OPTIMUM CURRENCY AREA:
THE STORY OF THINKING ABOUT

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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 optimum currency area (OCA), its current description-analysis in the literature and condition inside the EU.*

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JEL classification: A10; B15; B25.

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[1](p. 4).

1. The 'pioneering' phase

The 'pioneering' phase developed between 1960s and early 1970s. Actually, debate started and the OCA properties were drawn on appropriate

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issues – mobility of factors of production within the area; price and wage flexibility; economic openness; diversified production and consumption; similarity in inflation rates; fiscal and political integration; financial integration. The similarity of shocks and the income correlation "were added later" (IBIDEM, the same page). This first phase of the OCA theory developing was started by [2] – who is recognized as the parent of the concept –, then [3], [4] and [5] joint the debate not much later on, whilst [6] and [7] had expressed earlier than Mundell and the others, the previous on a principled price flexibility and the latter about the balance of payments of the region in way to become the later EU.

1.1. Basic definition of OCA

Once more, Mundell drew the common OCA definition:

(i) A 'domain *within which the exchange rates are fixed*' [2] (pp. 657);

(ii) The region (not the nation) with a high degree of internal production factors mobility (i.e. capital and labor), versus external immobility (IBIDEM, pp. 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/[8]) and on the other will come to be completed by [9] – actually by the lasts' theory of the *nominal anchor*. This is the order in which [1] (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 control*, or the inception of the European integration. In other words, the OCA theory came up directly into the *debate about fixed, versus flexible exchange rates*.

Pelkmans [10] believes that the (above) OCA's definition might actually be simplified 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 the above one related to the intra-region currency-exchange rate regime, but then more aspects here attach to these two and come to be mentioned here below.

1.2. Properties of OCA

1.2.1. Mobility of factors

Mundell [2], 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* [2]. Labor could be less mobile on the short periods, but the aspect might change in the long run [11].

[12] notices that the Mundell's 'region' is portrayed as neither geographical, nor political, and for the 'factors' mobility', Mundell had insisted more on labor, than on capital [5]. And this labor *mobility* needs a prior *employment* mobility and labor *homogeneity* in a formula that rather conducts to mono-industrial type regions. [13] explains that the Mundell's description reclaims '*perfect internal* labor *mobility*, versus *perfect external* labor *immobility'*, whereas in reality there is to debate about a real graduality (different levels) of labor mobility. [14] 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. [11] here answers that mobility of labor might prove a rather lower capacity of fighting *asymmetrical shocks*.

1.2.2. 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 [6].

1.2.3. Financial market integration

And since the incomplete Mundell's discourse about factors' mobility, [15] 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, [16] reinforces the role of financial integration, in context.

1.2.4. Degree of economic openness

McKinnon [3] 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.

1.2.5. Diversification in production and consumption

According to [12], 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.

1.2.6. Similarities of inflation rates

[17] observes that inflation might be caused by diverse disequilibria of sectors, their developments, policies promoted etc.[1] Similarity in inflation rates equally might reduce inter-country shocks and their impacts. [18] points on the need for narrowing fluctuations between countries and the *'Balassa-Samuelson' effect* could allow the 'catching-up' part of integration processes.

1.2.7. 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 [12].

1.2.8. 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. [19].

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Synthetically, these above properties would make the money exchange rate less adjustable (usable) within the region to adjust (temper) presumable shocks [1] (p. 5).

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[1] See the 'Mundell-Fleming model'.

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1.3. Criticism on the 'pioneering' phase

Mongelli [1] (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 contradicting one-another; (ii) an empirical content for most of its properties. There also were for [20] difficulties for measuring properties; ambiguity of characteristics and of differences amongst. As for Tavlas, [21] "OCA points to different directions", meaning a "problem of inconclusiveness" – 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. [22] here adds that more differentiated economies have less trade. Then, how the OCA above requirements can be ranked amongst?

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/ [1] (p. 5). For this phase there is to be understood the above 'pioneering' reuniting points of view, but equally what a presumable OCA brings for countries joining it. Concretely, [3] views 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 [23], for whom OCA is limited by the interest of each country to join or stay out of the union, and [11], 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 asymmetric 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.
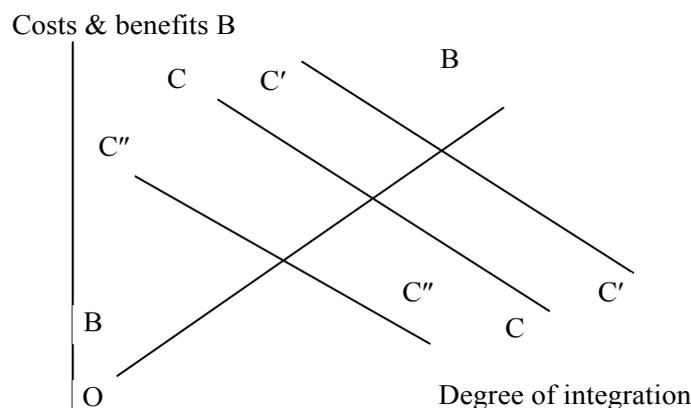
Figure 1. Cost-benefit analysis of the monetary integration of individual countries.

This is illustrated by [24] (p. 16) for '*a country facing option of joining with a partner or group of countries in a currency union*' (IBIDEM, pp. 2). *Benefits* here mean loss of: (i) transaction costs and (ii) currency risk – the (B) curve is upward sloping: 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 sloping: 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. [25] has, in this context, a two columns list of possible costs-benefits of OCA. And apart from these, two ways of efficiency increase in the OCA context are derived 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 [1] (p. 5).

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 [1](p. 5). Not to be equally here omitted for the late 1980s, parallel preoccupations 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" (IBIDEM, p. 14). [26] remarks that the 'new' OCA theory here started emerging vis-a-vis the 'old' OCA theory after revisions have been made [27].

Then, see *empirical studies* that did start in context since the 1980s: low wage flexibility behind low price flexibility [28] (real wages are still low flexibility across European countries and employment does some adjustment to wage flexibility [29]; some significant asymmetries of the European labor markets [30]; the relationship between centralization of wage bargaining and labor market outcome is not linear – countries with differences in labor market institutions make find it costly to form a monetary union [31]. Besides, it is for this phase that [32] conclude that countries with large co-movements of outputs and prices have lost costs from abandoning monetary independence vis-a-vis their partners, but [33] appreciate the lost of monetary independence as ‚not a substantial cost'. Last, but not least, [34] argue that in the long run, high inflation does not yield any macroeconomic benefit in terms of growth and unemployment.

4. The 'empirical' phase

This final phase started in 1987, as complex approaches and analyses [1] (p. 5), of which sizes overpass the previous studies drawn in early 1980s. Issues that came one by one under study in this time interval were: price and wage flexibility (IBIDEM, p. 18), labor market integration

(p. 19)[2], factors market integration (i.e. foreign direct investments/p. 20), financial market integration (pp. 20-21), the degree of economic openness (p. 21), diversification in production and consumption (pp. 21-22), similarities in inflation rates (p. 22), fiscal integration (pp. 22-23) and political integration (pp. 23-25).

The general critical remark that can be made on this final and intellectually productive phase is that all these studies look backwards by definition (IBIDEM, 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 specialization* in the inter-member countries' trade contest and the *endogeneity of OCA* that is the real integration (IBIDEM, pp. 27-31).

As for the previous (*country specialization*), the *'Krugman specialization hypothesis'* [36] (with the so called "lesson of Massachusetts") 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 [37], [38] and [39]). But so member countries of a currency area will reduce production diversification and become vulnerable to asymmetric shocks. [40] so opines 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' [1] (p. 28). Finally, on the one hand, the European integration is a process of evidence, but on the other specialization among the EU member countries plays its (other) role: destruct(ur)ing production diversity, as required by OCA (IBIDEM, p. 32).

As for the latter (*endogeneity of OCA*), a preliminary answer comes from [40]: member States will be more attracted by sharing a common currency when the trade-off and/or correlation between *incomes* and *economic openness* towards the (other) member States. The question whether income correlation rises or falls following the monetary integration doesn't make unanimous answer [1] (pp. 27-28). In which conditions, [39] also adds that '*OCA varies over time'*.

The hypothesis of positive correlation between income and inter-member countries trade rising consists in that increasing integration would so be assumed to lower transaction costs and eliminate currency risks. [40]

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[2] Here to be exemplified about labor market integration in Europe [18] concluding that variation of unemployment was twice in Europe than in the US and [35] for different responses in Europe and US of the unemployment rate to unemployment shocks.

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...?* [42] and [43] conclude on results like: (i) increasing specialization and (ii) lowering industrial concentration for both Europe and US. Another important response comes from [44]: countries trade on the same currency (with other countries) three times more than with countries with other currencies[3].

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 both positions reconcile? [1] (pp.6; 31).

5. Concluding remarks on OCA and an enlarged conclusion

Mongelli [1] (p. 31-32) finds the appropriate question raised for the 40th anniversary of the OCA theory was: "was that made simpler?" And the author answers "yes and no." For the 'better position': studies 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.

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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

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[3] 186 countries were taken in this model.

and countries' clubs' for convergence. Despite these, the two defined concepts on the advanced integration are obviously distinct from each other.

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 are 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 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.

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