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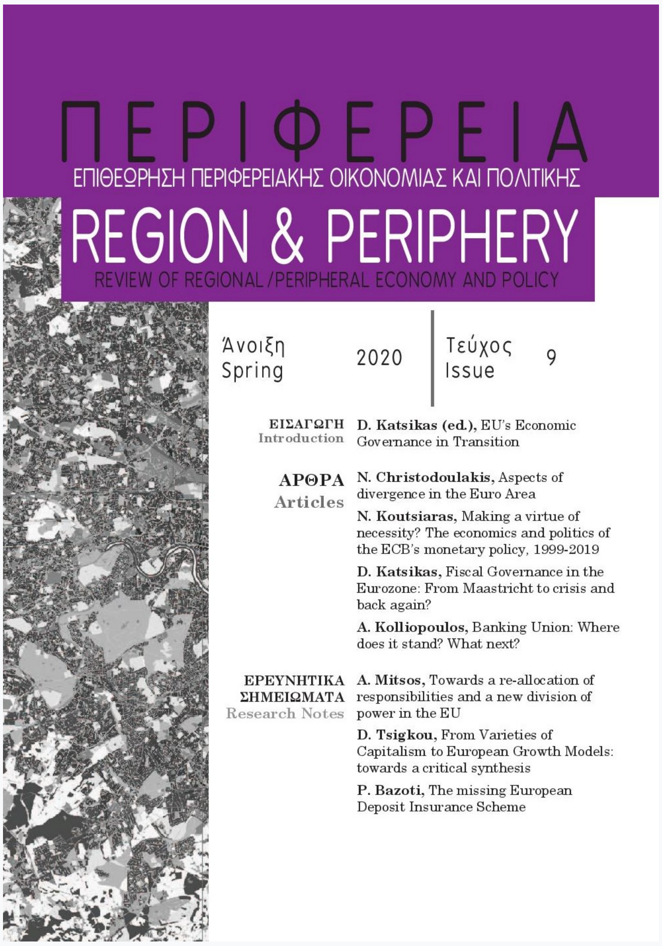

Ζητήματα απόκλισης στην Ευρωζώνη

Νίκος Χριστοδουλάκης

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Άρθρα
Articles

Aspects of divergence in the Euro Area

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Abstract

The paper examines how the convergence process between the less and the more developed members of the Euro Area weakened significantly after the circulation of the common currency, and subsequently reversed course in the post-crisis recession. The front-loaded consolidation programs that followed the bail-outs in the over-indebted economies caused asymmetric losses in per capita income in the peripheral countries and led to further North-South polarization. The paper identifies public indebtedness, quality of institutions and capital formation as the areas where divergences are more pronounced and suggests that policy initiatives to encourage more investment and a faster institutional assimilation are needed for the convergence process in the Euro Area to take off again.

KEY-WORDS: Euro Area, Growth, Convergence.

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Ζητήματα απόκλισης στην Ευρωζώνη

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Περίληψη

Η εργασία εξετάζει πώς η διαδικασία σύγκλισης μεταξύ των λιγότερο και περισσότερο ανεπτυγμένων οικονομιών της Ευρωζώνης εξασθένισε μετά την κυκλοφορία του κοινού νομίσματος και, εν συνεχεία, αντιστράφηκε σε απόκλιση μετά την κρίση χρέους. Η εμπροσθοβαρής δημοσιονομική προσαρμογή που συνόδευσε τα προγράμματα δανειακής διάσωσης στις υπερχρεωμένες χώρες προκάλεσε ασύμμετρες απώλειες εισοδήματος και μεγέθυνε το χάσμα Βορρά-Νότου στην Ευρωζώνη. Οι αποκλίσεις ανάμεσα στις δύο ομάδες χωρών που είναι έντονες αφορούν το δημόσιο χρέος, τις επενδύσεις και την ποιότητα λειτουργίας των θεσμών, συμπιέζοντας έτσι τη δυναμική της ανάπτυξης και υπονομεύοντας τη σύγκλιση. Για να ξαναπάρει μπροστά η διαδικασία σύγκλισης των χωρών της Ευρωζώνης, χρειάζο-

νται νέες πολιτικές οι οποίες ευνοούν την αύξηση των επενδύσεων και προάγουν την ταχύτερη θεσμική προσαρμογή των κρατών-μελών.

ΛΕΞΕΙΣ-ΚΛΕΙΔΙΑ: Ευρωζώνη, Ανάπτυξη, Σύγκλιση

1. Introduction

The aspirations of nations vying to join the European Union (EU) over the last half century were social, political and economic, albeit to a different extent for each new member. Mature western democracies, such as those of the United Kingdom or the Scandinavian countries sought to increase their involvement in the post-war European making, though later some of them changed their minds and chose to break away. The countries of European South that lived through military dictatorships until mid-1970s as well as those of Eastern Europe that abolished communist rule in the early 1990s saw their accession to the EU as an anchor of socio-political freedoms, and a helping hand for setting up democratic institutions. After decades of domestic oppression and geopolitical isolation, they hoped of fully participating in the family of Western societies sharing similar values and opportunities.

However, the *Holy Grail* of Governments, pressure groups and opinion makers in forging their people's approval of EU membership was the process of *convergence* towards the living standards of the older and more developed member-states. The expectation was that -sooner rather than later- some kind of mystical dynamics would bring about more efficient markets and macroeconomic stability ushering in to a new era of growth and prosperity for their citizens. The EU authorities embraced these aspirations and since mid-1980s made the financing of regional projects through the Community Support Frameworks (CSF) a central policy priority to foster growth in the less-developed areas.

In mid-1990s, however, most EU economies were in a state of panic after abandoning the Exchange Rate Mechanism (ERM) and the harsh monetary policy they had to follow in order to sustain the exchange rate targets. Naturally, policy priorities shifted toward seeking macroeconomic stability, and the need to create the Economic and Monetary Union (EMU) subsequently attracted most of the political capital and legislative work of that period. Each member-state had to comply with a number of rules and limitations regarding the burden of public debt and deficits, the inflation rate, the exchange rate fluctuations, and the cost of sovereign borrowing in world markets. It was only after achieving all criteria that a country could qualify for participating in the EMU and adopting the common currency.

It was clear that the emphasis given by both the EU authorities and national governments alike was to set up the EMU in time and by then secure the accession of as many member-states as possible. The new policy process was called -somewhat derogatorily- *'nominal'* convergence as opposed to the *'real'* convergence process involving households' incomes. As the latter was no more a prerequisite either for a country to join the common currency or for its smooth functioning afterwards, its urgency started fading away from the policy agenda and was since then considered to be the ultimate (as opposed to imminent) pursuit of the EU. To reassure the signatory member-states that real convergence is not abandoned, the Maastricht Treaty pledged that "*…the Community shall aim at reducing disparities between the levels of development of the various regions*"; see (EC, 1992, Article 130a).

To that effect, the EU responded first by extending the financial resources allocated to the CSF it hoped to speed-up convergence in the least-developed regions, and, second, by announcing the Lisbon Strategy for Growth (LSG for short). With the latter, it hoped to revive market reforms and boost competitiveness and non-inflationary growth. In practice, however, LSG lacked the financial capacity to implement such ambitious policies, and not even enforced a major reallocation of CSF funds to support them. No wonder that finally it became nothing more than a reference framework.

At that time, policy makers could not possibly imagine the different models of economic development that prevailed across member-states according to whether capital flows were mainly allocated to internationally traded (as happened in the northern countries) or non-traded sectors (as in the southern part of the Euro Area). In the former case, competitiveness and external balances greatly improved, while in the latter they deteriorated, thus leading to serious post-EMU divergences within the Euro Area. The dominant theory of the time was that EMU would evolve smoothly to correct any remaining imbalances in the economic behavior of member-states, ranging from business cycles smoothing (e.g. in Christodoulakis et al. 1993) to free factor mobility and equalization of wages (e.g. in Emerson et al. 1992). No doubt, at least the first of the above expectations was duly accomplished: for example, González and Ruscher (2008) confirm the synchronization of fluctuations and imply that it forged the confidence of the viability of the common currency. Similarly, De Grauwe and Ji (2016), and Belke et al. (2016) conclude that business cycles have had become increasingly synchronized across Euro Area economies even after they were severely hit by the global crisis.

But no comparable progress in closing the gap of post-EMU living standards has been noticed even before the global crisis. In fact, the Euro Area was experiencing a slow deterioration of income gaps that became a lot more pronounced in the aftermath of the debt crisis and the bailout programs implemented in the weaker economies. As a result, social dissatisfaction towards the common currency -and the European institutions in general- would reach unprecedented levels before a new policy interest in bridging the asymmetries started to emerge in policy debates.

In the literature, there are two measures of income convergence: one is the so-called β-convergence, which tests whether countries with an initially lower GDP per capita subsequently, grow indeed faster than countries with a higher initial level, thus giving rise to the "catching up" effect. The other is the so-called σ-convergence, which measures the decline in dispersion of GDP per capita among fellow member-countries. In a study for the initial 12-member group of the Euro Area (henceforth EA12), Christodoulakis (2009) employed both convergence indicators to show that the gap had in fact widened, albeit to an extent that at that time seemed to be reversible if certain policies were implemented.

Such corrective action, however, was never implemented at a scale sufficient for the convergence process to appear again. Hence, the catching-up effect ceased and the gap between less and more developed nations further widened after the global financial crisis in 2008. According to Diaz et al. (2017), it is striking that so little convergence has occurred among the early euro adopters, despite their differences in GDP per capita at the beginning of the period. In contrast to some optimistic expectations that the establishment of the euro would itself act as a catalyst for faster real convergence, they find that little convergence, if any at all, has taken place for the whole period 1999-2016. In a more updated study, Cabrillac (2019) examines both measures of convergence and finds that improvement among EU members has slowed down during the recent period if compared to the two prior decades.

It was only after the global crisis and the socio-economic cracks that appeared in recession-hit countries that policy makers started again appreciating convergence of living standards as an important pillar in the EMU foundation and longevity. No less than ECB (2015), openly admitted that 'little real convergence has taken place among the euro area economies since the establishment of the euro, despite initial expectations that the single currency would act as a catalyst for faster real convergence'. Further on, the ECB report suggested that 'sustainable real convergence supports the smooth functioning of Monetary Union over the medium term', and the Commission followed suit by emphasizing that 'progress on economic convergence is of particular relevance for the functioning of the euro area but is equally important for the EU as a whole'; see (EC, 2017).

In the same Report it is found that '[t]]he convergence trends of the single currency's first years have proven partly illusory', the Report calls for swift and effective action to achieve 'strong economic and social re-convergence'. Academic research responded with a strong voice in favour of more real convergence. For example, spirit, Diaz et al. (2017) argue that achieving economic convergence is a crucial condition for sustainability of Euro Area membership. More emphatically, Franks et al. (2018) remind all competent authorities that convergence of per capita income levels is *an important objective of the economic integration process*; (my italics). More recently, Imbs and Pauwels (2019), examined why EMU failed to generate convergence in per capita GDP terms and suggest that the best way to achieve that is by pushing EMU to become an optimal currency area ex post, even though it had not been one ex ante.

The aim of the present paper is to examine the gradual erosion of the convergence process since before the establishment of EMU in the late 1990s to the post-crisis years. In this context, it shows that major external imbalances that characterized the Euro Area economies in the post-EMU period led the most-exposed countries to the sudden-stop crises and necessitated the bailout agreements. The recession that followed exacerbated several inherent weaknesses and further widened the gap in living standards between the most developed countries of the Euro Area and the peripheral economies.

Investigating the areas where post-crisis discrepancies are more pronounced, the paper focuses on the issues of public indebtedness, the fall in investment activity and the delay -if not outright reversal- in improving institutions. In all three areas, the Southern economies of the Euro Area are found to starkly deviate from their Northern peers. The new member-states that joined the EU in 2003 and EMU a few years later appear to follow a more satisfactory process of convergence, though gaps in some critical areas continue to persist.

The rest of the paper is organized as follows: Section 2 describes how the convergence process was set in motion in the run-up to EMU but was then gradually extinguished and replaced by strong disparities after the global crisis. Section 3 discusses the main areas in which divergences appear to be stronger, leading to a further polarization between Northern and Southern members of the Euro Area. Section 4 examines some key aspects of polarization and proposes a number of policies to mitigate discrepancies. Finally, Section 5 concludes with some suggestions for future research.

2. From convergence to divergence

We start by examining a simple measure of dispersion in per capita incomes among member-states. Fig. 1a plots the band of one standard deviation around the mean of per capita GDP in real terms during the period 1986-2018. Calculations involve only the initial group joining the Euro Area to avoid possible idiosyncrasies in the countries that were not full members of the EU for the whole period. By further excluding Luxembourg as a high-income outlier, the group remains with eleven member states, (henceforth EA11). The growing gap in living standards becomes evident by observing that one standard deviation reached €13,538 in 2018, more than twice wider than the amount of €5,775 in the beginning of the EMU in 1986.[2]

In Fig. 1b, another measure of dispersion is depicted by plotting the gap between the maximum and minimum levels of per capita incomes among member-states relative to their mean. Before EMU, relative dispersion had fallen from 56% in 1986 to 49% in 1998, though it slightly rose afterwards to reach 52% in 2009. After the global financial crisis, it sharply widened reaching 76% of the mean in 2018. These findings imply that the convergence process between the less and the more developed initial members of the Euro Area significantly weakened in the post-EMU era and reversed course during the previous decade.

2.1 Convergence before the EMU

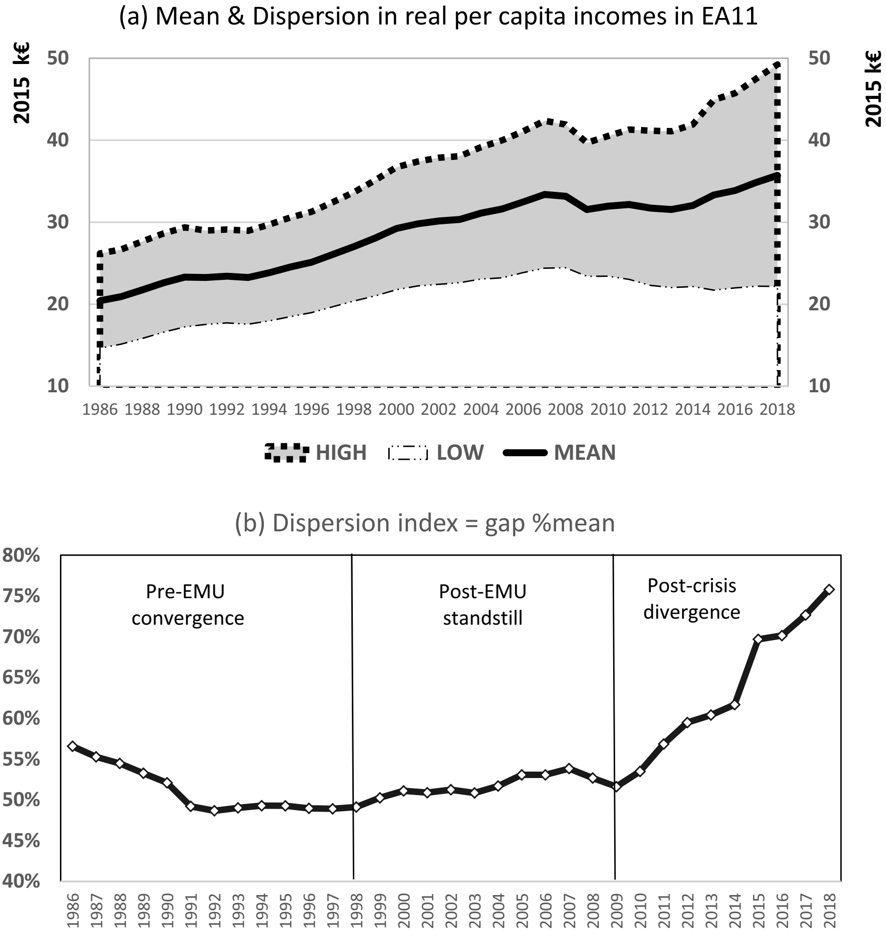
The well-known test for **β**-convergence over a certain period is to look for a strong, significant and negative correlation of cumulative growth versus the per capita GDP in the beginning of the time-span. The result depicted in Fig. 2a for the eleven Euro Area group (i.e. still excluding Luxembourg) in the pre-EMU phase 1986-1997, reveals a negative and statistically significant relationship. The implication is that the gap between poorer and richer members was clearly diminishing during that period, thus generating a strong catching-up effect.

The gap was reduced for both bad and good reasons: In late 1980s and early 1990s, several advanced economies were still trapped in the legacy of stagflation or experiencing painful currency appreciations in their struggle to survive in the Exchange Rate Mechanism (ERM), the EMU's precursor. As some of the less developed countries had remained thus far outside ERM, they enjoyed a more flexible monetary policy and higher growth.

On the positive side, the EU had endorsed a whole set of growth-inducing policies to promote development in the less-advanced regions – from financing new investment to upgrading human skills and supporting renovation and reallocation projects. Under the umbrella of the Community Support Framework (CSF), initiatives to build modern infrastructures, upgrade human capital, and support new productive investment reached such a scale that it finally succeeded in removing pockets of poverty and creating several local champions of competitiveness, exports and employment.

A framework of *ex post* evaluation attached to the CSF funding helped into further expanding the growth momentum. As a way of creating incentives for project efficiency, the eligibility as well as the level and the disbursement of regional funds were made conditional on the actual improvement of living conditions in the specific areas. In case of successful projects, conditionality sparked a virtuous cycle of income growth and project financing. On the other hand, failing to meet the criteria was likely to lead to the discontinuation of project funding, thus causing plenty of political embarrassment to national and local authorities.

Fig. 1. Dispersion of per capita income in EA11



Note: Dispersion in (a) is set to one std around the mean. In (b) the gap is the difference between maximum and minimum levels across EA11 countries relative to the mean. Data source: Ameco

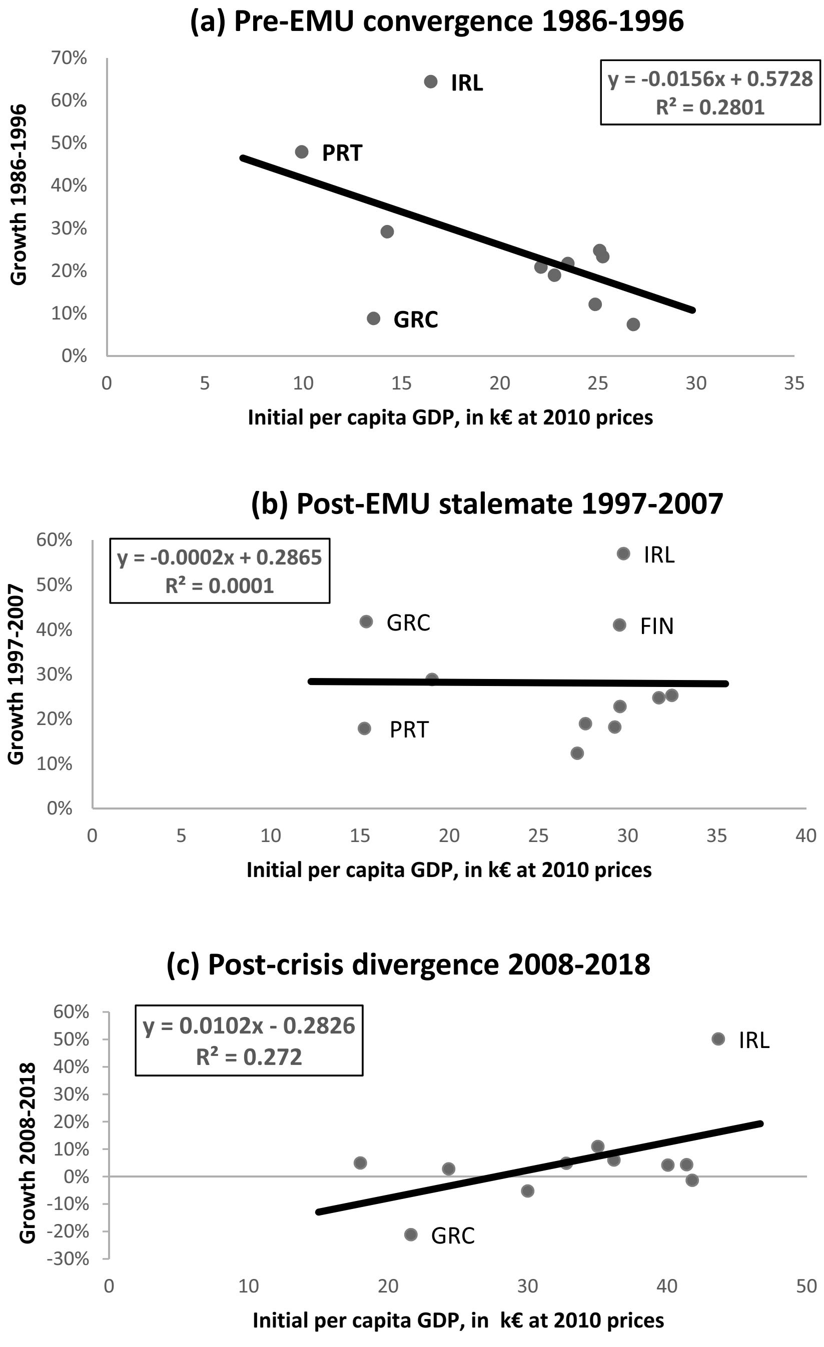
2.2 No convergence post-EMU

The early optimism that prevailed in the 1990s was stretched to the limits by claiming that the establishment of a common currency would automatically catalyze factor mobility between member-states. New investment expected to freely flow to the least-developed economies to exploit higher returns on capital, while labour was likely to move to the most-developed economies to benefit from better wage remuneration and more efficient job markets. Therefore, the gap in per capita living standards would further diminish by the self-correcting process of factor-returns equalization. In practice, however, no worth mentioning correlation is even detected between overall growth during 1997-2007 and per capita levels at the beginning of that period. The relevant test fails to establish any catching-up effect, as clearly shown in Fig. 2b.

The lack of post-EMU convergence should not, however, be attributed to the absence of policy targets. In fact, a long list of actions and reforms known as the Lisbon Strategy for Growth (LSG) had already put in circulation since 2000; see EC (2000). The LSG framework aimed at making the European Union *'the most dynamic and competitive knowledge-based economy in the world'*, by improving competitiveness to achieve sustainable economic growth, more and better jobs, greater social cohesion, respect for the environment, and a leap in educational attainment and technological innovation. All those became catch phrases for all post-EMU policy proclamations, albeit to only a limited practical effect.

The fact that the LSG failed in the post-EMU era was not due to the lack of ambition as to that of political will to confront the new challenges. Soon after its launch, it became evident that the complexity of goals and the lack of strong incentives or clear-cut national obligations in the implementation of LSG would soon make the whole effort to end up in a deadlock. The absence of enforcement mechanisms and the lack of appropriate financing -at least to the scale actually required-, finally made them look as only tentative inspirations rather than rigorously pursued policy targets. A new strategy drafted in 2005 put more focus on the simplification and national ownership via national action plans as the key elements to revitalize the reforms agenda. Nevertheless, as the global crisis was approaching, the Lisbon strategy again stayed below expectations and failed to steer the EU towards more growth and resilience; for a thorough critique see Wyplosz (2010). The LSG finally was declared obsolete and, in March 2010, subsequently superseded by a new framework for *'smart, sustainable and inclusive growth'*; see EC (2010). It was unfortunate that only a month after its launch, the debt-crisis erupted in the Euro Area periphery and its shockwaves hit convergence for yet another time.

Fig. 2: From convergence to divergence in EA11



Data source: Ameco

2.3 Post-crisis divergence

Although all of the EA economies suffered serious losses in households' incomes after the crisis in 2008, some countries were further subjected to the contingencies of bailout programs. The recipient countries agreed on implementing front-loaded fiscal consolidations to restore public balances, and extensive wage-cuts to effectively achieve an internal devaluation and restore competitiveness. In turn, this caused further recession and divergence among the EA11 became even more pronounced, with Greece being the most severe case throughout. According to Estrada et al. (2013), for most of them the result was 'a *reversal of fortunes'*, as several economies with better, on average, performance up to 2007 have subsequently experienced deeper recessions and larger increases in unemployment rates.

Figure 2c displays the pattern in the post-crisis period 2008-2018 for the EA11 member-countries. The relationship between cumulative growth in per capital income and its initial level has actually turned positive, suggesting that a process of divergence is clearly under way. An interesting exemption was Ireland, where the economy initially fell but subsequently embarked on a trajectory of superfast growth after 2014.

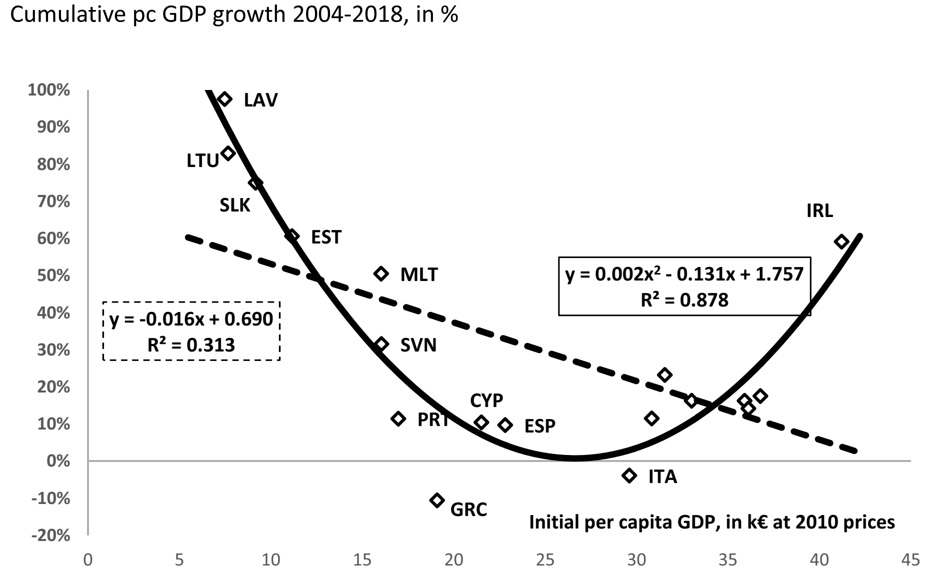
2.4 We are all a family now

The extent of divergence is somewhat mitigated by including the seven new accession countries that joined the EU in 2003 and adopted the common currency a while later. Fig. 3 juxtaposes cumulative growth over the period 2004-2018 with initial per capita GDP for the group EA18, (i.e. again excluding outlier Luxembourg). The straight line is statistically significant and implies that a negative correlation is established. As a matter of fact, the new EA members followed a strong catching-up process, managing to close the huge gap that existed before. Optimism, however, is mitigated by noting that the impressive growth characterizing the new joiners only took place in the years prior to the global crisis. Post-crisis, growth slowed down in them too and their convergence weakened as explained by Franks et al. (2018).

The fact that most of Euro Area convergence is due to Eastern European countries is also confirmed by Cabrillac (2019), who notes that otherwise convergence actually stopped among EU countries and regions after the crisis. This prompts a closer inspection of the scattered plot in Fig. 3. By employing a parabolic relationship, a far better fit is obtained and reveals that there probably exist more than one different growth patterns among the Euro Area economies.

One pattern appears in the rising part of the curve that includes the most-developed countries of the Euro Area. It shows a clear tendency of divergence in per capita incomes, confirming the findings in the previous subsection. The falling part on the left-hand side of the curve includes the new EA members together with those in the European South that experienced very low (or even negative) growth over the period in examination. The only convergence process currently in force in the Euro Area is the one between the less-developed new members with the crisis-stricken and relatively poorer members of the Euro Area. Hardly reminiscent of the aspirations held back in the roaring 1990s.

Fig. 3: Convergence in EA18, (excl. Luxembourg)



Note: All statistics are in favor of the parabolic (versus the linear) fitting and include: DW=1.85 (1.21), F-stat= 54.2 (7.3) and S.E.R.= 11.62 (26.74), Nobs=18. Data source: Ameco

3. New asymmetries

The most diverging performance among the Euro Area economies emerged in their external balances. Several countries saw their current account deficits to go explosive, while at the same time others were building-up surpluses. For the Euro Area as a whole, the current account was virtually in balance without alerting policy makers to the internal gap and the risks associated with it. Initially, European authorities and policy analysts misperceived the asymmetric developments in the external balances as being only a transitional characteristic. As such, it would soon dissipate without any specific action undertaken, although a traditional correction of competitiveness through exchange rate adjustment was no longer possible. Productivity alignments could possibly be carried out by enforcing new reforms in wage setting and labour markets, but that seemed hard to implement in the post-EMU years. A kind of policy fatigue was reigning in after the years of nominal convergence, and thus external asymmetries continued to grow unchecked.

3.1 Grow now, converge later

Furthermore, there was massive capital movement from Europe's core—mainly Germany, but also the Netherlands—to its periphery. According to Krugman (2012), these flows led to an economic boom in the periphery after the creation of the euro and significantly higher inflation rates in Spain, Greece, and other periphery countries, than in Germany. Prior to the crisis, the successful macroeconomic adjustment to the EMU requirements and the lower interest rates that prevailed afterwards had led to a post-EMU optimism in self-enforcing adjustments. Since national governments could borrow at a much lower cost than before, the expectation was that some kind of crowding-in would enable the private sector to finance more investment projects, while the public investment budget could also expand to finance modern infrastructure and, thus, enhance the supply-side capacity of the economy. In several countries, however, the increased availability of funds merely augmented aggregate demand, and soon led to large external imbalances.

According to some authors, the seeds of imbalances were already planted long before the EMU started to take place. For example, Grjebine et al. (2019) note that real divergence increased from the early 1990s as evidenced by low productivity growth in the «periphery» of the Euro area relative to «core» countries. They conclude that the creation of EMU in 1999 was far from being a catalyst for real convergence in Europe, because capital allocations across various sectors followed widely diverging patterns and led to very different developments in their total factor productivity (TFP).

Although capital flows increased all over the Euro Area, there was a strong differentiation in the type and the allocation of investment across different countries. Christodoulakis and Sarantides (2017) developed a theoretical framework predicting that if an economy is relatively capital-intensive in the production of traded-goods, foreign direct investment (FDI) is more likely to flow in greater proportions to the traded sector, thus improving the trade balance of that particular economy. In contrast, economies with relatively dominant service sectors are more likely to attract FDI there, eventually crowding-out production of traded goods and causing deterioration in the external account. By subsequently estimating the model across the Euro area countries over the period 1980-2009, the authors established that a growing divergence was under way in the Euro Area long before the eruption of the global crisis.

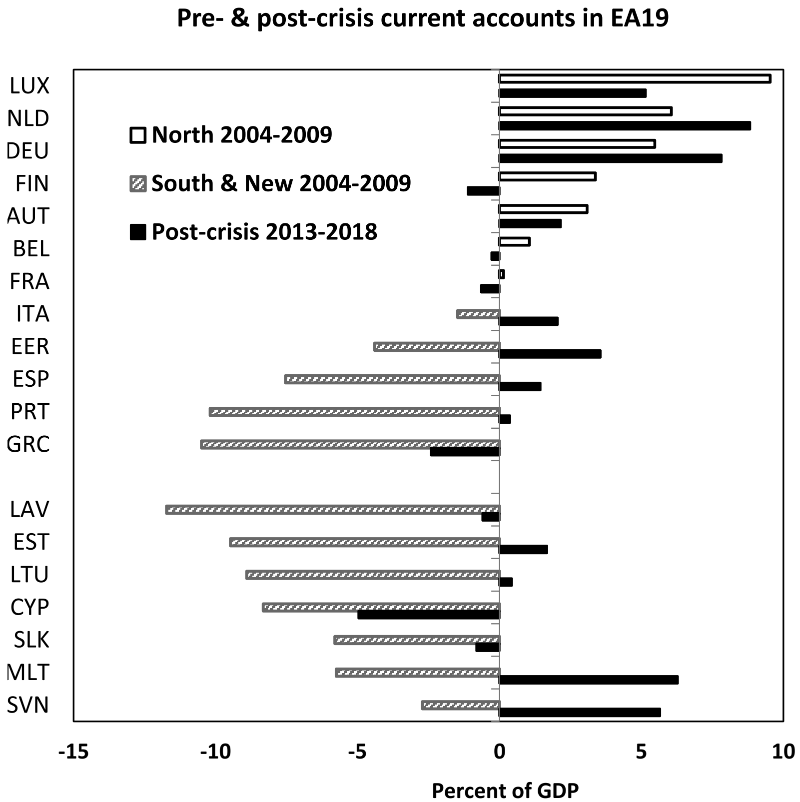
In fact, the majority of new investment in the northern EA countries went to manufacturing and/or other productive sectors, while southern countries became preferred destinations for real-estate development and the service sectors in general. Sooner rather than later, it was evident that northern countries acquired a competitive edge over their southern neighbors and the gap in the respective current accounts further widened. As a result, the northern group of countries managed to have export-oriented growth, while most of the southern economies plunged into real-estate bubbles and vastly increased their dependency on imports. Soon, their fortunes were to change course.

3.2 The reversal of fortunes

In the wake of the global financial crisis, the group of countries most exposed to external deficits were also those, which suffered more hardly from the lack of global liquidity. As described by Krugman (2012), when private capital flows from the core to the periphery came to a sudden stop, leaving the peripheral economies with prices and unit labor costs that were well out of line with those in the core, suddenly, the euro faced a major adjustment problem. Fig. 4 displays the current accounts of the Euro Area, by distinguishing between Northern, Southern and newly joining economies.

It is revealing to see that all countries seeking some kind of bailout agreements after 2010 had already experienced a huge deterioration in their current account deficits. Greece, Portugal and Ireland asked for bailout agreements with the European authorities and the IMF in 2010. Spain had to bail out the financial sector and adopted a similar adjustment program in 2012, albeit excluding IMF's participation. Italy, with a lower external imbalance, pointedly has kept on the verge until today.[3] The eventuality of some of them exiting the Euro was finally avoided, but only after the Euro Area authorities in coordination with the IMF organized massive capital injections. To enhance competitiveness while keeping the common monetary policy intact, each of the bailout countries had to implement extensive austerity programs combined with an internal devaluation process of wage-cutting and the removal of many labour market protections.

Fig. 4: External balances in the EA19



Note: In the vertical axis, country acronyms. Data source: IMF WEO database.

A similar crisis and consolidation pattern took place in the countries that joined the EU after 2003 and became members of the Euro Area a few years later.[4] All those plunged into recession in the event of the global crisis: The Baltic countries with large external deficits were the first to suffer from the global shrinkage of liquidity at the end of 2008. According to Blanchard (2013) the collapse occurred in a sequential pattern with the crisis leading to a sudden stop, a credit crunch, a sharp drop in exports, and finally widespread uncertainty dominating the economy. Estonia experienced a major recession with GDP falling by -14% in 2008 and subsequently underwent a harsh adjustment program. Next was Latvia with a fall in GDP by -18% in 2009 and then following a front-loaded fiscal consolidation to cut aggregate demand, while internal devaluation managed to lower wages and boost exports. Lithuania had a fall in GDP by -17% in 2009 and after following a similar adjustment program became a Euro member in 2015. Cyprus initially had a small reduction in economic activity but the continuing external imbalances and a banking crisis that finally erupted in 2013 drove the economy off the rails and forced the government to seek a bailout too; for details see Clerides (2017)

The other countries with less explosive external imbalances experienced either milder or shorter recessions, thus avoiding harsh consolidation program. Slovakia had just entered the EA when it was hit by recession in 2009-2010 but subsequently recovered; see Biea (2015). Slovenia with a comparatively smaller external deficit suffered a somewhat milder recession with the GDP falling by -8% in 2009. However, a banking crisis later on dragged its economy further down until 2013, before a gradual revival took place. Malta virtually escaped the crisis, by experiencing only a small and short-lived contraction of GDP by -2.5% in 2009, after which it returned to uninterrupted growth. Apart from its tiny size, a reason for the Maltese economy remaining relatively shielded from global recession might have been that it decisively cut the external deficit just before the crisis erupted.

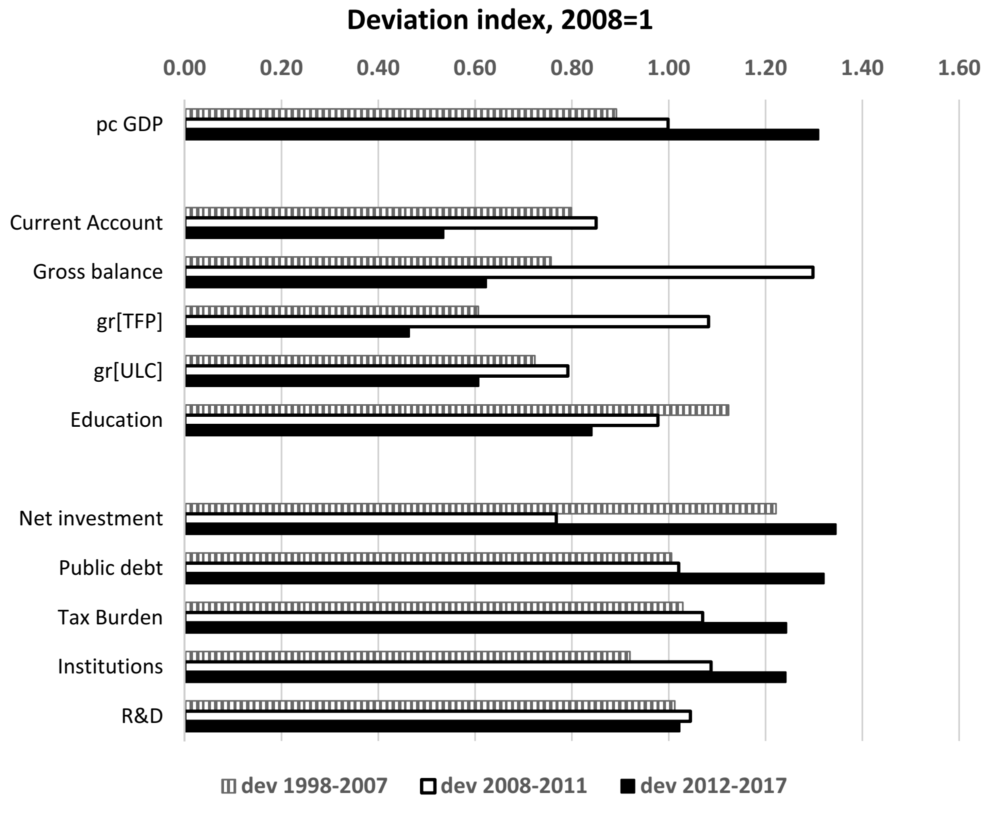
3.3 Spotting the weaker parts

The asymmetric developments in external positions revealed that a clear pattern of a North-South divide was set in motion before the crisis, rekindling the debate on the core-periphery gap and the claim that '*a single currency cannot fit them all'*. However, before jumping to arguments questioning the viability of the Euro, it is useful to check whether and how this pattern differentiated across countries during and after the crisis. Attention again is restricted to the initial 12-member group (including Greece), as the seven new EA countries joined the common currency between 2007 and 2015, either too close or after the global crisis.

The examination takes place by looking at how the dispersion among the Euro Area of some variables that typically are expected to affect growth and convergence. The variables of concern are similar to those included in the standard framework developed by Barro & Sala-i-Martin (1995, Ch. 12), and a comparison is displayed in Fig. 5 for three-time spans to cover the periods before, during and after the crisis. The graph shows that intra-EA deviations in per capita income initially widened only slightly during the crisis as countries suffered more or less symmetrically from the global recession. However, they were wildly exacerbated afterwards due to the different policies that applied to stave off recession and fueled the strong divergence dynamics mentioned in the previous section. The rest of the variables are exhibiting a mixed pattern that reflects the contradictory effects of stabilization measures on income growth as discussed below.

First, it is noticeable that cross-country deviations in the current accounts were seriously contained after the crisis, thus weakening the mechanism through which a troubled economy was suffocated by the international credit crunch. However, most of external balance in the bailout countries were a consequence of the austerity programs, rather than a result of some structural transformation of their economies. As Catao (2017) notes an important segment of structural reforms in southern countries and Ireland has taken the form of public sector streamlining that is expected to harness the external imbalances even if some cyclical correction takes place in the future.

Fig. 5: Comparing EA12 deviations before, during and after the crisis



Note: Standard deviation is calculated on data where per capita (pc) GDP is in levels, flow variables are in percent of GDP; institutions are indexed; education is expressed in population shares of 18-65 years attained secondary schools; and growth rates (gr) are in percent. All 12 members of the initial EA group are included. Data Source: Ameco, World Bank.

In this vein, the curtailment of imports was mainly due to the shrinkage of total demand, brought about by higher taxes and cuts in public expenditures. These are compatible with the reduction of deviations in Government balances and the increase in those of taxation. Moreover, the internal devaluation process of wage-cuts contained the asymmetric rises in unit labour costs as seen by the lower deviation in the post-crisis period. As noted by Fernandes (2019, p 25), real wages had to fall to restore competitiveness and this led to further wage divergence or no convergence between Southern and Northern euro area countries.

But there was a further price to be paid for the bailout adjustments: several banks' recapitalizations had to be financed by issuing new public debt, thus augmenting deviations in indebtedness between EA12 economies. Public investment expenditures were trimmed down by fiscal austerity in bailout countries, while private investment fell dramatically due to lower demand and liquidity shortages. The rise in deviations of net investments after the crisis, underlines the high asymmetries in capital accumulation that may further delay convergence in the future. Adding insult to injury, the intensifying social protests against front-loaded stabilization policies frequently weakened the political system and undermined the overall efficiency of institutions, as indicated by a substantial increase in the intra-EA deviations. Against all the above growth-cutting policies, the slight containment of deviations in education attainment or in TFP were not sufficient to alter the picture.

As deviations between North and South continue to be pronounced in key areas after the crisis, it is likely that new diverging patterns might emerge in the future. Below, the cases of public indebtedness, institutions and investment activity with high post-crisis deviations are further elaborated.

4. Aspects of North-South polarization

In this Section, we examine the developments in public indebtedness, investment activity, and institutional capacity that prevailed in the Northern and Southern members of the Euro Area. To caution for the possibility of Greece driving the Southern average, the graphs are displayed with and without including it. The group of the new seven countries is also displayed. Figure 6 shows the three group-averages.

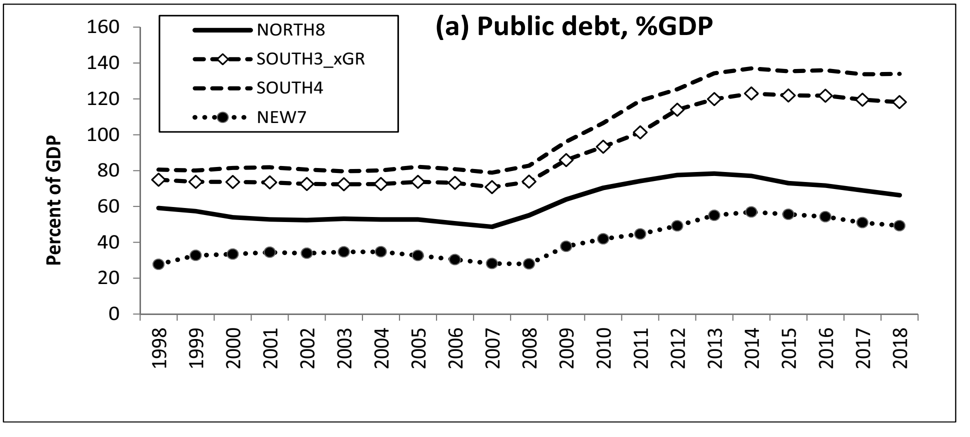
4.1 Public indebtedness

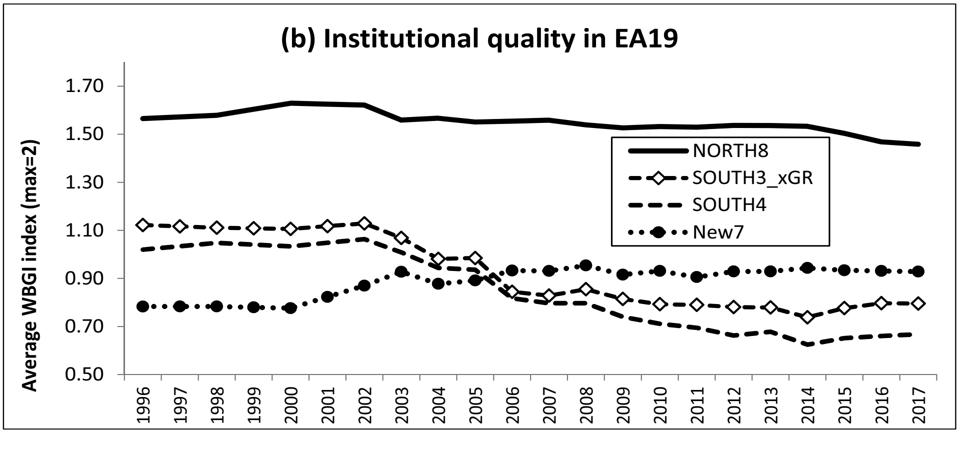
In the aftermath of the global crisis, public debt rose in most economies of the Euro Area for a variety of reasons: in the first phase, governments were engaged in Keynesian expansionary policies to support aggregate demand in the face of the incoming recession. With tax revenues falling due to slack economic activity and borrowing costs going up as a result of financial collapse worldwide, public deficits widened at a scale hitherto unseen for the Euro Area.

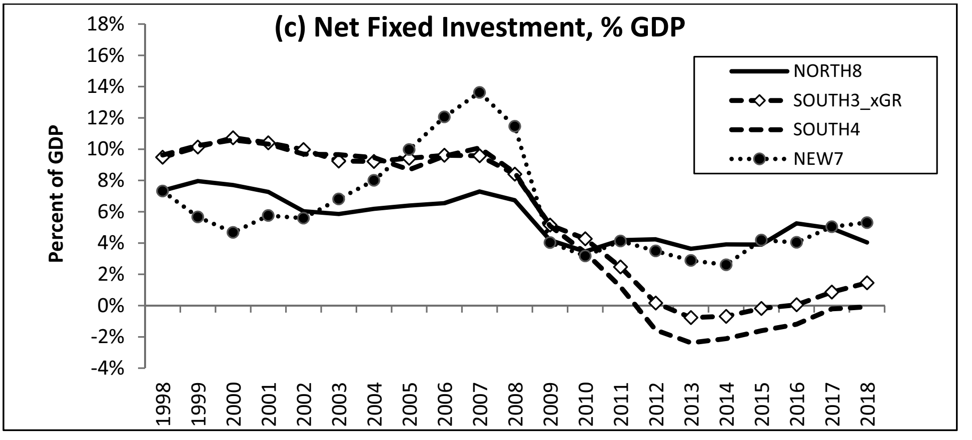
The second phase included a wave of banks' capitalizations by issuing public debt in order to compensate for the losses in their balance sheets due to investing in toxic assets overseas. As some governments in the Euro Area periphery were at the same time facing enormous borrowing requirements, they sought bailout agreements with European authorities and the IMF.

As bailout agreements imposed austerity programs to control deficits, they subsequently caused further recession and public debts spiraled as a proportion to GDP. Finally, the stock of debt expanded to cover the needs of banks' recapitalizations. Overall, all of the southern countries are characterized by a degree of indebtedness considerably higher than ever before; see Fig. 6a.

Fig. 6: New divergences in the Euro Area







Note: WBGI is in levels. Country-group averages. Dotted lines include Greece with the other three southern countries. Data source: Ameco, World Bank.

4.2 Public institutions

The most surprising finding, however, regards the growing discrepancies in the efficacy of institutions in the member states. Although institutional assimilation is by no means a process with specific targets and convergence requirements, it was natural to assume that increasing factor mobility and policy coordination during the run-up to EMU would rather smooth down idiosyncratic differences than amplifying them.

To visualize the process, we use the six governance indicators published by the World Bank (WBGI, for short) at an annual frequency and including the following:

1. Voice and accountability – capturing perceptions of the extent to which a country's citizens are able to participate in selecting and assessing their government, as well as freedom of expression, association, and press media.
2. Political stability and absence of violence/terrorism – capturing perceptions of the likelihood that the political system will survive in the face of fragile governments, partisan challenges, an eventual power vacuum or extensive protests, including politically motivated violence and terrorism.
3. Government effectiveness – capturing perceptions about the quality of public goods and services, the readiness of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of government's commitment to such policies.
4. Regulatory quality – capturing perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector activities and developments.

5. Rule of law – capturing perceptions of the extent to which agents have confidence in, and abide by, the rules of society and, in particular, the quality of contract enforcement, property rights, the police, the functioning of courts, as well as the frequency and intensity of crime and violence.
6. Control of corruption – capturing perceptions of how effectively malpractices including both petty and grand forms of corruption are checked, as well as avoiding the 'capturing' of the state by elites and private interests.
According to Kaufmann et al. (2011), the first two indicators qualify the process by which governments are selected and monitored; the next two, measure the capacity of governments to effectively formulate and implement sound policies; the final two show the respect of citizens and the state for the institutions that govern economic and social interactions.

To simplify the analysis, a principal components analysis is performed in order to obtain a weighted average of the above WBGI indicators for each country; see Christodoulakis (2019) for more econometric details. Subsequently, Fig. 6b displays how the country-group average evolved over the last twenty years. It is remarkable that the newly joined group improved institutions in accordance with stronger performance in GDP growth, thus speeding up convergence to the Euro Area peers. In contrast, the Southern countries suffered a pronounced deterioration in institutional capacity right after the circulation of the common currency, and continued unabated after the crisis.

The discrepancy in the institutional performance might -at least partly- explain the divergence in income growth, as has been debated in the economic literature for a long time (for a survey on the subject see Acemoglou et al. (2005), and Algan & Cahuc (2014), among many others. For the effect on European growth, see MacFarlan et al. (2013), Masuch et al. (2016), and Christodoulakis (2019), among many others).

As noted by Loon (2018), the importance of the structural/institutional aspect in the convergence process is often either neglected or purposefully avoided. To overcome the present impasse in convergence, a refocusing on structural and institutional indicators would aid in furthering the debate and, thus, strengthen the resilience of the EMU. The finding is in agreement with Eichengreen (2019), who notes that the change in the dynamics of convergence of TFP and per capita GDP before and after the global financial crisis underscores the fact that the problem is not just a legacy of the global financial crisis but, as he puts it, is fundamentally a crisis of institutions.

4.3 Investment activity

Investment activity appears to be strongly diverging in the Euro Area both before and after the global crisis, albeit for different reasons. Before the crisis, the

Southern Euro Area economies were investing in aggregate new fixed capital formation at an intensity consistently higher than that of their northern peers, as shown in Fig. 6c.

Obviously, this resulted to higher growth in per capita incomes and contributed to somewhat closing the gap with the most affluent countries as examined in section 2.2. Investments in the European South were predominantly channeled to real-estate and the non-tradable sectors in general, in contrast with the mostly productive investment in tradable sectors that was taking place in the Northern countries. An unpleasant consequence of these developments was that exports were boosted only in the North leading to a more robust growth, while external balances in the South hugely deteriorated leading to the bailouts and the prolonged austerity programs.

In the aftermath of the crisis, fixed investment declined in all countries with adverse consequences everywhere. The growth prospects of the Euro Area were starkly diminished by under-investment as described by Kolev et al. (2013), Bardi et al. (2014), Gornig and Schiersch (2014), among many others. Christodoulakis and Axioglou (2017) note that the overall response in the EA was sluggish and lagging behind the competitor economies, like the US or even Japan, where aggregate investment -after an initial slump- started quickly recovering. By estimating a neoclassical economic model, they show that underinvestment is the main factor behind unemployment and slow growth witnessed in the Euro Area ever since.

Even more alarming, however, has been the vast disinvestment that has taken place over the recent years in the peripheral economies. For example, investment in the real-estate sector plunged everywhere though its impact on overall investment was greater in the South, due to the higher share it had before the crisis. Further on, private sector savings in those countries were severely hit by direct wage cuts and increased taxation, as conditioned by the austerity programs. Moreover, governments were cutting back public investments as a politically easier way to trim deficits than by further raising taxes. These policies generated new post-crisis asymmetries in net fixed investment profiles, wider and more threatening than before. The northern Euro Area countries managed, after an initial drop in 2009-2010, to keep an average of 4% of GDP, while those in the South experienced a devastating fall. The intensity is so low after the crisis that it practically amounts to abstaining from new investment activity. Some marginal rekindling of investment appeared in 2017, though it again disappears if Greece is taken into account.

Regarding the newly joined economies, they naturally experienced a much more volatile pattern before the crisis in their way to remove the rigidities of state-planning and make room for modern dynamic market economies. In the prospect of becoming full members of the European Union in 2003, gross investment peaked and continued at even higher rates afterwards approaching 14% of their GDP in average in 2007. Post-crisis, however, investment activity also collapsed by more than 10% of GDP per year in average before reaching levels close to those followed in the northern Euro Area group.

4.4 Resolving the puzzle

The aforementioned analysis invites a debate on how each one of the three aspects characterizing the North-South divide could improve by specific actions. The situation, however, is more perplexing since the three characteristics are not autonomous but seem to affect -or being affected by- the other. For example, a deterioration in the efficacy of institutions deters new investment, thus halting growth and finally augmenting public debt as a proportion to GDP. High indebtedness is by itself a deterrent to new investment, while the positive feedback loop of underinvestment, recession and unemployment strains social coherence and undermines the institutional capacity of the country. Pierluigi and Sondermann (2018) argue that high levels of debt make economies more vulnerable to adverse shocks. For that reason, they suggest a higher GDP growth that would also help debt sustainability, which can be achieved by fostering the implementation of structural reforms.

The question then is how all the above aspects could start simultaneously moving in the right direction. Currently, there are some public debates to ease the burden of indebtedness in the most stressed countries of the Euro Area, either by reducing and further reprofiling debt repayments as in the case of Greece and possibly Italy in the near future, or by designing some kind of debt mutualization at the Euro Area level. As all such measures will eventually materialize - either directly or indirectly - at the expense of other member-states with currently lower debt burdens, it seems unlikely that they become popular issues to be easily adopted in the near future.

On the other hand, improving institutions by enacting market reforms and applying best practices seems to be promising for catalyzing new investment and fostering growth without burdening other member states. However, policy lags are important and it may take some time before the private sector reacts to an improved institutional framework. Especially for the countries exiting the long tunnel of consolidation programs, enacting radical market reforms may face a wave of socio-political resistance reminiscing of the post-EMU fatigue as mentioned earlier.

This leaves the option of enhancing investment activity as the most realistic in political terms and promptly delivering in economic terms. Describing the multiple effects that investment could have had on the Euro Area, Della Posta et al. (2019) underline the fact that in some peripheral Eurozone countries, aggregate demand and investment (especially public investment) are far from having recovered, thus explaining why they continue to have sluggish growth and fall away from their peers. To overcome this, they suggest a grand investment plan capable to stimulate both current and medium-term GDP growth. Moreover, it will definitely contribute to the stabilization of public debt as a ratio of GDP and might even help in the restoration of a pro-European sentiment in those countries.

However, underinvestment has been so vast in the recent past that even such an ambitious plan may not be enough. Barkbu et al. (2015) found that the shortfall in investment not explained by recession amounts to 3-6% of GDP, and suggest that to overcome the problem a *'complementary policy action at both the national and the euro area levels'* is needed in order to speed up investment in the non-residential sectors.

Arguments for raising, innovating and transforming productive capital and infrastructures in the Euro Area are becoming overwhelming. The investment initiative known as the 'Juncker Plan' helped to launch a number of major investment projects in post-crisis economies, though the amount of funds were clearly far below the critical mass needed to make them change course and embark on a sustained growth path. To strengthen the process, Fernandes (2019, p. 21) suggests to adopt the recommendation made by the European Trade Union Confederation for the establishment of a European Treasury for public investment.

Even the central bank's *zeitgeist* seemed to be more radical nowadays, as the new president of ECB took the unparalleled step to invite Germany and the Netherlands to use their fiscal surpluses in order to spur investment and boost growth both at home and in the rest of the Euro Area.[5] Striking a rare resonance with public sentiment and positive aspirations, both the outgoing and the incoming presidents of the ECB stressed the need for more investment as the single most important action to boost the economies in the Euro Area and avoid a new recession. In one of his last public lectures as ECB president, Draghi emphasized that "*the most effective response […] would be an investment-led stimulus at the euro area level*".[6] Adopting a similar tone in her inauguration speech a few weeks later, the new ECB president went further to argue in favour of increasing public spending on investment. Drawing a distinction between general government spending and "productive expenditure — which, in addition to infrastructure, includes R&D and education", the new ECB Chief admitted that productive investment had fallen as a share of overall public spending in most

Eurozone countries, urging that "new investment needs are emerging" Lagarde (2019). It remains to be seen whether such wording opens up a new era of policy action to restore growth or is another chapter of high moral lecturing without practical consequences.

5. Conclusions

Using a simple framework of analysis, the paper demonstrated that the process of convergence in per capita GDP first weakened, after the commencement of the single currency, and then reversed in the event of the global financial crisis. The only evidence of convergence is obtained after including the countries that joined the Euro Area during the last decade. Taking into account, however, that their leap onto high-growth paths is mostly explained by the policies of removing soviet-style rigidities and boldly adopting a series of market reforms, makes a repetition difficult to imagine. A similar opportunity is hardly realistic to appear again, either for the same or any other group of countries in the Euro Area, at least anytime soon and at the same pace and enthusiasm. A crucial finding among the older members of the Euro Area was that convergence dynamics were completely reversed leading to a polarization in the economic circumstances of the southern countries versus those of their northern most-developed peers.

Investment differentiation was a crucial factor in generating the North-South dichotomy before as well as after the crisis, albeit for different reasons. In the post-EMU era, it was the composition effect of investment toward tradeable and non-tradeable sectors in the Northern and Southern countries respectively. The different patterns quickly led to asymmetric and hugely diverging current accounts that subsequently necessitated the bailouts and fiscal consolidation programs. In the aftermath of the crisis, however, divergences appear to be sizable in other areas as well, such as public indebtedness, the efficiency of institutions and the intensity of investment activity as a whole.

Therefore, an investment plan across all the economies of the Euro Area seems to be the most effective policy approach in fostering growth and restoring convergence dynamics. The access to cheap borrowing in world markets creates new opportunities for financing EU-wide and country-specific investment projects implemented by either the private or the public sector.

Future research will further investigate the links between public indebtedness, institutional quality and investment activity in order to establish how all currently diverging areas follow a more integrated pattern. To make their implementation more effective, policy priorities should be placed in the new framework of economic governance that is under preparation for the Euro Area.

Notes

1. Athens University of Economics & Business, and Hellenic Observatory, LSE. Email address: nchris@aueb.gr and N.Christodoulakis@lse.ac.uk
2. To facilitate comparison, both values expressed in constant 2015 prices.
3. As noted by Barrios et al. (2009) the explosion of sovereign spreads that sparked the crises of the European periphery occurred in countries with large external deficits even if their fiscal position looked healthy. For a relevant discussion, see Christodoulakis (2016).
4. Slovenia was the first to join in 2007, followed by Cyprus and Malta in 2008, and Slovakia in 2009. After the global crisis, Estonia joined in 2011, Latvia in 2014 and Lithuania in 2015.
5. Financial Times, October 20, 2019.
6. Reuters, October 1, 2019.

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