ECONOMIC IMBALANCES AND INSTITUTIONAL CHANGES TO THE EURO AND THE EUROPEAN UNION

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ECONOMIC IMBALANCES AND INSTITUTIONAL CHANGES TO THE EURO AND THE EUROPEAN UNION

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ECONOMIC IMBALANCES AND INSTITUTIONAL CHANGES TO THE EURO AND THE EUROPEAN UNION

INTRODUCTION

Increasing external and internal imbalances that emerged early since the establishment of the Euro Area revealed flaws in the economic and institutional architecture of the single market. Recent economic and debt crisis highlighted the serious lack of confidence in the ability of the Euro Area to face challenges resulting from political and economic development in the Euro Area countries as well as the world economy. It has stressed the crucial need to find a systematic and consistent solution to the current problems of the Euro Area.

Limited maneuverability of the ECB's monetary policy induced by the low interest rate environment highlighted increasing role of fiscal policy in reducing negative effects of external and internal shocks on macroeconomic performance of the Euro Area member countries. However, many empirical studies emphasize the existence of asynchronous features strongly embedded in the mix represented by national fiscal policies combined with singly monetary policy that increases heterogeneity among the Euro Area member countries and thus reduces the overall benefits of deeper economic integration. As a result, there is an urgent call for stronger fiscal integration and establishment of the fiscal union within the Euro Area that could bring large number of benefits reducing asymmetric internal and external imbalances in the member countries and, as a result, increase the overall competitiveness of the Euro Area. However, deeper fiscal unification of countries with heterogeneous macroeconomic environment would induce higher occurrence of undesired exogenous shocks. As a result, it seems to be reasonable to consider alternative approaches of the route to fiscal union that are intensively discussed by both economists and politicians. Key pillars of the fiscal union design as well as particular steps toward its establishment faces the problem generally known as trust to institutions due to economic and debt crisis implications. Decreasing confidence and trust to

institutions revealed fragility of the institutional framework of the Euro Area that is why the recent crisis put on the agenda to redesign the Euro Area due to the lack of symmetry between "economic" and "monetary" union.

However, reduction of excessive economic imbalances that would improve performance and competitiveness of the Euro Area as a whole in the recent post-crisis period requires comprehensive examination of the causes and origins of the recent problems in the European Monetary Union. As many economists (i.e., Paul De Grauwe) suggest, the Euro Area as a very ambitious step forward deeper integration among European economies suffers from the design failures that reduces generally expected outcomes of the single currency. This book provides rigorous insights into the problems inevitably associated with design failures in the Euro Area that contributed to the rise and deepening of the external and internal imbalances within the monetary union.

Incorrect Diagnostics of the Public Finance Crisis refers to the notion that irresponsible national fiscal policies represent a primary reason of a debt crisis occurrence in the European countries. However, the main reason of the debt crisis is rather unsustainable accumulation of a private debt. General government, as the only sector in economy, did not increase its indebtedness during the pre-crisis period. Unsustainable private debt accumulation and linked processes led to the effect of so-called debt deflation. The only way out from deflation spiral accompanied by the recession is the rise of public debt burden that should help countries to avoid serious recession.

Single Monetary Policy Failure is associated with idea that the *loss of monetary autonomy* and associated loss of the lender of last resort may induce a self-fulfilling liquidity crisis. This consequently caused solvency problems. Credibility loss in peripheral countries resulted in sale of government bonds and sharp increase in interest rates and capital spill over to "safe" countries. Increasing *gap between investments and savings* in peripheral countries was implied mainly by decreasing volume of savings before crisis. The trend was even more amplified by lower real interest rate in the south (because of lower inflation) than in the north of the Euro Area. This fact reflected the loss of market capacity to perceive specific country risk (nominal interest rate convergence). Therefore, quantitative easing can be considered as an ECB failure. In the countries with lack of savings, interest rate increase would stimulate their creation in private (private debt reduction) and public sector (fiscal deficit reduction). *Centralized approach to monetary policy* in the Eurozone together with nationally oriented macroeconomic policies is considered as important source of idiosyncratic effects. Endogenous dynamics of convergence, which was efficient at the national level, has almost entirely disappeared at the level of the Euro Area.

Heterogeneous Macroeconomic Environment refers to the notion that performance-related increase in the gap between investments and savings directed to formation of two blocks of countries in the Euro Area – debtors and creditors in the south, and north of Europe, respectively. Low interest rates environment

during the pre-crisis period and quantitative easing during crisis make these problems persistent. Asynchronous evolution of competitiveness in the Euro Area during pre-crisis period even contributed to this problem. Southern countries experienced significant increase in relative unit labor cost (ULC), while ULC stagnated in northern countries and fell down in Germany. However, ULC sharply decreased in peripheral countries during the crisis. Internal devaluation had highly negative impact on output and employment in debtor countries.

Asymmetry in Macroeconomic Policies refers to the notion that solutions based on reduction of expenditures in the debtor countries without expansionary policy conduction in the creditor countries led to aggravation of recession and escalation of debt crisis. Nevertheless, debtor and creditor countries should spend less or more, respectively (redistribution of expenditures). However, this requires high degree of national fiscal policy coordination. Above-mentioned problems with liquidity resulted in abandoning automatic fiscal stabilizers and the countries had to implement fiscal consolidation.

Obstacles for Policy Coordination refers to the notion that crisis period revealed flaws and fragile patterns in the institutional architecture of the European Union. Insufficient guarantees to preserve fiscal responsibility (Stability and Growth Pack, Fiscal Compact), controversial low interest rate single monetary policy, asymmetric and massive fiscal consolidation, and the lack of coordination in both economic policy and institutional levels are just few examples of flaws in the European Union institutional framework that clearly reduces the policy driven recovery of the European Union from the crisis.

This book offers a critical perspective from which to observe evolution of the Euro Area and the European Union in these times of growing economic and political conflict. Key implications of above-mentioned design failures in the Euro Area and their contribution to the excessive external and internal economic imbalances will be critically discussed from the economic, policy, and institutional perspectives. This critical insight is used to examine both institutional asset and economic performance of Europe after the crisis, moving from the authors' shared perspective that the crisis revealed the weak aspects of the whole architecture of the European Union. The birth of a new currency union in 1999 represented such an important historical political and institutional event that it was expected to reshape the international relations in the globalized context. The first steps of Currency Union came after the collapse of the Exchange Rate Mechanism (ERM) in 1992. It marked the end of success of cooperative economic policy, revealed the conflict between internal and external policy objectives, and showed the existence of asymmetries among countries adhering to the exchange rate agreements. The solutions proposed to overcome these flaws brought to build the Single Currency Area: they pointed to radically remove the constraints and move on a shared level the alleged policy mechanisms source of divergences. As a matter of fact, the European Monetary Union

was built on two policy principles: (a) a single monetary policy and (b) a fiscal policy based on a strict budgetary discipline left to the management of individual states. This was supposed to contain interest rate differential, stabilize inflation, and assure the convergence process toward a uniform rate of growth. However, despite in the first years, it appeared to have created a trusted environment assuring capital to perfectly move from one country to another, after 2007, differences in inflation rates, in interest rates, in productivity, in fiscal policy performance and external competitiveness became abruptly evident. The existence of a single monetary policy and fiscal policy left to the management of individual states gave rise to asymmetrical effects on growth and self-fulfilling processes of divergences.

The divergences transmitted to European citizens the belief that the European bodies were unable to manage the difficulties and an ever decreasing trust in institutions, both political and economic ones, has been registering in the continent (see Eurobarometer). The greater fragility of some countries in respect to others has triggered a backward process in which national interests have started to prevail over those of both the currency area and the entire European Union. In turn, this fueled a progressive decline in confidence in the European institutions and is creating growing questions of interpretation both in terms of economic theory and institutional asset. The hot coals of the fragility of the banking sector, the unsustainability of public accounts, and the external imbalances seem to be, after almost 10 years from the eruption of the crisis and after 25 years from the ERM collapse, suffocated with difficulty under the ashes rather than permanently extinguished. The causes of the collapse of the ERM were reproduced, but with limited policy instrument to fight them. This time however it is much more difficult, complex, and implying political consequences to go back.

This book, containing contributions from international scholars both expert and young, focuses on these issues and provides an analytical investigation on the process of the European institutional and economic integration. It offers an analysis of the main causes of the institutional and economic decline of the European Union and provides some proposals to face the challenges for the future.

It is divided into three sections. Each of them analyses the institutional architecture, the policy model and the economic outcomes of the Euro Area from different perspectives with the aim of revealing the economic and institutional imbalances of both the currency area and the European Union as a whole. They are as follows:

(1) Institutional and political issues in the policy framework of the Euro Area.
(2) Monetary policy, the banking system, and financial integration.
(3) Macroeconomic imbalances and the convergence process.

The first section contains chapters investigating on the general institutional and policy framework of the Euro Area. Mariangela Bonasia and Rosaria

Rita Canale in the chapter *The Euro Area Policy Model and the Institutional Consolidation Process in the Long-run* discuss the theoretical limits of the European policy model on the basis of an inverse relationship both in the short and in the long run between trust in institutions and unemployment. This empirical outcome suggests that the European process of integration and institutional consolidation goes through a greater attention devoted to the rate of unemployment. Elina De Simone Marcella D'Uva and Giuseppe Gaeta ask the reader the question "Loving Europe or Not?" and provide an "Empirical Analysis of the Determinants of National Political Parties' Orientation towards the European Union." Adopting a national perspective they intersect the economic outcomes with national parties' political orientation in supporting the European integration process. With the support of their empirical results, it is possible to make an extension and deduce that poor economic outcomes are supposed to increase the consent toward ideologically extreme parties that are, on average, less supportive of European integration. The next three chapters focus on policy institution specifically: *Development-Related Problems in the Euro Area: The Challenge of the 'Strategic' Approach* by Nikolaos Karagiannis and Edward K. Zajicek deepens the regional and industrial problems in the context of the European Union and Euro Area and discusses the connected policies. A comparison with United States and Japan is also implemented in order to offer alternative policy recommendations based on the developmental state line of argument. *Rules, Imbalances and Growth in the Euro Area* by Daniele Schilirò highlights rules and institutions that have characterized the European Monetary Union during this prolonged crisis and discusses the policies implemented in the Euro Area, stressing the limits of the strategy pursued by the European authorities. The main purpose of the chapter is to indicate some economic solutions and political arrangements in order to complete the institutional system of the EMU. This requires appropriate reforms of its institutional architecture, where a key point is fiscal union. But such reforms require changes in the treaties so to the Eurosystem more consistent and endowed of democratic legitimacy, so to have the tools, resources, and policies necessary to contribute to the development, stability and cohesion of the Euro Area countries. Finally, the chapter *Back to National Currencies? Monetary Integration in an Asymmetrical Currency Area* by Sergio Rossi argues that monetary integration must precede, rather than follow, monetary unification, in order to avoid the occurrence of structural and systemic crises. It points out that adopting the euro as single currency for a number of heterogeneous countries led inevitably to a number of major negative effects, so much so because of the counterproductive financial constraints induced by the euro-area fiscal and monetary policy framework. It suggests to introduce a monetary-structural reform that will be instrumental in increasing financial stability and employment levels across Europe, thereby inducing positive effects also for trade and public finance. They all three underline, even if from different perspectives, the flaws of the institutional architecture of the Euro Area and offer some suggestions to overcome them.

The second section deals with the monetary policy, the banking system, and financial integration. The first two chapters concentrate on the conduct of the monetary policy. The contribution by Joerg Bibow *From Anti-growth bias to Quantitative Easing: The ECB's Belated Conversion?* identifies an anti-growth bias in the ECB's monetary policy approach: the ECB is quick to hike, but slow to ease. It needs a "Euro Treasury" partner to overcome the euro regime's most serious flaw: the divorce between central bank and treasury institutions. On less critical positions stands the chapter *Quantitative Easing (QE) in the Euro Area* by Marta Orviská and John Hudson. The main thesis is that the use of QE helped governments to deal with the immediate aftermath of the crisis and possibly prevented much sharper recessions than we witnessed. But in many ways its impact on the real economy has been limited and there are dangers in both the potential for substantial inflation to occur at some point in the future and the weakening of the financial sector.

The following three chapters investigate on the banking system and financial sector as indicators of the Monetary Union performance. Pasquale Foresti and Oreste Napolitano in their chapter *Updating the Evidence on Risk-Sharing through the Cross-Ownership of Financial Assets in the Euro-Area* argue that risk-sharing is a crucial issue in order to evaluate the performance of a monetary union. They estimate the degree of risk-sharing through the cross-ownership of assets within 11 European countries in the period 1971–2014. The results seem to represent the evidence of a missing element of the EMU that forced governments to intervene by means of fiscal policy to tackle the imbalances deriving from the financial crisis. The weakness in the risk-sharing has been one of the channels that allowed the global financial crisis to mutate in a sovereign debt crisis in the EMU. Further deepening on financial integration is provided by the Jan Babecký, Luboš Komárek, and Zlatuše Komárková's empirical contribution *Financial Integration at Times of Crisis and Recovery*. The analysis covers a wide range of markets and countries and reveals deviations from the arbitrage conditions during the crisis that after 2015 appear to be almost – if excluding the government bond markets – to pre-2007 levels. A wide reflection on the banking system and financial integration concludes this section. Dragan Momirović, Marko Janković, and Maja Ranđelović in their *EU Banking Union-Expectations Risks and Challenges* examines the issues of the Banking Union (BU) and the complex architecture of banking system surveillance. It is expected to preserve the single market and the common currency, breaking "toxic connections" between sovereign debt and banks, mitigation and removal of financial instability and economic growth. However, it seems the political will of national governments to give up sovereignty over its banking sector and transfer onto competencies to the supranational institutions to be a key factor in the success or failure of BU.

Finally, the issue of imbalances and convergence is addressed in the third section. According to Collin Constantine, differences in "Competitiveness and Macroeconomic Imbalances in Euro Area Countries" are not a failure of

nation states. The convergence criteria – limits on government deficit, debt, interest rate, and inflation – completely ignored differences regarding technological frontiers, the main determinant of the key macroeconomic imbalances across the Euro Area. The nominal price competitiveness criterion appears to be inadequate to assure convergence since there are deep differences in the productive structure. The imbalances issue is examined from the perspective of the differences in current accounts by Rajmund Mirdala and Júlia Ďurčová in their contribution *Current Accounts and Competitiveness Issues in the Euro Area*. Asynchronous current account trends between North and South were registered in the Euro Area and the author investigates on the underlying causes. The issue is whether they are due to differences in real exchange rate or in domestic demand. The empirical results indicate that while prices' and costs' related determinants of external competitiveness affected current account adjustments during the pre-crisis period, demand drivers shaped current account balances during the crisis period. The next chapters deal with fiscal imbalances in relation the country-specific cyclical position and monetary policy asymmetries. Ines Kersan-Skabic wonders whether "there is a debt-overhang problem in the European Union." Through the empirical analysis, she finds out a bi-directional impact of public debt on GDP growth rate, unemployment, current account, and interest rate spread. Tiago Cardao-Pito in his *Are they all the same? Banking and financial crises in debt-ridden Euroarea countries* states that the intra euro-area imbalances were already present before the financial crisis and that followed distinct evolution paths. Therefore, uniform prescriptions for each country encompassing all post-euro crises cannot exist, but rather may cause self-fulfilling processes of divergences. A special attention in creating fiscal imbalances is devoted to capital flows in the chapter *The Recent Experiences of Capital Flows and Fiscal Imbalances since the Creation of the Euro Area* by Yaya Sissoko and Brian W. Sloboda.

The creation of the Euro Area provided some fiscal and monetary stability up until the shock of the 2008 Financial Crisis. After that the interaction between current account and fiscal imbalances started to spread throughout the Euro Area members and many of them began to engage in policies in the attempt to restore stability and to stem capital outflows by implementing fiscal reforms. The author concludes that the Euro Area member countries need to re-examine best practices to implement fiscal policies that are resistant to intense financial shocks. The role of monetary policy in fiscal imbalances is examined in the chapter *Intra-European Union Imbalances and Cyclical Position: Does Monetary Policy Matter?* by Jean-Pierre Allegret and Aufrey Sallenave. The investigation is made upon some Baltics and South-Eastern European countries as well as peripheral European countries over the period 2000–2013. The general conclusions are that monetary policy was ineffective to face imbalances, the fiscal policy prescriptions generated pro-cyclical results, coordinated macro measures, and surveillance tools are needed. Convergence processes in the sectorial international competitiveness of the Eurozone area

countries are analyzed in the chapter by Roberto J. Santillán-Salgado and Araceli Ortega-Díaz. Authors deal with dilemma whether unexpected Euro Area sovereign debt crisis originates in a "contagion" effect of the subprime mortgages financial crisis in the United States or whether it is just a generally expected implication of deeper fundamental economic imbalances among Euro Area member countries. As the adoption of the euro created highly favorable conditions for increasing convergence, authors suggest that in 4 of 10 export sectors a significant evidence of international competitiveness convergence can be found while there is no significant evidence of divergence in the rest sectors. The last chapter addresses the Euro area countries debt-problem, not only from an economic perspective, but also from a political point of view. Julius Horvath and Alfredo Hernandez in their *Sovereign Debt Crisis: Euro-Reality* explore the different sources of sovereign debt crises: on one side the opportunistic and myopic behavior by debtor nations, and on the other side credit temptation by lenders, eager to allocate savings surpluses.

It emerges from the contributions that the European convergence process is extremely problematic. The issues of the compliance to rules appear to question the economic and political project for Europe as a whole and national perspectives prevail on supranational ones.

There are two scenarios which may occur: the first one, in which European institutions insist on the "efficient" working of the present policy framework. Following this point of view, single states are asked to make adjustments on their own. In particular, the peripheral countries have to bear the whole cost of rebalancing the currency area, while the core ones – in spite of having profited from the weakness of the Euro – remain at best as passive onlookers. However sooner or later, they will suffer from the negative spill-over effects.

The alternative scenario is to remove some constraints and start thinking to Europe as a single body. The Euro Area asymmetries cannot be realigned without shared policy action. It is clear that Europe is built upon a strong contradiction the crisis has explicitly revealed: the absence of common institutions in the presence of a common market. In imagining the future, single countries should have in mind that, in a globalized context, it is extreme difficult to pursue internal policy objectives and be aware that in order to move a step ahead, a quantum leap toward a political union would be required.

Rajmund Mirdala
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Editors

PART I
INSTITUTIONAL AND POLITICAL ISSUES IN THE POLICY FRAMEWORK OF THE EUROZONE

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THE EUROZONE POLICY MODEL AND THE INSTITUTIONAL CONSOLIDATION PROCESS IN THE LONG-RUN

Mariangela Bonasia and Rosaria Rita Canale

ABSTRACT

The aim of this chapter is to show the limits of the European policy model and to support the existence, through straightforward empirical analysis, of an inverse relationship both in the short run and in the long run between trust in institutions and unemployment. The empirical methodology relies on dynamic panel data techniques allowing measuring in a single equation both the long-run relationship and the short-run speed of adjustment among variables. This connection appears to be valid both in the Eurozone considered as a whole and in particular in peripheral countries, where the macroeconomic dynamics have been, under this respect, much more divergent from the average. This outcome allows proofing that to consolidate the European process of integration in the long run, institutions should have as main objective not only inflation but especially unemployment.

Keywords: Economic policy; Eurozone; institutions; trust

JEL Classifications: E02; E63; C23

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INTRODUCTION

The European Monetary Union (EMU) is the goal to which came the difficult integration process started after the Second World War. The crisis, born in United States in 2007 and arrived in Europe in 2009 as a sovereign debt crisis, weakened the economic structure of many Eurozone member countries and undermined the institutional architecture of the Monetary Union. The increased fragility of some countries in respect to others has been triggering a backward process, in which the national policy authorities' targets have been in contrast with those of the supranational institutions.

Some countries after having used, in the aftermath of the crisis, fiscal policy as a stabilization instrument, were forced to implement fiscal retrenchments to respect EMU policy rules. Some others in the fear of a greater inflation opposed to the European Central Bank (ECB) policy strategy accused of being too ease toward peripheral countries. The prevalence of the approach based on the compliance to the existing rules caused an institutional stalemate that hindered the objective of a wider and deeper integration.

As a matter of fact the Eurozone policy prescriptions appear to take care mainly of the sustainability of national fiscal accounts in the strong theoretical belief that this is the precondition of low inflation. In turn, low inflation is the sufficient and necessary condition for a long-run stable growth. However, despite the measures implemented to target and preserve a sound public balance, it has been evident that growth declined and that the majority of countries have been experiencing ever increasing rates of unemployment (Canale & Liotti, 2015; Canale, Liotti, & Napolitano, 2014). In the 12 Eurozone countries, unemployment in 1999 was on average 9.5%, 7.5% in 2008, and 12% in 2013. The recent reduction of 0.4% (11.6% in 2014) seems to be too poor to compensate the uneasy conditions of some peripheral countries (in 2014 unemployment in Greece was 26.5%, in Portugal 14.1%, in Italy 12.7% and in Spain 24.5%).[1]

At the same time an ever increasing distrust in the three main European Institutions – (1) the ECB, (2) the European Commission (EC), and (3) the European Parliament (EP) – can be observed, revealing that citizens believe that these three bodies are not capable to serve their interests.

This is detectable through the Eurobarometer, a biannual survey monitoring public opinion trends in European institutions within the Member States.[2] This biannual survey covers a wide range of topics, including questions ascertaining to what extent European citizens tend to trust in their main decision-making bodies, thus monitoring the process of integration and legitimacy. This degree of legitimacy, however, after an initial enthusiasm lasting more or less until 2008, seems to have declined in recent years. According to data collected in the whole European Union from the birth of the Eurozone to the present day (1999–2013), 43% of citizens were prepared to place their trust in the ECB in 1999 and 50% in 2008, declining to 34% at the end of 2013, while those who

stated they distrusted the ECB increased from 29% in 1999 to 49% in 2013; those confident in the EP decreased from 53% in 1999 to 39% in 2013, and those lacking confidence increased from 28% in 1999 to 48% in 2013. Finally, trust in the EC decreased from 50% to 35% while distrust increased from 29% to 47% in the same years (in all three cases the percentage of those who responded "I don't know" decreased).[3]

The aim of this chapter is to show the limits of the European policy model and to support the existence, through straightforward empirical analysis, of an inverse relationship even in the long run between trust and unemployment. This connection appears to be valid both in the Eurozone considered as a whole and in particular in peripheral countries, where the macroeconomic dynamics have been, under this respect, much more divergent from the average.

The whole sample contains 11 Eurozone countries – Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, and Spain most of which joined the Euro from the beginning (only Greece joined the Euro in 2001)[4] – and goes from 1999 to 2013 with biannual observations. To achieve this objective, unemployment and inflation, widely recognized in the literature as determinants of the institutional consolidation process, are considered as the two main explanatory variables of the net trust.[5] The empirical methodology is a dynamic panel data allowing measuring in a single equation both the long-run relationship and the short-run speed of adjustment among variables. This approach, using the error correction form, delivers results considered to be consistent even in presence of different dynamics in each country and despite the reduced number of explanatory variables.

The overall results show that respondents, in evaluating the institutional performances and their ability to reach the policy goals, take into account not only the rate of inflation, but especially the unemployment rate. This conclusion is particularly evident for peripheral countries and in a long-run perspective. This outcome allows proofing that to consolidate the European process of integration in the long run, institutions should have as main objective not only inflation targeting but especially the rate of unemployment. This is especially true if the aim is to not leave behind countries most in need and to preserve the institutional unity of the whole currency union.

The chapter is organized as follows: the next paragraph recalls the theoretical underpinning and the main pillars of the European policy model; the third paragraph reviews the literature about trust in institutions and the economic outcomes. The fourth paragraph presents the empirical strategy and results. These are presented separately for the whole Eurozone and for the peripheral countries. Finally the fifth paragraph draws conclusions and provides reflections on the institutional steps for the future of the integration process.

THE EUROPEAN POLICY MODEL: THEORETICAL UNDERPINNINGS AND FLAWS

The policy model, the European Union was built on, represents the most faithful implementation of the theoretical conclusions reached by the prevailing economic paradigm. The main idea is that monetary policy can be efficient only if there are rigid rules in single state interventions. The result is a subordination of fiscal policies to the wider objective of the stability of the Euro. This stability is the necessary condition for long-run convergence toward the natural unemployment rate.

European institutions shared this point of view, and despite the trade-off – at least in these times – between the reduction in public expenditure and interventions required to sustain growth, they have been asserting that there is only one single strategy to achieve both goals: the free operating of market forces which, in the long run, leads to steady growth, internal convergence and sound public accounts. There is the strong belief that: (a) short-term policies are not desirable because, even if they could have positive effects in the short-run, the final result is just an increase of inflation; (b) inflation is just a monetary phenomenon; (c) in the long-run inflation is proportional to the quantity of money in circulation and does not depend on what happens in the goods market; (d) gross domestic product (GDP) and unemployment fluctuate around their long-run value. This last one is independent from active fiscal and monetary policies (Canale, 2008).

These conclusions affected almost all the advanced economies and conduced to an institutional structure based on:

1. *Separation between fiscal and monetary policy*.
   Until the 1970s, economic policy has been managed more or less coordinately, according to different situations. The Central Bank effectively cooperated to the Government spending strategies. The main objective was the achievement of full employment, which the injection of resources would have assured to achieve. Since the early 1970s, after the collapse of Bretton Woods and the abandonment of the Gold Exchange Standard, economic theory changed orientation. The increase in inflation accompanied by a modest increase in employment brought to believe that the injection of money could not cause permanent changes in the real macro-variables but just a worsening of the income distribution, led to keep separate the decision-making process of fiscal and monetary authorities. The two policy authorities should cooperate just in presence of shared goals.
2. *Fiscal policies managed within a general criterion of spending constraint*.
   The direct consequence of the separation between fiscal and monetary policy is that the public debt must be placed – unless the Central Bank decides autonomously otherwise – on the private market. The higher the debt, the higher is the amount of interest to be paid. Moreover, Government

spending, as prevailing economic theory states following the seminal contribution of Barro (1974), does not produce long-term growth, and it is therefore certainly desirable that State economic intervention were inspired by the general criteria of spending constraint. In addition public spending is often subject to the consensus mechanism, rather than to effectiveness and efficiency criteria.

3. *Monetary policy with the purpose of maintaining constant the price growth.*
   The distrust on the governments' role in stabilizing output and the belief that the real growth could not be permanently affected by factors with a monetary nature, brought to assign to central banks the commitment of price stability. The achievement of this goal would have allowed perfect information, efficient market working and the achievement of full employment.
   In Eurozone two elements were added:

a. *A single monetary policy*
   As a matter of fact the ECB manages monetary policy for all the Eurozone member states. The principle of "one size fits all" was applied in the strong belief that the financial integration would have assured real convergence.
b. *Fiscal policy based on a strict budgetary discipline and left to the management of individual states.*

As it is well known, the Maastricht Treaty signed in 1992 and the Stability and Growth Pact state that public deficit and debt ratios to GDP should stand at 3% and 60% of GDP respectively. To achieve these objectives on March 2, 2015, Member States and many Eurozone countries (excluding the United Kingdom and Czech Republic) have signed the *Fiscal Compact*, which commits them to a path of reduction of public spending particularly onerous. In particular, the structural deficit – that is, the one that does not depend on the cycle – should not exceed 0.5% of GDP, and those countries with a debt/GDP ratio exceeding 60% should pursue a path of reduction of an annual value of 1/20 of the GDP.

This model showed its limits in dealing with situations such as those of the 2007s financial crisis. Its underpinnings are two controversial hypotheses that in times of crisis –in particular a financial crisis – represent an oxymoron: (a) the deterministic nature of the economic system; (b) the ability of financial markets to anticipate the future trend of the economy. According to the first hypothesis, in examining the working and the adjustment mechanisms of the economic system it is not necessary to consider the case of the occurrence of systemic shocks (i.e., affecting all countries contemporarily).

Following the second hypothesis – known as efficiency market hypothesis – financial markets are considered capable of assessing the various risks in order to prevent the excessive accumulation of debt, both public and private, by anticipating the future value of assets.

The crisis denied the goodness of these two assumptions and has been spreading negative real effects throughout the world through banks balance sheets, the higher financing costs and the fall of aggregate demand. The crisis also highlighted the greater fragility of some countries in respect to others and made clear that the economic policy structure was designed unbalanced. Unbalanced with respect to some countries and unbalanced with respect to the role of monetary policy to which both the output and inflation stabilization functions could be assigned (Canale, 2012).

This represents a "misunderstanding" of the Timbergen's (Tinbergen, 1962) economic policy rule, suggesting to have a number of targets equal to the number of instruments. The ECB, the sole common economic policy institution, has in the hands – via monetary and interest rates tools – the responsibility to respect the inflation target and to grant recovery of the Eurozone considered as a whole.

As a matter of fact since the end of 2008, key interest rates fixed by the ECB started to decline and, with the election of Mario Draghi as Governor in November 2011, it reduced so sharply that reached negative levels. From 9 December 2015, the deposit facility assumed the value of −0.30% and the marginal lending facility the value of 0.30%. These extremely low levels of interest rates were accompanied, during the whole period of crisis, by covered bond purchase programs and asset-backed securities purchase programme (ABSPP).[6] In addition, since the inability to inflate money into the economy and the persistent levels of low or negative inflation rates, at the beginning of the year 2015, the ECB started the expanded asset purchase program. It adds the purchase program for public sector securities (PSPP) to the existing private sector asset purchase programs. This is said to address the risks of a too prolonged period of low average inflation.

However, Eurozone is not homogeneous and the unconventional monetary policy has different effects on the European economy consolidation process. As a matter of fact, it is divided into two major blocks: the northern countries fearing that the impressive injection of liquidity and low interest rates would cause an increase of inflation and the southern countries that, despite the non-conventional monetary policy still suffer from the lack of demand. These last do not have autonomous effective tools to bridge the gap with northern countries. They can just apply a real devaluation via a reduction of wages and public sector cuts to meet the fiscal parameters. These tools are likely to generate, in times of crisis, other things being equal, further reductions of GDP and employment (Canale & Liotti, 2015).

TRUST AND ECONOMIC PERFORMANCE

The literature on trust in institutions is vast and an exhaustive review of the theoretical and empirical contributions goes beyond the scope of this chapter.

However, it may be helpful to outline the main findings in order to contextualize the contribution of this analysis. The prevailing literature analyses trust through the "Vote and Popularity" (VP) function, according to which the soundness of an institution is examined on the basis of a set of both economic and political determinants. In the absence of survey interviews, voting is used as a proxy of trust since "political trust is a central indicator of the underlying public's feeling about its politics" (Newton & Norris, 2000).

Since the 1970s, the "rationality hypothesis" and the centrality of "economic man" shifted the attention mainly toward the economic side of the analysis. The uncontroversial result is that the two main variables considered to be relevant to trust are the so-called "big two" (Paldam, 2004), namely inflation and unemployment. Both these variables are believed to affect negatively the level of trust.

However, the recent empirical literature, concentrating especially on trust in national governments and parliaments, has reached mixed results (for a complete review see Nannestad & Paldam, 1994). The results suggest that people: (1) are mainly "sociotropic," that is, are interested in the economic situation of the whole nation; (2) are retrospective with static expectations; (3) assign the greatest importance to the unemployment rate (Veiga & Veiga, 2004).

Conversely, Sanders (2000), using data for the United Kingdom, found that expectations about future economic performance play a key role in affecting the net trust in national governments. Kirchgässner (2009), examining the behavior of German voters, found that up to 1998, unemployment and inflation had opposite sign effects on trust. On the contrary, with the Schröder Government the results changed since unemployment became non-significant and the inflation rate switched to the opposite direction (the higher inflation rate increased the net trust in the government). Stevenson and Wolfers (2011) analyzed the decline of trust in the USA public institutions from 1972 to 2010 – also documented by National Election Studies by Arthur H. Miller (1974), Alford (2001), and Pew Research Center (2010) – over the business cycle and confirmed the pro-cyclical nature of trust.

The first study about the European Union as a whole using Eurobarometer surveys was that of Hudson (2006). Investigating several institutional aspects from a microeconomic perspective at national and supranational level, he finds, as the main result, that in 15 European countries the institutional performance affects individual happiness. The approach considering the economic outcomes of institutions has been privileged by subsequent studies. The main focus of the analyses is the ECB because of its institutional arrangements relying on independence and accountability. However, since the birth of the Eurozone is relatively recent, empirical analysis starts in 1999 and applies panel data methodology with the aim of capturing the degree of strengthening of European institutions. Adopting a macroeconomic perspective, Fisher and Hahn (2008) concentrate on trust in the ECB using Eurobarometer data from 1999 to 2004. In the period preceding the financial crisis, the main issue defining trust in the ECB is the

inflation rate (positive sign) although some real variables, namely GDP and unemployment, have to be taken into account. With the eruption of the financial crisis, the issue of trust and its link with the economic variables became increasingly important. Wälti (2012) empirically shows that the decline of trust in the ECB appears to be significantly evident in countries which have experienced increasing sovereign bond yields and financial turbulence. This leads to the apparently counterintuitive result that country-specific variables affect trust in a supranational institution. Through a micro-founded empirical model and taking into account many factors influencing individual economic situations, Ehrmann, Soudan and Stracca (2013) prove that the decline in trust in the ECB is due to the combination of the following three effects: (1) the deterioration in economic conditions during the crisis; (2) the overall decline in public trust in the European project during the crisis, because citizens saw Europe as being unable to address issues related the global crisis and iii) the fact that the ECB was associated to the troubles of the financial sector. However, they conclude that the evolution of the macro-economy is sufficient to explain the decline of trust and that there was not sufficient change in the regularities of the coefficient between normal and crisis times. Berlemann (2013) finds that the recent decline of trust in the ECB is attributable to financial and sovereign debt crises, even controlling for national macroeconomic factors. Focusing on the institutional commitments of the ECB, Kaltenthaler, Anderson, and Miller (2010) conclude that the citizens' lack of trust in the ECB is due to (1) the deterioration of the economic situation; (2) the decline in belief in the European project, and (3) the association of the ECB with troubles in the financial sector (Kaltenthaler et al., 2010). The first two factors are also relevant to non-crisis times.

Roth (2009) and Roth, Nowak-Lehmann and Otter (2011) analyze the determinants of trust for the three European Institutions, the ECB, EC and EP. They consider, as possible determinants, besides inflation and unemployment, a set of macroeconomic variables, such as debt and GDP growth. They conclude that unemployment and growth affect citizens' trust, whereas debt and inflation do not have any effect during periods of economic distress. In particular, Roth, Gros and Nowak-Lehmann (2014) detect a negative and significant relationship between unemployment and trust in the ECB in times of crisis using a panel data analysis on 12 Eurozone countries. They argue that the loss in trust is strongly driven by the significant increase in unemployment rates in four of the five peripheral countries: Greece, Ireland, Portugal, and Spain.

EMPIRICAL ANALYSIS

This chapter focuses on 11 Eurozone countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal and Spain that joined the Euro from the beginning (Greece in 2001). Trust in the ECB, in the

EC and in the EP is regarded as dependent variable; inflation and unemployment are considered as the independent variables. The sample period goes from the first semester in 1999 until the second semester in 2013 ($t = 30$ and $n = 11$, for a total of 330 observations).

Data on trust in European Institutions were collected from the Standard Eurobarometer survey. The survey was established in 1973 and has been progressively refined in the course of the years. Each survey consists in approximately 1,000 face-to-face interviews per Member State and reports are published twice yearly. It is structured around a wide range of questions. The question this chapter is concerned about is: "For each of the following European bodies, please tell me if you tend to trust it or tend not to trust it" (question QA15). The possibility of responding "I don't know" is also given. In order to construct an index measuring trust, the following method is considered: it is constructed as the ratio between the net trust and the sum of those who answered "tend to trust" plus those who answered "tend to not trust" without considering those who do not know (Wälti, 2012). This index has the limit of excluding from the sample those who "don't know": This answer could be interpreted, rather than as a signal of ignorance, as the expression of a sense of disaffection toward the institution's performance and as a lack of interest toward the European integration process.[7]

Data about unemployment and inflation were collected from the IMF outlook database. Since the Eurobarometer Survey runs twice a year (April and October, or May and November, or June and December), the independent variables have to be transformed in order to make them consistent with the dependent variables. Therefore, similar to Wälti (2012), inflation and unemployment are calculated as the averages between the months before two consecutive surveys were run. For instance, when surveys were run in June and December, the explanatory variables were calculated as the monthly averages between May and November. In addition, data on inflation are calculated as the deviation from the ECB target value of 2% (see Wälti, 2012) in this way assigning an equivalent weight to deflation and inflation.

Data and Methodology

The empirical technique relies on the existence of a long-run relationship among the variables and on the convergence toward an equilibrium value. This is due to the error correction form of the model (ECM) estimating separately the coefficients of the variables in a dynamic form with lagged values (long run) and the coefficient of the dynamics of the adjustment process (short run). Furthermore the ECM provides the speed of adjustment which is supposed to assume a negative and lower than one value, proving that there is a short-run dynamic of adjustment toward a long-run equilibrium value. In the panel

specification used here it assumes three forms: the dynamic fixed effect (DFE), the Mean Group (MG), and the Pooled mean group (PMG) estimators.

The DFE estimator constrains the coefficient both in the long and in the short run to be equal across groups and just the intercept to differ across countries. However if the coefficient dynamic are not equal across groups this estimator could produce misleading results.

The MG methodology (see Pesaran & Smith, 1995) estimates the N time-series regressions and averages the coefficients. This model, therefore, relies on separate estimates for each group, and calculates a simple arithmetic average of the coefficients of each group (Pesaran & Smith, 1995). With this estimator, the intercepts, slope coefficients both in the short and in the long run, and error variances are all allowed to differ across groups.

In an intermediate position between the DFE and the MG estimator stands the PMG model. In the PMG short-run coefficients are allowed to vary across groups, while long-run parameters are constrained to be equal (Pesaran, Shin, & Smith, 1997, 1999; For a pedagogical explanation see Blackburne & Frank, 2007).

The features of both MG and PMG are considered to be consistent in particular to estimate dynamic panels in which variables are non-stationary and the parameters are heterogeneous across groups. This fits the case of the 11 Eurozone countries in which the presence of cross-sectional dependence and different adjustment dynamics in each country could bring to misleading results.[8]

All the three models assume implicitly the presence of dummy variables. In particular, the common shock of the crisis is implicitly assumed in MG and PMG estimators in order to correct for cross-sectional dependence (Blackburne & Frank, 2007).

The equations to be estimated assume the long- and the short-run forms.

The long-run equation follows the ADRL(1,1,1) and is described by:

$$\begin{aligned} \mathrm{NT}_{i,t,j} = {} & \alpha_{i,j} + \lambda_{i,j}\mathrm{NT}_{i,t-1,j} + \beta_{i,0,j}\mathrm{UN}_{i,t,j} + \beta_{i,1,j}\mathrm{UN}_{i,t-1,j} + \gamma_{i,0,j}\mathrm{INF}_{i,t,j} \\ & + \gamma_{i,1,j}\mathrm{INF}_{i,t-1,j} + \varepsilon_{i,t,j} \end{aligned} \tag{1}$$

This is the long-run specification equation where NT is net trust, UN is unemployment, INF is inflation, i represents the country, j the specific institution considered, and t the time. The parameters $\beta_{i,j}$ and $\gamma_{i,j}$ to be estimated are indexed with different numbers in accordance to the time at which they are referred. Finally, $\alpha_{i,j}$ is the constant term referred to each country i and each institution j.

According to the ECM form the residuals coming out of the long run equation are then used to verify the long-run convergence toward the equilibrium value or to verify, as it is called, the speed of adjustment. So that in the short

run changes in the dependent variable should depend on changes in the independent variables plus an error term measuring if they converge.

Therefore, the error correction equation describing the short-run speed of adjustment is

$$\Delta \mathrm{NT}_{i,t,j} = \phi_{i,j}(\mathrm{NT}_{i,t-1,j} - \vartheta_{i,j} - \vartheta_{1,i,j}\mathrm{UN}_{i,t,j} - \vartheta_{2,i,j}\mathrm{INF}_{i,t,j}) - \beta_{i,1,j}\Delta \mathrm{UN}_{i,t,j} - \gamma_{i,1,j}\Delta \mathrm{INF}_{i,t,j} + \mu_{i,t,j} \quad (2)$$

where with simple transformations is easy to verify that

$$\vartheta_{i,j} = \frac{\alpha_{i,j}}{1-\lambda_{i,j}}; \quad \vartheta_{1,i,j} = \frac{\beta_{i,0,j}+\beta_{i,1,j}}{1-\lambda_{i,j}}; \quad \vartheta_{2,i,j} = \frac{\gamma_{i,0,j}+\gamma_{i,1,j}}{1-\lambda_{i,j}}$$

They are the long-run coefficient calculated as a weighted average of the coefficient of the independent variables. The weight is given by the coefficient of the dynamic-dependent variable.

Furthermore, $\phi_{i,j} = -(1 - \lambda_{i,j})$ is the error-correction speed of adjustment.

The parameters $\vartheta_{1i,j}$ for the long run, $\beta_{1i,j}$ and $\gamma_{1i,j}$ for the short run and $\phi_{i,j}$ for the speed of adjustment are of primary interest to confront different estimation methods.

In the MG estimator all parameters vary across countries and the results are averages of the panel members. In the PMG and DFE estimator, the constraint of homogeneity of long-run coefficients is imposed so that $\vartheta_{i,j} = \vartheta_j$. In the short run for the PMG estimator parameters vary, while for the DFE it holds $\beta_{1,i,j} = \beta_{1,j}$ and $\gamma_{1,i,j} = \gamma_{1,j}$.

Since all the models assume different hypotheses on both the long and the short-run coefficients and the estimates can be considered consistent and efficient if the restrictions are true, the result coming out of the application of all the three techniques are presented. This will allow verifying the sign and the dimension of the relationship between the variables, whatever the constraints and limits of each technique.

Empirical Results

In order to identify the impact of the variables of interest, Eqs. (1) and (2) are estimated with PMG, MG, and DFE. Table 1 reports the results for the whole sample and for the three European institutions considered along with the Hausman h-test to measure the comparative efficiency and consistency among PMG and MG, and PMG and DFE estimations.[9]

The error correction term ϕ_i is negative and highly significant (for ECB = −0.379*** for MG, −0.317*** for PMG and −0.185*** for DFE for

Table 1. Trust in European Institutions for 11 Eurozone Countries.

	Trust in European Central Bank			Trust in European Parliament				Trust in European Commission	
Variables	MG	PMG	DFE	MG	PMG	DFE	MG	PMG	DFE
Long-run coefficients									
Unemployment	−4.480**	−8.958***	−7.242***	−4.352	−7.720***	−6.891***	−4.344**	−7.296***	−6.754***
	(1.991)	(0.536)	(1.441)	(2.759)	(0.532)	(1.137)	(1.726)	(0.434)	(0.992)
Inflation	−4.423***	−2.022*	−3.346	−9.979*	−2,017*	3.560	−4. 607***	−1.496*	−2.901
	(1.608)	(1.137)	(3.515)	(5.789)	(1.098)	(2.780)	(1.547)	(0.907)	(2.429)
Error correction coefficient	−0.379***	−0.317***	−0.185***	−0.419***	−0.355***	−0.222***	−0.453***	−0.400***	−0.255***
	(0.061)	(0.063)	(0.036)	(0.078)	(0.075)	(0.039)	(0.072)	(0.071)	(0.040)
Short-run coefficients									
ΔUNEMPLOYMENT	−5.019**	−5.924***	−4.751***	−3.359	−4.422***	−4.707***	−3.115	−4.336***	−5.161***
	(2.517)	(2.059)	(0.932)	(2.047)	(1.496)	(0.887)	(1.983)	(1.488)	(0.899)
ΔINFLATION	−1.008***	−0.861*	−0.927	−1.522*	−1.111	−1.379**	−1.006	−0.554	−0.961
	(0.362)	(0.465)	(0.706)	(0.869)	(0.834)	(0.663)	(0.716)	(0.800)	(0.670)
Intercept	27.592***	31.551***	15.074***	29.515***	30.451***	18.421***	29.419***	33.013***	19.987***
	(8.313)	(7.141)	(3.612)	(8.686)	(6.518)	(3.687)	(9.112)	(7.049)	(3.676)
Observations	319	319	319	319	319	319	319	319	319
Number of countries	11	11	11	11	11	11	11	11	11
Hausman test[a]		11.54 [0.003]			4.13 [0.126]			6.64 [0.036]	
Hausman test[b]		2.64 [0.267]			1.74 [0.419]			1.25 [0.535]	

Note: ***, **, and * reject the null at 1%, 5%, and 10% respectively. Standard errors are presented below the estimated coefficients.
[a]PMG is preferred to MG under null hypothesis.
[b]PMG is preferred to DFE under the null hypothesis. χ^2 probability in square brackets.

EP = −0.419*** for MG, −0.355*** for PMG and −0.222*** for DFE; for EC = −0.453*** for MG; −0.400*** for PMG and −0.255*** for DFE). The rather fast speed of adjustment of the short-run changes toward the long-run equilibrium values suggests that all three empirical models fit the theoretical hypothesis. The results clearly indicate that the coefficients are properly signed and that for all three European institutions the unemployment rate has a negative and strongly significant impact on trust both in the long and in the short run, whatever the estimator chosen (for ECB = −4.480** for MG, −8.958*** for PMG and −7.242*** for DFE for EP = −4.352 for MG, −7.720*** for PMG and −0.6.891*** for DFE; for EC = −4.344*** for MG; −7.296*** for PMG and −6.754*** for DFE). Also in the short run the unemployment has a negative and significant impact on trust in the three institutions with the only exception of EP and EC when the MG estimator is used. However it is worth noting that, in this particular case, the Hausman test indicates that the PMG estimator is more efficient than MG.

Regarding the inflation (calculated as the deviation from the ECB target value of 2%), only the MG model suggests a strongly significant and negative impact on trust in ECB and EC in the long run, while the short-run coefficient of this variable results to be weakly significant for the EC. For the other estimation models (PMG and DFE) the results show that the inflation rate does not play an important role in defining trust in European institutions both in the short and in the long run.

Summing up, looking at the whole sample of European countries it appears that what most impacts on trust in institutions is the level of unemployment rate rather than the inflation target and that this is valid both in the long and in short run perspective.

Since some countries, the so-called PIIGS countries − namely Portugal, Ireland, Italy, Greece, and Spain − have experienced greater macroeconomic troubles and increasing rates of unemployment, the same estimates have been repeated in the subsample of the peripheral countries. The aim is to detect the different relevance of the variables chosen on the institutional consolidation process.

Table 2 shows the results relative to the estimation for the peripheral countries with the MG, PMG and DFE estimations. For this subsample, the coefficients of the speed of adjustment are negative and highly significant (for ECB = −0.443*** for MG, −0.377*** for PMG and −0.238*** for DFE; for EP = −0.381*** for MG, −0.368*** for PMG and −0.213*** for DFE; for EC = −0.438*** for MG; −0.424*** for PMG and −0.241*** for DFE) and the impacts of explanatory variables on trust in European institutions are very similar to the ones of the whole sample in term of sign and significance. The unemployment coefficients are negative and strongly significant for all the institutions considered and with all estimators used (for ECB = −7.138*** for MG, −8.961*** for PMG and −7.783*** for DFE; for EP = −8.828*** for MG, −7.711*** for PMG and −7.669*** for DFE; for EC = −7.048*** for MG; −7.347*** for PMG

Table 2. Trust in European Institutions for Peripheral Eurozone Countries.

	Trust in European Central Bank			Trust in European Parliament			Trust in European Commission		
Variables	MG	PMG	DFE	MG	PMG	DFE	MG	PMG	DFE
Long-run coefficients									
Unemployment	−7.138***	−8.961***	−7.783***	−8.828***	−7.711***	−7.669***	−7.048***	−7.347***	−7.348***
	(1.298)	(0.566)	(1.388)	(2.187)	(0.579)	(1.493)	(0.501)	(0.473)	(1.309)
Inflation	−5.173**	−1.712	−3.788	−14.722	−2.164	−6.224	−4.842*	−1.638	−4.454
	(2.539)	(1.259)	(4.093)	(11.930)	(1.343)	(4.463)	(2.577)	(1.096)	(3.897)
Error correction coefficient	−0.443***	−0.377***	−0.238***	−0.381***	−0.368***	−0.213***	−0.438***	−0.424***	−0.241***
	(0.096)	(0.108)	(0.056)	(0.109)	(0.109)	(0.056)	(0.127)	(0.131)	(0.058)
Short-run coefficients									
ΔUNEMPLOYMENT	−8.325**	−7.679**	−5.679***	−6.205***	−6.009***	−5.266***	−6.255***	−6.032***	−5.869***
	(3.864)	(3.768)	(1.173)	(1.976)	(1.783)	(1.142)	(1.706)	(1.655)	(1.150)
ΔINFLATION	−1.312**	−1.159	−1.952*	−2.277	−1.794	−2.478**	−1.833	−1.461	−2.282**
	(0.632)	(0.845)	(1.144)	(1.706)	(1.523)	(1.078)	(1.263)	(1.391)	(1.093)
Intercept	42.122***	40.299***	23.240***	42.544***	39.721***	23.346***	45.648***	43.454***	24.695***
	(11.440)	(11.164)	(6.133)	(11.414)	(11.864)	(6.483)	(13.555)	13.618	(6.475)
Observations	145	145	145	145	145	145	145	145	145
Number of countries	5	5	5	5	5	5	5	5	5
Hausman Test[a]		3.72 [0.155]			5.31 [0.070]			1.63 [0.442]	
Hausman Test[b]		2.23 [0.328]			1.35 [0.509]			0.77 [0.678]	

[a]PMG is preferred to MG under null hypothesis.
[b]PMG is preferred to DFE under the null hypothesis. χ^2 probability in square brackets.
Note: ***, **, and * reject the null at 1%, 5%, and 10% respectively. Standard errors are presented below the estimated coefficients

and −7.348*** for DFE). What is particularly interesting for this sample of countries is the magnitude of the coefficients estimated, that is, the weight that the unemployment has in influencing trust in institution. The inflation coefficients are negative and weakly significant or not significant at all depending on the estimator used and on the dependent variables considered, where the effect of inflation results to be significant, the size of its coefficients is always considerably lower than those of unemployment. Finally, the Hausman test indicates that PMG is a more efficient estimator than both MG and DFE for all three European institutions.

To summarize, these results suggest that, for countries that suffered most the macroeconomic turmoil, a declining confidence in ECB, EP and EC is strongly driven by an increase in unemployment rates rather than the achievement of inflation targeting at 2%. What was already clear for all Eurozone countries considered, is even more evident for the peripheral countries indicating that European policy goals, crucial to consolidate trust in the institutions, should focus more on the reduction of unemployment because citizens (mostly the ones of peripheral countries) are more sensitive to it. Furthermore, it can be added that it is hard to ignore the differences in the magnitude of the effects of explanatory variables between those of the whole sample and those of the subsample. This suggest a non-linear behavior of the parameters, that is, the greater the decline in employment the greater the decline of trust in European institutions.

CONCLUSIONS

Academics agree that economic outcomes affect trust in institutions and that the main variables to be considered are unemployment and inflation. The special institutional and political asset and the co-presence of supranational and national institutions bring to wonder if this link is present in the Eurozone as a whole. This paper clarifies that this link is present and that citizens hold responsible supranational institutions for their economic situation. In the 11 Eurozone countries the very relevant economic outcome affecting trust is the unemployment rate. According to the results presented and considering both the decline of trust and employment in the last years, citizens of the selected Euro area countries attribute to supranational political and economic institutions – the ECB, the EP and the EC – some of the responsibility of their inability to find a job. However, such responsibility is much more evident in peripheral countries.

This brings to infer that the European integration project requires more efforts. The objective of creating a solid monetary union governed by reliable institutions, has to be reached taking into account the economic outcomes and in particular the unemployment rate. However, if the EMU's economic policy

architecture is showing its limits, consensus has not yet found on how to manage the future of Eurozone.

There are two scenarios which may occur: In the first one, the European institutions insist on the implementation of the policy model according to which the reduction of the unemployment rate is the result of a stable inflation. Following this point of view, single states are asked to make adjustments on their own. In particular the peripheral countries have to bear the whole cost of rebalancing the currency area, while the core ones – in spite of having profited from the weakness of the Euro during crisis times – remain at best as passive onlookers.

The alternative scenario is to remove policy constraints and start thinking to shared instruments. It relies on the premise that the European policy model is unable to assure convergence of macroeconomic variables. This leads to the concluding consideration that the Eurozone asymmetries cannot be realigned without shared policy action. In this context, a quantum leap toward a political union would be required.

Europe is built upon a strong contradiction the crisis has explicitly revealed: the absence of common institutions in the presence of a common market. This contradiction can be seen also from a broader perspective as suggested by "the globalization paradox" (Rodrick, 2011): Countries cannot have at the same time globalization, democracy and autonomous management of economic policy. When a democracy faces globalization, it cannot use autonomously policy instruments to pursue its targets. A democracy can autonomously pursue its policy objectives if globalization is subject to constraints. Constraining globalization and closing national borders, for a small not self-sufficient country, means to lose the power to pursue its objective, that is, the degree of democracy.

A reflection on these contradictions comes from Acemoglu and Robinson (2013): The choice of policy instruments adequate to solve the current crisis in Europe has to go through the assessment of the possible future political balance. If economic policy is too unbalanced toward actions that lead to unequal distribution of income in the name of the correction of market failures, it gets results weakening democracy and market mechanisms themselves on which it is based.

NOTES

1. *Source*: Ameco database available at https://open-data.europa.eu/it/data/dataset/ameco.

2. The standard Eurobarometer was established in 1973. Each survey consists in approximately 1,000 face-to-face interviews per Member State (except Germany: 1,500, Luxembourg: 500, the United Kingdom 1,300 including 300 in Northern Ireland) and

reports published twice yearly. The entire dataset is available at http://ec.europa.eu/public_opinion/archives/eb/eb81/eb81_en.htm

3. *Source*: Eurobarometer.

4. Following the literature on the Eurozone, Luxemburg is excluded from this analysis due to its particular features. Amongst others, see De Grauwe and Ji (2013).

5. Net trust is the difference between the percentage of the whole population of those who trust minus the percentage of those who do not trust at all.

6. For time and quantitative details about the ECB monetary policy strategy, see https://www.ecb.europa.eu/home/html/index.en.html.

7. Literature uses also an index calculated as the simple difference between the number of those who answered "tend to trust" minus those who answered "tend to not-trust" as a percentage of the total population interviewed, including those who answered "don't know" (Roth, 2009; Roth et al., 2011, 2014). This index has the advantage to not be affected by the width of the sample, but includes in it even those who do not have enough information to express an opinion. Since the results coming out of the estimates conducted with the two indexes are not significantly different, the one considering just those who know something about European institutions has been chosen.

8. The Pesaran, Friedman, and Free's test have been performed and all three reject the null hypothesis of cross sectional independence (Pesaran: 21.084***(Pesaran, 2004), Friedman: 161.056*** (Friedman, 1937) and Frees: 2.890 with all critical values of the Q distribution below 0.2 Frees (2004)).

9. The null of Hausman test is that the difference between PMG and MG or PMG and DFE estimation is not significant. If the null is not rejected, the PMG estimator is recommended since it is efficient. The alternative is that there is a significant difference between PMG and MG or PMG and DFE and the null is rejected. The PMG will be used if the *p*-value is insignificant at the 5% level. On the other hand, if it happens to have a significant *p*-value, then the use of an MG or DFE estimator is appropriate.

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