Abstract: This paper intends to understand the major institutional factors related to the economic development of the European Union (EU) countries in the last two decades. It provides some contributions to the institutionalist debate of the present crisis of the European Union, and within it, the Economic and Monetary Union (EMU). The two main issues of the empirical research are the effect of the different institutions on economic growth and the relative importance of institutions compared with the traditional macroeconomic components of economic development. The institutionalist traditions of comparative political science and political economy as well as institutional economics define the framework of interpretation. The analysis sheds some light on the relationship between economic development and the different institutional dimensions, namely the legal environment, political institutions, public policy institutions (governance) and the informal institutions, the cultural components of the economic-political behaviour. The empirical research examines the development pattern of the European Union countries between 1993 and 2011 as well as the relationship between economic development and institutional quality in that period by descriptive and explanatory statistical methods. The results reveal strong relationship among the different aspects of institutional quality in the EU countries; within Europe we cannot observe a Singaporean type contradictory constellation between the quality of democratic institutions and public policy effectiveness. The path of European development has been drawing a conspicuously strong correlation among the different institutional dimensions: the high quality of democratic institutions, the respect of the rule of law and property rights and the effective governance are going hand in hand with the growth-supporting components of the culture. In cultural terms, the high level of trust, respect and self-determination as well as the lack of obedience ensure the most successful long-term growth pattern in Europe. Another important finding is that the EMU countries are conspicuously heterogeneous in their institutional quality and the Mediterranean members of the Euro area are institutionally closer to the non-EMU-member Central-Eastern European countries than the core EMU countries. Concerning the economic policy consequences, the heterogeneity of the informal institutions fundamentally challenges the effectiveness of the approach of stronger harmonisation by stricter formal rules and stricter sanctions against the norm-breaking Euro area members.

Keywords: economic development; European Union; Euro area; institutions; culture, democracy

JEL classification: O43; O52; P16
1. Introduction
The European Union (EU) is in deep crisis; at the moment there is no serious professional or internationally respected public figure who can debate it. In mere economic sense it is obvious that the global financial crisis has implied a debt crisis and a subsequent long-lasting recession in several countries of the EU. At the beginning of 2013 it seems that the European Union as an actor in itself has more difficulties in managing the crisis than other developed regions of the world. Moreover, it is already doubtful whether the EU, and within it especially the group of the countries using the common currency, the Euro (the Economic and Monetary Union, EMU) will be able to survive this crisis without losing some of its members. Indeed, the EMU (and also the entire EU) is seriously endangered as a political construction, at least in its present form (Habermas 2012).

Most of the policy suggestions presented as ‘solutions’ of the present crisis explicitly or implicitly derive from the diagnosis that the problem is ultimately the weakness of fiscal federalism in Europe. Briefly, the mainstream approach is that the Eurozone can be saved only if decision-making is federalized (Darvas 2010); the efficient management of the present crisis of the EMU requires stricter rules as well as stricter sanctions against the norm-breaking countries (Hodson 2012). It is noteworthy that even those who debate this therapy accept the ‘federalism problem’: the typical counter-arguments point to the problems of legitimacy of the EU institutions, the contradictory nature of sovereignty within the EU, and the problems of the European identity, the lack of a European ‘demos’ (Cederman 2001, Schimmelfennig 2010). But these problems have already been well-debated several times, among others, nine years ago when a big-bang enlargement happened (see the overview of Körösényi, 2004 about that). Logically, the absence of a strong common European identity implies a relatively weak solidarity potential towards other EU nations: the willingness of support for bailout purposes in a time of an enduring crisis is moderate – incomparable for example with the quasi-automatic solidarity of West-German citizens and politicians towards East-Germany in the decade after the German reunification (Dochartaigh 2010).

In this paper I intend to open the black-box of the European institutions. By stepping out from the federalism debate frame, I interpret the development of the European economies in the last two decades from a deeper institutionalist perspective that integrate the recent theoretical and empirical findings of new institutionalism in political science as well as in comparative macroeconomics.

The next section briefly deals with the potentially relevant institutional approaches in the context of the EU countries’ development. Section 3 analyzes empirically the economic and institutional development of the EU and EMU countries between 1993 and 2011. The final section presents the concluding remarks and discussion.

2. Institutional development and economic growth
The institutionalist perspective has recently become integrated in the main streams of the different social sciences. In the political science the expansion of new institutionalism started in the eighties (Peters, 2005:16). In organisational sociology, the revival of the ‘embeddedness’ approach of Polányi (1957) in the seminal paper of Granovetter (1985) implied a culturalist research perspective: the role of values and norms in the working of organisations became a new research programme in the nineties (DiMaggio, 1990). Moreover, the institutionalist approach is obviously
important in economics as it was already part of the classical school (Smith, 1899[1776]). However, the specific institutional explanations of the basic question of growth theory (why some countries are rich and why are others poor), has only come back into the mainstream in the last two or three decades when the new growth theory approach integrated the major results of institutionalist economics (Helpman 2004, Czeglédi 2006).

2.1. Growth and institutional quality in the European Union

The European Union and especially the Economic and Monetary Union as one of its enhanced institutionalist cooperation projects has followed the logic of pro-active institution-building: the less developed countries of the community are supposed to incorporate the ‘good’ formal institutions of the most developed ones. Theoretically the EU and again, especially the EMU is supposed to be a convergence club (Baumol, 1986): the criteria of entrance select among the aspirants, and the applied new rules and organisations (in terms of North 1990: the formal institutions) will help the less developed countries to gradually converge towards the more developed ones. However, the imitation of the ‘best’ formal institutions has not necessarily implied a convergence in economic development. In this context, the literature suggests four potential institutional factors of economic development (Bartha, 2012): (a) the legal institutions, (b) the political institutions, (c) the institutions of governance (professional bureaucracy, public policy expertise) and (d) the informal institutions (values and norms orienting the behaviour of political and economic actors).

2.2. Research questions and hypothesis

This paper attempts to answer two main questions: (1) What is the effect of the different institutions on economic growth in the EU and the EMU countries? (2) What are the relative importance of the different types of institutions compared to each other and the traditional macroeconomic variables? The hypothesis to be tested here is the following: as the last two decades of the European development was characterized by an increasing convergence in the formal (legal and political) institutions, the stubborn differences in economic development levels are mainly caused by the differences in informal institutions and governance.

3. Empirical research

3.1. Variables, operationalization

The growth accounting framework is the starting point for the empirical research; namely the augmented Solow model (Mankiw et al. 1992:408) that among the explanatory variables of growth includes the accumulation of human capital as well (in addition to physical capital and labour). In this context, the role of institutions is reflected by the unobserved total factor productivity (TFP), as a country’s total factor productivity is a function of the country’s policies and institutions’ (Parente 2001:56). Consequently, the different (legal, political, policy and cultural) institutional approaches are rival specifications of the TFP residual in the growth accounting.

3.1.1. Dependent variable

The dependent variable chosen for this research is economic growth. The indicator is the change in GDP per capita in Purchasing Power Parity between 1993 and 2011.
The source of these data (as also for other macroeconomic data) is the Penn World Table 7.0 (Heston et al., 2011) database for 1993-2009; the values for 2009-2011 are extrapolations based on Eurostat data.

3.1.2. Independent variables

Macroeconomic variables
The independent variables are specified in the framework of conditional convergence (Barro- Sala-i-Martin, 1992:226). The first independent variable is the level of economic development (GDP per capita in Purchasing Power Parity) in 1993. If the quality of institutions does not play a major role in long-term economic growth, this variable basically defines the trends: the poorer countries should gradually but steadily converge towards the most developed ones.

The next independent variable is the change in physical capital; the proxy of it, following the international practice, is the investment/GDP ratio. The change of labour is measured by the average change in the number of people employed, the technological change and the amortisation (a negligible factor in the present analysis) are supposed to be 0.05 (an international convention since the seminal paper of Mankiw et al., 1992).

I have used a less conventional indicator for the proxy of human capital investment. Among others, van Leeuwen and Földvári (2008) revealed that when we compare the EU countries, the use of the conventional ‘average years of education’ proxy overvalues the human capital of the Central-Eastern European countries. Therefore I have applied as a proxy of human capital investment the indicator of ‘cognitive skills’ developed by Hanushek and Woesmann (2009), although with some modification. Their ‘cognitive skills’ indicator is derived from the OECD Programme for International Student Assessment (PISA) survey: cognitive skills are “measured by the simple average of all observed math and science scores between 1964 and 2003 for each country” (Hanushek and Woesmann, 2009:8), it is probably biased somewhat against the literacy skills. Consequently, I have also included the simple average of all observed literacy skills scores; this ‘cognitive and literacy skills’ is the proxy of human capital investment used for each of the European countries.

Institutional variables
I have operationalized four different institutional type variables from different international surveys. The proxy of the Northian formal institutions is the sub-index of Legal Structure and Security of Property Rights from the 2011 Annual Report of the Economic Freedom of the World from the Cato Institute (Gwartney et al., 2011). The proxy of the Northian informal institutions, i.e. the cultural components guiding the behaviour of the economic and political actors comes from the ‘culture’ principal component of Williamson and Mathers (2010). The authors constructed the values of this culture principal component from the different data collection waves of the World Values Survey; according to their interpretation, trust, self-determination and respect are positive correlates of the economic development, while the obedience is a negative component of that. The proxy of the quality of democracy, the quality of political institutions comes from the democracy index of the Economist Intelligence Unit. This index involves the quality aspect of the democracy (Ringen, 2011); in addition, we have values for all of the EU member states for several measurement periods. Finally, the proxy of the governance, the quality of expert-bureaucratic
institutions comes from the World Bank “Worldwide Governance Indicators (WGI)” project (Kauffmann et al., 2010) the sub-index of government efficiency was selected for this. By using long-term average values for all of the four institutional proxies I followed the international conventions.

3.2. Main findings

3.2.1. Institutional relations between legal institutions, democracy, governance and culture

The comparison of the relative standard deviations (see Table 1) supports our hypothesis: among the 26 European Union member countries, the most important differences can be registered in the informal institutions. However, the smallest differences are in the quality of democracy, while in the legal institutions and the quality of governance we find more significant differences (but less significant ones than in the dimension of culture).

Table 1: The heterogeneity of institutional indicators

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<tr>
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<th>LEGAL</th>
<th>CULTURE</th>
<th>GOVERN</th>
<th>DEMOC</th>
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<tbody>
<tr>
<td>Standard deviation</td>
<td>1.18</td>
<td>1.80</td>
<td>12.99</td>
<td>0.79</td>
</tr>
<tr>
<td>Means</td>
<td>7.32</td>
<td>5.24</td>
<td>73.50</td>
<td>8.06</td>
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<tr>
<td>Relative standard deviation</td>
<td>16.15</td>
<td>34.34</td>
<td>17.68</td>
<td>9.75</td>
</tr>
</tbody>
</table>

Sources: LEGAL (Legal Structure and Security of Property Rights): Cato Institute, Gwartney et al., 2011; CULTURE: Williamson and Mathers (2010); GOVERN (Government Effectiveness): World Bank “Worldwide Governance Indicators (WGI)” project (Kauffmann et al., 2010); DEMOC (Democracy), Economist Intelligence Unit Democracy Index

Nevertheless, it would be misleading to draw a conclusion of ‘incompatibility’ between democracy and culture in the EU. The correlation matrix of the four institutional variables reveal a strong relationship: the bi-variate correlation is significant at a 0.01 probability level between each of the four variables.

Table 2: Correlation between institutional factors

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<th>LEGAL</th>
<th>CULTURE</th>
<th>GOVERN</th>
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<tbody>
<tr>
<td>LEGAL</td>
<td>1.00</td>
<td>0.72</td>
<td>0.93</td>
<td>0.86</td>
</tr>
<tr>
<td>CULTURE</td>
<td>0.72</td>
<td>1.00</td>
<td>0.69</td>
<td>0.82</td>
</tr>
<tr>
<td>GOVERN</td>
<td>0.93</td>
<td>0.69</td>
<td>1.00</td>
<td>0.89</td>
</tr>
<tr>
<td>DEMOC</td>
<td>0.86</td>
<td>0.82</td>
<td>0.89</td>
<td>1.00</td>
</tr>
</tbody>
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Sources: LEGAL (Legal Structure and Security of Property Rights): Cato Institute, Gwartney et al., 2011; CULTURE: Williamson and Mathers (2010); GOVERN (Government Effectiveness): World Bank “Worldwide Governance Indicators (WGI)” project (Kauffmann et al., 2010); DEMOC (Democracy), Economist Intelligence Unit Democracy Index

The quality of democracy correlates strongly with all of the three other dimensions, but the strongest statistical relationship (93%) can be registered between the government effectiveness and the legal structure. These findings indicate that the
Lee-thesis, the assumed Singaporean type contradiction between democracy and government effectiveness is not valid in the EU on the long-run (for more criticism about the Lee-thesis see: Knutsen, 2010); either the quality of democracy or the government effectiveness is the strongest in the Nordic countries, while Bulgaria and Romania are the laggards in both aspects (see Figure 1).

Figure 1: Quality of democracy and government effectiveness in the EU
Sources: Economist Intelligence Unit and the World Bank

Consequently, it requires a specific methodological treatment to minimize the obvious endogeneity and multicollinearity problems: we have to include a common factor of institutional development in our explanatory models (and not four different institutional variables). The principal component analysis derives one principal component from the four institutional dimensions that explain 86.5% of the variance of the original institutional variables. The strong relationship between this constructed institutional development component and the economic development level supports our interpretation about the underlying institutional factors behind the seemingly economic problems of the European integration. Figure 2 regarding the EU member countries' economic and institutional development obviously indicates that the Economic and Monetary Union is not the club of the most developed European countries; neither in economic, nor in institutional development terms. Not only because the institutionally two most developed countries of the EU (Sweden and Denmark) are not members of the EMU, but also because of the apparent weaknesses of the Mediterranean countries' institutions.
Among other things, our institutional data indicate that one founding member, Italy is more like the two countries that joined the EU only five years ago (Bulgaria and Romania), than Sweden (the institutionally most developed EU member). It is also noteworthy that the institutional development level of France is only around the EU average and it is significantly weaker than that of Germany; paradoxically, in addition to Austria, the institutional development level of Germany is the closest to that of Ireland and the United Kingdom. Though there are several arguments that multiple development clubs are forming within the EU in the spirit of differentiated integration (Koller, 2012), it is doubtful that the EMU can be considered an outstanding development club of enhanced financial cooperation. This is not true in economic terms; it is even less true in institutional development terms. Moreover, because neither the Czech Republic, nor the United Kingdom are EMU members, it is not even true that the common currency area concentrates the EU average countries in economic and institutional development terms.

The hierarchical clustering process of the institutional dimensions draws three subgroups among the more developed EU countries: the three Nordic states and the Netherlands form the group of the most developed countries; Germany, Austria, Ireland and the United Kingdom constitute a second group, while France, Belgium and Spain are on the margin of the more developed EU countries. The institutionally less developed Southern and Eastern EU member countries are positioned along a continuum; only Bulgaria and Romania form a separate cluster.
3.2.2. Economic development: institutional and other explanations
I would like to reflect briefly on the weight of institutional and other explanations in economic development. Though the initial development level (in this analysis in 1993) correlates significantly and negatively with the economic growth in the last two decades, the moderate value of the determination coefficient (0.58) conforms with our expectations, that is, the more refined explanations can have empirical relevance in the development of the EU countries. The inclusion of our institutional development principal component significantly increases the explanatory force: in this model the value of the adjusted $R^2$ is 0.65. However, in a technical sense, our institutionalist explanation is weaker than the human-capital-augmented Solow model (the adjusted $R^2$ increases to 0.76). Indeed, the human capital seems to be the decisive factor (besides the initial development differences). Nevertheless, this does not mean that we have to neglect the institutional effects in interpreting the economic development of the EU countries; the novelty of our human capital investment proxy is precisely the inclusion of the labour market adaptability dimension in the educational variable that means an implicit incorporation of the institutions, especially the informal institutions.

4. Conclusion and discussion
This paper presented an institutional, comparative political economy perspective for the EU countries’ growth patterns; it also offered the institutional heterogeneity thesis in framing the enduring crisis of the EU and the Economic and Monetary Union. Four potential institutional explanations of long-term growth were operationalized: the formal institutions by the legal structure, the Northian informal institutions by the cultural components guiding the behaviour of actors, the political institutions by the quality of democracy, and the bureaucratic-expert institutions by the quality of governance.

The expectation of the empirical research was that the formal institutional resemblance of the EU and especially the EMU countries is in sharp contrast with the stubborn and significant differences along the dimensions of the governance and the cultural components. However, the empirical findings are not undoubtedly supporting this hypothesis. In fact, the path of European development draws a strong correlation among the different institutional dimensions: the high quality of democratic institutions, the good legal structure, the efficient government and the supporting components of culture (trust, respect and self-determination and the lack of obedience) are going hand in hand.

This implies that the present crisis of the Eurozone is not mainly economic in nature, and it is not predominantly the problem of the supposed bad governance of the South-European political elites. The root of the political crisis comes from the much deeper institutional heterogeneity; concerning their institutions, the older Southern EU member states are much more like the new Eastern-Central EU member countries than the institutionally most developed Nordic ones. Because of the endogenous nature of this institutional heterogeneity, the stricter rules and the stricter sanctions against the norm-breaking countries are unlikely to solve the crisis and preserve the survival of the Eurozone in its present form. The best case scenario is a slow, gradual convergence when the constant human capital improvement of the less developed EU and EMU countries imply a self-reinforcing improvement in the legal and political institutions, governance and the cultural components guiding the behavioural patterns of economic and political actors.
Why can we observe these conspicuously strong relations between the different institutional aspects in Europe in the last two decades? One possible explanation derives from the global interconnectedness, the increased role of perception of the global financial and capital markets. Practically all of the EU member countries depend basically on the external perception, but they depend independently (and not together as the EU or the EMU). The country risk premiums are obviously country-specific ones, and they reveal the global intuitive perception of the major financial and capital market players about the economic and institutional development prospects of the individual countries. The presented strong institutional heterogeneity within the EU and the EMU shed some light on the enduring European crisis, nevertheless these findings are rather preliminary, and should be tested by more subtle indicators and on longer time periods as well.

5. Acknowledgements
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