CONVERGENCE AND DIVERGENCE IN EUROPEAN UNION: EVIDENCE FOR BETA CONVERGENCE AMONG NEW EU MEMBER STATES

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Abstract: *Convergence may be considered a central issue of the current economic literature, and not only, concentrating upon income distribution within different economies, but also focusing on different aspects of polarity and inequality that characterize especially the emerging economies. Testing convergence within economies may serve as a useful instrument for the validation of the economic growth models. While convergence was considered a defining element of the neoclassical growth models, the majority of the new endogenous growth models argue in favour of divergence across different economies. Testing convergence among European Union is even more challenging due to the high degree of heterogeneity that characterizes these economies. The recent accessions with ten new countries in 2004 and with another two in 2007 were considered only the first step towards assuring a sustainable convergence and finally adopting a common currency-the euro. A series of empirical studies concentrated upon testing convergence among EU, using as benchmark the real convergence quantified by the level of GDP/capita as an indicator for the living standards of every economy. The most popular approach rely on Beta and Sigma convergence, the first one being an indicator of the GDP/capita dispersion between different economies, and the later one being an estimator of the reverse relationship between GDP/capita and its initial level. The main purpose of this paper is to test Beta converge among the new EU member states, in order to obtained more information about the fact whether the poor countries are trying to catch-up with the more developed ones. Also Beta convergence indicator embodies useful information about conditional and un-conditional convergence, two leading hypothesis within the neoclassical and endogenous growth models. For Beta convergence hypothesis to be valid it should be taken into consideration a "catch-up" mechanism over a longer period of time and a set of elements that are inter-correlated with the main objective of reducing disparities among economies. However we also have to take into consideration the fact that these elements may be influenced by temporary shocks that may have a decisive impact upon their short time performance.*

Keywords: Beta convergence, real convergence, emerging economies, growth models.
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1. Introduction

Conducting an objective analysis upon the criteria, policies and instruments used in the convergence process by the new European Union member states may be considered extremely challenging. The correct analysis and interpretation of convergence nowadays it's considered to be very important and thus the study of its impact beyond the general policies imposed by the European Union through the nominal convergence criteria could highlight the mutations across economies and especially the correlations between them. During time, a series of papers discussed and quantified using different instruments the degree of convergence between economies. If we were to classify the main trends related to the process of real convergence across the Central-Eastern economies we may distinguish between the following categories (Ingianni, 2010):

- *The first category takes into consideration time series variables regarding the evolution of GDP/capita for the purpose of testing convergence using some standard measures like Sigma and Beta convergence. Convergence in terms of Sigma and Beta indicators is an extremely debated subject and many studies concentrate their empirical research upon these two aspects. A representative article is the one elaborated by* Ingianni A., Vaclav Z. (2007) that using quarterly data regarding GDP/capita evolution obtained significant results for real convergence across European Union both for Sigma and Beta convergence. Bruggeman and Trenkler (2007) also investigates the degree of convergence across Hungary, Czech Republic and Poland in order to test the integration effects upon GDP/capita across European Union and also upon a group of Mediterranean states over a longer period of time. The used instruments are the unit root tests that allow the analysis of structural breaks. The general conclusion of the study is that Czech Republic and Hungary stochastically converge towards the group of Mediterranean states, while only Hungary converges towards EU average.
- The second trend uses different economic indicator for testing convergence among different economies. Kocenda, (2001), Kutan and Yigit, (2004) concentrate their research in this field. Kocenda (2001) analysis the performance of Central-Eastern economies like Czech Republic, Slovakia, Lithuania, Latvia, Estonia, Hungary, Poland, Romania, Bulgaria and Albania using monthly data from 1991 to 1998. The obtained results indicate convergence across these economies, but its intensity is highly influenced by the set of included variables and also by the group of countries. The Baltic countries registered high convergence rates, being at the same time the most homogenous group. The convergence hypothesis was validated across all states regardless of their initial condition, institutional background or privatization techniques used by every economy. Kutan and Yigit (2004) use an endogenous model of economic growth in order to test the impact of European Union integration upon productivity growth and convergence. The authors use a derivate version of this model that allows them to incorporate new estimation techniques for obtaining more precise results. The group of countries taken under observation is formed by Spain, Portugal, Austria, Sweden and Finland. The obtained results are in favour of convergence across these states.
- The third trend focuses upon eastern economies in the post-liberalization period. Dobrinsky (2006) quantifies the connection established between real