Unemployment, local economic conditions and the ideology
and political position of parliament: Greece 1974-2015

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I would like to dedicate my dissertation to my parents and my sister, for all of their love and support.
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Περίληψη


Λέξεις κλειδιά: Πολιτική Ιδεολογία, Πολιτικά Κόμματα, Λαϊκισμός, Τοπικές Οικονομικές Συνθήκες, Ανεργία
Summary

In this dissertation, we study the political parties of Greece based on the political ideology, from 1974 until the last elections in 2015 (Inglehart & Norris, 2016). Also, during the years of recession is observed rise of populism and that’s affects the people's vote and the country's economic aggregates. It will also examine the impact of rising unemployment rates due to the global economic crisis of 2007-2009 on the rise of populism and two completely different political parties (SYRIZA, GOLDEN GAWN). Finally, by regressing we will see the results of the economic magnitudes at regional level.

*Keywords:* Political Ideology, Political Parties, Populism, Local Economic Conditions, Unemployment
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Introduction

1. Introduction

In this dissertation, we study how the political parties of Greece could categorize based on the party's political ideology, from 1974 until the last elections in 2015 using the Chapel Hill index (Inglehart & Norris, 2016). Also, we are going to consider the rise of populism and how it affects the people's vote and the country's economic aggregates (such as unemployment, living standards, GDP, etc.) before and after the outbreak of the economic crisis. It’s important to study how the Economic conditions affect the people’s Voting Behavior based on the economic growth. Another thing which we are going to work is the impact of the rising unemployment rates due to the global economic crisis of 2007-2009 and the rising of populism and anti-capitalist views will also be examined.

The literature on this subject is enormous and develops many interesting points for further analysis, but for the case of Greece the literature is poor. So, Pacek (1994) and Fidrmuc (2000) obtain analogous results when examining electoral outcomes across low-income Eastern-Europe democracies, such as Poland, Bulgaria, Hungary, Slovakia and the Czech Republic. Also, Powell &Whitten (1993), Lewis-Beck & Stegmaier (2000) report that voters are assumed to look back at the performance of those in government and vote asymmetrically, punishing incumbent governments more than the less policy-coherent opposing parties, without distinguishing between left-wing and right-wing ideology.
I succeeded to draw some statistic results (i.e. gender, age, education, occupation, field of study) about the Parliament members of the Greek Parliament from the period 1974-2015.

In this dissertation we run 3 OLS Regression using Fixed Effects with 255 observations for all the 51 electoral regions of Greece. The 1\textsuperscript{st} regression is going to have as dependent variable the Right-Center, the 2\textsuperscript{nd} one the Center-Left and the last one the Left. As independent Variables for all the Regressions are Education, Unemploymed, Agriculture, Employment, Urban, Standard of Living and Year. I chose these independent variables because they are the most important and we are going to figure out how the country’s economy respond to these 3 political parties.

The remainder of the dissertation proceeds as follows: Section 2 discusses the literature review of the voting behavior and which factors affect, as well as the effects of the political position on economic outcomes. Next section is about the data, we compare on the statistic results from the Hellenic Government which are published in its site and the statistical results from my personal research. Next, in section 5, there is the empirical model and finally the estimation results. Conclusions are in the 7\textsuperscript{th} Section.
2. Literature Review

2.1. Voting Behavior

In this Chapter, we have to explain and understand voters' behaviour. In this way, we can explain how and why decisions were made either by public decision-makers or by the electorate. This politics' explanation of politics and psychology was necessary, so the field of political psychology emerged. It should be considered that certain factors such as gender, race, culture or religion. In addition, According to the political psychology, key public influences include the role of emotions, political socialization, tolerance of diversity of political views and the media.

Some literature reviews agreed that, the European Parliament is just like all other democratic parliaments. The main dissociation of voting behaviour both within and between the transnational political parties in the European Parliament is the classic left-right dimension of democratic politics. Left-right politics explains an overwhelming proportion of voting in the European Parliament. In contrast, national interests, independent of national party positions, have very little systematic influence on voting in the European Parliament (Moravcsik, 1998).

Downs speculated voters assess their expectations about future (economic) performance and vote for the party giving them the greatest expected utility. In contrast, Key argued voters punish or reward the incumbent party based on past economic performance.

Kramer (1971) showed that voters use economic performance over the last year to guide their vote choice, voting for the incumbent party when times are good and against it when times are bad. He showed that congressional elections respond in particular to national income over the last year.
Hibbs and Vasilatos (1982), Hibbs et al. (1982), and Linn and Nagler (2005) note that voters do not have homogeneous preferences. If all voters had the same preferences, we would be describing a homogeneous society – utopia that does not exist.

2.2. Factors affecting Voting behaviour

Voting behaviour is the way that different people tend to vote. It is studied so that political scientists, or more accurately political psychologists, can understand why certain people vote for different political parties and who might best represent them and persuade voters to vote for them at the next election.

So, the study of voting behaviour can be roughly divided into long-term and short-term factors. Long-term influences include social class, gender, race, culture, religion, age, education, housing tenure and simple long-term political alignment. Short-term influence include the performance of the governing party, major issues, the electoral campaign, the image of party leaders, the influence of the mass media and major political events (e.g. war, natural disasters or economic crises).

Mair (2009), who advocates that in recent years some parties seem to have won the battle of attracting voters irrespective of their ideology, by targeting specific social groups that have been severely hit by austerity measures adopted by governing parties. Also, Political scientists have agreed for over thirty years that the state of the economy affects elections (Linn et al., 2015). But, it is difficult to explain how and why the economy affects elections. Downs (1957) and Key (1966) argued that voters should look at the economy in making voting decisions. Downs argued that voters would vote for the candidate likely to deliver the best economic performance. However, Key argued that voters see elections as referenda, punishing incumbents if
they presided over poor economic times. Next we are going to analyze some of the most important factors which we report above.

The media and election campaigns are very powerful factors influencing voting behaviour in all over the world, especially newspapers and social media. Political campaigns used by candidates and political parties prepare and present their ideas and positions on issues which are about each country, to convince the voters in the period preceding for the election’s day. They use a variety of techniques to reach voters and deliver their messages, including through traditional and new media, public events. TV has always the right to publish but often leading to bias that in turn influences how people decide to vote. The printed press and generally the social media (Facebook, Twitter, Instagram) can picture politicians or political parties in different ways, and display constant negative or positive stories about a subject all in the aim of persuading their readers to vote the way they want. Finally, Mackuen et all. (1992) in their study report that economic expectations are a function of leading indicators, which are themselves a function of what people have heard in the news about the economy.

Ethnicity also plays a role in how the public vote as the Conservatives struggle to pick up the minority vote, in UK for example. Ethnicity is commonly defined as some people’s individual characteristics that are either difficult or impossible to change, such as nationality, skin color, or primary language (Chandra, 2004, 2006, Birnir, 2007). According to the literature review, we know that ethnic minorities tend to be less liberal on social issues than whites, so it’s too difficult or extraordinary for the ethnic minorities to understand the way of thinking. That’s why, there is an argument about if they have the right to vote or not, or if they can represent people with greatly different ethnicity by them. In contrast Labour does
well among ethnic minorities especially among Black and Asian voters. Welch and Foster (1992) show that black voters consider the change in economic fortunes of blacks, as well as the change in national economic conditions, when voting. Finally, Algan et al.,(2017), find that the recent crisis has resulted in more negative attitudes towards immigrants, however, this anti-immigrant sentiment is related to the immigrants’ economic impact rather than their cultural identity.

**Age** is another key factor that plays a role in how people decide to vote. Traditionally, younger voters are more likely to support parties promising social change, young voters tend to be more close to their revolutionary thoughts and sometime vote the left wing political parties, just like the Greek young voters. In contrast older people vote traditionally older politicians with experience believing that the young ones have to get older and more experience to represent them in the Parliaments. However the influence of age is changing. According to our research’s results we can see that during all these elections the age gap reduces and more and more young people are Parliament Members as the years go on.

**Gender** is another factor that plays a role in how people decide to vote. Scholars observed that women used to have a strong attachment to the Conservatives while men were more attracted towards Labour in England. Scholars typically reasoned that women’s higher levels of religiosity encouraged stronger ties to religious and conservative parties. Further, fewer women participated in the paid workforce, and thus they were less likely to join trade unions, the very organizations that historically connected workers to leftist parties (Kittilson, 2016). At the same time, countries vary substantially in the size of these gender gaps, that’s why, in contemporary elections, women tend to support leftist parties more than men in many countries. In recent decades “gender differences in electoral behavior have been
realigning, with women moving toward the left of men throughout advanced industrial societies (though not in postcommunist societies or developing countries)” (Inglehart & Norris, 2003). Welch and Hibbing (1992) consider gender, and claim to show that men are more likely to be economic voters than women, at least in part because women see themselves as accountable for their own economic situations.

**Education** is one of the essential factors in the formation of political identity, and any increase in the level of education influences people’s mental vote decision. We know that until 2000 the education level was low and the most of the politicians in Greek Parliament were lawyers and doctors (Table 1). As the education level rises, there is a new air for modern/secular and democratic preferences. In our research, it was discovered that with the rise in education level, the possibility rises for the positive characteristics of the candidates. Krause (1997), in an analysis of education/information groups, finds that as voters' level of education declines economic expectations rely more heavily on retrospective evaluations while more educated voters draw on more information, particularly media coverage of the economy, to shape their expectations.

### 2.3. Effects of political position on economic outcomes

The truth is that Greece had always problems with its economy, the difference is that these problems were greater with the accession of Greece to the euro. According to James (2012) the euro projects had 4 goals: i) to build a unified European identity, ii) to eliminate nominal exchange rate fluctuations and the imbalances that those could create, iii) to create a monetary authority isolated from political pressures, and iv) to broaden support for structural, supply-side reforms to improve Europe’s growth rate. In order to succeed this project, each euro-country had to do reforms. These reforms
had to be made from all the countries where they were willing to pursue this program and start having the euro as their national currency which were many and painful. The governments of most countries have failed to pass the package of new reforms from the country's parliament or at least the Parliament Members vote a package of not strict reforms, and as a result year after year created greater financial problems and debts. The only country that voted for these reforms was Germany because it believed that with the accession of a country to the euro, the necessary reforms needed to make the program successful and to improve the economy. In other words, for Germany, the euro meant tighter budgetary and fiscal constraints, not looser financial conditions (Fernández-Villaverde, et al., 2013). Germany has done it in this area and it is today the only country in the Eurozone with the least financial problems.

About Greece we know that some reforms had taken place in 1992 when the budget was under serious strain, but they did not tackle the long-term imbalances. Then, according to Börsch-Supan and Tinios (2001) in the run-up to joining the euro, the government was under pressure to undertake these reforms and in 2001 tried to pass a reform package that had first been proposed in 1958 and was already considered at that time “extremely urgent”.

At the national level, Bronskov, 2004 point out that the ideology of the median voter could thus affect economic performance through several policy channels. In addition, individuals’ political ideology might also reflect norms and preferences that influence their personal economic behaviour. Also, there is empirical support for a standard public choice hypothesis that rightwing governments intervene less in the economy and are more concerned with law and order and that this subsequently affects economic performance, but also for explanations arising from recent advances in institutional economics that emphasize the independent importance of social norms.
Goulas, et al. (2017) examines the relationship between Greek Voters’ behaviour and economy, having evidence for the period 2000-2012. According to this we have a lot of useful and understandable results which are helpful to understand how two different political parties such as left-wing SYRIZA and right-wing Golden Dawn suddenly gained the trust of the disappointed Greeks and gained power and positions in the Greek parliament.

In particular, Goulas et al. (2017) find evidence suggesting that low growth, high unemployment and tight fiscal policy have led the Greek electorate to reduce support for the parties in power and reward even more opposition parties, especially populist non-orthodox parties, like the left-wing Syriza and the ultranationalistic right-wing Golden Dawn. Also, with economic activity showing no signs of recovery even after the signing of the two bail-out programs of 2010 and 2012 and with unemployment at its highest level ever, there has been growing dissatisfaction among the Greek electorate and essentially, the austerity measures, which were adopted as a precondition for Troika’s bailout funds, have led Greek voters to turn to non-orthodox left-wing or far-right-wing parties and to reduce their support for the traditional parties that held power after Greece’s transition to democracy in 1974 (Goulas et al., 2017).

Next, at the aggregate level, these could be observationally equivalent. If we observe that voters reward the incumbent when the mean of real disposable income goes up, they could be doing this because they learned that real disposable income was up nationwide and they are rewarding the incumbent for this nationwide prosperity, or because an increase in real disposable income could imply -if it is distributed reasonably uniformly, an assumption we return to later- that most voters had an increase in their own personal income and they are rewarding the incumbent
for that (Linn et al., 2015). Also, Kiewiet and Kinder (1981) Kiewiet (1983) examined this question in detail, and introduced the notions of “pocketbook voting” (votes about the possibility of income’s rise for each voter) versus “sociotropic voting” (votes about the aggregate economy) into the literature, as well as explored voter decision making, and presidential approval, Hibbs, Rivers, and Vasilatos (1982) allowed voters to behave as if they saw a Phillips-curve tradeoff between unemployment and inflation. However, Hibbs noted that voters have different unemployment versus inflation tradeoffs. In Hibbs et al.’s world (1982) left-voters, who are presumably lower-income, would prefer less unemployment even at the cost of more inflation, whereas right voters, who are presumably higher income, would prefer lower inflation, even at the cost of higher unemployment. Also they found that Republicans are more sensitive to inflation than Democrats and Independents while Democrats show greater sensitivity to unemployment and real income when evaluating the president.

Another thing we have to report is that Algan et al., (2017) noticed that Dustmann et al. (2017) uncover that unemployment (and GDP) shocks at the regional level are accompanied by a trust deficit (defined as the ratio of political to general trust). They show that regional unemployment is systematically linked to non-mainstream vote in European Parliament elections.

Finally, Algan et al., (2017) used data from the European Social Surveys that measure Europeans’ general and political trust, political attitudes, and beliefs on immigration to understand the underlying mechanisms. The results showed that, the increase of unemployment during the crisis has resulted in lower trust in national and European political institutions as well as in a rising distrust in the legal system. So, higher unemployment does not correlate with trust in the police and is also strongly
related with dissatisfaction on the working of democracy and a belief that no party is close to respondents. So, the impact of increase in unemployment on interpersonal trust is small and not always statistically significant.

Goulas et al., 2017, concerned oneself about the Growth rate. They find an asymmetry between these two political parties which are the non orthodox of the Greek Parliament: while electorate support for Syriza is found to be strongly influenced by changes in GDP growth and unemployment, this is not the case for Golden Dawn. Indeed, their estimates show that the rise in the electoral support for Golden Dawn since 2009 has mainly been related to the forced fiscal-deficit cuts associated with Greece’s bail-out program. This suggests that Greeks don’t believe that Golden Dawn can effectively address the country’s main economic problems, such as poor growth performance and high unemployment.

Linn et al., (2017) studied if the voters look at measures of the economy between the level of aggregation of the individual and the national macroeconomy. If economic growth is distributed equally across any country’s population, all voters prefer the candidate offering and suggesting the plan with the most growth and preferring the candidate who would raise growth the most is the same as preferring the candidate who would maximize one’s own income. Instead, if voters observe that some parties provide unequally distributed growth, then some voters may prefer a party providing a lower aggregate growth rate, but one in which they receive a larger share of the growth.

So, the implementation of Troika’s tough economic-adjustment program and the simultaneous cut off from the financial markets resulted in a huge loss of more than 25% of the Greek GDP and a rise in the official unemployment rate to over 27% (Goulas et al., 2017).
The voting share of Syriza is found to exhibit greater sensitivity to changes in both GDP growth and unemployment compared to, for example, that of Golden Dawn, which suggests, as we report above, that Greek voters do not believe that Golden Dawn could manage the economy better than the other parties. In fact, Goulas et al., (2017) observed that Golden Down seems to have increased its vote share mainly by taking advantage of the dissatisfaction of the Greek public, especially middle age groups, with the drastic cuts in social and health spending or other forms of state support, while at the same time it succeeded in establishing strong links with young groups facing deteriorating conditions in the labour market.

2.4. Populism, political position and economic outcomes

The literature review is great, and there are many papers and researches which analyze the phenomenon of populism from 1974 until today. Generally the most prevalent definition of popularity is as follows by Rudiger Dornbusch and Sebastian Edwards (1991) emphasizing this ‘‘left of the median’’ aspect of populism:

*Populist regimes have historically tried to deal with income inequality problems through the use of overly expansive macroeconomic policies. These policies, which have relied on deficit financing, generalized controls, and a disregard for basic economic equilibria, have almost unavoidably resulted in major macroeconomic crises that have ended up hurting the poorer segments of society.*

The phenomenon of populism has always existed in societies, except that since the outbreak of the Great Ressesion, has become more pronounced in all societies, leading also to the introduction of folk parties in Parliaments, just as in the case of Greece. The Greek voters were disappointed by the previous governments during
almost 10 years of the financial crisis affecting Greece, because they saw cuts in pensions, wages, increase in commodity prices and a big decrease in their income. When all this happens, each individual wants to show his temper against the Government and he does it with his vote. From the moment they are disappointed by the party that has been so fiercely supported all these years is turning to other parties. Most of them examine the political ideology and try to understand if the vote that will be given, it will provide him with something better for their living standards.

According to the definition of populism, the winners are the rich and the losers of the poorest. Nowadays the most populist politicians are based on this and have, in many cases, won votes and seats in the Parliaments in this difficult period of time for the global economy.

In our case, as we said before, the literature is enormous if electoral outcomes are to be in line with the performance-sanctioning model, one would expect that during unfavourable macroeconomic conditions or a tight fiscal policy people will strongly turn to non-orthodox populist parties like Syriza or Golden Dawn despite their different political ideologies, hoping for a return to the previous status (Goulas et al., 2017). Also, they noticed that worsening economic conditions have led the Greek electorate to reduce support for traditional parties and move to non-traditional populist parties, like the left-wing Syriza and the ultra-nationalistic right-wing Golden Dawn. Finally, at their paper supported that, governing parties are found to be negatively affected when the economy is downsized or when there is a need to pursue fiscal-consolidation policies, while opposing parties are benefited. However, the magnitude of the effect is even larger for non-orthodox parties, especially those with a populist left-wing ideology, like Syriza.
Indeed, searching for evidence for non-orthodox parties based on the Greek experience is important for at least two reasons: first, because Greece was severely hit by harsh austerity policies, and second, because immediately after the signing of the Greek bailout-program, the country experienced a party-system restructuring and saw a surge of political support for Syriza and Golden Dawn, two non-orthodox populist parties with completely different ideology, as a possible response to the bipolar system that dominated Greek politics for over 40 years (Magalhaes, 2014a, 2014b, Teperoglou and Tsatsanis, 2014).

The research’s results of Hix, Noury and Ronald (2006) suggest an optimistic conclusion about the accountability and stability of European Parliament. Politics in the European Parliament is very much like politics in other democratic parliaments, dominated by left-right positions and driven by the traditional party families of domestic European politics.

Inglehart and Norris (2016) explore two leading explanations. First, the widely-held view that economic insecurity has caused the rise of populism. The second view focuses on cultural backlash. In addition to deep economic changes, the last fifty years have seen profound social transformation; the introduction of new values in the society has caused a reaction in sectors of the population which felt threatened. Using the European Social Survey, Inglehart and Norris (2016) find strong evidence in favour of the cultural backlash hypothesis. This finding suggests that the traditional left-right cleavage, on which politics was based before the 80s, is being substituted by a new cleavage between traditional and progressive values in (post-modern) Western societies. Also, Inglehart and Norris (2016) find evidence that the support for populist parties comes from small shop keepers and not from low-wage
workers and that unemployment status and income are bad predictors of populist votes.

Acemoğlu et al. (2013) argue that populist policies are a signalling device by honest politicians directed to voters who have imperfect information about the politicians. Also, Populist politicians choose ‘extremist’ policies to signal that they are not beholden to special interest. Di Tella and Rotemberg (2017) add voters’ distaste for ‘betrayal’ to a standard model and argue that voters prefer having incompetent leaders rather than feel betrayed. These explanations have merits, but also the big limit that they do not build on the insights of political science. Finally, Rodrik (2017) argues that populism is a rational response to the shocks caused by globalization. Acemoglu, Egorov and Sonin (2013) presented a simple theory of populist politics. According them, Populist policies thus emerge as a way for politicians to signal that they will choose future policies in line with the interests of the median voter. They find that honest politicians who are not influenced by the rich lobby will choose policies to the left of the median voter’s preferences, and even politicians captured and bribed by the rich elite may end up choosing policies to the left of the median voter.

Binswanger and Prufer (2009) & Frisell (2009) show that indirect democracy can lead to “populism” defined very differently than here—meaning that politicians, conditional on their information, still put positive weight on the prior beliefs of voters.
3. Data

In this research we use two types of data. Firstly, we created a database of all the Parliament Members of the Greek Governments (1974-2015). More specifically, during these years, Greece had 17 different Governments, 44 political parties and 5,100 Parliament members. Doing research on the Internet we have succeeded in creating the database where there are the most of Members’ biographical data, since for some of them there was no information. This database consists the date of birth, place of birth, field of study, year of first election, first election political party and their main occupation. Having all these data we have managed to draw some statistical conclusions where we may have known them so far, except that now we have the necessary proofs to support them.

Also, we create another data base from the Hellenic Parliament’s site, in which there is published data about the results of all the Greek elections. We are going to focus on specific data such as gender, age and occupation in order to compare the statistics results with the dataset which we created. Unfortunately, we have no data about some election periods, so we will work with the existing data.

Finally, we have another dataset about the aggregate variables of Greek Economy per year from 1946 until 2016, such as Population, Unemployment, Education, employment, agriculture, standard of living for all the 51 Greek constituencies. Studying all these variables we are going to understand how to consider the rise of populism and how it affects the people’s vote and the country's economy before and after the outbreak of the economic crisis.

3.1.1. Elected parties & Political Position

Greece has often attracted international attention though not always because of the country’s history, people, or democracy. In 1974 it was the fall of the seven year dictatorship and the establishment of the Third Greek republic and the subsequent development of a stable and consolidated democratic political system. (Lyrintzis, 2011). Our research is going to concentrate after the period of Dictatorship (known as Antipolitefsh in Greece) 1974 until the last elections of 2015.

The positions that political parties take on major political issues cannot be observed directly but can be estimated using either behavioural evidence from party manifestos, roll call votes, television debates or parliamentary speeches, or evaluations by voters, parliamentarians or third-party analysts (Benoit & Laver 2006). In order to classify these categories we are going to use the Chapel Hill index (CHES). Political experts of this survey on 2014-2015 measure national party positioning on European integration, ideology, and several European Union (EU) and non-EU policies and studied 268 political parties in 31 countries, including all European Union member states, plus Norway, Switzerland and Turkey. The CHES uses expert ratings on position of parties on a range of characteristics such as support for traditional values, liberal lifestyles, and multiculturalism, including economic characteristics such as state of the economy, and market deregulation. Inglehart and Norris classify a party as populist if it scores more than 80 points on a standardized 100-point scale built using thirteen selected indicators contained in the CHES. This definition of populist party is time-invariant.

As we reported above, we are going to classify the political parties based on their political ideology. Based on the literature we know that:
• Far-Right: the ideology of this group is Ultranationalism, Neo-Nazism, Hard Euroscepticism, Anti-globalization and Metaxism
• Right-wing: the ideology of this group is National and Social conservatism, Right-wing Populism and Euroscepticism
• Centre-right: the ideology of this group is about Liberal conservatism, Christian democracy and Pro-Europeanism
• Centrist: the ideology of this group is about Centrism, Social liberalism ans Social Democracy, Venizelism, Pro-Europeanism
• Centre-left: the ideology of that category is about Democratic socialism, Secularism, Left-wing populism, Anti-capitalism, Alter-globalisation and Social democracy
• Centre-Left: that group’s ideology is about Social democracy, Pro-Europeanism, Social liberalism
• Left-wing: the ideology of this party is about Democratic socialism, Hard Euroscepticism and Left-wing populism
• Far-Left: this last group’s ideology is about Communism Marxism–Leninism, Hard Euroscepticism Stalinism, Revolutionary socialism

Based on these groups and according to the CHES index, we can classify the political parties of the Greek Parliament as follows:

• Far-right: XA
• Right-wing: ANEL
• Right-center: ND
• Center: EDHK
• Center-left: DHMAR, PASOK
• Left-wing: OIKOLOGOIENAL, SYNASPISMOS, SYRIZA
• Far-left: ENIAIAARISTERA, KKE, KKEESWT

In this point, we have to say that according to the literature, there are evidences that Governments nevertheless do not always follow their declared ideology. From a political side, this makes any categorization of governments insecure. Yet, Downs (1957) originally pointed out that voters cast their votes according to ideological signals by introducing the notion of the rationally ignorant voter (Bronskov, 2004).

Next we notice a plot which has all the parliament members of each political party, based on ideology and that help us to understand how the Greek Parliament is ideologically divided from 1974 until today. So, we know that the biggest part of the pie (2211 members) is about the Centre-Right from all the elections. The next bigger is the Far-Left which has 1843 politicians of the Greek Government. Also the political group of Centrist has 105 members and the Left wing has 537 PMs. Another thing which has to mention is that 73 Parliament Members belong to the Far-Right such as the Left wing with 537 members, and these results are about the last decade more sensible, increasing the Populism and influencing the vote of the Greek people during the Economic Crisis.
FIGURE 1: SEATS OF ALL THE POLITICAL PARTIES IN GREEK PARLIAMENT 1974-2015

Notes: Statistics about the seats of 5100 Greek Parliament Members, from 17 election periods (1974-2015)

We manage to have the number of the Greek People’s Votes, so can see how these votes allocated from 1946 until today. It is obvious that the Centrist voters decreased after 1964 and they amount is low until today. Next, we see the Center-Left wing which stable and almost 0, such as the Far-Right except of an increase to the votes the period of 2000 until today. Also the Far-Left political party is stable all these years and the votes of Left are stable until 2007, after this period they increased. The Right political group has a stable number of voters during these years. Finally, the group of Unknown is about all the other small political parties such as ANEKSARTITOI.
FIGURE 2: Votes of Greeks for the periods 1946-2015

Notes: These Figures are about the votes of the Greek People for all the political parties. We have data about the numbers of votes from all the election years (1946 until 2015), so we manage to create these graph.
Source: Author’s Calculations by Hellenic Parliament

3.1.2. Characteristics of PM

In this subsection we are going to study statistics results which are uploaded on the web site\(^1\), and are about the gender, the age and the occupation of the Greek Parliament Members from 1974 until the elections of January 2015. It worths to report that we have no information for some elections so we are analyzing according to the existing database.

In that database we have no data about the variables of Occupation, Age and Gender for the election years 1974, 1977, May 2012, June 2012, January 2015 and

\(^1\) [http://archive.ipu.org/parline-e/reports/2125_arc.htm](http://archive.ipu.org/parline-e/reports/2125_arc.htm)
September 2015. Also, the election year of 2009, there is no report of the members’ occupation.

In order to have this information gathered, we had to categorize the variables of Occupation, Age and Gender of all the members to make some important conclusions.

The next graph is about the presence of women in the Greek Parliament. We notice that the periods of 1977 and 1981, there is no female Parliament Members. Also the smallest amount is 2% at the elections of 1974 and the biggest one is 23% at the elections of January 2015. The second snap elections in 2015 the amount of the women was 3% smaller than the first elections in 2015. It is important to say that during all these elections the presence of women is bigger election by election.

**FIGURE 3: Gender’s Statistics**

<table>
<thead>
<tr>
<th>Year</th>
<th>Women Presence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1974</td>
<td>2%</td>
</tr>
<tr>
<td>1977</td>
<td>0%</td>
</tr>
<tr>
<td>1981</td>
<td>0%</td>
</tr>
<tr>
<td>June 1985</td>
<td>4%</td>
</tr>
<tr>
<td>Nov 1989</td>
<td>7%</td>
</tr>
<tr>
<td>1990</td>
<td>5%</td>
</tr>
<tr>
<td>1993</td>
<td>6%</td>
</tr>
<tr>
<td>1996</td>
<td>6%</td>
</tr>
<tr>
<td>2000</td>
<td>9%</td>
</tr>
<tr>
<td>2004</td>
<td>13%</td>
</tr>
<tr>
<td>2007</td>
<td>17%</td>
</tr>
<tr>
<td>2009</td>
<td>19%</td>
</tr>
<tr>
<td>May 2012</td>
<td>21%</td>
</tr>
<tr>
<td>June 2015</td>
<td>23%</td>
</tr>
<tr>
<td>Jan 2015</td>
<td>20%</td>
</tr>
<tr>
<td>Sept 2015</td>
<td>20%</td>
</tr>
</tbody>
</table>


Next we have to examine the age of the Parliament member at each election year. As we said before, there is no available data for some elections, so we study the existing dataset. We make 4 categories about the age, <50 years old, 50-60 years
old, >60 years old and the last category is about the Unknown that means that we don’t know the age of 63 members. Until the elections of 1990, the most of the members were younger than 50 years old. Also, at the elections of 1993 and 2000, it seems to be more than 200 members at the group of 50-60 years old. Another thing is that the election periods of 2004, 2007 and 2009, the more than 200 members belong to the categories of <50 years old and to 50-60 years old, that means that compared to the elections of 2000, the elections of 2004 increased the people of the category whose the age is younger than 50. However these elections, there is the category of people whose we have no data about their age, but fortunetally they are less than 50 people at each election. Finally, there is the category of the members who are older than 60 years old.

FIGURE 4: Age’s Statistics

![Age's Statistics Graph](image)


Finally, we are going to study the occupation of the Parliament members. The data which are available are for the election periods from 1981 until 2007, after these elections there are no information about their occupation, some of these occupation
are in the next table. Candidates' occupations play an important role in their electoral success. So we notice that almost the half of the members, of each election year, were lawyers, and a small number of Doctors/Medical Professions. The occupational impact is far greater than gender or doctoral degree effects (Mechtel, 2014). Also we have to report that the occupation of the Architects and Engineers election year by year increased too. We see that there is an increase to the professions of journalist and teachers.

During these elections years, we see that the number of lawyers decreased and there is an increase to the number of economists. It is believed that happens because of the Economic crisis, so the Greek people vote more Economists in order to represent them to the Parliament and help the Greece’s economic situation. However, there is the category of military and as we see the presence of them is small and more specifically there is no military member the election periods 1989 until 2004.

Finally, there is another group which is interesting too. That is the category of “Others” and is about the people whose we don’t know there occupation or they have basic knowledge. During these years, we see that there is a big increase of it so there is low information of the candidates.

Typically, poor information elections are defined as elections where voters lack detailed information on candidates' characteristics (Mechtel, 2014).
## TABLE 1: Occupation

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lawyers</td>
<td>140</td>
<td>139</td>
<td>126</td>
<td>129</td>
<td>119</td>
<td>109</td>
<td>95</td>
<td>83</td>
<td>68</td>
<td>70</td>
</tr>
<tr>
<td>Doctors/Medical Professions</td>
<td>31</td>
<td>28</td>
<td>41</td>
<td>39</td>
<td>43</td>
<td>47</td>
<td>47</td>
<td>42</td>
<td>40</td>
<td>34</td>
</tr>
<tr>
<td>Engineers/Architects</td>
<td>27</td>
<td>30</td>
<td>31</td>
<td>33</td>
<td>31</td>
<td>41</td>
<td>45</td>
<td>42</td>
<td>17</td>
<td>31</td>
</tr>
<tr>
<td>Economists</td>
<td>11</td>
<td>12</td>
<td>16</td>
<td>18</td>
<td>19</td>
<td>24</td>
<td>24</td>
<td>20</td>
<td>33</td>
<td>32</td>
</tr>
<tr>
<td>Journalists</td>
<td>6</td>
<td>4</td>
<td>13</td>
<td>12</td>
<td>11</td>
<td>9</td>
<td>9</td>
<td>15</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Military</td>
<td>10</td>
<td>9</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Teachers (university-high school)</td>
<td>19</td>
<td>22</td>
<td>20</td>
<td>24</td>
<td>34</td>
<td>20</td>
<td>19</td>
<td>21</td>
<td>20</td>
<td>34</td>
</tr>
<tr>
<td>Others</td>
<td>34</td>
<td>42</td>
<td>43</td>
<td>36</td>
<td>62</td>
<td>48</td>
<td>61</td>
<td>48</td>
<td>107</td>
<td>33</td>
</tr>
</tbody>
</table>

Notes: This Table presents Summary Statistics for the main Occupation of each Greek Parliament member. There are data about occupation but the groups of professions change for each election period. So using the Existing data we manage to create new categories of occupation in order to show the most common occupation. We already know that the numbers of the Greek Parliament members for the election periods which we study is 5100 members. However, for this table we know the main occupation only for 2885 members, because we have no data for the elections of 1974, 1977, 2009, May & June 2012, January &September 2015.

Source: [http://archive.ipu.org/parline-e/reports/2125_arc.htm](http://archive.ipu.org/parline-e/reports/2125_arc.htm)
4. My Data

In this section we are going to study the database which I create, with all the information of the Greek Parliament Members.

Let’s start examining the relationship between the gender of each election year in order to see how many women and men used to deal with the civilian life of Greece in period of 1974-2015. Observing the results of 17 election periods and 5,100 members of the Greek Parliament, we realize that the participation of women is small compared to men.

**FIGURE 5: The distribution of PMs by gender (Female)**

![Graph showing the distribution of PMs by gender](image)


More specifically in 1974, the number of female was 7 and the number of male was 293. During the election periods, the number of women steadily increased. So, from 1974 until 1990, Greece had 7 different election periods in which the female presence to the Greek Parliament was 87 times. Also the next decade (until 2000), the number of women was 78 and in 2004 until 2019 (3 election periods) the female PM presence was 103 times. In 2012, Greece had 2 different election periods (May and June) and as we observe from the plot the women presence increased and the female
one decreased. Also in 2015, there was 2 different election periods again (January and September). The results of January’s elections had the highest number of women from all periods (67) instead of the results of September which the number of women decreased (54).

All in all, according to the plot we can see that the number of female presence to the Greek Parliament increased after the 2000 and as the result there was a reduction to the male PM over 2/3 of the parliament.

Lee (2018) wanted to check the electoral competition between male and female in Indian Parliament for the periods 2006-2011. The results show that, even after considering the role of electoral competition, female politicians are more likely to make decisions in ways that are better for women's well-being.

Next we find out which was the age of each Member of its selection year. There are 498 missing values about the variable of birth year so we know that information for 4,602 people. We see that the mean age is 51.51 years. The smallest age is 30 years and the largest age is 75 years.

The next thing to check in more detail is the mean age of the Parliament members at each election year.
FIGURE 6: Mean Member’s age at its election year

According to the plot’s results, we can say that the mean age of each selection year is between 50-52 years old, expect the election period of 1990 which was 49.50 years old and the latest election period which was 54.51 years old, which is the largest mean value.

It is worth to see the mean age of members’ election for women and men. The number of male PMs is 4,140 and generally the mean age is between 50-54 years old of all the election periods. Totally the mean age is 51.70 years old.

As far as the elected women of the Greek Parliament, the number of observations is smaller than the men ones (462), so the mean age of our sample is between 49-51 years old, with some exceptions, such as the election year of 1977 which the mean age is 47 years old, the election year of 1981 which is 45.69 years old.
FIGURE 7: Number of Parliament Members by frequency in Greek Parliament

Notes: Statistics for the PMs’ Frequency in the Greek Parliament, of 5100 Parliament Members, from 17 election periods (1974-2015). The horizontal axis represents the number of people who have re-elected, while the vertical axis represents the times where they have reelected.

During these election periods there are PM, neither male nor female, who their presence was frequent. So, according to the plot, there are 15 people (0.29%) whose the presence is the most frequent (14 times). There are 897 members who have been elected only once (17.59%) until today. Also, 120 members have been elected 10 times (2.35%)

Another thing we can say after research is that, we can show the occupation of the PM’s amount. So we managed to categorize their professions in these categories:

- 0 Armed Forces Occupations
- 1 Managers (Politician, Businessman, Administrative Director, Freelance, Business Consultant, Merchant)
- 2 Professionals (Pharmacist, Journalist, Veterinary, Lawyer, University Professor, Doctor, Teacher, Economist, Mechanician)
- 3 Technicians and Associate Professionals (Agriculturist, Athlete, Commander of the Merchant Navy, Telecommunications technician, Coach, Insurer, Motorist)
- 4 Clerical Support Workers (Bank, Private and Public employee, Hotel staff)
- 6 Skilled Agricultural, Forestry and Fishery Workers (Farmer, Breeder)
- 7 Craft and Related Trades Workers (Electrician, Artificial Furniture)
- 8 Plant and Machine Operators and Assemblers (Naval, Industrial Worker)
- 9 Elementary Occupations (Baker, Radio scriber, Builder, Metaller)
- 10 Unknown (We have no information about their occupation)

In order to present our results easily, we created groups for the previous occupations. So we classify them by Highly, Medium and Low skilled, Armed forces and Unknown.

- Highly Skilled: Professionals and Managers
- Medium Skilled: Technicians and Associate Professionals and Clerical Support Workers
- Low Skilled: Skilled Agricultural, Forestry and Fishery Workers, Craft and Related Trades Workers, Plant and Machine Operators and Assemblers and Elementary Occupations
- Armed Forces: Armed Forces Occupations
- Unknown

<table>
<thead>
<tr>
<th>Skill</th>
<th>Freq.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly Skilled</td>
<td>90.31</td>
</tr>
<tr>
<td>Medium Skilled</td>
<td>3.37</td>
</tr>
<tr>
<td>Low Skilled</td>
<td>1.41</td>
</tr>
<tr>
<td>Armed Forces</td>
<td>2.1</td>
</tr>
<tr>
<td>Unknown</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

Notes: Statistics about the skill level of 5100 Parliament Members, from 17 election periods (1974-2015)
As we observe the biggest amount of the members are Highly skilled, next there are politicians with Medium skilled. Also, there are members who were working for the Greek Army and after that they were Parliament Members. The category of the Low Skilled has less people of all the others categories. Finally, we have no data about their occupation for 143 members.

Another thing we can study is about the field of study of every politicians. According to Assunção, M., & Estevan, F. (2018), Primary education is an essential component of socioeconomic development and, in most countries, (at least partly) publicly provided. However, there is little causal evidence on whether voters reward politicians for educational expenditures. According this we would like to learn if the education’s level of the Greek Parliament Members is basic or not.
TABLE 3: Field of study

<table>
<thead>
<tr>
<th>Field of study</th>
<th>Freq.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic programmes</td>
<td>63</td>
<td>1.24</td>
</tr>
<tr>
<td>Personal development</td>
<td>45</td>
<td>0.88</td>
</tr>
<tr>
<td>Teacher training and education</td>
<td>18</td>
<td>0.35</td>
</tr>
<tr>
<td>Arts</td>
<td>42</td>
<td>0.82</td>
</tr>
<tr>
<td>Humanities</td>
<td>148</td>
<td>2.9</td>
</tr>
<tr>
<td>Social and behavioural science</td>
<td>600</td>
<td>11.76</td>
</tr>
<tr>
<td>Journalism and information</td>
<td>45</td>
<td>0.88</td>
</tr>
<tr>
<td>Business and administration</td>
<td>105</td>
<td>2.06</td>
</tr>
<tr>
<td>Law</td>
<td>1,694</td>
<td>33.22</td>
</tr>
<tr>
<td>Physical sciences</td>
<td>189</td>
<td>3.71</td>
</tr>
<tr>
<td>Mathematics and Statistics</td>
<td>42</td>
<td>0.82</td>
</tr>
<tr>
<td>Engineering and engineering trades</td>
<td>189</td>
<td>3.71</td>
</tr>
<tr>
<td>Manufacturing and processing</td>
<td>7</td>
<td>0.14</td>
</tr>
<tr>
<td>Architecture and building</td>
<td>395</td>
<td>7.75</td>
</tr>
<tr>
<td>Agriculture, forestry and fishery</td>
<td>80</td>
<td>1.57</td>
</tr>
<tr>
<td>Veterinary</td>
<td>17</td>
<td>0.33</td>
</tr>
<tr>
<td>Health</td>
<td>681</td>
<td>13.35</td>
</tr>
<tr>
<td>Social services</td>
<td>26</td>
<td>0.51</td>
</tr>
<tr>
<td>Transport services</td>
<td>38</td>
<td>0.75</td>
</tr>
<tr>
<td>Security services</td>
<td>98</td>
<td>1.92</td>
</tr>
<tr>
<td>Unknown</td>
<td>578</td>
<td>11.33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5,100</td>
<td>100</td>
</tr>
</tbody>
</table>

Notes: Field of Study Summary Statistics of 5100 Parliament Members, from 17 election periods (1974-2015)
As we notice almost all the Greek politicians haven’t got the basic knowledge. As shown in the table above, most of them have graduated from universities and there is a wide variety in the field of study. For example, we see that 33% are most lawyers, then we see that about 600 people have studied economics. Generally, during the collection and analysis of the data we noticed that since 1974, voters increasingly voted politicians with law studies, while the proportion of economists was small. During the electoral years, and to date, these rates have been reversed. Lawyers are declining while elected economists are rising, which is considered to be reasonable if one takes into account the country's economic problems.

Next, we see that the percentage of doctors is relatively small over the years but remains stable. Finally, we seem to have people for whom there is no information available, which makes it difficult for us to see with more clear results. We still see that there are people who have not studied a certain subject, and their studies are basic. Nevertheless they have succeeded and have won the confidence of voters and are elected.
5. Empirical Model

In order to investigate the impact of all these independent variables, an econometric model has been developed and we adopt an OLS linear regression model where the dependent variable measures quality of work.

To isolate the effects of our variables we create the next empirical Function:

\[ Y_{rt} = \alpha + \beta U_{rt} + \gamma^k X^k_{rt} + u_{rt} \]  \hspace{1cm} (1)

where, the response variable \( Y_{rt} \), is a linear function of the regressors, where \( \alpha \) is the constant and \( \beta \) is a \( p \times 1 \) vector of unknown parameters, \( U_{rt} \) is the main independent variable of Unemployment for specific time line, and \( X^k_{rt} \) is the vector of all the other independent variables (where \( k \) refers to the Big Seven variables, \( k=1,...,7 \)) and and \( u_{rt} \) the disturbance term.

More specifically, we are going to run 3 OLS Regression using Fixed Effects with 255 observations for all the 51 electoral regions of Greece. The 1\(^{st}\) regression is going to have as dependent variable the Right-Center, the 2\(^{nd}\) one the Center-Left and the last one the Left. As independent Variables for all the Regressions are Education, Unemployed, Agriculture, Employment, Urban, Standard of Living and Year.

This specification, although general, is expected to provide evidence on the role of Big Seven variables on the political parties through the vector of estimated coefficients \( \beta k \).
6. Estimation Results

In this section we are going to see the empirical results of our model. Let’s start with some extra statistics about the seats of the Greek parliament only for the elections of 1974, 1981, 1990, 2000 and 2012 (the second electoral confrontation).

We examine these specific periods, because we have better and more imaginative results as we know the number of the population in those periods. In particular, population census began in 1828 and took place at irregular intervals, but after World War II, it was established every ten years starting in 1951. So we have data about the population for the periods of 1971, 1981, 1991, 2001 and 2011.

Starting we could see in total, how many seats these parties have in Parliament during these periods. We notice that the biggest part of these 5 periods belong to NEA DHMOKRATIA with 709 Parliament members and the next one belongs to PASOK with 484 Parliament members. Also we observe too, some political parties which have a small number of Members such as ENIAIA ARISTERA and OIKOLOGOIENAL with 1 member, and KKEESWERIKOU with 2 members.

Also, we are going to do some regressions with all the elections for some political parties. As we know, we study 17 elections, so we are going to see if there is big affection between them for each political position. We have as dependent variable for all the regressions, the election period 1974, and as independent variables all the others ones. Below there is a graph with the results of the regressions.
FIGURE 8: The evolution of Political Ideology since 1974

Notes: The results of 4 OLS Regressions are on this Graph. For all the Regressions, we have as dependent variable the results of 1974 election year of each political party of the independent variables.

According to the plot, we observe that there is a rise of the political party ‘Left’ during all these election periods compared to 1974, and as a result that party manage to have Parliaments Members and rule Greece. Next, we see that the party of ‘Centre-Left’, compared to 1974, has a big number of politicians until the elections of 2009. After that election we can see that its presence has a reduction compared to 1974. Also, there is a big reduction to the party of ‘Centre-Right’, and that’s maybe why there is a rise to the other political parties. Just like the Far-Right. Compared to 1974, the presence of that party is near to 0, but after the elections of 2009 there is a rise to the Parliament Members.

Now we will merge the dataset of the Parliament Member and Political Parties with another dataset, in which there are all the variables which explain the aggregate Greek Economy in order to see the effects of the political parties and also the effects of the populist parties. We are going to study specific variables which are:
• labmarketsample: amount of the people who work
• higheredu : Amount of people who have High Education
• agriculture : Amount of people who have professions with nature such as agronomist, breeder, farmer
• skilled : Amount of people who have Specialization on their profession
• employed : Amount of people who work
• unemployed : Amount of people without work
• haswaterinside: Standard of living, how well their life has improved and their daily routines over the years
• urban : Amount of people who live in cities

So with these variables we are going to run Correlations such as regressions with fixed effects. The results are shown in detail after the chapter

Next, we want to see if there is correlation between 3 important variables, education, unemployment and 3 political parties based on ideology, Right-Center, Center-Left and Left. We are going to use these 3 political parties because, according to the figure 2 we can see the biggest change in the voters' preference as well as, nowadays these parties dominate political momentum. So we want all these to combine and make our estimations. We see these correlations for the 5 election periods. The next table there are the results of these correlations:

<table>
<thead>
<tr>
<th>Variables</th>
<th>Column (1)</th>
<th>Column (2)</th>
<th>Column (3)</th>
<th>Column (4)</th>
<th>Column (5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Right-</td>
<td>Center-Left</td>
<td>Left</td>
<td>Unemployment</td>
<td>Education</td>
</tr>
<tr>
<td>1974</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td>0.0128</td>
<td>0.0709</td>
<td>.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-0.1884</td>
<td>0.1408</td>
<td>.</td>
<td>-0.017</td>
<td>1</td>
</tr>
<tr>
<td>1981</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.2396</td>
<td>0.2536</td>
<td>.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-0.3557</td>
<td>0.2772</td>
<td>.</td>
<td>0.127</td>
<td>1</td>
</tr>
<tr>
<td>1990</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td>-0.0305</td>
<td>-0.0983</td>
<td>-0.0984</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-0.2634</td>
<td>0.0047</td>
<td>0.1794</td>
<td>-0.0678</td>
<td>1</td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td>0.0148</td>
<td>0.0255</td>
<td>-0.1213</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-0.2116</td>
<td>0.1196</td>
<td>0.6087</td>
<td>-0.185</td>
<td>1</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment</td>
<td>0.2039</td>
<td>-0.1497</td>
<td>-0.2298</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>-0.1543</td>
<td>0.0014</td>
<td>-0.0215</td>
<td>-0.0907</td>
<td>1</td>
</tr>
</tbody>
</table>

Notes: This table shows the results of correlations for 5 different elections (1974, 1981, 1990, 2000, 2012) and the variables which use are Unemployment, Education and correlate with 3 political parties based on ideology, Right-Center, Center-Left and Left. We work with these periods because we have better and more imaginative results as we know the number of the population in those periods. So we have data about the population for the periods of 1971, 1981, 1991, 2001 and 2011.

Let’s start analyzing the correlation between Right-Center, the Unemployment and the Education. Observing the results, we can say that the correlation between the variables of Right-Center and the Unemployment, for the years which we study, is positive except of the years 1981 and 1990 in which the correlation is negative. Also, the correlation between the variables of Right-Center and Education, which are negative, so there isn’t interdependence between these two variables.

After that, we will see the Correlation’s result for the same independent variables, but the dependent variable is going to be the political party Center-Left. According to the table, the correlation between the variables of the Center-Left and the Unemployment are low positive for the years of 1974, 1981 and 2000 and negative for the periods 1990 and 2012, which mean that the unemployment is not
affected by the party. Also, we examined the correlation between the same party based on the political ideology and the education. The results for all the election periods match each other and we can see that exist low positive correlation.

Ending, we correlate again the same variables for the political party Left. We have no results about the periods 1974 and 1981 for the variables which are study because we have no data. So we will see the correlation between Unemployment and Left for the periods 1990, 2000 and 2012 which are negative. We checked the correlation for Education and Left, for the same periods. As we observe we have low positive correlation at 1990 (0.1794) and almost high positive correlation at 2000 (0.6087)

All in all, based on the correlation’s results, we found that the correlation between unemployment and each party separately, most of the times, is negative, with some exceptions just like in column 3 where we have no results. That’s also happens in the case of the education, except that the political party Center, in which there is a positive correlation for the periods we are studying. Finally, we have seen that the correlation between unemployment and education is low positive (0.127)for the election period 1981, instead of the other periods which the results are negative.

The next table is about all teh summary statistics of the independent variables. As we can see the mean value of the people who have high education are 6.604. Next we notice that the mean value of the households which have water inside are 84.155. the minimum value of the Urban Population is 0 instead of the maximum which is 90.826. Last and most important variable is the Unemployment rate. As we can see the mean value is 6.20 instead of the people who work which are smaller per 4.70722.
Next, we are going to work and analyze some regression results using Fixed Effects.

We examine the role of unemployment, education, agriculture, employment, urban, standard of living with the 3 political parties in which seems to have more sensible changes to the people’s votes. First, we run panel fixed effects specifications that explore within-region variation over time. We use only 5 election periods Table 2 reports the results.
Let’s start with the panel specifications in Column 1. The regression’s results using Fixed effects are about the Effects of the Dependent Variable o Right-Center. So, as we notice, the results for the independent variables of Education and Employment is statistical significant at the level 1% and negative. Also if we increase the Right-Center by 1 unit then the Unemployment decreases by 0.148 at confidence level of 5%. Also we can see that if we increase our dependent variable too, the standard of Living does not increase.

At the 2\textsuperscript{nd} Column we can see the results for the Center-Left. At the level of confidence 1%, if we increase the dependent variable by 1 unit then the independent variables of Education, Unemployment, Employment, Standard of living and the

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Column (1)</th>
<th>Column (2)</th>
<th>Column (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education (percent)</td>
<td>-0.576*** (-0.095)</td>
<td>0.806*** (-0.083)</td>
<td>-0.005 (-0.013)</td>
</tr>
<tr>
<td>Unemployment rate (percent)</td>
<td>-0.148** (-0.068)</td>
<td>0.204*** (-0.066)</td>
<td>-0.029** (-0.011)</td>
</tr>
<tr>
<td>Working Agriculture (percent)</td>
<td>-0.058 (-0.105)</td>
<td>0.178* (-0.092)</td>
<td>0.006 (-0.02)</td>
</tr>
<tr>
<td>Employment over Population (percent)</td>
<td>-0.654*** (-0.239)</td>
<td>0.817*** (-0.176)</td>
<td>-0.067 (-0.065)</td>
</tr>
<tr>
<td>Urban Population (percent)</td>
<td>-0.005 (-0.003)</td>
<td>0.004 (-0.003)</td>
<td>0.001 (-0.001)</td>
</tr>
<tr>
<td>Households with water supply</td>
<td>-0.045 (-0.091)</td>
<td>0.227*** (-0.076)</td>
<td>-0.050*** (-0.015)</td>
</tr>
<tr>
<td>Time trend (year)</td>
<td>0.024*** (-0.005)</td>
<td>-0.040*** (-0.004)</td>
<td>0.004*** (-0.001)</td>
</tr>
<tr>
<td>Constant</td>
<td>-43.827*** (-8.762)</td>
<td>73.483*** (-8.377)</td>
<td>-7.089*** (-2.036)</td>
</tr>
<tr>
<td>Observations</td>
<td>255</td>
<td>255</td>
<td>255</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.409</td>
<td>0.566</td>
<td>0.236</td>
</tr>
<tr>
<td>Number of NUTS3</td>
<td>51</td>
<td>51</td>
<td>51</td>
</tr>
</tbody>
</table>

Notes: This table present the results of 3 OLS Regression using Fixed Effects with 255 observations for all the 51 electoral regions of Greece. The 1\textsuperscript{st} column’s results have as dependent variable the Right-Center, the 2\textsuperscript{nd} Column has the Center-Left and the last Column the Left. As independent Variables for all the Regressions are Education, Unemployment, Agriculture, Employment, Urban, Standard of Living and Year. Also, in parenthesis there are the Standard Errors and the statistical significance is *** p<0.01, ** p<0.05, * p<0.1 confidence level.
constant increase! The independent variable of Agriculture is positive and statistical significance for 10%.

Finally, the last results of OLS regression using fixed effects show that: if we increase the Far-Right political party by 1 unit then the variable of Education is negative and not statistical significant. Also people whose their professions are in relative terms with agricultural work is positive. Another thing we have to report is that, the Unemployment ratio is negative but it is statistical significant at the level of 5%, such as the amount of people who work is negative but not statistical significant. However, if we increase the Far-Right political party by 1 unit, the effects to people’s standard of living is negative for confidence level 1%.

All in all, we realize that, according to the Empirical Results from the OLS regression using Fixed Effects, the most positive results were for the political party of Center-Left. Almost, the most results from the independent variables were statistical significant at 10%.
7. Conclusion

We study how the political parties of Greece could categorize based on the party's political ideology, from 1974 until the last elections in 2015. These categories created base on the paper of Inglehart & Norris (2016), who they use the Chapel Hill index. Classifying already the political parties we have verified the results. Also, during the Crisis, the populism raised and as a result the populist political parties won the people’s votes on the Greek Parliament. Worths to say that, Powell & Whitten (1993), Lewis-Beck & Stegmaier (2000) report that voters is supposed to look back at the government’s performance and work and vote asymmetrically, punishing incumbent governments more than the less policy-coherent opposing parties, without distinguishing between left-wing and right-wing ideology.

I succeeded to draw some statistic results (i.e. gender, age, education, occupation, field of study) about the Parliament members of the Greek Parliament from the period 1974-2015. Some of them follows: the mean age of the politicians is 51 years old and I believe that year after year this number will be probably smaller. Also the amount of women participation was smaller, but during all these elections the presence of women is more often.

According this, we have to report that there is a research study\(^2\). The purpose of the survey was to find out what criteria the new generation chooses candidates in

\(^2\) This research study was conducted by the scientific team of apodoxi.gr. A short anonymous questionnaire was issued, asking for the respondent’s age, gender and educational level. The questions were hierarchical in order to highlight the main merits of the electoral candidate (always in the perspective and perspective of young people). The survey involved 96 people (48 men and 48 women) from three cities (Heraklion, Athens, Thessaloniki). The average age of the sample is 28.2 years. The educational level of the sample is divided as follows: primary education (26%), secondary education (32%) and tertiary education (42%). Source: [http://www.apodoxi.gr/muepsilon-piomicroniotaalpha-kapparhoiotatau942rhoiotaalpha-psieta phi943zet aomicronupsilonnu-OMICRONIOTA-NUSPHI941OMICRONIOTA.html](http://www.apodoxi.gr/muepsilon-piomicroniotaalpha-kapparhoiotatau942rhoiotaalpha-psieta phi943zetaomicronupsilonnu-OMICRONIOTA-NUSPHI941OMICRONIOTA.html)
the elections. The results showed that: Young people choose to support candidates on the basis of the following characteristics: social offer, studies - curriculum vitae, political speech and political presence. Less powerful are the following features: party origin, popularity, younger candidate age and affinity with the candidate. While weak characteristics are: the origin and gender of the candidate.

Another thing we studied is the correlation between the Center left and the Center Right political parties. About the most important variable, Education, we show mostly a positive correlation between them, the literature agrees too about the results. Also we check the variable of education too, in this case the results are almost 50-50. In the end, we point out the results between the main variables, Education & Unemployment, only the period of 1981 we have positive correlation.

Another thing which we are to work is the impact of the rising unemployment rates due to the global economic crisis of 2007-2009 and the rising of populism and anti-capitalist views. This situation (economic crisis, rise of populism) affects the country's economic aggregates (such as unemployment, living standards, GDP, etc.) too. Luckily, the results of the OLS Regressions showed that, at the electoral district level, only for the Center Right political party are optimistic for all the variables. We observe also that the results for the Center left is going to rise if we increase the independent variables by 1 unit. However the Far Right Agreed with Goulas et. Al., (2014) who supported that people voted the Far right political parties by reaction to the economic difficulties, however they really know that this political party can’t solve the economic problems.

Finally, via the statistics results from the political parties, we can see if the populism is on rise. We agree with the literature about the populist parties, as we can
see from the results that, when the economy of our country worsed, the Greek voters disappointed and turn to non-orthodox populist parties, like left wing and right wing.
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