# ECONOMIC CONVERGENCE, PART OF ADVANCED EUROPEAN INTEGRATION

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**Abstract**
*In 1961, in the earlier stage of the European integration, Bela Balassa proposed a five successive phase model about it as a foresight. Today, the half century experience on integration and corresponding literature issued just lets us see rather two big phases (instead of five). The one would be the incipient integration, that came to enlarge the economic openness and internationalization and shaped on: (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. This paper limits its focus on the economic convergence, its current description-analysis in the literature and condition inside the EU.*

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

**Jel classification**: A10; B15; B25

## 1. Definition and perception

There are three definitions of the economic convergence in the literature [10]: (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. [14, 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.

[1] This is a term rather strongly used for 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.

Equally through its conceptual approaching, convergence equalizes a *structural similarity* between national economies [8[1], pp. 17-19], assumes a list of *quantifying indicators*[2] [8p. 19] and lays in the proximity of other (economic) terms like: similitude, harmonizing, complementarity and even redundancy [8 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 – that will be approached below. The second one in line considers rather a 'non-convergence' finding of the contemporary era – and the last chapter of this paper will also detail about it. Thirdly and finally, convergence is seen as possible on the competition market, but the difference from the neoclassic view here consists in the presence of *policies* instrumented (developed) for convergence implementing and presumably appropriate [14, p.7].

## 2. Classification

The $\alpha$ 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 [8, p. 26 and the following]?

The $\beta$ 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 $\beta$ 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 [27, pp. 58] and breaks down into: ***$\beta$ -absolute*** -- *higher growth for developing economies, as compared to the developed ones;* ***$\beta$ - group*** -- $\beta$ absolute**,** plus considering countries' grouping on criteria of similarity in industrial technologies, institutions and economic policies applied; ***$\beta$ -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. [24] here accuses the 'Galton type error' related to self-correlation statistics. [5]pretend that even the $\beta$ type convergence, in its literal definition, might see itself wrongly reflected by its found coefficient and [11] argues that it can be well replaced by the *variation coefficient of per capita GDP* within the region. [5, pp. 57-58] suggest that this above three (sub) types of the $\beta$ convergence would actually base on the need created for such an internal

[1] And on-line: http://www.edinga.ro/files/studii/7_ro.pdf
[2] See also below details.
[3] As once more related to the optimum currency area (OCA).

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 [8, pp.. 27-28].

As concretely, the *σ type convergence* calculates through the per capita GDP *coefficient of variation*[1] [11] or *standard deviation* ([6, 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 [22 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/ [14, p. 14 and 27].

The other two types of convergence in debate are *∂* and γ types [8, pp. 27-28]. The previous regards the similarity of *real convergence* factors [10, p. 4]. These factors do group into third levels. The basic one sees just the common currency that countries trade in-between [13]. The second one comprises "common language(s), colonial history, remaining political links". The "third category of factors" mean what [10, 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. [8, p. 28] generally agrees the literature's arguing about its essential role in 'turning the asymmetric into symmetric shocks', bout slightly doubts its long-life in practical terms.

**Scheme-Tabel 1. Types of real economic convergence**

| TYPE | SUB-TYPE | BRIEF DESCRIPTION |
|---|---|---|
| α | X | structural similarity between economies. |
| β | X | links between:<br>/ 'classical' and qualitative view on the convergence dynamic and /'catching-up' type processes (that display different dynamics on shorter terms in favour of less developed and developing countries) |
| X | *β – absolute* | higher growth for developing economies, as compared to the developed ones |
| X | *β – group* | *β* absolute, plus considering countries' grouping on criteria of similarity in industrial technologies, institutions and economic policies applied |
| x | *β conditioned* | the previous, plus additionally considering the vector of determinant factors of growth. |

[1] *Transversal*, but also *chronological* data series are here used [14, pp. 21-22].

| | | |
|---|---|---|
| σ | X | calculates through the per capita GDP coefficient of variation |
| ∂ | X | regards the similarity of *real convergence* factors (Frankel 2004, 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). |
| γ | x | 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', bout slightly doubts its long-life in practical terms. |

## 3. Real convergence criteria

The description regarding the nominal convergence and its Maastricht (1992) criteria won't be here repeated[1]. And unlike [8], 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. I here remind the *nominal* convergence criteria and so the basic distinction between these and the *real convergence criteria* for the reason of mentioning [8, 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* [8, pp. 36-37] deals with components of both the aggregate demand (consumption, government expenditure) and supply (investments[2]). 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 [8, p. 37].

Lastly, Table 2 enumerates the *real convergence criteria* by individual and groups [8, pp. 45-47], then the author organizes them into three *'classes'* of criteria [8, pp. 48-49], but these classes do not match the previous list of individual criteria.

Scheme-**Table 2 Real convergence criteria**

| GROUP | ITEM | OF WHICH: | NOTATION |
|---|---|---|---|
| (a) | general indicators | | |
| | | population | P |
| | | active population | Pa |
| | | people employed | EMP |

[1] See my opinion about in [1] 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.
[2] I see investments on the aggregate supply side as arguable.

| | | |
|---|---|---|
| | average number of employees | EMPav |
| | 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:*** *[8, pp. 45-47]*

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, labor 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.

## 4. Criticism, controversies and other aspects

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

### 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 and bibliographical dimensions. Roughly, studies of convergence did start in the mid 1950s in the neoclassical zone of thinking. [29] has his own (famous) theory that bases the today convergence description, as both economic equilibrium reached and 'catching-up' processes: *the same* ***saving-investment rate*** *help 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.

[19] 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. [30] 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 [21;30;16] all of these as a true 'anti-convergence' phenomenon of the contemporary era [14, 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 $\beta$-$\sigma$ parameters like 'convergence speed' for the negative value of parameters, or 'convergence-divergence' for value dispersion [2; 18 /pp. 2-42; 26].

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 [20; 15], others play the same for capital and labour mobility [3]. On the opposite side, authors rather see divergence between large groups of countries, versus some existing 'clubs of convergence' [4; 9; 25]. A rather third position belongs to authors like [12] : 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.

### 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[1]. The ***Balassa-Samuelson effect*** predicts that *countries experiencing productivity increases would meet price increases* meanwhile [10, 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

[1] See the Ricardo–Viner–Harrod–Balassa–Samuelson–Penn–Bhagwati effect [17; 28, p. 201].

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* [7] and [22].

## 5. Specific developments in the European Union

The EU appeared aware of the about realities from the very beginning – that was why its basic Treaties did associate convergence with *cohesion* [21]. 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 [14, pp. 12-13].

Despite these facts [14, pp. 22-23] concludes some contradictory situation regarding the issues here above debated. The per capita GDP proves rather divergent (i.e. rising $\sigma$ 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. 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[1].

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[1] Here including Romania. Despite 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 [14, pp. 18-21].

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