

The Eurozone's Future: Nominal, Real and Structural Convergence

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Abstract

The future of the Eurozone will be determined by the convergence processes. The recent policy steps restored the nominal convergence as the sine qua non of the effectiveness of the common currency monetary policy. The same steps, however, deepened the real divergence. Structural convergence is then proposed as the answer to this conundrum. The term "structural" is then interpreted as the description of the set of preferences, political, economic, social and legal institutions and the associated policies and decisions. Structural convergence then describes the narrowing of the differences between the national political, economic, social and legal institutions, which is expected to bring about the similar if not identical economic results as the response to the Europe wide economic policies. However, the subject is far from simple and it would be naïve to expect the quick results. History and traditions determine political, economic and structural characteristics of the Eurozone's member countries. To overcome history is difficult, but not impossible.

Key terms: Nominal convergence, Real convergence, Structural Convergence

INTRODUCTION

The aim of this paper is to analyze the long term dynamics of the Eurozone with the emphasis on the convergence processes (or the lack of thereof). It is today generally recognized that the growing real divergencies (especially the diverging competitiveness) between the Eurozone members are at the root of the recent crisis and the current growth restoration difficulties. The discussion in this paper looks historically at the dynamics (i.e. the convergence vs. divergence) of both nominal – i.e. the Maastricht criteria, and real variables. Moreover, the recently emerging concept of a "structural convergence" is critically evaluated.

The nominal convergence is the key to the functioning of a monetary union. It determines the effectiveness of monetary policy, especially in the organization like EMU (Eurozone), where the monetary centralization operates in the environment of decentralized fiscal structures, limited fiscal transfers between the participating entities (independent states) and a very limited labor mobility. In such an environment, the diverging trends between the participating entities (states) are unlikely to be compensated for by induced factor movements and/or structural changes (not to mention fiscal transfers etc.), as happens in the similar dynamics within the centralized political entities (individual states).

The real convergence is crucial for the political and social stability, which in turn determines the degree of commitment to the preservation of the common endeavor – i.e. the EU itself.

Finally, the structural convergence determines both the effectiveness of common policies and ultimately the form of the EU commonality itself.

The meaning of the term convergence, the issues associated with its interpretations and applications here are discussed in part II. Measurement issues are elucidated in Part III. Parts IV and V then discuss the dynamics of nominal and real convergencies respectively in detail. Part VI concentrates on a rather controversial subject of a “structural convergence”. Finally, Part VII concludes.

THE MEANING OF CONVERGENCE

The majority of economic literature recognizes the two measurable concepts of the convergence (or the lack of thereof). σ -convergence (sigma convergence) refers to the process through which the variables of interest move (or not) toward a common value (level). An example is the process of the market clearing price determination in a competitive environment. The development economics then constructed the concept of the β -convergence (beta convergence), which endeavors to measure the (changing) distance of a variable like a GDP per capita or a labor productivity from the pre-defined world champion (often the USA).

In addition, the concept of a “structural” convergence is sometimes used. However, here the authors use two different interpretations. Historically, the term “structural convergence” was used to analyze the changes in the composition of economic activities (initially just agriculture, industry and services, later a more detailed nomenclature) over time in the process of economic development. (For more discussion, see Hoehenberger and Schmiedeberg, [6].) Later the term was used to analyze the institutional, political and social dynamism in both geographical and time horizons. (Buti and Turrini, [3], Fatas, [4], Bertonecini et al. [1].)

The subjects of the current discussion are the processes of nominal, real and structural convergencies (or divergencies, as the case might be) among the different countries of the European common currency area, commonly referred to as Eurozone.

The analysis concentrates on the 12 “original” Eurozone countries. These are Germany, Austria, Netherlands, Belgium, Luxembourg, Finland, France, Italy, Spain, Portugal, Greece and Ireland. The remaining today’s Eurozone members (Slovenia, Slovakia, Malta, Greek Cyprus, Estonia, Latvia, Lithuania) were left out of the analysis because of the short period of the membership – hence the short available time series usable for comparison purposes.

The nominal convergencies (or divergencies) are akin to the above mentioned σ -convergence. The subject of interest is whether a predetermined set of variables (basic Maastricht criteria here) tends to move closer together or further apart over time. The importance of the nominal convergence is therefore the same as the importance of Maastricht criteria – to create the environment conducive for the effective discharge of the ECB policy mandate across the whole Eurozone.

Real convergencies are then evaluated by comparing the dynamics of the real GDP per capita, productivity and unemployment for the same countries. Real convergencies resemble the β -convergencies in a sense that they can be interpreted as a (changing) distance from the “best” performing economies. The importance of the real convergence – and especially its mirror image – the real divergence, is more in the social and political arena rather than pure economics. Nevertheless, it is of the key importance. The processes of real convergencies (and more importantly the real divergencies if this is the reality) determine the degree of political support for the European integration in the individual EU countries – the key not only to the EU success, but increasingly to its survival as well.

The question of a structural convergence is then discussed from the standpoints of both the EU and individual countries. The basic question is where should the structural reforms (presumably the precondition for a structural convergence) originate? On the national level, EU level or some combination of both? How is the presumed need for a structural convergence (Buti and Turinni, [3]) related to the *acquis communautaire* and the existing European treaties?

MEASURING OF CONVERGENCE (OR DIVERGENCE)

12 different variables were used, covering a broad spectrum of economic phenomena and activities. (Four for the nominal convergence, eight for the real convergence). Observations are annual, covering the period from 1999 to 2015. Data for the study were obtained from the Ameco, Eurostat and the ECB.

Each data point for each variable consists of 12 observations (one for each of 12 countries). Hence the mean and standard deviation can be calculated for all variables at every data point. The measure of the relative dispersion (the coefficient of variation) could then be constructed for the each variable at the each data point. ($C_{vit} = \sigma_{it}/\mu_{it}$, where c_{vit} is the coefficient of variation for the variable i at the period t , σ_{it} is the standard deviation of the variable i at the period t and μ_{it} is the mean for the variable i at the period t .) However, given the fact that some of the analyzed variables generate negative means for some dates, the standard deviation instead of the coefficient of variation is used below as the measure of dispersion. This choice, albeit inevitable, leads to different scales regarding the measure of dispersion for different variables. Hence the dynamics of different variables cannot be presented in a single graph (see below).

For the each variable the time series defined by the standard deviations over the period of inquiry (1999 to 2015) then describes the dynamics of the dispersion of this variable over time. Indeed, if this dispersion increases, the underlying national economies diverge and vice versa.

NOMINAL CONVERGENCE

The processes of the nominal convergence (or the lack thereof) are analyzed by looking at the dynamics of the four variables forming the backbone of the Maastrich treaty. These are the inflation, budget balances (as the share of GDP), public debt as the share of GDP and interest rates. In the absence of a reliable approach which would facilitate the discussion of a synchronization of business cycles (and hence the symmetry of economic shocks), these variables form the space designed to make it possible for ECB to fulfill its mandate of a low inflation (less than 2% annually across the Eurozone) and stability.

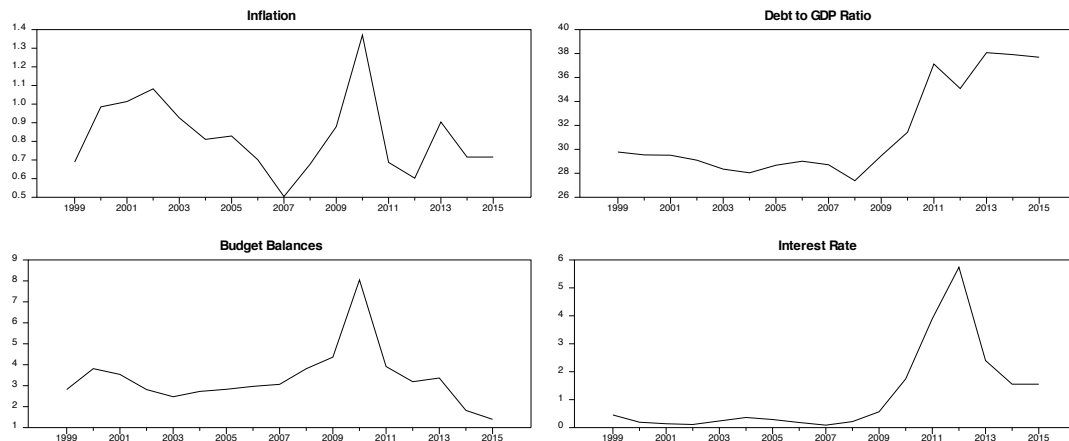
Analyzed countries consist of Germany, Austria, Finland, Netherlands, Luxembourg, Belgium, France, Greece, Italy, Spain, Portugal and Ireland. (See the previous part for reasons for this choice.). Data for the analyzed variables were obtained from the EU's Ameco database in the annual frequency. Standard deviations were calculated for the each date and the each variable,

All analyzed variables are defined over the overall period of the Eurozone's existence – i.e. the 1999 to 2015.

The results for the “nominal” variables are provided in Figure 1.

FIGURE 1

Nominal Convergence Variables



It shows clearly that three out of four analyzed variables of interest converged from the Eurozone inception in 1999 to the onset of the economic crisis. Only budget balances (deficits) started to diverge in 2003 – coincidental with the problems related to the compliance with the original Stability and Growth Pact. (Most of writers date the beginning of the economic and financial crisis to the fall of 2009, when the then Greek Prime Minister Andrea Papandreou revealed the Greek budget difficulties. However, there were crisis indications before. One just should remember the Airbus uneasiness in the spring-summer 2007 or the BNP Paribas temporary close in the summer of 2007). With the onset of crisis the analyzed nominal variables started to diverge. The resulting threat to the common currency prompted the EU and Eurozone’s policy reaction (re-establishment of more binding fiscal rules, intensification of co-operation and supervision and, indeed, the change in the ECB’s approach and operating procedures (OMT). These steps stabilized the situation by 2013, which is indicated by the restoration of the nominal convergence visible in Figure 1 – albeit still less compared to the pre-crisis period. Only variable which continues to diverge is the public debt to GDP ratio – but this can be attributed to the divergencies in the dynamics of GDP. Albeit slowly, the discipline in public finances – reflected by the visible restoration of convergence in budget balances – appears to be restored.

One may conclude that the answers of the European Union and Eurozone authorities, together with the ECB, to the shock of the economic and financial crisis appear to restore the nominal cohesion of the economies sharing the common currency.

THE REAL CONVERGENCE

For many observers, the success of the Euro stabilization (due to the restoration of the nominal convergence) appears to be rather hollow given the persistence of the high unemployment in some EU countries and a rather sluggish overall economic performance post crisis. On the other side, the economic success of Germany (and perhaps few others) cannot be denied. To sort out these questions, we look at the dynamics of the key real variables.

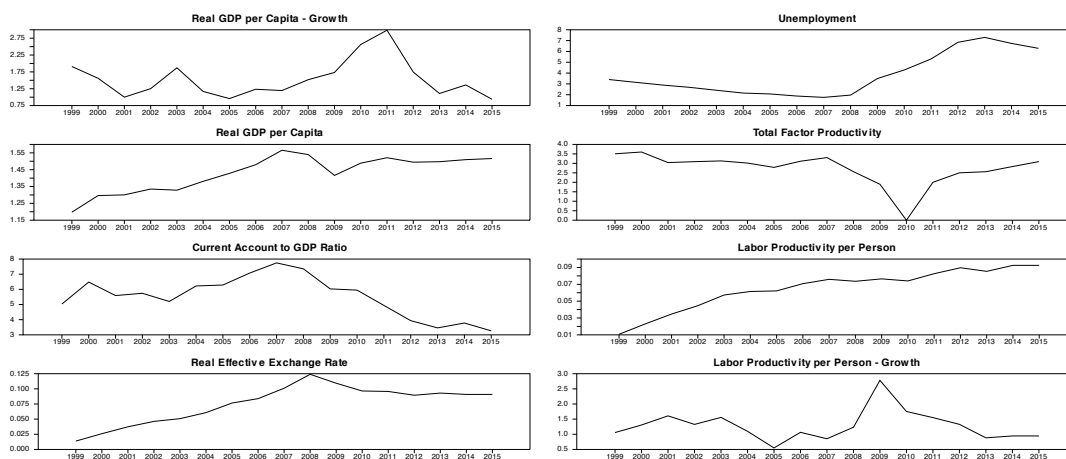
The real variables of interest are the real GDP per capita and its growth, unemployment, the real effective exchange rate and the current account to GDP ratios (the latter two measuring the dynamics of competitiveness), the total factor productivity and the labor productivity per person and its change.

The variables, their construction, sources and the periods covered correspond to the nominal variables discussed in the previous part.

The results are then in Figure 2.

FIGURE 2

Real Convergence Variables



Simple inspection of the graphs above indicate the growing divergence in the GDP per capita over the whole period of the Eurozone's existence and the unemployment from the onset of the crisis. Rate of growth of the GDP per capita converges – but given the divergent starting point, the latter convergence only increases the overall divergence.

Competitiveness variables (real effective exchange rates and the current accounts to GDP ratios) diverged from the introduction of the common currency. This trend, however, appears to change with the onset of the crisis. Given the fact that the slight improvement in competitiveness indicators coincides with the significant rise of unemployment, the significance and the sustainability of better competitiveness indicators remains a subject of considerable doubts.

This conclusion is only reinforced by looking at the dynamics of productivity. The labor productivity per person displays slowly increasing divergence. The growth of the labor productivity per person converges – but given the initial base this only reinforces the overall divergent tendencies. The total factor productivity showed a slight convergence before the crisis. However, this trend was radically reversed in both crisis and post crisis periods.

It can be concluded that in contrast to the nominal convergence, a divergence is clearly observable among the real variables. Economically it may not be important as long as the nominal convergencies facilitate the ECB policies. However, politically the real divergence constitutes a growing problem.

The issue is indeed the sustainability of the nominal convergence, especially as it relates to fiscal variables – i.e. the budget balances and debt. And is the newly regained competitiveness sustainable given the large and persistent unemployment? Unless addressed, these issues may constitute a significant, and perhaps the ultimate, threat to the Eurozone's cohesion and perhaps even to its existence.

STRUCTURAL CONVERGENCE

The problems and dangers discussed above are not ignored by European authorities. Their answer appears to be twofold. On the one side steps are taken to increase the European integration by expanding the common economic institutions. The major steps here are the Banking Union (in the process of implementation) and the Capital Markets Union (in the beginning). On the other side is the idea of a structural convergence understood as a process of creating the similar (if not the same) legal and institutional environment in all areas of economic activity in all states sharing the common currency, provided that the autonomy of individual states and hence the existing principles underlying the European treaties are preserved. (Buti and Turrini, [3].)

The political commitment to furthering the processes of a structural convergence as a part of a deepening of European integration processes was announced in Juncker at el. [7].

The empirical studies of the processes of the convergence or divergence of European states preferences, institutions and policies were undertaken (among others) by Fatas [4], Bongart and Torres [2], and Hefeker [5]. The results of these studies are mixed. Biggest problems, indeed, are the metrix and the quantification of the structural “variables”.

Any discussion of the issue is conditioned on the definition of the subject. What is the “structural convergence” or for that matter the “structural divergence”? In this analysis we accept the interpretation of the term “structural” as describing the set of preferences, political, economic, social and legal institutions and the associated policies and decision making processes. (I.e. we exclude the interpretation of “structural” as referring to the composition of economic activities and industries.)

Given this interpretation (which we believe corresponds to the meaning of “structural” in above mentioned Buti and Torrini [3] and Juncker at el. [7]) two types of “structural convergence” actions are possible within the boundaries of the EU and the Eurozone.

One, which could be called the “absolute” structural convergence is the transfer of institutional arrangements, policy formulations and decision-making procedures to the EU (or the Eurozone) levels. Participating member states experience the 100% loss of autonomy in such cases. The history of the European integration can be interpreted as this type of the structural convergence. It includes wide variety of actions, from the “European Treaties” (the Lisbon Treaty of 2009 is the last in the long line of those), binding decisions of the European summits (some may require ratifications by the participating countries) to the EU commission directives and judgements of the European Court of Justice.

Institutional, policy and decision making structures apply uniformly across the participating countries. It can be argued that this process of absolute structural convergence in Europe was rather successful in general terms, even if the lack of a real convergence might suggest otherwise. (It is far beyond the subject of this paper to provide a detailed discussion of the history of European integration. Moreover, the real economic convergence often fails even in the unified national states – Italy is the best known example – where the structural convergence is absolute by definition.)

In the context of the EU and the Eurozone the latest examples of absolute structural convergence are the ongoing projects of the Banking Union and the Capital Markets Union. High hopes are associated with these projects as far as the real convergence is concerned – but results are still in the future.

Second type of a structural convergence addresses the situation when the institutional or policy arrangements in different countries are getting closer together (becoming the “more similar”). But the jurisdiction remains on the national level, with no (or a very limited) common EU action.

The discussions (and sometimes actions) in this area are related mostly to labor markets, business creations and operations environments, and legal structures and procedures. Taxation, health care and education are also involved. The basic idea is the identification and the subsequent emulation of the “best practice” – with the hope that this will contribute to the real convergence and the EU and the Eurozone's political and social stability.

However, several issues should be raised in this context. To start, one may ask about the determination of the “best practice”. From the available literature, it appears to be a kind of arrangement which is instrumental in achieving the predetermined goal – be it the growth of the GDP per capita, productivity, competitiveness or the level of employment. But if it is so why not to adopt such an identified “best practice” as a kind of the EU standard – something which would fall under the above discussed category of the “absolute” structural convergence. The lack of the needed political consensus may be the most likely reason – but then why should such steps be taken by individual countries independently?

Second, one may raise the question of the suitability of particular institutional or policy arrangements across the board – a precondition for the convergence. After all there are the reasons – historical, cultural, demographic, perhaps even differences in the climate – why EU and the Eurozone member countries differ and insist on the preservation of significant political and institutional autonomies. Absent this the unified European superstate would be created a long time ago.

And third, there is the question of costs – or more precisely the North – South transfers. It was pointed out that the most successful structural reforms in any European economy – the German Hartz IV package of labor markets and welfare reforms – was only made possible by Germany violating the original Stability and Growth pact in 2003 and 2004. One would assume that similar reforms introduced in the states of the South (the approach often advocated) would be costly and would require the EU's – i.e. the North – financial support. And in the current circumstances this is far from certain.

Hence: structural reforms – i.e. the structural convergence – are indeed useful and if designed thoughtfully they may be the key for overcoming the real divergence. However, the subject is far from simple and it would be naïve to expect the quick results.

CONCLUSION

Whereas the recent EU measures largely restored the nominal convergence, the real convergence still remains at best problematic. In addition, the challenges of the structural convergence remain significant. As recent developments demonstrated, unless addressed, the divergence trends may constitute a significant, and perhaps the ultimate, threat to the Eurozone cohesion and perhaps to its existence.

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