Portugal in the EU: the Perspective of Convergence

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Âmbitos (2000):
Economia
Estudos Europeus

4. Measuring Convergence - What For?

A dynamic perspective on macro convergence like the one spoken above becomes indispensable under a study especially concerned with the Portuguese performance in a regional block like the European Union, to realize if the country recovered from the backwardness in which ended its days some decades ago when compared to the rest of Europe.

A more detailed study will be followed in the second part of this paper, developing some considerations about the Portuguese regional integration and its evolution in terms of trade. Before a main differentiation must still be made, this because convergence can be nominal or real.

4.1 Nominal and Real Convergence

The transformations that have been verified in the markets may be reached from a study that separates the two types of convergence, one closer to conjuncture effects, one reflecting more permanent effects. To help that differentiation, this paper deals with the following indicators.

For nominal convergence:
⇒ Monetary convergence, that deals with inflation rates and interest rates
⇒ Government finances discipline, analysed from ratios like dept/GDP and public deficit/GDP
⇒ The Stability Pact includes the exchange stability for the safe implementation of the unique coin

For real convergence:
⇒ GDP PPP evolution
⇒ Growth rates of the GDP constant (prices of 1990)
⇒ Unemployment rates

After what must be made an inter-relationship between all these types of convergence, an effort particularly preoccupied in answering to three pertinent questions:

⇒ What changed? Was there a structural convergence?
⇒ From the analysis of the results, what can we conclude? What's more important, nominal or real convergence?
⇒ Does nominal convergence lead to real convergence?

Knowing what steps to follow, what do authors usually say about the subject still on a macro point of view? Their main idea is that with a prevision of the distinct steady states by using the conditional convergence, we will be able to analyse the potential impact of nominal convergence in real convergence

from conditioning nominal convergence by the level of the real variables as well as from conditioning the real convergence by the level of the nominal variables.

From the earlier definitions of σ-convergence and β-convergence tests, we understood that the σ-convergence seems more interesting than the other one, despite its big inconvenience of not specifying the different cross effects, dynamics and stability of the process.

Convergence as a dynamic process for smaller initial differences between countries, can be expressed according to Cohen (1992) in its model without the noise:

$$dx_t / d_t = a + c.x_0 + dy_0$$
$$dy_t / d_t = b + ex_0 + fy_0$$

(C.1)

It follows a study of the system stability from a linear dynamics by testing the determinants possessions (or not) using the Wald's tests, this beginning by calculating a rolling evolution of the joint system to continue analysing some chosen periods on historical contexts to reach the coefficients values. Under the nominal convergence equation the direct coefficient is the initial level of inflation. Under the real convergence equation is the GNP per capita. The reason for this is to find the same conclusions under distinct periods of time.

According to the study effectuated by Carré (1997) over the European regional block, an asymmetry is verified when the initial level of the GNP per capita has a stronger impact over the inflation growth rate than the initial level of inflation over the logarithm of the GNP per capita; which according to her study it's what's verified. So, the author proposes a non-competitive effect over growth and the existence of a strong Phillips effect over prices. Wages and prices control are considered determinant in the disinflation process. A smaller GNP per capita initial value mean a stronger increase in the GNP per capita's rate, leading to a weaker inflation growth rate.

Real per capita living standards converge much slower than inflation rates, so the system would be stable and the system's coefficients value important. An effect of initial differences among living standards over nominal convergence is far more significant than the effect of initial differences among inflation rates over real convergence. If under the chosen period of time the coefficients linking the average are negative, they will push rates to their own initial level and there will be both nominal and real convergence.

4.2 To Transform Nominal Into Real Convergence, Government Policies Have a Role to Perform

Facing exogenous shocks as a whole, it will be better that countries will be near enough structurally. So, following the notion of neoclassic convergence, inter-industry trade between capital-intensive rich and labour-intensive poor

countries and factor-mobility, specially over the form of foreign direct investment, helps that tendency, as well as technology transfers; labour-mobility is easier to find at a regional level than across countries, because of cultural barriers and more material costs. This is considerably important information knowing that the second part of this paper will deal exactly with the perspective of trade.

Convergence is better traduced by the substitution of inter-industry trade for the more adequate intra-industry trade and more intra-industry fluxes usually reflect a tendency towards closer structures among the several countries. Here trade loses some weight importance; technology transfers and factor mobility gain claim power. Nevertheless, labour-mobility is still weak because Europe is a group of countries and not a group of regions like the USA, which imply different legal, institutional, cultural and linguistic barriers, for more that total mobility of people is acceptable by the Community Treaty. That's why policies of cooperation between countries and supranational policies through income transfers or others are determinant. The smallness of the central European budget doesn't help much in this matter nevertheless the convergence (or divergence) of the differences in income inter-countries inside the Regional Block is still mainly determined by autonomous economic forces, including the forces of the growing economic and monetary integration.

The methods of political economy must be distinguished from the objectives, because convergence has a specific objective which is diminish heterogeneity, this is different from convergence as an intermediary road to reach other objectives, and convergence doesn't necessarily approaches methods of action just because was made over common objectives.

So, convergence can be at the same time a model, an objective, a harmonization rule and an instrument. An objective because seeks the reduction of different living standards between richer and poorer countries as well as between the people inside each country, the reason why the governments use social and social-cohesion policies; social policies for better protect workmanship and rest over regulations; with the help of structural founds, social-cohesion policies wish for the development of the regions, not meaning regional homogeneity in the sense that privileges the identity of each region reaching at the same time a bigger respect for each regional environment and closer well-being tendency.

Convergence it is also a rule, or a group of rules, because democracy and harmonization need to be built over a structured society, the reason for supranational jurisdiction. Curiously, the time-consistency problem raised by Kydland and Prescott (1977) according to which the rational discretionary decision made at a given moment in time may not be optimal, say that governments seem to have interest in tying its hands so that they won't make bad decisions.

Convergence is also an intermediary objective and, in consequence, an instrument toward bolder stages of the union's construction, like nominal criterion before real convergence. This must be confronted with the difference

between the Optimal Zones Theory and the Treaty's practice, since the first gives a very big importance to a real convergence when the second only defined nominal goals for the start.

The more and more similitude between countries can be verified at two levels, so we will find nominal convergence when variables like budget policies, prices performances, costs and so on have a direct impact over the exchange rate stability. Real convergence when we focus the importance of approximation of living standards between state-countries and convergence of income per capita can, at the same time, be divided in two, according to Fayolle and Le Cacheux (1996) one resulting from the approximation of average productivity levels per worker and other from closer employment rates.

For these reasons and all the others spoken until now, nominal convergence is good but real convergence is even better. Knowing that nominal convergence mean the conjuncture control of some of the most important variables of the economy, the environment is created to a following real convergence, which doesn't mean that that will happen just after or quickly, but that once reached will last for long.

5. Nominal and Real Convergence – Own Estimations

Beginning with the evaluation of the Stability Pact criteria from the year of 1993 to the year of 1997, to better understand the countries' efforts on convergence to achieve the right environment for the success of their communitarian goals: the development of the integration project by creating a unique coin (Euro). This to answer to the previous made questions what changed? Was there a structural convergence? Does nominal convergence lead to real convergence?

5.1 Nominal Convergence

5.1.1 Criteria of Public Finance Discipline

Countries must control their public finances because excessive deficits mean higher financing costs in the market of capitals and a stronger absorption of domestic savings. A limited deficit on a big country doesn't also affect negatively the smaller countries or the community as a whole. When the deficit is under sight the public dept is easier to control, because the added credibility of budget policies have positive consequences in the economy, stimulating fiscal receipts and diminishing the interest rates that will decrease the dept.

Criterion 1: Deficit or Surplus of Public Expenses (% GDP) must not exceed the 3% of the GDP.

Square 1: Deficit or Surplus of Public Expenses (% GDP)

	1993	1994	1995	1996	1997
Austria	-4,2	-5,0	-5,2	-4,0	-2,5
Belgium	-7,1	-4,9	-3,9	-3,2	-2,1
Denmark	-2,7	-2,8	-2,4	-0,7	0,7
Finland	-8,0	-6,4	-4,7	-3,3	-0,9
France	-5,8	-5,8	-4,9	-4,1	-3
Germany	-3,2	-2,4	-3,3	-3,4	-2,7
Greece	-13,8	-10,0	-10,3	-7,5	-4,0
Ireland	-2,4	-1,7	-2,2	-0,4	0,9
Italy	-9,6	-9,2	-7,7	-6,7	-2,7
Luxembourg	1,7	2,8	1,9	2,5	1,7
Netherlands	-3,2	-3,8	-4,0	-2,3	-1,4
Portugal	-6,1	-6,0	-5,7	-3,2	-2,5
Spain	-6,9	-6,3	-7,3	-4,6	-2,6
Sweden	-12,2	-10,3	-6,9	-3,5	-0,8
UK	-7,9	-6,8	-5,5	-4,8	-1,9
EU-15	-6,1	-5,4	-5,0	-4,2	-2,4
EUM-11	-5,5	-5,0	-4,8	-4,1	-2,5

Eurostat annual 98/99

The period of 1993/ 97 was selected for being the one considered for the evaluations of the Stability Pact. In that period it's possible to verify big efforts from each country in diminishing the weight of the public expenditure in the GDP, reflecting at the same time an interesting nominal convergence around the small percentages, testified by the average of the EU15 and the EUM-11, respectively   -2,4% and -2,5% in 1997.

Greece tried that convergence but had a very difficult depart of -13% in 1993 only dropped until -4%, reflecting a strong effort yet insufficient. Germany and France, for instance, had their public expenses more balanced but reflected more difficulties in reaching or getting through the limit of the 3%. But this indicator is just one among others, hiding many positive or negative characteristics of the country.

Portugal shows a smaller drop that the one from Greece but not less significant since in five years went from the value of -6,1% in 1993 to -2,5% in

1997, the sufficient to be inside the allowed interval. −2,5% is precisely the average of the EUM-11 in that year.

Criterion 2: Brut Dept of public administrations (%GDP) must not exceed the 60% of the GDP. Exception made in the case of a very strong dropping tendency in the last years.

Square 2: Brut Dept of public administrations (%GDP)

	1993	1994	1995	1996	1997
Austria	62,7	65,4	69,2	69,5	66,1
Belgium	135,1	133,5	131,2	126,9	122,2
Denmark	81,6	78,1	73,3	70,6	65,1
Finland	58,0	59,6	58,1	57,6	55,8
France	45,3	48,5	52,7	55,7	58,0
Germany	48,0	50,2	58,0	60,4	61,3
Greece	111,6	109,3	110,1	111,6	108,7
Ireland	96,3	89,1	82,3	72,7	66,3
Italy	119,1	124,9	124,2	124,0	121,6
Luxembourg	6,1	5,7	5,9	6,6	6,7
Netherlands	81,2	77,9	79,1	77,2	72,1
Portugal	63,1	63,8	65,9	65,0	62,0
Spain	60,0	62,6	65,5	70,1	68,8
Sweden	75,8	79,0	77,6	76,7	76,6
UK	48,5	50,5	53,9	54,7	53,4
EU-15	65,3	67,4	71,4	73,4	72,0
EUM-11	66,5	69,1	73,3	74,9	74,7

Eurostat annual 98/99
** In the case of deficit (-) and surplus (+).

This criteria was more problematic since the Stability Pact applied more than once the exception condition of strong dropping tendency in the last years. The most evident case is the one of Belgium that only was capable of 122,2% after the 135,1% registered in 1997, not exactly very significant. But then again, only four countries (Finland, France, Luxembourg and United Kingdom) did verify rigorously the criterion. The average of the EU15 and EUM-11 shows that exactly with their 72% and 74,7%, respectively. France, Germany and United Kingdom even raised their weight of the dept over the GDP.

What about nominal convergence? Homogeneity isn't reached for more than the numbers look closer in the year of 1997 than in 1993, independently of the dropping tendency or not. Nominal convergence isn't clear here.