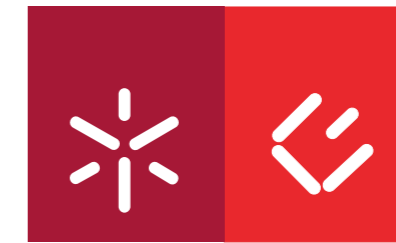**Universidade do Minho**
Escola de Economia e Gestão

Carlos André da Silva Gama Nogueira

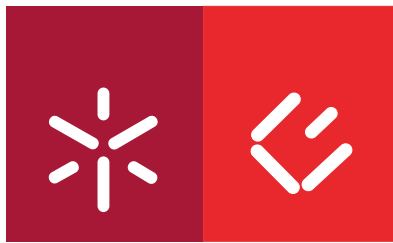**Economic Determinants of the European Union's Popularity.**

Junho de 2010

Universidade do Minho

Escola de Economia e Gestão

Carlos André da Silva Gama Nogueira

Economic Determinants of the European Union's Popularity.

Tese de Mestrado
Mestrado em Economia

Trabalho realizado sob a orientação da
Professora Doutora Linda Gonçalves Veiga

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À minha família e aos meus amigos,

pelo apoio incondicional.

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ECONOMIC DETERMINANTS OF THE EUROPEAN UNION'S POPULARITY

Abstract

The purpose this dissertation is to test the impact of macroeconomic outcomes on citizens' support for the European integration process. Citizens' support is vital for the European integration process mainly because without their support, national governments' will not endorse increases in the levels of integration. In order to analyse the impact of the economic conditions on the European Union's popularity at an aggregate level, a popularity function was estimated for a panel of the first fifteen EU members, between 1974 and 2008. To control for countries' different characteristics at different levels, a fixed effects estimation method was used.

The results indicate a negative impact of unemployment variations on EU's citizen support for the EU, and a positive impact of the degree of openness of the economies and of the percentage of trade with other EU countries. There is also evidence of the existence of a honeymoon effect in the first three years of each countries EU membership, and of a decrease in citizens' support for the EU as time in the Union increases. When the sample is split into different integration stages, econometric results suggest that significant departures of the economic variables from what citizens consider to be 'acceptable' levels increase the weight citizens attribute to them in their evaluations of the EU's performance.

These results can have important implications on the EU's policies since they reveal which variables the EU should focus on when it considers increasing its integration levels.

Keywords: European Union, popularity, economic performance, panel-data

DETERMINANTES ECONÓMICOS DA POPULARIDADE DA UNIÃO EUROPEIA

Resumo

O objectivo desta dissertação é analisar o impacto da performance económica de cada país na opinião dos seus cidadãos sobre o processo de integração europeia. O apoio dos cidadãos é vital para o processo de integração europeia principalmente porque sem ele os governos nacionais não endossarão aumentos nos níveis de integração europeia. De modo a analisar o impacto das condições económicas na popularidade da União Europeia (UE) a um nível agregado, foi estimada uma função popularidade para um painel composto pelos quinze primeiros membros da UE, entre 1974 e 2008. Para controlar para as diferentes características dos países aos mais diversos níveis, foi usado um método de estimação de efeitos fixos.

Os resultados indicam um impacto negativo das variações do desemprego na opinião dos cidadãos sobre a UE, e um impacto positivo do nível de abertura da economia e da percentagem de comércio realizada com outros países da UE. Existe também evidência da existência de um efeito lua-de-mel nos primeiros três anos após a entrada de cada país na UE, e de uma diminuição da popularidade da UE em cada país ao longo do tempo. Quando a amostra é dividida em diferentes fases de integração, os resultados econométricos sugerem que desvios significativos de uma variável económica daquilo que os cidadãos consideram valores 'aceitáveis' aumentam o peso que os indivíduos lhes atribuem nas suas avaliações da performance da UE.

Estes resultados podem ter implicações importantes nas políticas da UE dado que revelam em que variáveis a UE se deve concentrar quando considerar aumentar os seus níveis de integração.

Palavras-chave: União Europeia, popularidade, performance económica, dados em painel

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List of Abbreviations

DOE: Degree of Openness of the Economy

EB: Eurobarometer

EC: European Comission

ECB: European Central Bank

ECSC: European Coal and Steel Community

EDP: Excessive Deficit Procedures

EEC: European Economic Community

EMU: European Monetary Union

EP: European Parliament

ERM: Exchange Rate Mechanism

EU: European Union

OLS: Ordinary Least Squares

PBC: Political Business Cycle

SEA: Single European Act

SGP: Stability and Growth Pact

TEU: Treaty of the European Union

VP: Vote-Popularity

1. Introduction

The purpose of this thesis is to analyze the impact of economic conditions on European Union's (EU) popularity. Public support is vital for the European integration process. National governments will not decide to move forward to higher levels of integration within the EU's scope if they believe citizens don't support it, especially if this decision reduces their chances of re-election. Therefore, in order for the EU to continue its integration process, it is important to understand the determinants of citizens' support for it.

In little more than half a century of existence, the EU has become one of the most advanced processes of international economic and political integration in the world. It started as a common market for a few selected products, with only six countries[1], aiming at guaranteeing peace in the days that followed the end Second World War, but the European integration process led the EU to become a political and economic union that encompasses twenty seven countries and close to 500 million citizens, with its own directly elected parliament, its own budget and its own constitution. The European integration process was slow and progressive, and it was lead by treaties that represented steps towards higher levels of integration, such as the Single European Act (1986) or the Treaty of the European Union (1991). But as the EU was changing during the second half of the twentieth century, so was its economy.

After the Second World War ended, up until the end of the sixties, most developed European countries had low levels of inflation, stable and relatively low unemployment rates and healthy GDP growth rates, but it all began to change after 1970. The two oil crises, one in the beginning of the decade and the other in the end, shook the world's economy, leading to high levels of inflation together with high levels of unemployment and much smaller GDP growth rates, significantly changing the economic outlook of western economies. Although inflation returned to lower levels after the two oil shocks, unemployment rates persisted at levels higher than those observed before the two oil crises. This wasn't an easy environment for economic policymakers to deal with. As economic paradigms changed and unforeseen economic scenarios became true, policymaking decision became even more difficult than before. If it was rather clear that the classic economical tools previously used to fight adverse economic conditions weren't useful in the new scenario, the new path to follow wasn't consensual. If we take

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[1] Belgium, France, Germany, Italy, Luxembourg and Netherlands.

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a closer look at the economic measures taken by governments in the UK, the USA or France at that time, we conclude that there were profound differences in the way each country tackled relatively similar problems, even though some governments were ideologically close.

During the same period, the increasing levels of integration of the EU inherently reduced the degrees of freedom in economic policymaking. This was visible even in countries that were not EU members at the time, but wanted to join the EU. Although they were not legally bounded to the EU's policies and recommendations, they had to follow them closely in order to assure they would be accepted as members in the future.

Taking into consideration the transfer of powers in the economic field from the national governments to the EU's supranational entities – with the adoption of a common currency as the its most emblematic and visible feature – it is reasonable to assume that the EU is in part responsible for each state member's economic outcomes. Therefore, it is expectable that the economic performances of each country influence citizens' opinions about the EU and their support for the European integration process.

The idea that economic performance may have a significant impact on EU's popularity is closely related to the political business cycle (PBC) literature's hypothesis that economic outcomes have a significant impact on elections' results. If governments are held responsible for economic outcomes, then when economies are prospering the governments are rewarded with more votes in the following elections, and the reverse happens when economic conditions are less favourable to the electorate. Given that the European integration process implies a transfer of powers from national governments to the EU, it is expectable that the EU would also be accounted responsible for the economic conditions of each country. Moreover, as integration increases over time, it is plausible for citizens to understand economic outcomes more as a result of the EU's decisions than as an outcome of their governments' actions.

At this stage, it is important to stress the parallelism between vote/popularity (VP) functions, the PBC literature and the purpose of my thesis. The PBC literature is more prolific when it comes to vote functions than it is on popularity functions. This can be due to the fact that popularity functions are seen, in part, as an alternative to vote functions that allow researchers to use larger datasets to assess government's popularity, since elections in most countries are held only one time every four or five years. Although elections' outcomes are the ultimate and more precise way to assess public's opinion about their government, some small sample issues may arise on vote functions

due to the small number of observations available. In this case, the choice for a popularity function to study the determinants of the support for the European integration process comes from the fact that EU citizens are still today far away from fully identifying themselves with the EU in the same way they do with their nations. Accordingly, they use European Parliament elections mainly as a way to signal their support or lack of it for their national governments, making them second order elections, as shown by Reif and Schmitt (1980), Reif (1984), Marsh (1998) and Kousser (2004). Therefore, European Parliament elections' results would be a poor measure of the EU's popularity. In spite of the fact that the use of a popularity function greatly increases my observations and this can be a valuable asset to my research, it is important to stress that it is not the main reason behind my decision.

As far I am aware of, this is the first study on the economic determinants of the support for the European integration process with such a large sample. I will use data between 1974 and 2008, for the first fifteen EU Members[2]. Although some authors like Eichenberg and Dalton (1993), Anderson and Kaltenthaler (1996) or Mahler, Taylor and Wozniak (2000) have already analysed the impact of macroeconomic outcomes on the support for the EU, their samples are much smaller, both in the number of periods and the number of countries. The study with a larger sample that I am aware of has 152 observations, while my baseline model has 530 observations.

The structure of this dissertation is as follows: Section 2 will present the most relevant literature regarding the VP-functions, Political Business Cycle, the support for the European integration process, as well as a description of the EU's history and its current structure; Section 3 presents the data used and the respective sources; Section 4 will explain the empirical and econometric approach and present the estimations' results; Section 5 finishes off up the dissertation with the most important conclusions and work yet to be done.

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[2] Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

2. Literature Review

2.1 Economics and Elections

Vote and popularity functions were first introduced to the economic science in the early seventies. The first popularity function was formulated by Mueller (1970) in his analysis of the United States President's popularity using data from monthly polls around the country. Kramer (1971) came up with the first vote function, when he studied the impact of economic conditions on US Congress' elections outcomes. Around the same time, Goodhart and Bhansali (1970) also came up with a popularity function for the UK Prime Minister. As in Mueller (1970), they also used monthly polls to access Prime Minister's popularity. Regardless of the different approaches taken by each of these authors, they all mentioned Downs (1957) seminal book as the theoretical basis for their work.

Following these pioneering works, several other economists developed new models to explain voters' behaviour more accurately. The starting premise was both simple and compelling: since governments are held responsible for their countries' economic performances, their popularity and results at elections should be influenced by them. Even though the PBC literature is extensive, there is still much discussion about the role economics plays in election outcomes and in governments' popularity. Some believe that the economy influences voting decisions in ways that allow the governments to take advantage of them, manipulating the economy in pre-election periods to increase their chances of re-election – opportunistic PBC. Others believe that economic voting leads to business cycles due to the differences in ideologies between the competing parties – partisan PBC. There are also disagreements over several aspects of individual decisions, and over which variables to use in order to measure economic voting. In the following sections I will take a look at the different streams of PBC literature and its main controversies.

2.1.1 Opportunistic Political Business Cycles

One stream of literature on PBC literature argues that macroeconomic outcomes around election time are manipulated by incumbents in order to increase their chances of re-election. These authors based most of their work on Nordhaus' (1975) theoretical model of the political business cycle that studies governments' optimal choices along a

Philips Curve. The model is solved both for the long run and the short run. Relying on voters being myopic and homogeneous, the author shows that it is optimal for governments to induce a business cycle in the short run through their policy making decisions. This would lead to low levels of unemployment before elections, followed by higher levels of inflation. After elections, the winner would then let unemployment rise in order to fight the previous burst of inflation. Works by authors like Fair (1978) confirm that high real GDP per capita growth rates and lower unemployment rates before elections significantly increase incumbents' chances of re-election.

Nordhaus' model was criticized because it relied on the hypothesis of adaptative expectations. If voters were fully rational and, in presence of complete information, they would understand the costs associated with the expansionary policies before elections. Therefore, they would not vote for the incumbent party since they would realize that the adoption of opportunistic policies worsened their well being after elections. This means that policies intended to increase incumbents' votes before the elections could, in some cases, lead to a decrease in votes. But if voters behaved like that and governments were aware of it beforehand, they would have no incentive to induce a business cycle in the first place.

Another important critique made to the early opportunistic PBC models is that they assume that monetary policy is in the hands of governments. This assumption is particularly relevant in this thesis since it focuses its analysis on the first fifteen EU members and most of them already gave away the control of monetary policy over to the European Central Bank (ECB). Without control over monetary policy, national governments are less able to manipulate aggregate demand, and therefore to induce a PBC. It is however possible to argue that fiscal policy can also be used as a tool to generate such cycles.

Given the mentioned critiques, it seems complicated to conceptually accept a model that encompasses both opportunistic business cycles and fully rational voters at the same time.

In the wake of all this criticism, Rogoff and Sibert (1988) came up with the first of several rational opportunistic PBC models, like those by Rogoff (1990) and Persson and Tabelini (1990). According to these models, different parties have different levels of competence. In Rogoff and Sibert's (1988) model, each candidate has different costs to finance the same levels of expenditure. In a context of asymmetric information, a competent incumbent has an incentive to signal its competence. Even though he might

be giving a false signal, or at least an exaggerated one, voters know that such signal could not be given by a less competent incumbent. Therefore, although the increase in public expenditure before elections will imply higher seignorage taxes afterwards, voters will still be better off by voting in the incumbent if the signal received makes them believe he is the most competent candidate. This would basically mean that he is the candidate that would need less tax revenue to finance the same level of expenditure. This model formulation allows the co-existence of opportunistic political business cycles and fully rational voters, thus leading to the possibility of voters rationally responding in a positive way to governments' expansionary policies before election time, even at the cost of future taxes. As for Persson and Tabelini's (1990) model, it defines incumbents' competence as their ability to promote economic growth without inflation.

The opportunistic PBC line of reasoning assumes that voters' preferences are homogeneous and that incumbents are all alike, because they all want to be re-elected. There is however large evidence that a significant part of the electorate exhibits strong loyalty to certain parties and that this loyalty is reciprocal. That is, parties stick to ideals and adapt policies that are favourable to those who systematically vote on them. In fact, at election times, different parties make different promises. If voters were homogeneous, as the opportunistic PBC models suggest, then all parties would converge to the same policy promises, if their main goal was to win the elections. This takes us to an alternative stream of research, parallel to that of the opportunistic PBC: the partisan PBC models.

2.1.2 Partisan Political Business Cycles

The partisan PBC line of thought argued that the motivation behind policy making decisions that induced PBC was not governments' opportunistic nature, but differences in parties' ideologies. The main question, as Drazen (2000) puts it, is then "whether alternation of parties with different preferred policies can lead to a cycle when voters are rational". This view assumes that voters have different preferences for the competing parties, regardless of past or future economic conditions. For instance, some part of the population, like blue collar workers, can feel more threatened by unemployment perspectives, while wealthier groups might feel that inflation is more likely to become a menace to their income. While voters more concerned about

unemployment will be expected to support parties that have a greater concern about it – usually left wing parties -, voters who care more about inflation will probably support those parties more concentrated on fighting inflation – mostly right wing parties. This hypothesis is supported by studies such as Tufte (1978) and Hibbs (1982) that find consistent results supporting the idea that different occupational groups tend to care more about different economic variables. This in turn has a significant impact on their assessment of national economic conditions, as well as on the candidates they decide to support.

Hibbs (1977) conceptualizes the first partisan political business cycle model inspired by the different preferences regarding inflation and unemployment between republicans and democrats in the US. This dichotomy can easily be extended to any left/right wing parties in other countries. The main result of Hibbs' model is a business cycle generated by party rotation in office, with higher unemployment and lower inflation when the government is lead by a right wing party, and lower unemployment with higher levels of inflation when the government is lead by a left wing party. The different combinations of inflation and unemployment are chosen along either an expectations-adjusted Philips Curve with adaptive expectations or a Philips Curve with a trade-off between unemployment and anticipated inflation. The latter shows rather clearly one of the basic failures of this type of models: much like the opportunistic PBC models, partisan PBC models also assume that voters constantly make mistakes while forming their expectations.

In an attempt to integrate opportunistic and ideological behaviour, Frey and Schneider (1978) propose a "mixed" model, where governments act as it is assumed in the partisan PBC framework, but only as far as it doesn't harm their chances of re-election. When the incumbents' chances of re-election become dangerously small, then the governments' policies will be lead by an opportunistic behaviour, as postulated by the opportunistic PBC literature. The authors find evidence of both kinds of behaviours depending on the incumbents' confidence on the election outcome, as predicted by the model.

A different alternative to support the partisan PBC framework and surpass the critique to Hibbs' (1977) model that voters make systematic mistakes, was proposed by Alesina (1987, 1988). In these two papers, the author presented a partisan PBC model with rational expectations, where business cycles are generated by uncertainty about elections' outcome, combined with differences in parties' ideologies. The model

assumes elections happen every other year. Alesina argues that negotiations on nominal wages take into account expectations about inflation. Unexpected levels of inflation have real effects as long as contracts are not signed every period, as assumed in the model. Voters' expectations about inflation depend on the ideology of the next government. Since contracts are negotiated before election time, individuals have to guess who is going to be in office after the next election. They, therefore, associate a probability of winning to each party and, given each party's different optimal policy and probability of winning, make their predictions about future inflation. The higher the difference between agents' predictions about elections' outcome and the actual outcome, the higher the partisan effect will be. But if the election outcome is certain, expected inflation will meet actual inflation and there will be no business cycle. This microeconomic structure allows for a partisan PBC with rational agents. A recession is expected when the winning party is a right wing party (Republican for the US), and an expansion if the winner is a left wing party (Democrat for the US). The expected inflation will stand somewhere between the right wing preferred inflation level and the left wing party desired inflation level. The effect disappears in the second period and output growth should be approximately the same under either type of administration, only with higher inflation under a left wing government. The model also concludes that if the contending parties could reach an agreement there would be no unemployment variations, thus making the voters better off. The values of such a consensus would depend on the probability of election of each candidate, treated as exogenous in the model. But it is not very likely that, once in office, the winning party would have any incentive to honour such an agreement. One possibility to solve this drawback would be to have an independent institution controlling inflation rates, like a central bank.

Yet another alternative intended to overcome early criticism of partisan PBC was proposed by Hibbs (1994) through a "model of changing objectives". Again, elections happen every other year. Similarly to Alesina's (1987), this model also presents larger differences between different parties' policies in the first year after the election when compared to the second. In this case however, the differences are not due to uncertainty about the election outcome but a result of uncertainty about the way the economy works. This leads to uncertainty about the fit of each economic policy to pursue the intended goals. Conceptually, each candidate estimates the natural unemployment rate, and the gap between their estimation and the actual value of the natural unemployment

rate (which they can observe only if they win the election) and the parties underlying preferences will generate the business cycle.

2.1.3 Voters' Behaviour

Although it is consensual that economic conditions play a role in citizens' voting decisions, the nature of such relationship is still subject to much debate – good reviews of the literature can be found in Nannestad and Paldam (1994), Lewis-Beck and Stegmaier (2000) and Hibbs (2006).

2.1.3.1 Sociotropic or Egotropic?

One of the controversial points in PBC literature concerns voters' view of the economy. If voters' perception of national economic conditions is based on their households' financial situation, they are said to be egotropic. If, on the contrary, voters look at a broader perspective of the economy, showing concern not only about their personal situation but also about that of their peers', voters are said to be sociotropic. Empirical results have mostly supported voters as being sociotropic, with the conclusions by Kinder and Kiewiet (1979) being particularly supportive of this view, on what came to be known as the "Kinder and Kiewiet result" – the absence of egotropic voting and the presence of strong sociotropic voting. Their results were afterwards confirmed by larger and different data sets. Even though some researchers find an egotropic component on economic voting they always find a significant sociotropic component too. It is, therefore, fair to conclude that the proof for sociotropic voting is very strong while evidence of egotropic voting is scarcer and significantly weaker, when one considers the political business cycle literature as a whole.

2.1.3.2 Retrospective or Prospective Voting?

The first and more prominent critiques of both the opportunistic and the partisan PBC models focused on the assumption of voters' purely retrospective behaviour. According to the critics, individuals are rational enough to know that their votes do more than evaluate past performance: they define future policies. Therefore, voters should also focus on what they expect for the future from each party in case of victory

in the elections, instead of concentrating only on what happened in the past. Retrospective voters define their economic vote based purely on past economic performance, and according to the critiques this is not a rational behaviour since it may ignore important information about future economic policy. For instance, it wouldn't be logical for a voter to punish a government for a bad economic period if there is strong suspicion that the opponent party in the elections won't be able to do any better than the incumbent did. The prospective nature of voting was postulated by Downs, for most researchers the theoretical starting point for all the PBC literature. Nonetheless, retrospective voting is not necessarily a signal of a somewhat irrational behaviour. Ferejohn (1986) defines a model where retrospective voting is not only rational but optimal. Fiorina (1981) followed a similar path to conclude that retrospective voting can really be a rational choice.

In the end, one should probably consider the possibility that voting has both a retrospective and a prospective side. Going back to Downs work, he actually defended that voters use past economic performance to make their predictions about future economic policies and outcomes. In this context voters are forward looking (i.e prospective) but always keep an eye on the past. Past events may not be the only fundaments for the formation of individuals' expectations, as Lewis-Beck (1988) demonstrates, but they are probably an important part of it.

Rogoff and Sibert (1988) and Rogoff (1990) "signalling models" originated the first setup of what could be called "rational retrospection". However, empirical studies of models such as Alesina, Londegran and Rosenthal (1993) or Alesina and Rosenthal (1995) still found significant proof of naïve retrospective voting. Veiga and Veiga (2004a), in their study on the determinants of vote intentions in Portugal between 1986 and 2001, also found strong evidence that voters are retrospective. Moreover, Hibbs (2000) too found evidence of pure retrospective vote in his "Peace and Bread Model" too. Therefore, we may conclude that there is strong support for Key's (1966) argument about the retrospective nature of voting.

2.1.3.3 Are voters myopic?

Another issue that still raises significant debate and disagreement across the PBC literature is how far back in time voters look when they make their assessments of the state of the economy. On one hand, authors like Fair (1978), Paldam and Nannestad (2000) or Veiga (1998) find voters to be myopic, only looking back to the more recent values of variables such as inflation, unemployment rate or GDP growth, when they form their opinions about the state of the economy. On the other hand, we have authors like Pletzman (1990) or Hibbs (2000), who state that the economic performance during the whole electoral cycle is taken into consideration by voters when they assess their country's economic performance.

With all this being said, it isn't clear what kind of lag structure a model aimed to understand the origin and magnitude of the economic vote should have. Nonetheless, as in most of the issues regarding the PBC literature, the most accurate answer will probably lie somewhere between the two more extreme views. In this particular issue, it is likely that voters are not as myopic as to only consider last year's economic performance to assess incumbent's competence in handling the economy, but myopic enough to give more weight to more recent data while making that evaluation than to data from the beginning of the electoral cycle.

2.1.4 The state of the art

The most recent research on the political business cycles has diverged into two main different approaches: The first faces the issue at an individual (i.e micro) level, with models of higher complexity, like the two stage models of Dutch and Stevenson (2008) and Brug, Eijk and Franklin (2007). In those models, the authors control for a significant number of contextual variables, in both stages, in order to purge most of the instability found across the preceding PBC literature. The second approach takes a global view at voting decisions, looking at macroeconomic variables and election outcomes, like the works by Hibbs (2000) or Chappell and Veiga (2000). Veiga and Veiga (2004b) also take an aggregate approach to the determinants of popularity for different political entities in Portugal, finding proof consistent with the responsabilization hypothesis, with unemployment playing being particularly determinant on those entities popularity.

Since this thesis will take an aggregate view of the economy, the first stream of research, with all its merits and contributions to our knowledge of the nature and the mechanisms of individuals' voting decisions, shall not be thoroughly analyzed. Some insights can and will be used if they are relevant to the research in hands, but at this stage it is important to focus on models that resemble in a closer way the model to be developed.

Hibbs (2000) and its "Peace and Bread Model" can be pointed out as one of the most important contributions for the PBC literature in the US economy of the last decade. Hibbs showed that when the model accounts for the existence of "war years" (i.e years when the USA is involved in war), the weighted-average growth of real disposable personal income per capita explains almost all of election outcome's variations in "non-war years". In "war years", the number of American military casualties in action, together with the same economic variable, still accounts for most of election outcome's variations. One of the biggest surprises of the paper's results is that none of the additional variables tested added anything valuable to the model.

In a closer approach to what I intend to do in my thesis, Chappell and Veiga (2000) analyzed a panel of 13 Western countries' electoral outcomes for almost forty years, using different alternatives to measure economic performance, each one corresponding to different economic paradigms. They found out that only inflation is consistently significant on individuals' voting decisions. Other macroeconomic variables, such as real output growth rate, don't seem to significantly influence citizens' voting decisions. The authors argue that this can be a consequence of voters perceiving economic growth, and other real economic variables, as variables that are harder to influence by their governments when compared to inflation, therefore not accounting governments responsible for their fluctuations.

2.2 The European Integration Process

In order to fully understand the evolution of the European integration process and its implications on the EU's popularity over time, it is essential to acknowledge the motivations that drove it in the first place. Although political reasons are behind most cases of international economic integration, they also bring some important economic benefits, namely:

- Enhanced productivity, given that higher levels of competition lead to increased specialization, and this, in turn, according to the comparative advantage theory, enhances productivity.

- If the community negotiates as an unit, it assumes a stronger international position regarding trading agreements

- Larger markets allow producers to take more advantage of economies of scale;

- Policy coordination allows for common targets, such as full unemployment or stable economic growth, to be pursued at the same pace by all countries involved.

These are all potential gains. A successful economic integration is one that takes advantage of all of those potential gains, or at least of most of them.

From the first days of the European Coal and Steel Community (ECSC), in 1952, to the current days, the European integration process has come a long way. Except for the most visionary minds, at the beginning most wouldn't believe that, what was first intended to be a cooperation platform to ensure peace between former enemies in the Second World War would eventually become one of the most advanced and ambitious project of international political and economic integration in the world. Figure 1 presents a timeline with the major historic events in the EU's history.

Figure 1 – EU's History Timeline

Year	1951	1957	1973	1981	1986	1993	1995	1996	1999	2004	2007
Event	Treaty of Paris.	Treaty of Rome.	First Enlargement.	Second Enlargement.	Single European Act. Third Enlargement.	Treaty of the European Union.	Fourth Enlargement.	Stability and Growth Pact	Birth of the Euroarea.	Fifth Enlargement	Sixth Enlargement

The following sections present a brief description of the different integration phases in the EU history since its formation as the European Economic Community (EEC). A more detailed and complete history of the EU can be found in Artis and Nixson (2001).

2.2.1 The early days of the European Economic Community

The European Coal and Steel Community (ECSC), established in the Treaty of Paris, in 1951, took the first step into the European integration process, by setting up a common market for coal and steel. It comprised of only six countries at its beginning: Belgium, France, Germany, Italy and Luxembourg. The success of the ECSC project can be explained by the fact that its concept encompassed both economic and political advantages to its members: if, on one hand, it allowed for a joint effort to reconvert the war industries into productive activities, on the other hand this effort made it impossible for France and Germany to go to war against each other again since they couldn't produce weapons without the other members' knowledge and permission. The ECSC was also a pioneer in nominating a supranational entity to manage all matters within its sphere of intervention.

The European Economic Community (EEC) was established by through the Treaty of Rome in 1957. During its first decade and half of its existence, the community followed the path of integration through the creation of a common market for goods and services, as well as through the definition of common policies in such important economic areas as agriculture and trade. Interstate tariffs were all removed before the 1st July 1968. In the end, the EEC was a less supranational entity than the ECSC, which was required to avoid further political controversies that could eventually endanger the creation of the community. Nonetheless, this was a small price to pay for a more ambitious venture, given that integrating the whole economy came out to be more complicated and uncertain than integrating only a specific sector.

The decision making process of the community was supported by the different institutions that were created along with it: the Council of Ministers, the European Commission (EC), the European Parliament (EP) and the Court of Justice.

The following decade also presented several small steps towards a higher degree of economic and political integration, from including environmental problems in the EEC agenda to the establishment of direct elections to the European Parliament. The seventies also saw the first enlargement of the EEC, with the entries of Denmark, Ireland and the United Kingdom in 1973. In 1974, the EEC created the European Council, in order to bring country leaders closer to the decision making process of the community. This allowed the EEC to finally overcome the impasse brought by the

Common Agricultural Policy (PAC). In 1981 Greece joined the community, raising the number of members to 10.

2.2.2 The Single European Act - 1986

The Single European Act (SEA), signed in 1986 to come into effect on July 1ˢᵗ 1987, was undoubtedly a giant leap in the European integration process. After the two oil crises of the 70's and the consequent recessions, consensus was reached between the EEC members on the direction and pace at which the community should be moving, as well as on the urgency to put such consensus to fruition as soon as possible. In the eighties, the EEC's economy was still not even close to the performances of global competitors like the USA or Japan. It was clear that the EEC's economy needed to have a more flexible and liberalized market in order to compete as a global power in the world economy, which was ultimately its members' main ambition.

Among the most important SEA contributions were the commitment to complete the single market until the end of 1992, and the agreement to raise the integration of decision making processes across state members. The years preceding the SEA also made clear that the changing political international environment asked for the EEC members' external policies to converge into a unitary front, in order for the community to be an important player in the new international scheme.

1986 was also the year when Portugal and Spain joined the EEC, further extending the community to the South European, less developed countries.

With the decisions of the SEA in motion, the idea of an European Monetary Union (EMU) gaining momentum after the publishing of the Delors Report, and the political, economic and social repercussions of the Berlin Wall's fall being felt all over the EEC territories (the reunification of Germany originated the only enlargement without formal accession in the EEC's history), the negotiations for the Treaty of European Union (TEU) proceeded rather quickly.

2.2.3 The Treaty of the European Union – 1991

The TEU was signed in Maastricht in December 1991, and came into effect after November 1993. The main driving forces behind the idea of the TEU mentioned before were soon followed by a whole new set of intentions by the state members, aiming to raise the bar not only in terms of economic integration, but also in fields such as security and foreign policy, among others. The wide range of the TEU intentions, contemplating not only the setting of new provisions on the mentioned areas, but also amendments to the EEC, ECSC and Euratom treaties, made it a highly complex document. It is therefore common to describe it as a set of three pillars, in order to simplify its structure: the first, concerning the economic activity of the union*;* the second pillar including common foreign and security policy; and the third, contemplating justice and home affairs, which in turn includes several issues, such as police cooperation, immigration affairs, fraud combat and others.

The fall of the former Soviet Union was also an important factor in some of the structural changes included in the TEU, since it was common belief among the members that the fall would imply, with time, an increasing number of applications to EU membership, and the members did not believe that the EU previous structure was prepared to deal with that eventuality. It later became clear that the members' predictions were accurate, since from 1991 to 2007 the EU members' number increased from 12 to 27.

The TEU also addressed other vital issues for the union. The most significant was the commitment to finish the EMU until the end of the decade. In order to assure that the EMU was accomplished, several conversion criteria – also known as Maastricht criteria – were set. These criteria, to be met by any country wanting to join the EMU, were:

- Each country's inflation could not be more than 1½ percentage point higher than the average of the three members with lower inflation rates.
- Long-term interest rates should be within 2 percentage points of those same countries.
- In the same period, members should keep their exchange rates within the bands defined in the Exchange Rate Mechanism (ERM), with no stress or devaluation.

- Budget deficit to GDP ratio should be under 3%, and the ratio of government debt to GDP should be under 60%. In certain pre-defined cases however, infringements were allowed.

- Finally, an independent central bank was also mandatory.

A Cohesion Fund was created in order to transfer funds to the less developed members. EU's infrastructures, consumer protection rules, industrial policy, among other matters, were also addressed in the TEU. In the end, the TEU represented an enormous leap for the EU, with significant institutional reforms and the definition of deadlines for the ambitious EMU project. Those profound changes were symbolically embodied in the union's new name: the Economic European Community was now the European Union.

2.2.4 The Amsterdam Treaty and the Growth and Stability Pact – 1996

The next treaty to be signed in the EU, the Amsterdam Treaty (1996/97), was more modest in its contribution for the European integration process, when compared to its predecessors. There were even difficulties with its ratification in Denmark, France and the UK. Nonetheless, it was an important step towards new levels of integration. It included an employment chapter in its provisions and also environmental, public health and consumer protection policies following the "mad cow disease" burst in the precedent years. Improvements on common foreign and security policies were also made.

One year before, in 1995, the EU became a 15 members union, with the entrance of Austria, Finland and Sweden.

Economists will probably remember the year of 1996 most for the Stability and Growth Pact (SGP), a decisive step which guaranteed that members' behaviour regarding their economies was convergent and prudent enough to guarantee the full realization of the EMU in the deadline defined at the TEU.

The SGP enforced two particular Maastricht Criteria: the 3% limit for the budget deficit to GDP ratio, and the limit of 60% for the national debt to GDP ratio. It contemplated fiscal monitoring, warnings and sanctions for those who were not able to respect those limits.

The limits for the budget deficit and national debt deeply influence members' fiscal policy autonomy. For instance, they diminish governments' ability to intervene in the economy, since members are unable to significantly increase public expenditure if they are already too close to those limits. This kind of actions can be particularly relevant in times of recession. By taking away these policy instruments from national governments the EU becomes more responsible for members' economic outcomes, since national governments can argue that the worsening of its country's economy is a consequence of its inability to intervene in the economy due to the limits set by the TEU. This relates to the purpose of my thesis, since I intend to study if EU citizens are aware that higher levels of integration implicate more power of the EU over its members, their economic policies and ultimately also their economic outcomes.

In order to be closely monitored by the European Commission (EC), members were required to deliver annual stability/convergence programmes. In these documents, members should demonstrate they will adopt, in the next four years, fiscal policies that comply with the SGP objectives. In case of disagreement about the policies undertaken by a member, the commission might either issue a warning or recommend specific procedures. If a member fails to keep the budget deficit under 3%, Excessive Deficit Procedures (EDP) may be implemented, which the member state should strictly follow. In case the member does not comply in due time with the measures recommended in the EDP, it can be subject to warnings and, eventually, sanctions by the EC.

2.2.5 The European Monetary Union - 1999

The convergence criteria defined in the TEU regarding matters such as budget deficits, government debt, inflation, interest rates or exchange rate stability were considered fundamental to assure the necessary economic convergence between members that intended to participate in the EMU.

The Convergence Report (1998) accessed to what extent did those members meet the criteria previously defined. In the end, when the Council of Ministers established which countries met the criteria and which did not, significant departures from the previous established criteria were allowed, specially regarding the debt to GDP ratio. The strong will of those in power, with the help of high levels of flexibility in the

interpretation of the convergence criteria allowed the Euroarea[3] to be born on January 1st 1999, when all exchange rates between state members were fixed according to the Exchange Rate Mechanism (ERM). Denmark, Sweden and the UK were the only members at the time that did not share the will to join the Monetary Union. Therefore, the UK negotiated an "opt-out" from the Maastricht Treaty, Denmark subjected its decision to a popular referendum, which rejected the participation in the EMU, and Sweden deliberately failed to meet the convergence criteria in time.

The Euro only entered people's pockets in 2002, but after the 1st January 1999, the EMU was a reality. This was undoubtedly a great achievement in the history of international economic and political cooperation. This also implied that nation members ceased to have any saying in their monetary policy besides their representation in the European System of Central Banks (ESCB), lead by the European Central Bank (ECB). Without entering into the discussion about the advantages and disadvantages of the monetary union, one thing is obvious and consensual: the monetary union stripped its members of some of their power to manage and/or manipulate their national economies, by taking away their authority over monetary issues. This comes as a more important feature when we take into consideration that a significant part of economic theory sees monetary policy as an important and powerful tool to intervene in the economy.

Later in 2004 the EU took an important step in the healing process that had been going on since the early nineties and the fall of the Berlin Wall, allowing for 10 different countries[4] to simultaneously join the EU, and in the process extending its border until Russia, what some years before would seem politically too risky.

From a common market for a few selected products, with only six countries, to a union with a directly elected parliament by twenty seven countries[5], the EU walked an enormous distance in its integration process. Such a process inherently stripped EU members of some of their powers in the most varied fields, with the economy being of particular significance. Regarding the economic integration process in particular, we can thus identify four phases: The first, with a common market spreading between the late sixties and the mid-eighties; the second phase after the signing of the SEA (1986) ,

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[3] Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Nederlands, Portugal and Spain joined the Euroarea from the beginning, in 1999. Greece followed in 2001. Further additions for the Euroarea were Slovenia (2007), Cyprus and Malta (2008) and finally Slovakia (2009).

[4] Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia

[5] Bulgaria and Romania joined the EU in 2007.

paving the way to a more convergent path for all the members; the third phase, beginning with the signing of the TEU (1991) and the decision to go ahead with the EMU, confining countries economic actions to the convergence criteria; and the last phase, starting with the implementation of the monetary union, in the beginning of 1999.

My premise in this dissertation is that, given the transfer of competences from the EU members to the EU institutions, citizens' approval of EU should depend on good/bad national economic performances.

2.3 The European Union's Structure

After the fourth enlargement in 1996, the EU had a combined population of close to 370 million people, ruled by 15 different national governments. In order to assure effective economic integration between interests that aren't always convergent, the EU has to rely on its institutions and on its legal basis. The EU has five main institutions: the European Commission (EC), the European Parliament (EP), the European Court of Justice, the European Council and the Council of Ministers. While the first three are independent supranational entities, the latter two are composed by governments' representatives, being therefore totally dependent on state members' interests and actions. Each institution has different levels of authority and competences that make them all essential to the effectiveness of the European integration process:

- The EC is responsible for proposing and mediating negotiations regarding legislation, as well as for the management of the technical implementation of the union's policies. It also has the responsibility of representing the EU in international negotiations, defending its interests. Finally, the EC has also to ensure that EU laws and recommendations are followed within its members' territories.
- The EP has the power to reject legislation in certain policy areas. The EP can also, under predetermined circumstances, call the EC and the Council of Ministers to report their actions to it. In extreme scenarios, the EP has also the power to dismiss the EC, although this has never been done.
- The European Court of Justice is responsible for judging all matters concerning the EU law.

- The Council of Ministers is composed by ministers of all state members. Each meeting is attended by the ministers responsible for the subject to be discussed. Each country holds the presidency of the council for a rotating period of six months.

- The European Council is composed by the heads of state and foreign ministers of each member, as well as by the EC president and vice-president. It is considered to be the most important and influential institution within the EU, since it is responsible for the more important political and strategic decisions.

There are also a number of other institutions that should be mentioned when we talk about the power the EU has over its members. The ECB, created in 1999, is responsible for all monetary policy decisions among the members of the EMU. The Economic and Social Committee is composed by interest groups, and it is consulted in most economic policy decisions. The TEU created a Committee of the Regions, aiming at involving subnational governments in EU's regional policy. There are also a great number of lobbies that substantially influence the EU's decisions and the EC's in particular. The openness of the EC to those pressures is in part consequence of the fact that the EC doesn't have any agencies in the field, and therefore is forced to rely on such lobbies to gather relevant information for its activities and decisions.

If we take into account the authority and responsibilities of each of the EU's institutions, we can have an approximate idea of the impact that the EU's decisions may have on each members' economy. I rely on that impact to support my prior that economic conditions have an influence on people's opinion about the EU. The following section presents a literature review on studies that used economic conditions and other factors to explain the support for the European integration process.

2.4 The Support for European Integration

Ever since the creation of the EU, researchers have tried to figure out what causes citizens' opinions about it to vary over time and across countries. Nonetheless, researchers are not the only ones interested in understanding the EU's popularity mechanics. They aren't probably even the ones more interested in it. Since the union's early days, member states' governments have been the main deciding forces behind the integration process's evolution. To this day, the European Council is still in charge of

all important strategic decisions regarding the EU's future. Assuming that governments are interested in staying in office for as long as their national constitution allows them to be – taking a page out of the political business cycle literature – it is likely that they will only support an increase in the EU's levels of integration as long as they believe that their voters will support it as well. With this being said, we can argue that public opinion about the EU is a decisive factor when the union decides to move forward in its integration process.

Different kinds of factors can influence the EU's popularity variation, from political and institutional features to economic and historic conditions. According to Lindberg and Scheingold (1970), in the early days of the European integration process, the first six members' citizens supported the process through what they called a "permissive consensus", since there was a generalized feeling of trust from the EU's population on the political elites that drove the process. Although there is a high level of agreement in the literature about this explanation for the evolution of the public opinion about the EU in its first two decades, a series of more significant steps towards higher levels of integration, namely the SEA (1986), the TEU (1992) and the start of the EMU (1999), made public opinion to diverge from the so called "permissive consensus" to a more active and critique stance towards the EU. This greater level of awareness of the EU citizens' was patent on the outcomes of the referendums on the TEU held in Denmark and France, and the results of the EU membership referendums held on Austria, Sweden and Norway, with Norwegians actually rejecting becoming part of the EU.

Several factors have been pointed by the literature as having a significant impact on the public support for the EU and its integration process. For presentation purposes, I will divide them into economic and non economic related theories. This will allow for a better focus on those works that use approaches closer to the one I use in this dissertation.

2.4.1 Non-Economic Factors

Starting in the seventies with Ingleheart's (1970) paper, a stream of literature from authors such as Hewstone (1986), Ingleheart *et al*. (1991) and Janseen (1991) has postulated that individual values influence citizens' attitudes towards the EU. They argue that the EU represents an idea of integration and unification towards a more

egalitarian system that should be more appealing to the so called postmaterialists than to the materialists. [6]

The same group of authors also argued that since the European integration process lead to a supranational political figure (the EU) that was highly abstract, individuals had to have high levels of cognitive mobilization in order to fully understand the scope of the EU. Therefore, individuals with higher levels of political knowledge who can understand the full range of the European integration process with less difficulty should be more supportive of the EU than the less informed ones.

According to Ingleheart *et al.* (1991), Wessels (1995) and Budge, Robertson and Hearl (1987), class partisanship can also play an important role in shaping individuals' opinion about the EU. According to their argument, left parties have been more critical of the European integration process since the beginning because they see it mainly as a further step to consolidate the capitalist model, which they don't support.

There are also some researchers who believe that the most important determinant of EU's popularity is the support levels for each national government. This belief comes from the fact that the biggest reforms and policy decisions within the EU are negotiated by the heads of state, and therefore citizens may use their governments' domestic performances as a proxy by to access the EU's performance. This is reinforced by the idea that the EP's elections are seen by Europeans as second order elections. As argued by Reif and Schmitt (1980), Reif (1984) and Marsh (1998) voters still use domestic government's performance as the main indicator of European performance. Franklin, Van der Eijk and Marsh's (1995) study of the French, Irish and Danish referenda concluded that in all the three cases the government's popularity at the time of the referendum was an important explanation of referendum's outcome, further supporting the hypothesis that citizens may use national governments' performances as proxies for the EU's performance.

It should be noted that most studies listed above rely on relatively small samples and econometric results that are not very robust. Therefore, in order to draw definitive conclusions more research on these topics is necessary.

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[6] Materealists are individuals who value physical and economic well-being above everything else, while postmaterialists value factors such as self-esteem, integration and intellectual fulfilment.

2.4.2 Economic Factors

If we take into account that together with peace-keeping, economic growth was the main motivation behind the creation of the EU (or the ECSC in its early days), it should come as no surprise that European citizens expect EU membership to improve their countries' economic performance and/or their personal financial situation. Therefore, economic conditions are likely to have an impact on people's opinions about the EU. In order to verify the existence and magnitude of such an impact, two different approaches can be taken.

The first approach looks at the costs and benefits associated with EU membership for each citizen as an individual. Gabel and Palmer (1995) and Gabel (1998) developed a utilitarian model to explain individuals' levels of support for the European integration process. According to their argument, such divergence in opinions about the EU is a consequence of the heterogeneity of individuals' socio-economic situations. They argue that trade liberalization increased competition among EU members, making individuals with higher stocks of human and physical capital more likely to benefit from the EU's common market, and thus more supportive of the European integration process. The same authors also argue that geographic location can influence citizens differently, with citizens living nearer borders with other EU countries benefiting more from market liberalization within the EU, thus being more supportive of the European integration process as well. Multivariate analysis from Gabel and Palmer (1995) and Anderson and Reichert (1996) confirm the influence of education, occupational skills, income and proximity to EU borders on citizens' support for the European integration process. Nonetheless, these works once again lack controls for alternative explanations, thus casting some doubt on the robustness of their conclusions.

The other approach to the impact of economic conditions on the EU's popularity is closer to the analysis undertaken in this thesis, and studies the aggregate–level dynamics of public support for the EU. Based largely on the literature on VP-functions, this approach was first introduced by Eichenberg and Dalton (1993). The argument behind this stream of research is that since the EU, like national governments, has an important role on defining economic policy for its members, it is also held responsible for variations in economic outcomes. Eichenberg and Dalton (1993) use national macroeconomic outcomes to explain variations on the EU's popularity, that they measure using data from the Eurobarometer's (EB) questionnaires. In this pioneer

study, only inflation is found to have a statistical significant effect on people's opinion about the EU. This conclusion would be later reinforced by Anderson & Kaltenthaler (1996), although these authors also find a negative and statistical significant relationship between unemployment and the EU's popularity. Their results also show that GDP growth is statistically significant when the dependent variable used is the support of integration in general, which is basically the same dependent variable used in all models of this thesis. Mahler, Taylor and Wozniak (2000), in their study of the economic determinants of public support for the EU, found that, at a national level, inflation is statistically significant related with the EU's support, while neither the unemployment rate nor GDP growth are found to be statistically significant, thus supporting Eichenberg and and Dalton's (1993) results.

Most authors that believe non-economic factors to be the main determinants of the EU's popularity disagree with this point of view, stating that citizens have limited knowledge about their countries' economies – as shown by Paldam & Nannestad (2000) for the the Dannish case – which casts doubt in the assumption that national economic conditions have an impact on citizens' support for the EU. Nonetheless, if citizens know little about the economy, it is likely that they form their opinions about it from the perception they have of it, either from their personal experience and the experiences of those close to them, or from the media and other information vehicles. If they do so, then it is likely that broader measures of economic performance such as inflation, unemployment rates and GDP growth rates are the best proxies for their perception of their countries' economic performance available to us.

3. Dataset

The dataset used in my estimations comprises data from 1974 to 2008, for the first 15 EU members[7]. The panel constructed is not balanced given the differences in data available for each country. Notice that EB questionnaires are only conducted in each country after that country joins the EU.

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[7] Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom.

3.1 Eurobarometer Data

EB are public opinion surveys conducted on all EU countries since 1973, two times per year. These questionnaires are used to access public opinion in the EU about a variety of topics, such as EU's policies and institutions, religion and politics. Each observation is based on a different random sample, making relations at an individual level impossible to analyze. Each EB survey is followed by a Standard Report, presenting the main results from the conducted surveys and its analysis.

The composition of the EB has changed significantly over time. Although demographic and individual related questions have remained unchanged since the first EB, other questions were only asked in a smaller number of EB. Nevertheless, some questions besides the ones regarding aspects such as individual's personal characteristics have also been asked in virtually all the EB. This is the case of the question I intend to use as a proxy for EU's popularity – Question 1 in Table 1 – which has close to seventy observations for the first six EU members. This question has been asked from EB No 1 to the last EB for which the Standard Report is available, with only minor changes in its phrasing.

Table 1 presents a list of the questions for which I retrieved the data, the answers available to the respondents as well as the indexes computed for each of them. The number of observations for each question and the dates of the first and last EB on which they were asked are also presented in the same table. To all of these questions, the respondents who answered "Don't know" were discarded, and the other answers' percentages were recalculated as percentages of all the respondents with an actual opinion. After that operation, three different indexes were computed for each variable, in order to obtain a single value for country i at time t.

Graphic 1 displays citizens' support for the EU between 1974 and 2008, in four different countries, using question 1's index 1. There are significant disparities among EU's popularity over time, in the four countries. These disparities in the support for the EU among state members are most likely a consequence of the different repercussions that EU's policies have in each of them, caused by the political, economic and social framework of each country. Moreover, economic shocks across the union are not perfectly symmetric, which implies that policy decisions by the EU are unable to satisfy the needs of all countries. Therefore, the same EU policy can have different impacts on member states' economies, and ultimately in each citizen's opinion about the EU.

Figure 2 - The EU's popularity
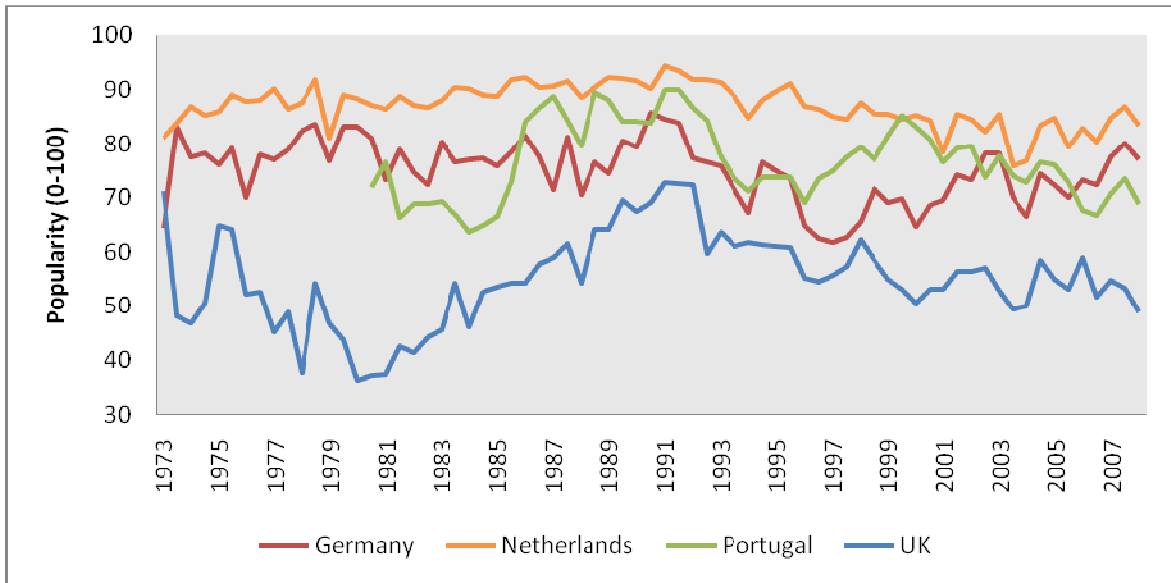
Table 1 - Questions' Description

Question	Answers	Indexes	Max Obs. per country	First Obs.	Last Obs.
1. Generally speaking, do you think that your country's membership of the EU is:	a) A good thing; b) A bad thing c) Neither good or bad	Index 1 = a + 0,5c Index 2 = a – b Index 3 = a - 0,5c - b	70	EB No 1 April 1974	EB No 70 November 2008
2. How do you think the general economic situation has change over the last twelve months?	a) Got a lot better; b) Got a little better; c) Stayed the same; d) Got a little worse; e) Got a lot worse;	Index 1 = a +0,5 b Index 2 = 5a + 4b +3c + 2d +e Index 3 = (a + 0,5b) – (e + 0,5d)	14	EB No 18 October 1982	EB No 42 December 1994
3. Compared to twelve months ago, do you think the financial situation of your household, now is…?	a) A lot better; b) A little better; c) The same; d) A little worse; e) A lot worse;	Index 1 = a + 0,5b Index 2 = 5a + 4b +3c + 2d +e Index 3 = (a + 0,5b) – (e + 0,5d)	13	EB No 18 October 1982	EB No 40 November 1993
4. What are your expectations for the year to come, when it comes to your country's economy?	a) Better; b) Same; c) Worse;	Index 1 = a + 0,5b Index 2 = a – c Index 3 = a – 0,5b –c	23	EB No 46 November 1996	EB No 70 November 2008
5. What are your expectations for the year to come, when it comes to your household's financial situation?	a) Better; b) Same; c) Worse;	Index 1 = a + 0,5b Index 2 = a – c Index 3 = a – 0,5b – c	23	EB No 46 November 1996	EB No 70 November 2008

3.2 Economic Variables

As far as the economic variables are concerned, quarterly data on exports, imports and GDP was gathered from the International Monetary Fund's (IMF) International Financial Statistics (IFS). Inflation, unemployment rate and private consumption series were taken from the OECD Economic Outlook statistics, except for the unemployment rate series for Belgium, Denmark, France and the UK, which were taken from the Eurostat statistics. Private and government consumption data was also collected from Eurostat's statistics database. Data on the trade volume with other EU countries was gathered from the AMECO database. The EU's budget figures were taken from the Court of Auditors Annual Reports. Both values for intra EU trade and the EU budget are only available in an annual basis. Therefore, the values retrieved were divided by two in both cases in order to obtain approximate values for each semester. In every model specification, all other economic variables are measured as two-quarter averages. The degree of openness of the economy (DOE) was calculated according to the following formula:

$$DOE_{it} = (IMP_{it} + EXP_{it}) / GDP_{it}$$

where IMP_{it} is the level of imports of country i in year t, EXP_{it} is the level of exports for the same country, in the same period, and GDP_{it} is the gross domestic product for that country at that time.

Data on the European Parliament Elections, the Excessive Deficit Procedures and the entrance date of each member was retrieved from the European Union's official website.[8]

Summary statistics for all the variables are presented in Table 2.

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[8] http://europa.eu/

Table 2 - Summary Statistics

	Units	No Obs.	Mean	Stand Dev.	Min.	Max.
Popularity Index 1	Units	855	74,368	12,449	36,170	94,388
Popularity Index 2	Units	855	48,725	24,891	-27,660	88,776
Popularity Index 3	Units	855	36,441	27,706	-39,362	85,204
Inflation	Percentage	1.038	0,014	0,014	-0,004	0,089
GDP Growth Rate	Percentage	841	0,013	0,033	-0,124	0,150
Unemployment Rate	Percentage	857	0,074	0,042	0,012	0,243
Unemployment Growth Rate	Percentage	842	0,012	0,118	-0,226	0,807
Degree of Openness of the Economy	Percentage	845	0,783	0,477	0,290	3,307
Percentage of Trade with EU countries	Percentage	966	0,644	0,090	0,382	0,855
Private Consumption	Percentage of GDP	734	0,536	0,075	0,160	0,765
Government Consumption	Percentage of GDP	754	0,211	0,038	0,078	0,308
Honeymoon effect (2 Years)	Discrete	1.050	0,066	0,426	0	4
European Parliament Elections	Dummy	1.050	0,086	0,280	0	1
Excessive Deficit Procedures	Dummy	1.050	0,043	0,203	0	1
Membership Length	Semesters	1.050	36	28	0	94
Economy Previous Year Index 1	Units	147	-17,171	23,319	-71,717	28,342
Economy Previous Year Index 2	Units	147	266,046	46,738	156,566	359,684
Economy Previous Year Index 3	Units	147	13,934	8,728	1,042	36,413
Household Financial Situation Previous Year Index 1	Units	140	-9,541	13,414	-51,010	14,283
Household Financial Situation Previous Year Index 2	Units	140	281,090	26,953	197,980	331,566
Household Financial Situation Previous Year Index 3	Units	140	11,396	4,674	2,020	26,263
Economy Next Year Index 1	Units	311	-13,534	23,364	-63,291	50,000
Economy Next Year Index 2	Units	311	41,205	6,975	22,727	66,447
Economy Next Year Index 3	Units	311	-33,866	21,097	-77,848	31,895
Household Financial Situation Next Year Index 1	Units	315	9,436	14,311	-74,648	40,909
Household Financial Situation Next Year Index 2	Units	315	34,894	5,880	20,833	56,250
Household Financial Situation Next Year Index 3	Units	315	-18,947	13,363	-80,282	21,591

Source: IMF, Eurostat, OECD, AMECO, Eurobarometer, European Comission

Looking at Popularity Index 1, which will be used as the explanatory variables on most estimated models along this thesis, we conclude that the EU's citizens see their countries' membership of the EU generally as a good thing, since this index may vary 0 and 100, and its mean is close to 75. Inflation's mean (under 1,5%) is a clear signal that, on average, inflation remained at low levels across the sample. Unemployment however presents more worrying values, that in the end imply that, on average, almost 7,5% of the EU's population was unemployed between 1974 and 2008. EU countries show disparities in their degrees of openness of their economies, with values raging between 29% and 331%. From the total trade considered in the calculations for the DOE, around

64% on average respects trade with other EU countries, which is proof of the importance of the EU's common market.

Although the economic performances of EU members are expected to converge, especially in later stages of the economic integration process, there are still significant asymmetries between members' economic outcomes. Graphic 2 illustrates those differences by presenting the evolution of unemployment rates in four EU members over the last four decades.

Figure 3 – Unemployment Rate
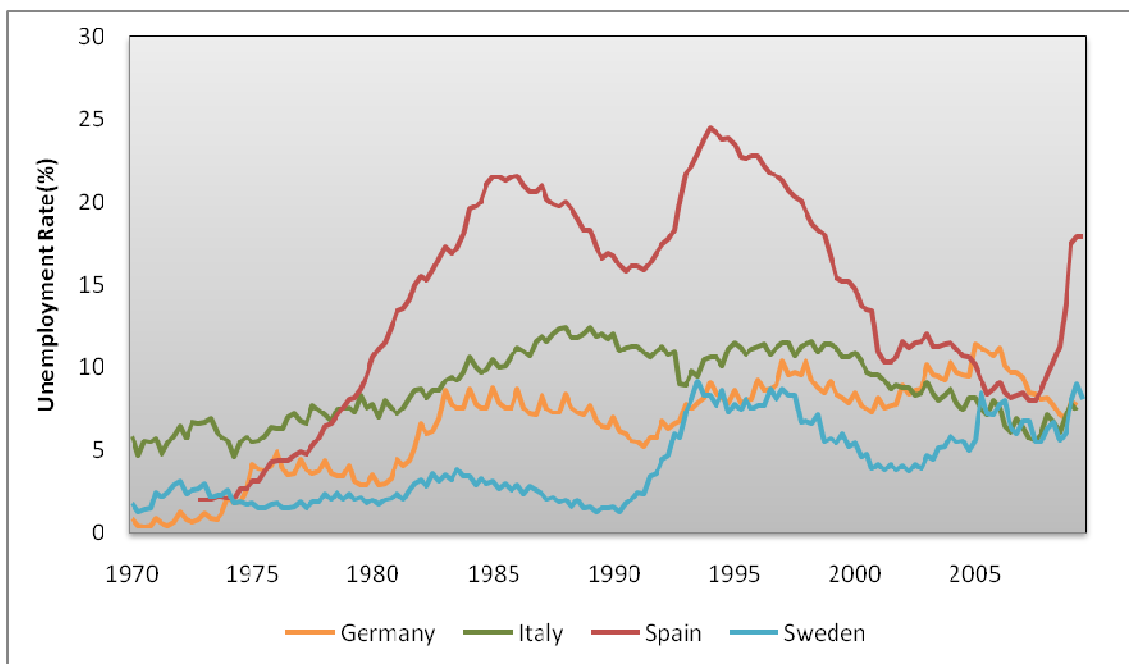
4. Empirical Analysis

4.1 The Generic Empirical Model

Since the purpose of my thesis is to evaluate how economic conditions influence EU's popularity, the following generic popularity function will be estimated:

$$POP_{it} = \beta_0 + \beta_1 LPOP_{it-1} + \beta_2 X_{it-1} + \beta_3 Y_{it} + u_{it} \qquad (1)$$

In this function, POP_{it} stands for EU's popularity index in country i, at time t and $LPOP_i$ represents lagged values of the EU's popularity. Vector X_{it-1} represents a set of variables that measure economic performance. Different lags of both the dependent variable and economic variables will be tested, in order to assure that the correct specifications are used.

Although economic outcomes are expected to influence the EU's popularity, there are other non-economic variables that may have a significant impact on it. Vector Y_{it} comprises those variables, mostly dummies, aimed to capture issues such as honeymoon effects, the impact of EP's elections, the effect of EDP or the length of each country's membership of the EU.

The honeymoon effect represents a state of grace that the EU may enjoy in a country after it joins the EU. This is based on the assumption that after a country enters the EU its citizens are overjoyed with the fact that they are now members of the EU. In the model, this can be analyzed by creating a dummy variable assuming positive values for the first semesters after each country enters the EU, and zero in the remaining periods. For instance, if we consider it to last two years, the dummy variable will have the value of 4 for the semester when the country joins the EU, 3 for the second, 2 for the third semester and 1 for the fourth semester after the entrance. Different lengths will be tested in order to access how long the honeymoon lasts. I expect this variable to have a positive coefficient on my estimations.

It would also be interesting to test if when EP elections are held, citizens pay more attention to the EU actions and policies, and if this has an impact on its popularity. Therefore, a dummy variable was created with value 1 for each semester when EP elections are held and 0 otherwise.

The convergence criteria set in the SGP, in 1996, established that countries not complying with the public debt to GDP and budget deficit to GDP ratios would be subject to an EDP, under the coordination of the EC. Given the restrictive nature of the EDP, it is expectable that when governments are forced to follow them, they will blame the EU for its negative short-run consequences. Therefore, when countries are under the EDP, it is likely that EU's popularity diminishes. To study this effect, a dummy variable was created, assuming value 1 whenever a country is under EDP, and zero for all remaining periods.

The variable regarding membership length assumes a value corresponding to the number of semesters that each country has been a member of the EU. For instance, if at a given moment, one country as been a member of the EU for twenty years, the variable will have a value of 40. I expect this variable to present a negative sign, following the same assumption that was presented earlier for the honeymoon effect. Furthermore, citizens from older members may not be enthusiastic about the more recent members, particularly if those countries are economically weaker and will compete for the EU budget's transfers.

4.2 Econometric Issues

The specification of my empirical model and the dataset structure previously presented may originate several econometric issues that must be taken into consideration while choosing the most suitable econometric method for the estimations. I will start by estimating the regressors by Ordinary Least Squares (OLS). Even though later econometric procedures may prove that OLS isn't the best estimation method given the dataset and the empirical model, its results will serve as a benchmark for the other models.

One of the problems that may arise when applying OLS to a panel data-set is that its estimations may be biased if unobserved individual effects are statistically significant. Figure 3 show that there are significant differences between members' average popularity over the whole period, suggesting this is an issue that should be taken into account.

Figure 4 – Average Popularity Index 1
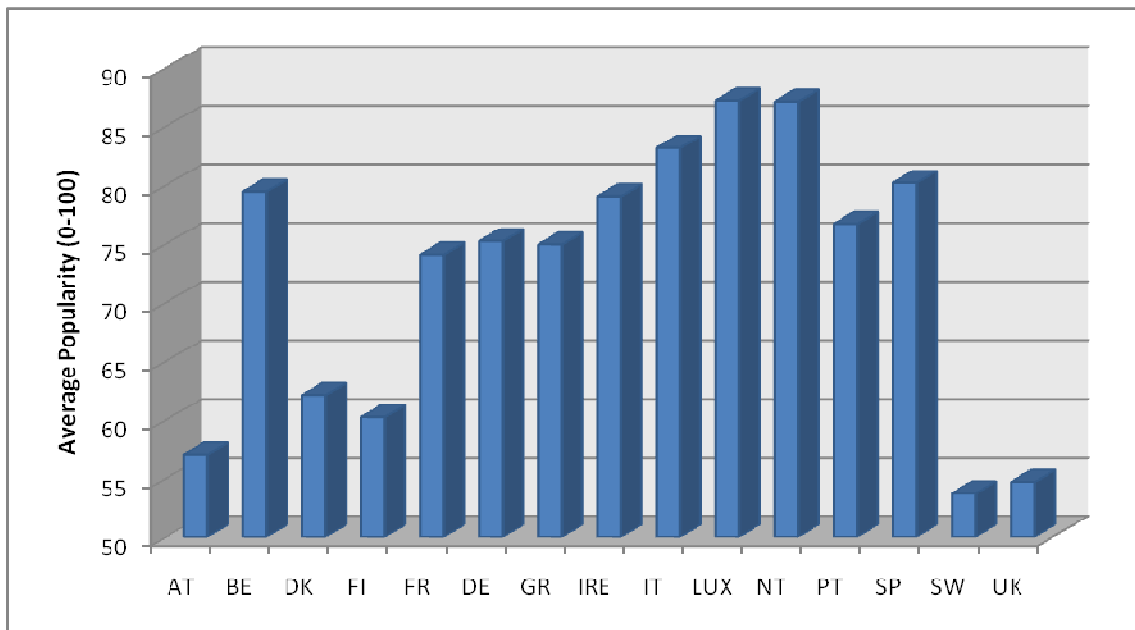
One way to address the problem is to use a fixed effects model. The fixed effects model assumes the existence of correlation between the error term and the regressors. This is an intuitively compelling idea in this framework, since each country has its own historic, social, economic, political and institutional characteristics that are likely to have a permanent, significant influence on its economic performance as well as on its citizens "affection" for the EU. Another model that can be used to address the problem of unobserved heterogeneity is the random effects model. This model assumes that there is a country specific effect, but that this is somehow random. This effect has no correlation either with the regressors or with the error term. It is less likely that this is the case in my empirical model. Nonetheless, I intend to perform the Haussman test in order to test if the extra orthogonality conditions imposed by the random effect model are valid. If they are, it means the regressors are uncorrelated with the error term, and therefore the fixed effects model turns out to be consistent but inefficient whereas the random effect model is consistent and efficient. If, on the contrary, the Hausman test results point to the existence of correlation between the error term and the regressors, the random effects estimator will not be consistent, and the fixed effect estimates will be consistent and efficient.

There is also evidence that the EU's popularity is persistent over time. This is taken into account in the model by including lags of the dependent variables as explanatory variables. This dynamic nature of the panel may bring up some estimation issues itself.

Specifically, the estimation for the lagged dependent variables in the fixed effects model tend to be negatively biased in a dynamic panel framework, while the OLS estimators become positively biased. A first-differences model could be an alternative for this problem, but it would generate a case of correlation between the lagged dependent variable and the error term that would cause the OLS estimators to be strongly negatively biased.

Another alternative would be to use a system GMM estimator, which overcomes both the problems from the fixed effects and the first differences models, and it is appropriate to be used in cases where there is significant persistence of the dependent variable. However, the system GMM model is better suited for datasets with large number of individuals (N) and small number of periods (T), which is not the case in this sample. Since the fixed-effects model's negative bias is larger when there is a small number of periods and a large number of individuals in the sample, this bias won't be as severe in my estimations as it would be in other data frameworks. Therefore, as long as the results support it, I will use the fixed-effects estimation method as my main econometric framework throughout this dissertation.

4.3 Popularity Functions for the EU

A Haussman test was used to choose between the random effects and the fixed effects model. Results firmly rejected the null hypothesis that the error terms are not correlated with the regressors, suggesting the existence of country specific effects. As a robustness test, the Breusch and Pagan Lagrangian multiplier test was also used. The null hypothesis is that variance across countries is zero, which means that there is no significant differences across countries. Results of the test once again confirm the inappropriateness of the random effect models, rejecting the null hypothesis.

A Fisher test for panel unit root using an augmented Dickey-Fuller test was performed in order to access whether the series concerning the dependent and the main economic variables were stationary or not. The advantage of this test, when compared with other alternatives on unit root testing in a panel data framework, is the fact that it can be performed in an unbalanced panel, while most of the other similar tests can't (Maddala and Wu, 1999). All tests rejected the null hypothesis of the existence of a unit root, therefore proving all series to be stationary. The only exceptions are the degree of openness of the economy and the percentage of trade with other EU countries that

appear to have unit roots. Since in my model's specification these variables are used as control variables, I will not dwell too much on their unit root. Moreover, it would be expectable that on most countries they would increase over time as globalization in general, and the European integration process in particular, move forward.

4.3.1 The Impact of Economic Performance

The results of my first estimations are presented in Table 3. Two different estimation methods were used: OLS and fixed effects. Each popularity index was used as dependent variable on OLS and fixed effects estimations. All models share the same explanatory variables in order to make comparisons more straightforward.

Table 3 - Estimation Results

	Index 1 OLS		Index 2 OLS		Index 3 OLS		Index 1 Fix. Eff.		Index 2 Fix. Eff.		Index 3 Fix. Eff.	
Popularity (-1)	0,707	***	0,707	***	0,704	***	0,624	***	0,623	***	0,619	***
	(16,92)		(16,95)		(16,95)		(14,51)		(14,51)		(14,53)	
Popularity (-2)	0,221	***	0,222	***	0,224	***	0,149	***	0,150	***	0,151	***
	(5,36)		(5,38)		(5,46)		(3,49)		(3,52)		(3,56)	
Inflation (-1)	0,344		0,702		0,824		-0,053		-0,083		-0,096	
	(1,30)		(1,33)		(1,37)		(-0,15)		(-0,12)		(-0,12)	
Unemployment Rate Growth Rate (-1)	-5,087	***	-10,200	***	-11,700	***	-4,137	**	-8,290	**	-9,620	**
	(-2,58)		(-2,58)		(-2,59)		(-2,05)		(-2,06)		(-2,09)	
GDP Growth Rate (-1)	3,770		7,930		6,470		2,504		5,400		3,840	
	(0,52)		(0,54)		(0,39)		(0,35)		(0,38)		(0,23)	
Degree of Openness of the Economy (-1)	0,380		0,750		0,959		3,484	*	6,880	*	8,510	*
	(0.,93)		(0,92)		(1,03)		(1,76)		(1,74)		(1,88)	
Trade with the EU (-1)	1,758		3,580		4,360		8,270	*	16,500	*	20,200	*
	(0,68)		(0,69)		(0,74)		(1,84)		(1,84)		(1,96)	
Membership Length	-0,001		-0,002		-0,005		-0,075	***	-0,148	***	-0,182	***
	(-0,16)		(-0,15)		(-0,26)		(-3,60)		(-3,57)		(-3,83)	
Constant	3,587	**	-0,038		-1,570		12,110	***	1,460		-3,350	
	(2,12)		(-0,01)		(-0,39)		(3,62)		(0,23)		(-0,46)	
R - Squared	0,907		0,908		0,905		0,859		0,860		0,850	
Observations	530		530		530		530		530		530	
Countries	15		15		15		15		15		15	
Fixed Effects	N/A		N/A		N/A		Yes	***	Yes	***	Yes	***

Obs: t statistics in brackets. Significance level for which the null hypothesis is rejected: *** 1%, ** 5% and *10%; for all Fixed Effects Models, Prob > F = 0, proving the existence of Fixed Effects.

Results presented in Table 3 for the six estimated models have some common features. First, all fixed effects estimations' results reject the null hypothesis that the dummies for each country are jointly insignificant. Therefore, the fixed effects model is

preferable to the OLS when it comes to studying the impact of economic outcomes on the EU's popularity. Another important feature in Table 3's results is that the EU's popularity shows strong persistence over time, with the sum of the estimated coefficients for the first two lags being around 0,80 in all models. Note that the indexes have different scales: index 1 varies between 0 and 100, while indexes 2 and 3 vary between -100 and 100. It should also be noted that regardless of the index used as dependent variable, the R-squared, the t-statistics and the significance level of each variable do not vary considerably. I will from now on focus my interpretation on the models that use index 1 as the dependent variable because, in my opinion, its coefficients are easier to interpret than the others, given theirvalues' range (0 to 100).

As long as the economic variables are concerned, the unemployment rate growth in the previous semester is always statistically different from zero for a 1% confidence level. The unemployment rate growth's coefficient on both the OLS and the fixed effects model is close to minus 5, which suggests that when unemployment doubles, the EU's popularity (index 1) falls around 5 points. If we take into account that popularity index 1 varies between 0 and 100, we can conclude that the impact of the unemployment rate growth's variations on EU's popularity is not very strong. Nonetheless, its negative sign follows my initial expectations, implying that an increase in a country's unemployment hurts EU's popularity. As expected, citizens hold the EU partially responsible for their country's economic performance.

From the other economic variables, the percentage of trade with EU countries and the DOE are also statistically significant in all fixed effects estimations for a 10% confidence level. Both variables have positive coefficients, suggesting that the EU is on average more popular in countries that trade more, particularly with other EU countries.

None of the other economic variables tested are statistically different from zero. However, the coefficients for inflation have always the expected negative sign. Results concerning GDP growth also follow my initial expectations, with its positive coefficient pointing to a positive relation between economic growth and support for European integration.

Finally, the variable that represents the length of each country's membership is statistically significant at the 1% confidence level and negatively signed, suggesting that as time goes by the EU's popularity decreases. It appears that countries that have been members of the EU for longer periods of time tend to be less supportive of the EU.

It is important to mention that other economic variables were tested in the baseline model, such as private and government consumption as a percentage of the GDP, and the net benefit from the EU budget averaged by the GDP. Since none of them was close to being statistically significant in any of the models, they were excluded from the estimations presented throughout the thesis.

4.3.2 Country Specific Effects

Although a fixed effects' estimation is equivalent to adding N-1 dummy variables to an OLS regression, in reality it allows for every single individual in the sample to have its own constant term. The model does so by creating an additional dummy which is constrained to be equal to zero, thus allowing the existence of a constant coefficient for each individual, which should be compared to zero, as suggested by Suits (1984). The results presented in Table 3 indicate that there are significant individual (country effects) for a 1% confidence level. This was expectable, since each country has different features, both economic and historic, that have a permanent and very strong impact in its economy at any time. Table 4 presents the specific effect coefficient for each country, according to the fixed effects model's estimation that excludes the variable concerning membership longevity, since this variable may capture some of the country specific effect associated with the timing of each country's entrance to the EU, and I am interested in analyzing the whole specific effect at this point.

Table 4 - Country Specific Effects

Country	Fixed Effect
Austria	-3,0596
Belgium	1,4682
Denmark	-1,2198
Finland	-2,9567
France	-0,1139
Germany	-0,1475
Greece	-0,1859
Ireland	2,6593
Italy	0,6779
Luxembourg	3,8753
Netherlands	2,6594
Portugal	0,4224
Spain	0,8166
Sweden	-2,9325
United Kingdom	-3,2821

Source: IMF, Eurostat, OECD

From the six EU founding members, only Germany and France present negative coefficients. It would be expectable that the nations that were in the origin of the union would be the ones that would support it the most. This is true for the other four founding members. In spite of that, for both France and Germany the estimated coefficients are very close to zero, meaning that they are still more supportive of the EU than other countries that joined the union later on.

There are great differences between the 1973 entrants' public opinion about the EU. UK's reluctance to fully embrace the EU has been evident ever since it began negotiating its entrance. This was even clearer when the country chose not to join the EMU in the early nineties. The negative coefficient of its country specific effects confirms UK's scepticism about EU membership, and was expected beforehand. Denmark, another of 1973's entrants, was also one of the countries that preferred not to join the EMU on its free will. The popular referendum that rejected the EMU is a clear sign of Danish people's opinion about the EU, and this is visible in Table 4 as well. The other member that joined the EU in 1973 however, has a totally different perspective. After a long period of economic growth, especially in the nineties, Ireland received the nickname of the Celtic Tiger, an analogy to the Asian tigers that had great spells of economic growth years before, through relatively similar economic strategies. It is likely that Irish people see the economic growth and the policies behind it as a partial consequence of their membership of the EU, especially the access to larger markets, an essential pillar of Ireland's economic growth strategy. Therefore, the large positive coefficient presented for the country is not a big surprise as well.

Greece, the solo entrant of 1981, presents a negative coefficient that might be attributed to the fact that the country has been unable until today to accommodate the rigor associated with EU's policies and regulations. This became more visible when it was proved that the Greek government had deliberately manipulated public statistics in order to assure that the country was able to join the EMU. The fact that the EU was unable to notice this in due time, as well as the lack of ability of the country to deal with problems such as corruption and inefficiency in the public sector even after it joined the EU, can probably explain the negative coefficient of this country specific effect, although its magnitude is not as severe as in other countries.

In the opposite scenario we find Portugal and Spain that joined the EU in 1986. Both countries enjoyed great spells of growth after joining the EU. The smaller coefficient from Portugal can be a consequence of the economic downturn the country

has suffered since the late nineties, while Spain kept growing at relatively steady rates, thus presenting a higher coefficient.

The three most recent members, Austria, Finland and Sweden, joined the union in 1995, and they all present negative coefficients. The fact that the EU is not very popular among their citizens may be due to the fact that these countries were already countries with strong economic performances when they joined the EU, and didn't observe significant improvements after joining the EU, and therefore feel that there were no significant benefits from giving up a significant part of their autonomy to the EU.

4.3.3 Dummy Testing

In order to test the impact of the EP elections and the EDP in the EU's popularity, and to check if there is evidence of a honeymoon effect in a country's population after that country joins the EU, Table 5 presents the estimation for three models that include vector Y_{it} presented before in equation (1). Each one of the models has different length for the honeymoon effect: in model 1, the effect lasts two years, in model 2 it lasts three years, and finally, model 4 considers it to last four years.

Table 5 - Dummy Testing Results

	2 Years HE Fixed Effects		3 Years HE Fixed Effects		4 Years HE Fixed Effects	
Popularity (-1)	0,614	***	0,617	***	0,618	***
	(14,26)		(14,30)		(14,33)	
Popularity (-2)	0,155	***	0,151	***	0,150	***
	(3,63)		(3,53)		(3,50)	
Inflation (-1)	0,008		0,005		-0,002	
	(0,02)		(0,01)		(-0,01)	
Unemployment Rate Growth Rate (-1)	-3,642	*	-3,623	*	-3,573	*
	(-1,80)		(-1,78)		(-1,76)	
GDP Growth Rate (-1)	3,562		3,364		3,326	
	(0,49)		(0,47)		(0,46)	
Degree of Openness of the Economy (-1)	2,875		2,972		3,010	
	(1,44)		(1,48)		(1,50)	
Trade with the EU (-1)	9,785	**	9,282	**	9,031	**
	(2,14)		(2,02)		(1,97)	
Excessive Deficit Procedures	-0,701		-0,712		-0,717	
	(-1,05)		(-1,06)		(-1,07)	
European Elections	-0,518		-0,516		-0,536	
	(-0,95)		(-0,95)		(-0,98)	
Honeymoon Effect	1,205	**	0,477	*	0,264	
	(2,43)		(1,69)		(1,43)	
Membership Length	-0,063	***	-0,063	***	-0,063	***
	(-2,86)		(-2,86)		(-2,85)	
Constant	11,318	***	11,680	***	11,790	***
	(3,28)		(3,35)		(3,36)	
R - Squared	0,868		0,866		0,866	
Observations	530		530		530	
Fixed Effects	Yes	***	Yes	***	Yes	***

Obs: t statistics in brackets. Significance level for which the null hypothesis is rejected: *** 1%, ** 5% and *10%; for all Fixed Effects Models, Prob > F = 0, proving the existence of Fixed Effects.

All three models suggest that there isn't a statistically significant impact of the EP elections on the EU's popularity, which could imply that citizens don't change their opinion about the EU in periods when information about the union is more easily available, particularly through the media. EDP's relation with the EU's popularity is not statistically significance as well, although its p-value in the three models is close to 0,2. Its coefficient points towards a negative relationship between EDP's and the support for the EU, implying that some of the short-run restrictive consequences of the EDP may be considered the EU's fault. There is also evidence of the existence of the so called honeymoon effect in the first three years after a country joins the EU. This effect is stronger in the first two years, although it is also statistically significant for the first three years, for a 10% confidence level. The coefficient regarding the honeymoon effect is not statistically different from zero when we consider it to last four years. This

is a signal that in the first three years after a country joins the EU its citizens are filled with a sense of euphoria that translates into a positive bias towards the EU that fades away after three years.

4.3.4 Time Evolution

The European integration process was slow and progressive. It took more than half a century for the union to reach the level of integration experienced by its members today. During this period, not only the levels of economic integration changed, but the economy changed as well. When this is taken into consideration, it is not expectable that the way citizens incorporate economic conditions on their opinions about the EU has remained unchanged along its history. In order to study how the different levels of economic integration changed the way citizens incorporated economic outcomes in their opinions about it, I split the sample into three different periods, taking into consideration the two most important changes in the EU's integration levels:

- 1974 – 1987 (13 years): The first period goes from the beginning of my sample until the coming into effect of the Single European Act, whose consequences for the European integration process have been discussed previously in section 2.2.2.
- 1987 – 1993 (6 years): This second period starts with the end of the previous period and ends with the coming into effect of the Treaty of the European Union and the definition of the convergence criteria (for more detailed information, see section 2.2.3).
- 1994 – 2008 (14 years): The last interval of time begins with the coming into effect of the TEU, and extends until the end of my sample.

A case could be made for the division of the last period into two, with a first period going from the TEU until the beginning of the EMU, and the second beginning with the EMU and extending itself until the end of my sample. However, it should be noted that before the start of the EMU its members were already bounded to the convergence criteria since the TEU. Furthermore, such division would lead to smaller samples and reduce the degrees of freedom in the estimations.

Summary statistics for each period concerning the more significant economic variables used in the model are presented in table 6.

Table 6 - Summary Statistics by Period

1974-1987

	Units	No Obs.	Mean	Stand Dev.	Min.	Max.
Popularity Index 1	Units	280	74,24	13,88	36,17	92,71
Inflation	Percentage	399	2,50	1,60	-0,42	8,92
Unemployment Rate	Percentage	233	6,76	4,50	1,23	21,43
Degree of Openness of the Economy	Percentage	259	0,59	0,22	0,29	1,52
Percentage of Trade with EU countries	Percentage	351	0,59	0,09	0,38	0,78

1987-1993

	Units	No Obs.	Mean	Stand Dev.	Min.	Max.
Popularity Index 1	Units	154	81,11	9,20	54,21	94,39
Inflation	Percentage	193	1,23	0,95	-0,02	5,47
Unemployment Rate	Percentage	182	7,97	4,68	4,45	22,95
Degree of Openness of the Economy	Percentage	156	0,64	0,28	0,36	1,43
Percentage of Trade with EU countries	Percentage	175	0,68	0,07	0,54	0,80

1994-2008

	Units	No Obs.	Mean	Stand Dev.	Min.	Max.
Popularity Index 1	Units	421	71,98	11,57	40,53	92,55
Inflation	Percentage	446	0,59	0,37	-0,30	2,92
Unemployment Rate	Percentage	442	7,53	3,66	1,80	24,25
Degree of Openness of the Economy	Percentage	430	0,95	0,58	0,41	3,31
Percentage of Trade with EU countries	Percentage	440	0,68	0,07	0,55	0,86

Source: IMF, Eurostat, OECD

After splitting the sample into the mentioned periods, I estimated a model very close to model 4 from table 3, with the only difference being that I used only one lag of the dependent variable as explanatory variable instead of two, due to the smaller size of the new samples. The estimation results are presented in table 7.

Table 7 - Sample Division

	1 1974-1987		2 1987-1993		3 1994-2008	
Popularity (-1)	0,200		0,617	***	0,627	***
	(1,54)		(6,76)		(13,75)	
Inflation (-1)	-1,116	*	0,875		-1,136	
	(-1,75)		(0,83)		(-1,39)	
Uneployment Rate Growth Rate (-1)	-1,274		-13,470	*	-4,014	
	(-0,28)		(-1,85)		(-1,56)	
GDP Growth Rate (-1)	-3,821		-3,833		4,323	
	(-0,13)		(-0,15)		(0,52)	
Degree of Openness of the Economy (-1)	-21,010	**	8,772		4,092	*
	(-2,39)		(0,72)		(1,65)	
Trade with the EU (-1)	31,720	**	6,673		15,050	*
	(2,44)		(0,31)		(1,71)	
Membership Length	-0,072		0,023		-0,007	
	(-0,29)		(0,15)		(-0,21)	
Constant	61,130	***	18,250		13,450	**
	(3,96)		(1,44)		(2,19)	
R - Squared	0,197		0,776		0,823	
Observations	66		97		368	
Number of countries at the period's beginning	9		12		15	
Fixed Effects	Yes	***	Yes		Yes	***

Obs: t statistics in brackets. Significance level for which the null hypothesis is rejected: *** 1%, ** 5% and *10%; for all Fixed Effects Models, Prob > F = 0, proving the existence of Fixed Effects.

The first conclusion that can be taken from Table 6 estimations is that, as expected, economic variables present different coefficients and statistical significance levels in the different periods analysed, proving that the way economic factors affect citizen's opinion about the EU has not been constant over time.

Beginning with the first period analysed, we can observe that inflation, the DOE and the percentage of trade with other EU countries are all statistically significant. The lagged dependent variable is close to being statistically significant (p-value of 1,29), although its coefficient is significantly smaller than in previous estimations. This can be a sign that citizens' opinion about the EU was not as persistent and stable in the early periods of the EU as it is now. The period between 1974 and 1987 is the only one where inflation is statistically significant. It is important to note that this period encompasses the two oil crises, and the high levels of inflation all over the world that followed them. Summary statistics for the three different periods in table 6 show that the average inflation during this period was two times bigger than the one observed in the next period, and four times bigger than the average inflation of the last period. This is probably proof that the EU's citizens worry more about inflation when its levels are

relatively high, and that they stop incorporating it in their opinion about economic performance when it stabilizes at lower levels. Similar to the inflation's case, the DOE is also only statistically significant in this first period. Its negative coefficient can most likely be attributed to the repercussions in the world economy of the two oil crises too. Since open economies are more vulnerable to exogenous shocks, it is likely that as the damages from the two oil shocks started to be felt, with worse consequences for the more open economies, citizens started to believe that high degrees of openness of their countries' economies were an undesirable characteristic because they made them more vulnerable to exogenous shocks. Results suggest that, for this period, an increase of 1 point in the DOE reduced the EU's popularity around 21 points. On the contrary, the percentage of trade with EU countries shows a large positive coefficient for this period, what is probably a sign that at this time, EU citizens considered the increase in the trade with other EU countries one of the most important and positive aspects of their countries' EU membership.

During the second period, which extends itself between the second half of 1987 until the end of 1993, we observe significant changes in the estimations results. We see a higher level of persistence on citizens' opinion about the EU, patent in the higher coefficient of the lagged dependent variable, which is now statistically significant for a 1% confidence level. Inflation is no longer statistically significant, as its levels stabilized in the end of the 80's at low levels, close to those observed before the two oil crises. On the contrary, the higher unemployment rates that followed the two oil crises didn't disappear after the effects of the crises wore off, as it happened with inflation. It might be the case that only after realizing that the higher unemployment levels that followed the two oil shocks were not just a temporary state but a permanent one, did citizens start considering it a problem worth worrying about, and thus the negative, statistically significant coefficient the unemployment rate growth presents in this second period. The lack of statistical significance of the DOE can be a proof that, after the oil shocks consequences dissipated, individuals realised that higher DOE's were not such a negative reality. Whether it was a consequence of the evolving and growing European integration process itself, or a result of a broader process of globalization, remains to be determined, but it is likely that both realities played a role in this change of attitude. Neither the percentage of trade with other EU countries nor the GDP growth are statistically significant as well in this period.

The last period's estimation results continue to support most of my interpretation of the results concerning the two previous periods. We can see a slight increase in the level of persistence of the lagged dependent variable probably as a sign of stabilization of citizens' opinion about the EU. Inflation and GDP growth are not statistically significant in this period. The unemployment rate's growth rate is very close to being statistically significant, with a p-value of 1,2. Both the DOE and the percentage of trade with other EU countries are statistically significant in this period for a 10% confidence level, and both have positive signs which means that in this period, the EU citizens view trade in general, and with EU countries in particular, as a positive consequence of their EU membership. The lack of statistical significance of GDP growth in all models estimated so far may be an indication that individuals have more difficulty in observing variations on GDP growth than they have in observing unemployment variations for instance.

Although my main focus has been on the different coefficients and degrees of statistical significance of each of the independent variables in the models reporting to the different periods considered, there is also another aspect of the results that must be analyzed. The R-squared coefficient is very small on the regression for the first period, when compared to any other regression estimated so far. In the second period this coefficient is bigger, and finally, in the last period it reaches values close to those presented in the previous estimations that considered the sample as a whole. There are some possible explanations for this fact. First, there can be some significant economic variable that was not accounted for in the first period, which doesn't seem very likely since I have used the more common variables present in the VP-function literature as proxies for countries' economic performances. It may also be possible that in the early days of the EU, ideological and political factors had a more important role than economic outcomes in people's opinions about the EU, leading to the "permissive consensus" first mentioned by Lindberg and Scheingold (1970). A higher volatility of those opinions in the early days of the EU may also play a role in this behaviour by the R-squared coefficient, since the coefficient for the lagged dependent variable grows bigger as time goes by, implying that in the early periods of the EU citizens' opinion about the EU was not as stable and persistent as it is now. However, the most likely scenario is that this evolution of the R-squared coefficient in this particular case is mostly caused by the fact that the first two periods have less then than one third of the

observations of the last period, which causes the first two periods' estimations to have less explanatory power than the last period's estimations have.

4.4 Additional Questions

The VP-Function literature is rich not only in the number of publications, but also on the number of questions it raises about citizens' behaviours. Given the questions' data recovered from the EB's Standard Reports, some of these questions can be targeted by my analysis in this thesis. Questions 2, 3, 4 and 5 (See Table 1) ask EU citizens their opinions about past and future scenarios for both their countries' economies and their households' financial situations. If we use these questions as explanatory variables for the EU's popularity, we can try to shed some light over two of these questions: (1) are European citizens egotropic or sociotropic in their assessment of their countries' membership of the EU?; and (2), are citizens more influenced by past events, or by what they expect will happen in the future when they evaluate their countries' EU membership? The following sections will address these two questions, using the set of variables generated by the indexes created from answers data to the questions presented in table 1.

Since questions 2 and 3, and questions 4 and 5 were present in exactly the same EB, I will estimate two different equations, one with data regarding questions 2 and 3, and one with data from questions 4 and 5, in order to lose as few observations as possible.

Both estimated models presented in table 8 include only one lag of the dependent variable, in order to lose only one observation in each regression. This procedure is validated by .the results of the test for serial correlation for panel data (Wooldridge, 2002) which didn't reject the null hypothesis that there was no first-order autocorrelation.

Table 8 - Additional Questions

	1 Q 2 & 3		2 Q 4 & 5	
Popularity (-1)	0,654	***	0,584	***
	(7,00)		(13,03)	
Country's Economy Previous Year Index 1	0,055			
	(0,68)			
Household Fin. Sit. Previous Year Index 1	0,159			
	(0,77)			
Country's Economy Following Year Index 1			-0,022	
			(-0,46)	
Household Fin. Sit. Following Year Index 1			0,217	***
			(3,08)	
Degree of Openness of the Economy (-1)	12,517		4,713	*
	(1,21)		(1,74)	
Trade with the EU (-1)	25,979		18,12	**
	(1,35)		(2,02)	
Excessive Deficit Procedures	-		-0,772	
			(-1,00)	
European Parliament Elections	0,449		-1,829	***
	(0,38)		(-2,72)	
Honeymoon Effect (2 Years)	0,753		-	
	(0,78)			
Membership Length	-0,099		-0,085	**
	(-0,70)		(-2,32)	
Constant	2,975		12,010	
	(0,21)		(1,61)	
R - Squared	0,687		0,747	
Observations	85		284	
Periods (Semesters) covered	13		22	
Maximum countries	12		15	
Fixed Effects	Yes	**	Yes	***

Obs: t statistics in brackets. Significance level for which the null hypothesis is rejected: *** 1%, ** 5% and *10%; for all Fixed Effects Models, Prob > F = 0, proving the existence of Fixed Effects.

The results from model 1, which includes measures for previous year's economic performance and household situation, indicate that neither past households' financial situations nor past country's economic conditions influence individuals opinion about the EU. None of the other variables is statistically significant. When it comes to the analysis of expected scenarios for both the national economies and households' financial situation in the following year (model 2) the results are different. The expected evolution of the household's financial situation is statistically significant to a 1% confidence level. On the contrary, the expected evolution of the country's economy isn't statistically significant, with its coefficient presenting an unexpected negative sign. These results imply that individuals only take into consideration the impact of the future EU actions in their personal financial situation when they make their opinions about the

EU. This shows that, when looking at the future, European citizens are egotropic when they analyse their countries' membership of the EU. This result goes against the so called "Kinder and Kiewiet result" from the PBC literature, since it indicates the existence of egotropic nature on citizens' evaluation of the EU and the inexistence of a sociotropic component in that evaluat   ion, while most PBC literature finds strong evidence of sociotropic behaviour in economic voting and little to no evidence of egotropic behavior. Nonetheless, previous estimations have shown that the growth rate of the unemployment rate has a statistically significant impact on the EU's popularity and this is mainly a sociotropic variable. Therefore, it might be possible that the lack of statistical significance of the sociotropic variable in this model is a consequence of the reduced number of observations and is not due to a lack of citizens' concern for the macroeconomic situation of the country. Additionally, there is evidence in model 2's results of a positive influence of the DOE and of the percentage of trade with EU countries on the EU's popularity, and also that the increase on information available in semesters when elections for the European Parliament are held has a negative impact on that same popularity. The length of membership is still statistically significant, with a negative coefficient relatively close to the ones found in previous estimations.

The comparison between the results from model 1 and model 2 has to be made with caution, since it relies on the comparison between two equations that use two different data sets: model 1's explanatory variables report to a period between 1982 and 1994, and has 130 observations while model 2's explanatory variables has 306 observations that go from 1996 to 2008. But still, the result indicates that Europeans' assessment of their countries' membership of the EU is based at least more on their expectations for the future than in past events, giving the support for the European integration process a prospective nature. Again, this conclusion is less robust than the one concerning individuals' egotropic nature due to the differences between the two data used in each of the equations, that differ even in the number of countries included in each of them, since the data used on model 3 doesn't include Portugal, Spain, Austria, Finland and Sweden in some of its observations.

5. Conclusion

The purpose of my dissertation is to analyze the determinants of the support for the EU in the past four decades. Understanding the variations of the EU's popularity is important because it influences the EU's and its members' decisions to move forward to higher levels of integration. One should not expect member states' governments to support higher levels of integration if they are not supported in that decision by their electorate since governments are always interested in being re-elected, according to the PBC literature. Therefore, more than researchers, the EU and its members have a need to know what determines the EU's popularity.

According to the literature on the support for the EU, there are different factors that may influence citizens' opinion about the EU, from individuals' values to aggregate economic performance, from countries' geographical positions to individuals' socio-economic conditions. I focus my analysis on the impact of macroeconomic outcomes on the EU's popularity, although other factors are also taken into account throughout my estimations. One of the most predominant arguments behind the European integration process since its early days is that it would allow, through its common market and centralized policy making decisions, to improve its members' economic conditions. Therefore, it is plausible to assume that the EU's citizens expect EU membership to be associated with better economic performances. Taking a page from the PBC literature, if governments are held responsible for economic outcomes, why shouldn't the EU be held responsible as well, given it has taken away national governments' authority over some economic policy decisions?

The dataset used in my estimations comprises observations for the first fifteen EU members, from 1974 until 2008. The EU's popularity was measured using data from the EB's surveys, which ask the same question about the EU's membership since 1974, thus allowing for a consistent measure of the support for the European integration process for all the period considered. In order to control for each country's specific historical, economic and social background, a fixed effects estimation method was used. This method allows the model to control for the existence of correlation between the error term and the regressors.

Among the economic explanatory variables, the unemployment rate's growth rate has a negative and statistical significant impact on the EU's popularity throughout the whole sample while the DOE and the percentage of trade with other EU countries are

statistically significant, but have a positive impact on the citizens' support for the European integration process. The variable that represents each country's longevity in the EU is statistically significant in all estimations, always with a negative sign.

There is also evidence of the existence of a honeymoon effect between the EU members and the union in the first three years of membership. Inflation fails to be statistically significant in all the models that consider the whole longitudinal sample dimension, which comes as surprise since it is the only variable that is statistically significant in almost all empirical estimations in the literature that takes a aggregate approach to explain the support for the EU. However, the results become a little clearer when the sample is split into three periods, using the SEA (1986) and the TEU (1993) as the breaking points since I consider them to be the two major leaps in the European integration process. The different results presented by each variable in these periods, both in their coefficients and in their levels of statistical significance, are proof that EU citizens' opinion has not been affected the same way by each variable along the period analysed.

Additionally, country specific effects' coefficients meet my expectations, with the EU being more popular in the first six members and in the members that had greater spells of economic growth after joining the EU (Ireland, Portugal and Spain).

Finally, using four questions to ask respondents their opinions about past and future scenarios for both their countries' economies and their households' financial situations, I find evidence of egotropic behaviour by citizens when they evaluate their countries' EU membership based on their expectations for the future.

As interesting and relevant my dissertation's conclusions might be, especially considering it is the first time to the best of my knowledge that the impact of aggregate economic conditions on the EU's popularity is studied for such a large sample, there is still research that can be made to improve it. For instance, it would be interesting to expand the number of controls to the political realm, in order to have a better understanding of all the main determinants of the EU's popularity, and not only the economic ones. One could also try to estimate vote/popularity functions for national governments in the same period, to analyze if the EU's increasing levels of integration lead citizens to held national governments' less accountable for their countries' economic outcomes.

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