CONVERGENCE AND OPTIMUM CURRENCY AREA, AS ADVANCED ECONOMIC INTEGRATION

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Abstract

In 1961, in the earlier stage of the European integration, professor Bela Balassa proposed a five successive phase model. Today, the half century experience on integration and corresponding literature issued lets us see rather two big phases (instead of five). The one would be the incipient integration, that came to enlarge the economic openess and internationalization and shaped: (i) free trade area (FTA) and (ii) customs union; the other would be the advanced integration, in which internationalization would be replaced by the unique-common market and other two commandments would replace or just reshape the older FTA and customs union into: (iii) economic convergence and (iv) optimal currency area.
The last two will be emphasized by our paper, as for their current description-analysis in the literature.

Keywords: European type integration; incipient & advanced integration phases; customs union; economic convergence; monetary union; fiscal union; optimum currency area.

1. Introduction

I would like this paper to continue the previous one (Andrei, 2012), for the preoccupation on the European integration outline, as considered update. In *résumé,* polemics were with the integration model of Balassa (1961) through here criticizing at least all: (i) the *economic and monetary union* that had been assumed to have ended the integration process; (ii) integration, as not only successive, but also *distinct* phases from one-another; (iii) limiting integration to its 'liberal' part of development (i.e. through *common-unique* market, competition, economic union and common currency – whereas today the 'other European economics', the *non-liberal* one of budgets, policies, structural funds and policy, cohesion, sustained and regional development and others has become as obvious as the liberal component of the European integration.

Also in *résumé,* our retort to the Balassa's model – more precisely, to the 'liberal' component of the economic integration – comprises only two big (development) phases, meaning the *(a) incipient* and *(b) advanced* integrations, as in the following Table 1.

Table 1 -- Outline of the (European) integration process

Integration	Incipient	Advanced
Basic structure	International	Unique-common market
Commandments	Free trade area	Convergence*
	Customs union	Optimum currency area

* See several types of convergence considered in the literature: economic, political and institutional.

Just mentioning that these phases proposed are no longer assumed as so deeply distinct from one-another, as in the model of Balassa – i.e. even the primary *free trade area* phase might contain germs of the *optimum currency area (OCA)*, as it will be read below.

My previous paper here referred did conclude on a presumable 'end of integration' for a moment in which specific contradictory aspects would end, when the EU (or just the 'Euro') area would work like all States federations and when the institutional inventory will become complete, as it is in individual federations or just States. As for this paper, a certain 'drawing-back' is preferred in the sense that details of such a time-development will dominate. *Convergence* and *optimum currency area(OCA)* will be here below debated as specific to the advanced phase of integration, as free trade area and customs union stay specific to both the early phase of the EU and to all the other than EU integration options world-wide. There is not only similarity between the two phases of integration – i.e. convergence and OCA are different issues than the free trade area and customs union, as described below in our text.

Some space limits impose to our approach to stay close to conceptual developments in the literature, meaning distant from either details on the EU-Euro-Zone, or debate on current crisis.

2. The economic convergence concept in the literature

2.1 Definition and perception

There are three definitions of the *economic convergence* in the literature (Frankel, 2004): (i) *synchronization* of business cycles – against *asymmetry shocks*[1]**;** (ii) *similarity of economic structures* – e.g. weight of agriculture and industry in total GDP; (iii) *similarity of productivity and non-tradable weight* in the total economy. Iancu (2005, p.6) completes such portraying through considering the internal distinction among: *real, nominal* and *institutional* types of convergence – of which the *economic* convergence stops to the first two of these.

Equally through its conceptual approach, convergence equalizes a *structural similarity* between national economies (Dinga, 2008[2], pp. 17-19), assumes a list of *quantifying indicators* (Dinga, 2008, p. 19) and lays in the proximity of other (economic) terms like: similitude, harmonizing, complementarities and even redundancy (Dinga, 2008, p. 21).

The same literature indicates three *perceptions* of the economic convergence. The one points on the 'market forces' and stays related to the neoclassical theory of economic growth. The second one in line considers rather a 'non-convergence' finding of the contemporary era. Thirdly and finally, convergence is seen as possible on the competition market, but the

[1] This is a term rather proper the other concept approached in this paper -- i.e. the *optimum currency area* --, but this remark is for once more illustrating the proximity between these two concepts in the today understanding.
[2] And on-line: http://www.edinga.ro/files/studii/7_ro.pdf

difference from the neoclassic view here consists in the presence of *policies* instrumented (developed) for convergence implementing and presumably appropriate (Iancu, 2005, p.7).

2.2 Classification

The α type convergence sees what is meant by *structural similarity* between economies. This type of convergence is considered able to absorb the *asymmetric shocks*[3], but equally insufficiently clarified as in theory – i.e. what kind of structural similarity is about? – and in methodology – e.g. what about economies of different dimensions? Are regional non-similarities also able to induce convergence (Dinga, 2008, p. 26 and the following)?

The β type convergence is pretty different story. It focuses on the link between the 'classical' and qualitative view on the convergence dynamic, on the one hand, and 'catching-up' type processes – that display different dynamics on shorter terms in favour of less developed and developing countries – on the other. As in its larger sense, the β convergence regards all about economic 'speeds', meaning that it even starts from the dynamic *of a national economy towards its own equilibrium*, as the primary definition of convergence.

The same type of convergence reaches its own regression equation and coefficient (Sala-i-Martin, 1997, p. 58) and breaks down into: *β -absolute* -- *higher growth for developing economies, as compared to the developed ones ; β - group* -- β absolute, plus considering countries' grouping on criteria of similarity in industrial technologies, institutions and economic policies applied; *β -conditioned* -- the previous, plus additionally considering the vector of determinant factors of growth.

Criticism for this zone of convergence classifying comes from other several analyses. Quah (1993) here accuses the '*Galton type error'* related to self-correlation statistics. Boyle & McCarthy (1997) pretend that even the β type convergence, in its literal definition, might see itself wrongly reflected by its found coefficient and Friedman (1992) argues that it can be well replaced by the *variation coefficient of per capita GDP* within the region. Boyle & McCarthy (1997, pp. 57-58) suggest that these above three (sub) types of the β convergence would actually base on the need created for such an internal distinction, as directly, and notice, as the basic truth, that the β convergence doesn't prove able to replace another type, the *σ type convergence* – that is the similarity regarding per capita GDP and directly related economic indicators, the 'catching-up' process equally considered (Dinga, 2008, pp. 27-28).

As concretely, the σ *type convergence* calculates through the per capita GDP *coefficient of variation*[4] (Friedman, 1992) or *standard deviation* (Dalgaar & Vastrup, 2001, pp. 283-287) and includes two series of indicators for value dispersion (from average values): the (a) *simple* ones -- basic dispersion and amplitude – and (b) *synthetic* ones – linear and squared average dispersions, variation coefficient (Pecican, 2006, pp. 1-4). Note that such negative assessment that all the σ coefficients basically develop clears the way for assessing 'catching-up' as ' *the higher the dispersion, the higher its speed, the more positive evolving throughout de facto conversion'* (i.e. the β-type conversion, actually the per capita GDP/ Iancu, 2005, pp. 14 & 27).

The other two types of convergence in debate are ∂ and γ types (Dinga, 2008, pp. 27-28). The previous regards the similarity of *real convergence* factors (Frankel, 1999, p. 4). These factors do group into third levels. The basic one sees just the common currency that countries trade in-between (Glick & Rose, 2001). The second one comprises "common language(s),

[3] As one more conceptual relation between convergence and optimum currency area (OCA/ i.e. in the other part of this paper).

[4] *Transversal*, but also *chronological* data series are here used (Iancu, 2005, pp. 21-22).

colonial history, and remaining political links". The "third category of factors" mean what Frankel (2004, p. 4) calls "accidents of history" …"that influences both currency choices and trade links".

Finally, the latter γ type convergence regards the business cycles synchronizing. Dinga (2008, p. 28) generally agrees the literature's arguing about its essential role in 'turning the asymmetric into symmetric shocks', but slightly doubts its long-life in practical terms.

2.3 The real convergence criteria

The description regarding the nominal convergence and its Maästricht (1992) criteria won't be here repeated[5]. And unlike Dinga (2008), I find the EU's (actually, ECB's) absence from any debate about *real convergence* criteria enough consistent with the Organization's general attitude on this topic. Just here reminding the *nominal* convergence criteria and so the basic distinction between these and the *real convergence criteria* for the reason of mentioning Dinga (2008, pp. 36-39)'s contribution to drawing a list of what the author calls *inter-conditioning* criteria between the *nominal* and *real* groups of them. This is what the author calls 'nominal-real transmission channels' and three such general indicators are here enumerated.

The *real interest rate* (Dinga, 2008, pp. 36-37) deals with components of both the aggregate demand (consumption, government expenditure) and supply (investments[6]). Secondly, the *inflation rate* is the way of affecting (reducing, when inflation rises) the money purchasing power, so the aggregate demand, but indirectly the aggregate supply, as well. And thirdly, the *exchange rate* takes a behaviour similar to the one of wages – as nominal and real, similarly to the exchange rate --, the difference made consisting in the proximity of the exchange rate to the openness degree of the economy (Dinga, 2008, p. 37).

Lastly, Table 2 enumerates the *real convergence criteria* by individual and groups (Dinga, 2008, pp. 45-47), then the author organizes them into three *'classes'* of criteria (Dinga, 2008, pp. 48-49), but these classes do not pretty match the previous list of individual criteria.

The class of *(i) 'catching-up'* criteria includes items like average domestic supply, openness degree of the economy and average gross wage. The class of *(ii) sustaining* criteria includes: the net savings rate, labour productivity in commercial sectors, GDP-distribution and the sold of the current account of the external balance of payments. Lastly, the *(iii) resilience* class of criteria contains items like national revenue on activities, domestic absorption, employment rate and government.

2.4 Criticism, controversies and other aspects

As the above title suggests, this paragraph belongs to debatable aspects, as update. So, there will be below about three directions of studies drawn on the economic convergence concept so far in the same literature.

2.4.1 Neoclassics, Solow and the 'anti-convergence'

This aspect might well have had its place as introduction of all the above descriptions, due to its historical order and bibliographical dimension. Roughly, studies of convergence did start in the mid 1950s in the neoclassical zone of thinking. Solow (1956) has his own (famous)

[5] See my opinion about in Andrei (2010) that these Criteria didn't arise from any scientific debate that the European Monetary Institute (EMI), its following European Central Bank (ECB) or other EU forum would ever largely or publicly propose.

[6] I see investments on the aggregate supply side as arguable.

theory that bases the today convergence description, as both economic equilibrium reached and 'catching-up' processes: *the same saving-investment rate helps growth and development at different degrees – i.e. it is converse to the capital stock that this rate relates to.* In other words, the capital stock agglomeration lowers the returns to investment, as much as less developed economies or those destructed by wars and other external causes, on the opposite, are, conversely, able to acquire higher returns on the same investment made. The Solow's model's restrictions are those of: (a) equal saving-investment rates for all countries and (b) general decreasing returns on capital stock. Plus, a '*steady state'* to be reached by all economies – when zero growth rate of capital stock related to the unit of labour – is also concluded.

Table 2 -- Real convergence criteria

Group	Item	Of Which:	Notation
(a)	general indicators		
		population	P
		active population	Pa
		people employed	EMP
		average number of employees	EMPav
			All of the above, on regions and activities
		GDP- domestic supply	GDPs
		GDP- sources	GDPk
		GDP-distribution	GDPq
		exports	X
		imports	M
		government	G
(b)	revenues & expenditures		
		households' revenue	HR
		gross nominal wages	Wagn
		net nominal wages	Wann
		gross nominal labour costs	LCgn
		households' expenditure	HE
(c)	others		
		net savings	Sn
		domestic demand	Dd
		domestic absorption	Ad
		direct fiscal pressure	DFP

Source: Dinga (2008, pp. 45-47).

Mankiw (2003) illustrates the Solow's theory of growth at least by the extreme post-war cases of Germany and Japan, with their 'catching-up' developed economies, but many other authors share a fully different position than that. Thirlwall (2001) founds that 'empirics never confirmed' this neoclassic theory and others point to the *enlarging development gaps,* as a contrary world-wide trend, as enough obvious. The poor countries of the Third World see themselves forced to internationally specialize in basic product(ion)s, the international factors' mobility closed stops convergence trends as well and the revenue multiplier plays for reach countries and equally against the poor and developing areas (Myrdal, 1957; Thirlwall, 2001; Kornai, 1974), all of these as a true 'anti-convergence' phenomenon of the

contemporary era (Iancu, 2005, pp. 7-15). New and newly-based models point to the 'out of use' for the neoclassic thinking on growth-convergence in diverse ways – e.g. associating to the physical capital or to β-σ parameters like 'convergence speed' for the negative value of parameters, or 'convergence-divergence' for value dispersion (Arrow, 1962; Lucas, 1988/pp. 2-42 ; Romer, 1986).

The current literature in the area sees itself splitting into pros and cons, but not only. On the pros side, the ones reconsider growth motors like savings and growth of population (Mankiw; Romer; Weil 1992 ; Islam 1995), the others play the same for capital and labour mobility (Barro; Sala-i-Martin; Blanchard; Hall 1992). On the opposite side, authors rather see divergence between large groups of countries, versus some existing 'clubs of convergence' (Baumol, 1986; Durlauf, 1996 ; Quah, 1996). A rather third position belongs to authors like Galor (1996) : convergence might be real in practice, but for countries that prove some similarities '*ab initio'* – or, this is what there has already been called above the *conditioned* convergence, but also might be called 'multi-polar' convergence.

2.4.2 The Balassa-Samuelson effect

This is a controversy face to the convergence issue made by a theory actually shared by a longer series of authors[7]. The *Balassa-Samuelson effect* predicts that *countries experiencing productivity increases would meet price increases* meanwhile (Frankel 1999, p. 14). The purchasing power parity (PPP) proves productivity-based and this effect is double-based: first, the so-called *"Penn-effect"* sees the (same) goods' price higher in the richer, than in poorer countries; second, the so-called *"Balassa–Samuelson hypothesis*" sees all economies producing both tradable and non-tradable goods and the productivity level and rates stay more variable for tradable zone all over. In such an order, immediate causes of this effect do easily multiply: variation of productivity among countries for both tradable and non-tradable sectors; variation of differences in the same productivity between tradable and non-tradable goods within the same country; persistence and weight of the non-tradable sector in the home economy; the direct productivity-incomes correlation; even high transportation costs wherever the good is cheaper. The "Penn-effect" finalized sees the PPP deviations as: *the higher the income, the higher the price level* (David, 1972; Officer, 1976).

2.4.3 Specific developments in the European Union

The EU appeared aware of the above described realities from the very beginning – that was why its basic Treaties did and do associate convergence with *cohesion* (Myrdal, 1957). The attractiveness of the area has also presumed as associated to the pressure on labour resources, especially the one from less developed areas. The Maästricht Treaty and moment (1992) took a new and advanced step onto deepening cohesion in a context linked to convergence and growth-sustained development (Iancu, 2005, pp. 12-13).

Despite these facts, Iancu (2005, pp. 22-23) concludes some contradictory situation regarding the same issues here above debated. The per capita GDP proves rather divergent (i.e. rising σ coefficient) within EU15 during the 1995-2005 interval. On the contrary, a slight convergence trend was proven by EU25 between 2004 and 2005 around EU10. However, the EU25 and EU15 groups display significantly different variation coefficients from each-other.

[7] See the Ricardo–Viner–Harrod–Balassa–Samuelson–Penn–Bhagwati effect (Kravis & Lipsey, 1983; Samuelson, 1994, p. 201).

Finally, all three mentioned groups of the EU member countries play on distinct numbers the way that the highest trend to convergence belongs to the less developed countries[8].

3. The Optimum Currency Area (OCA) theory in the literature

In 2002 the OCA theory had its own 40th anniversary, for a period during which four phases were claimed to have succeeded and marked this subject: 1/ *‚pioneering'* phase – with the basic OCA theory and properties revealed; 2/ *‚reconciliation'* phase -- combining diverse facets of the theory; 3/ *‚reassessment'* phase -- that leads to the ‚new OCA theory'; 4/ *‚empirical'* phase – in which the theory was subject to due empirical scrutiny (Mongelli, 2002, p.4).

3.1 The "pioneering" phase[9].

Developed between 1960s and early 1970s. Actually, debate started and the OCA properties were drawn on appropriate issues -- mobility of factors of production within the area, price and wage flexibility, economic openess, diversifyed production and consumption, similarity in inflation rates, fiscal and political integration, financial integration. The similarity of shocks and income correlation „were added later" (Mongelli, 2002, pp.4 and 8-11). This first phase of the OCA theory developing was started by Mundell (1961) – who is recognised as the parent of the concept --, then McKinnon (1963), Kenen (1969), and Ingram (1969) joint the debate not much later on, whilst Freedman (1953) and Meade (1957) had expressed even earlier than Mundell and the others, the previous on a principial price flexibility and the latter about the balance of payments of the region in way to become the later EU.

3.1.1 Basic definition of OCA

Once more, Mundell drawn the common OCA definition:

(i) a '*domain within which the exchange rates are fixed'* (Mundell, 1961, p. 657);
(ii) the region (not the nation) with a high degree of internal production factors mobility (i.e. capital and labour), versus external immobility (Mundell, 1961, p. 661);
(iii) finally, Mundell sees a world of '*currency regions'*, rather than nations with their own monies.

In reality, the first and third components of the Mundell's definition of OCA relate to money and currencies, so OCA, on the one hand, retorts the older theory of *international monetary systems* (IMS/Triffin, 1973) and on the other will come to be completed by McKinnon (1993a) – actually by the lasts' theory of the *nominal anchor*. This is the order in which Mongelli (2002, p.8) notices the concomitance of this phase with either the IMS shaping in the Bretton Woods Agreement (1944)'s way and process, with its specific *capital controll*, or the beginning (incipience) of the European integration. In other words, the OCA theory came up directly into the *debate about fixed, versus flexible exchange rates.*

Pelkmans (2003) believes that the (above) OCA's definition might actually be simplyfied or adjusted as: ‚the region in / for which the cost of giving up floating exchange rates– i.e. the alignment of the national currencies' rates within the region -- is overwhelmed by benefits of the unique-common currency in use'.The second component of the OCA's definition prolongs

[8] Here including Romania. Despite that the author has a not too optimistic conclusion, i.e. for a presumed 4% a year growth for this country, as against 1.8% a year growth for EU25, a common per capita GDP level will get as high as EUR 63,200 in about 57 years from the moment of this study (Iancu. 2005, pp. 18-21).
[9] Mongelli (2002, pp. 4 and 8-11).

the above one related to the intra-region currency-exchange rate regime, but then more aspects here attach to these two.

3.1.2 Properties of OCA

(1) Mobility of factors. Mundell (1961) was ending his analysis by reiterating for OCA the picture of the 'region with perfect (production) factors' mobility'. As for this component, *mobility of factors of production* counteracts price variability (see the next sub-paragraph) *within the region* (Mundell, 1961). Labour could be less mobile on the short periods, but the aspect might change in the long run (Corden, 1972).

Kenen (1969) notices that the Mundell's ‚region' is portrayed as neither geographical, nor political, and for the ‚factors' mobility', Mundell had insisted more on labour, than on capital (Ingram, 1969). And this labour *mobility* needs a prior *employment* mobility and labour *homogeneity* in a formula that rather conducts to mono-industrial type regions. Grubel (1970) explains that the Mundell's description reclaims ‚*perfect internal* labour *mobility*, versus *perfect external* labour *imobility'*, whereas in reality it is to debate about a real graduality (different levels) of labour mobility. Giersch (1973) here wonders, in context, about whether an irreversible by definition process that *migration* is would be able to imbalance the external equilibria on the long term. Corden (1972) here answers that mobility of labour might prove a rather lower capacity of fighting *asymetrical shocks*.

(2) Price flexibility. As continuing the introductory idea of the precedent sub-paragraph, when flexible prices and wages – says the „last neoclassic" that Milton Friedman was, as together with all his ‚classics' and neoclassic predecessors -- it is less likely for unemployment in one country and inflation in another, plus exchange rate adjustments between (Friedman, 1953).

(3) Financial market integration. And since the incomplete Mundell's discourse about factors' mobility, Ingram (1973) argues that this part of integration cannot substitute the capital's mobility, but just smoothen it – i.e. fighting its shock aspects. In other words, *financial market integration* cushions temporary adverse disturbances through capital inflows. Later on, McKinnon (2001) reinforces the role of financial integration, in context.

(4) Degree of economic openess. McKinnon (1963) says that the more open the economy, the easier the *transmission mechanism* of exchange rate mobility into prices' and wages' movements; plus similarity between economic activity structures.

(5) Diversification in production and consumption. Acording to Kenen (1969), this OCA item also smoothens the exchange rate changes shocks; the same for impacts of individual sectors' mutations, and for settling ‚jobs portfolios' within the region.

(6) Similarities of inflation rates. Fleming (1971) observes that inflation might be caused by diverse disequilibria of sectors, their developments, policies promoted etc.[10] Similarity in inflation rates equally might reduce inter-country shocks and their impacts. Eichengreen (1990) indicates the need for narrowing fluctuations between countries and the *‚Balassa-Samuelson' effect*[11] could allow the ‚catching-up' part of integration processes.

(7) Fiscal integration. This aspect is for the *union of countries* to be able to redistribute resources among -- i.e. to countries that need them, when the case, in order to free the exchange rate from such a task, once more (Kenen, 1969).

(8) Political integration. This is, finally, the will of the countries involved to join commitments, to share costs of processes amongst and to encourage institutional linkages and cooperation on some activities etc. (Mintz 1970). Synthetically, these above properties would

[10] See the 'Mundell-Fleming model'.
[11] See also the above 2.4.2.

make the money exchange rate less adjustable (usable) within the region to adjust (temper) presumable shocks(Mongelli, 2002, p.5).

3.1.3 Criticism on the ‚pioneering' phase

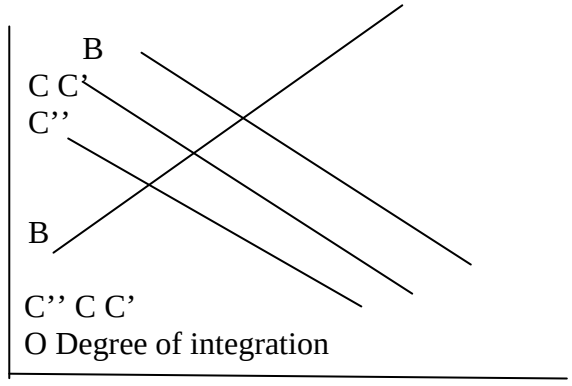
Mongelli (2002, pp.5; 11) indicates what the author calls the ‚pioneering phase's drawbacks', meaning there were not yet for OCA: (i) a ‚comprehensive framework' defined, so some properties were yet contredicting one-another; (ii) an empirical content for most of its properties. There also were for Robson (1987) difficulties for measuring properties; ambiguity of characteristics and of differences amongst. As for Tavlas (1994), „OCA points to different directions", meaning a ‚problem of inconclussiveness' – e.g. small economies are more likely to be open, but less capable of production diversification, so more likely to accept the unique currency, but with more propensity to flexible (than to stable) exchange rates. McKinnon (1993b) here adds that more differenciated economies have less foreign trade. Then, how can the OCA above requirements be ranked amongst ?

3.2 The "reconciliation" phase

That was during the 1970s. There were both a deepening of some properties (i.e. ‚meta-properties') of OCA and an adding of more ones (i.e. *similarity* of shocks/ Mongelli, 2002, p. 5). There is to be understood for this phase the above ‚pioneering' points of view reuniting, but equally what a presumable OCA brings for countries joining it. Concretely, McKinnon (1963) was viewing that country A might be supposed as interested in a currency union with a price and cost stable country B, in order to ensure its own stability, but some shocks are always expected. Or, this is the same with Ishyama (1975), for whom OCA is limited by the interest of each country to join or stay out of the union, and Corden (1972), who imagines joining a currency union by any presumable country as basing on a prior *cost-benefit analysis*. And actually, the exchange rate flexibility would be in place on both alternatives, together with the one of prices and wages -- the exchange rate would be able to insulate a country from asymetric shocks in any way; the question which remains is whether that would be outside or inside the union.

And as for the *cost-benefit analysis* of the monetary integration of individual countries, see the rectangular graph in Figure 1.

Figure 1 -- Costs & benefits



Source: Artis (2002, p.16)

This is illustrated by Artis (2002, p.16) for *‚a country facing option of joining with a partner or group of countries in a currency union'* (Artis, 2002, p. 2). *Benefits* here mean loss of: (i) transaction costs and (ii) currency risk – the (B) curve is upward sloaping: the higher

the economic integration degree, the higher the benefits from the monetary integration. *Costs*, as correspondingly, mean: (i) loss of the country's (independent) monetary policy; (ii) loss of the shock absorbing of exchange rate movements. – the (C) curve is downward sloaping: both monetary and exchange rate policies decline, as values, in the open and interacted economies of such an area.

There are three cost curves (C, C' and C''), of which's meaning gets related to different economists' view on approaching integration – see also the corresponding intersectional points. The intersectional costs-benefits points express economic states in which a country starts taking advantages of joining a currency area.

In such an order, it is the *monetarist* view (C'') – for which integration costs are assumed to be low and even a reduced integration degree is enough for attending the crossed cost-benefit point of joining integration; versus the *Keynesian* view (C') – for a significantly higher cost level of assuming integration. Cerna (2006) has, in this context, a two collumns list of possible costs-benefits of OCA. And apart from these, two ways of efficiency increase in the OCA context are outcoming from this view: (1) rising the economic integration (i.e. convergence) degree between countries in the area; (2) reducing rigidity of the integration costs – i.e. flexible production factors' movement around.

Despite all these above developments, this new ‚reconciliation' phase proves the same drawback as its previous ‚pioneering' one: still no empirical content (Mongelli, 2002, p. 5).

3.3 The "reassessment" phase

Then, in early 1980s, there came a kind of ‚stagnation' for the OCA theory's developments or a *‚lost momentum'* in the aftermath of the second phase. Despite that, then there were: (a) some advancing on empirical approaches; (b) conceptually reconsidering the monetary (currency) union; (c) reinterpretations of some properties, as previously formulated – and this was the *‚reassessment'* phase: between 1980s and early 1990s (Mongelli, 2002, p. 5). Not to be equally here ommitted for the late 1980s, parallel preocupations for building the EMU on the *‚one market-one money'* principle, that did push approaches through the ‚new OCA theory'. Or, „the. EMU question is, possibly, more complex than the OCA question" (Mongelli, 2002, p. 14). Tavlas (1993) remarks that the ‚new' OCA theory here started emerging *vis-à-vis* the ‚old' OCA theory after revisions had been made (see also Tavlas 1993).

Then, see *empirical studies* that did start in context since the 1980s: low wage flexibility behind low price flexibility (Calmfors & Driffil, 1988); real wages are still low flexibility accross European countries and employment do some adjustment to wage flexibility (OECD, 1994); some significant asymetries of the European labour markets (Cadiou, Guichard and Maurel, 2001); the relationship between centralization of wage bargaining and labour market outcome is not linear – countries with differences in labour market institutions make find it costly to form a monetary union (DeGrauwe, 2000). Besides, it is for this phase that Alesina, Barro, Tenreyro (2002) conclude that countries with large co-movements of outputs and prices have lost costs from abandoning monetary independence *vis-à-vis* their partners, but Calvo & Reinhart (2002) appreciate the lost of monetary independence as ‚not a substantial cost'. Last, but not least, Emerson and al (1992) argue that in the long run, high inflation does not yield any macroeconomic benefit in terms of growtht and unemployment.

3.4 The "empirical" phase

This final phase started in 1987, as complex approaches and analyses (Mongelli, 2002, p. 5), of which's sizes overpassed the previous similar studdies drawn in early 1980s. Issues that came one by one under study in this time interval were: price and wage flexibility (Mongelli,

2002, p. 18), labour market integration (Mongelli, 2002, p. 19)[12], factors market integration (i.e. foreign direct investments/ Mongelli, 2002, p. 20), financial market integration (Mongelli, 2002, pp. 20-21), the degree of economic openess (Mongelli, 2002, p. 21), diversification in production and consumption (Mongelli, 2002, p. 21-22), similarities in inflation rates (Mongelli, 2002, p. 22), fiscal integration (Mongelli, 2002, p. 22-23) and political integration (Mongelli, 2002, p. 23-25).

The general critical remark that can be made on this final and intellectually productive phase is that all these studdies look backwards by definition (Mongelli, 2002, p. 26), whereas the opposite *‚looking ahead'* stays a more delicate issue – it is supposed to answer some questions raised. The one is the *question-paradigm* between the old and classic *country specialisation* in the inter-member countries' trade contest and *endogeneity of OCA*, that is the real integration (Mongelli, 2002, pp. 27-31).

As for the previous (*country specialisation*), the *‚Krugman specilisation hypothesis'* (Krugman, 1993, with the so called „lesson of Messachussets") relates to a US development-experience over the last century: the single currency removes barriers of increasing returns to scale and even in integration fostering conditions the comparative advantage will work as classically and countries will specialize (see also Rauch, 1994; Eichengreen and Bayoumi, 1996; Bertola, 1993). But so member countries of a currency area will reduce production diversification and become vulnerable to asymetric shocks. Frankel (1999) so opinates that the solution will be enlarging the OCA's area – i.e. the *Frankel's paradox*. Otherwise, the former OCA will turn into a small group of countries with proper currencies floating among each other: , the OCA's dissolution' (Mongelli, 2002, p. 28). Finally, on the one hand, the European integration is a process of evidence, but on the other specialisation among the EU member countries plays its (other) role: destruct(ur)ing production diversity, as required by OCA (Mongelli, 2002, p. 32).

As for the latter(*endogeneity of OCA*), a preliminary answer comes from Frankel (1999) as well: member States will be more attracted by sharing a common currency when the trade-off and/or corelation between *incomes* and *economic openess* towards the(other) member States. The question whether income correlation rises or falls following the monetary integration doesn't make unanimous answer (Mongelli, 2002, pp. 27-28). In which conditions, Frankel (2004) also adds that *‚OCA varies over time'*.

The hypothesis of positive correlation between income and inter-member cuntries trade rising consists in that increasing integration would so be assumed to lower transaction costs and eliminate currency risks. McCallum (1995) specifies that the common currency is supposed to be a „serious commitment"; no competitive devaluations, incentive for FDI and future political integration encouraged.

But *what does the empirical evidence tell us.?* Eighengreen (1996) and EU Commission (1999) conclude on results like: (i) increasing specialisation and (ii) lowering industrial concentration for both Europe and US. Another important response comes from Rose (2000): countries trade on the same currency (with other countries) three times more than with countries with other currencies[13].

The other relevant *question-paradigm* of the last and current phase is: „do countries form currency unions because they tread a lot, or start trading more because they form a currency union ?" Or, do the two position reconcile ? (Mongelli, 2002, pp.6; 31).

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[12] Here to be exemplified about labour market integration in Europe Eighengreen (1990) concluding that variation of unemployment was twice in Europe than in the US. and Thomas (1993) for different responses in Europe and US of the unemployment rate to unemployment shocks.

[13] 186 countries were taken in this model.

3.5 Concluding remarks

Mongelli (2002, p. 31-32) found as the appropriate question raised for the 40th aniversary of the OCA theory that: „was that made simpler ?" And the author answers „yes and no". For the ‚better position': studdies are much deeper and OCA can be viewed in many more positions and situations. For the opposite ‚harder position': it is still hard to reconcile all the OCA's properties and to assess the agents' reactions.

4. Concluding for convergence and OCA

Just let us suppose the impossible alternative in which both convergence and OCA debates wouldn't limit to regions, as *multi-country-regions* defined as above. Then, what would our approach become? The answer is simple: (a) the debate on *convergence* would go back to its primary neoclassical approach of growth-development, with its double aspect, (i) trend towards self-balancing and (ii) '*catching-up'* developed economies by the less developed ones in the international context; (b) the debate on *OCA* would search for inter-country trade and all the other flows equilibrium able to fight real and even presumable asymmetric shocks.

So, actually, such an extremely simplifying hypothesis is enough for re-positioning research onto basic *growth-development* and general *equilibrium*. Also note that the two concepts keep in common issues like: equilibrium growth, international economics, symmetry-asymmetry of shocks, common currencies – i.e. common value references for the common market --, but equally regionalization, as areas-zones for OCA and countries 'clubs' for convergence (Table 3). Despite these, the two defined concepts on the advanced integration are obviously distinct from one-another.

Last, but not least, recall that the *convergence-OCA* couple of concepts look different issue than the *free trade area-customs union* corresponding association. The last were just phases of an earlier moment of the integration and the relation between is defined clearly and simply by specific differences. Convergence and OCA stay different from free trade area and customs union meaning a paradox of more knowledge of the past for what was developing at that time, than it currently is the case of an *advanced integration* on which theoretical debate sees itself forced to recall primary economic theories and analyses and/or to adapt them to a reality that is just Europe.

Table 3 -- Key issues related to both convergence and optimum currency area (OCA)

N.	Concept	Convergence	Optimum Currency Area (Oca)	Observations
1	*Asymmetrical shocks*	Convergence is just embarrassed through.	They are the opposite of the OCA's aiming.	x
2	*Balassa-Samuelson effect'*	This is a challenge for all convergence idea: prices (i.e. the inflation rate) go higher in more developed economies.	As all challenge for conversion, it is the same for OCA and potential shocks.	x
3	*Capital*	This is a factor of production for economic development, but the financial integration is even more obviously significant for convergence.	The financial integration (see 15 below) is equally important for what OCA priory sees for capital: its mobility throughout the region.	x
4	*'Catching-up'*	This is deeply proper to convergence, despite that so growth rates show fully different between developed and developing economies in the	This might be a source of some shocks sometimes.	Solow(1956) and see also the types convergence.

		region.		
5	*"Common language(s); colonial history; remaining political links"*.	This is a kind of 'classical' factors for economic convergence nowadays, in the post-colonial era.	OCA stays always close to convergence and integration factors.	Glick & Rose (2001).
6	*Cost-benefit analysis*	Rather no mention to make.	Benefits of (staying in) the OCA have to overpass corresponding costs.	Cerna (2006)
7	*Country specialization*	Rather non specific for convergence (although never being excluded), but proper to the classical-neoclassical theory of international trade.	Not specific to OCA either.	Krugman (1993), with the so called „lesson of Massachusetts for the EU"
8	*Criteria*	They are nominal (see monetary) and real (as referred to the real economy). The previous are pointed by the 'Treaty of Union' (Maästricht 1992), whereas the last seem to be conveyed to the academic approaches. Actually, they refer to some macroeconomic indicators, but of which, of course, behaviour displayed is different from one-another.	The convergence criteria belong to convergence, by excellence, whereas OCA sees them as belonging to the integration concept itself. Convergence itself is one of the OCA's requirements.	x
9	*Diversification in production and consumption*	This is proper to development and building well developed economies.	This is for OCA, as against potential shocks, but the alternative of country specialization stays under the same debate for a similar support to common currencies.	Kenen (1969)
10	*Economic equilibrium*	This is a convergence trend, as compulsory, in which the 'steady-state' is expected for each economy in part; what happens between different economies then is expected to come.	OCA is assumed as an equilibrium area (region) of all: prices, including exchange rates and costs, the last including wages, then production factors equally with their prices, but besides with their space mobility etc.	x
11	*Economic openness*	No convergence without economic openness.	The same as for convergence.	McKinnon (1963)
12	*Economic structure*	This is finally expressed by weight of activity sectors in GDP (or rather GNP, when integration) and stays important for the economic convergence in the sense that markets of different countries so may be not only similar, but also united amongst, as one common (unique) market with the same business cycle timing and similar consequences on employment, welfare and cohesion in the area and, finally, on integration present and perspectives.	Similarity of economic structures of member States in the region is just one of alternatives for the common unique market viability -- the alternative might be a countries' specialization, as in the classic theory of international trade (see also the country specialization). However, the previous similarity of structures seems more appropriate to avoiding asymmetric shocks and so to OCA; to welfare and corresponddding cohesion, as well.	Dinga (2008) wonders 'what kind of economic structure?'. Krugman (1993) offers the country specialization alternative to the unique market and common currency.

13	*Exchange rates*	They are assumed as fixed, or at least stable, as much as the floating ones imply insulating individual economies from the others.	It is the same as for convergence; moreover, the fixed exchange rates hide the potential or virtual common currency, as operational.	See the European Monetary System (EMS/1979-1999).
14	*Factors of production*	Their problem is double: (i) supporting growth-development of each nation; (ii) availability to all nations.	They imply specific mobility in the region, as either beneficial, or supportive for shocks.	x
15	*Financial market integration*	This is favourable for the capital involvement in both development and integration.	The financial integration is equally important for what OCA priory sees for capital: its mobility throughout the region.	x
16	*Fiscal integration*	This is a good help for convergence, even when disparities of development in the region.	As linked to the factors' mobility and disposability throughout the region.	x
17	*Growth & development*	Convergence might be seen as a growth-development theory adapted to new realities.	The economic development level is among the strongest stability factors in a multi-State region.	x
18	*Inflation rate*	This is a good reflection of convergence achieved any time. As opposed, there are many factors of the inflation rate's similarity erosion at the same.	This is a basic factor for OCA achieved, as well.	Fleming (1971); Eichengreen (1990); Balassa-Samuelson effect.
19	*Integration (degrees)*	Convergence equals integration, as seen from OCA.	OCA is high degree integration, as by definition.	Artis (2002)
20	*Labour*	This directly-indirectly relates to the open economy.	A labour market in the region is obviously required.	Mundell (1061); Corden (1972)
21	*Nominal anchor*	Both convergence and OCA relate to a unique basic value for the modern market development.	Moreover than for convergence, this basic value is a national currency that becomes internationally freely usable currency (i.e. in the OCA region), except for the *common currency* adopted formula.	McKinnon (1993a)
22	*‚One market-one money' principle*	See above for the nominal anchor.	See above for the nominal anchor.	x
23	*"Penn-effect"*	See the 'Balassa-Samuelson' effect.	The same as above.	*the higher the income, the higher the price level* (David, 1972; Officer, 1976).
24	*Political integration*	No integration against the people's will.	Only in theory (i.e. the theory of international trade) and partly in incipient phases of integration (e.g. free trade area & customs union) the indifference about with whom (which other nation) to integrate is considered.	Mintz (1970)

25	*Productivity*	The productivity level defines the level of economic development and welfare reached by any economy.	The productivity problems presumably 'hide' behind all economic shocks between nations.	x
26	*Quantifying*	This is needed wherever several economies compete on the same 'qualitative' basis.	Finally, shocks express in quantitative terms.	x
27	*Structural similarity*	It expresses like weight of sectors in GDP etc., but there is still controversy in the topic area from different stand-points.	OCA is more exact in its economic similarity requirement -- i.e. when defined as such, asymmetrical shocks would be better avoided, but an alternative of specialized countries and sub-regions around might equally be valid for supporting common (regional) currencies (see Krugman/"Lesson of Massachusetts").	α type convergence (Iancu, 2005; Dinga, 2008) and the "Lesson of Massachusetts " (Krugman, 1993)

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