International Workshop
"Bridging the gap: the role of trade and FDI in the Mediterranean"
Naples, June 8-9 2006

Convergence and FDI in the Mediterranean Basin: an Empirical Evidence

Giuseppe Notarstefano
(giunotar@unipa.it)

Raffaele Scuderi
(scuderi@economia.unipa.it)

University of Palermo
Dipartimento di Contabilità Nazionale ed Analisi dei Processi Sociali

Extended abstract

Neoclassical theory prevision about per capita income gap reduction in the long term gave birth to a wide debate about the so called *convergence hypothesis*. Empirical evidence has not lead to univocal conclusions about this postulate of Solow model.

Literature has proposed different statistical approaches in order to test convergence since long term data have been available. Empirical evidence lead Baumol (1996) to highlight the *club convergence* phenomenon, that is a reduction of per capita income levels within clusters of countries.

Theoretical contributions of the *new growth theory*, and applied ones of *conditional convergence*, strongly questioned neoclassical framework. These approaches link reduction of sectional differences over time with *endogenous* variables, which characterise the steady state of each economy. Many different proxies have been employed in literature, which also lead to estimate the effect of these proxies on income growth. Durlauf and Quah (1998) observe that the choice of steady state's proxies is linked to the interest of the researcher, and no "universal" growth determinants can be detected from empirical evidence proposed by literature.

The scope of this paper is twofold. We aim to test convergence hypothesis among countries agreeing to the Euro-Mediterranean Partnership (EMP), and to analyse the influence of foreign direct investment (FDI) on growth.

The importance of foreign direct financial flows has been put in evidence by different theoretical and empirical works. Spillover effects induced by FDI in fact may increase human capital stock, propensity to invest and per capita income.

Increase rate of these financial resources to Mediterranean developing countries (DC) has been considerably lower than the one of the whole group of DC, and in particular of Asian countries. According to Petri (1997), investors are discouraged by country risk, reduced dimensions of economies, limitations to international capital movements, although important reforms have been introduced recently.

In spite of this peculiar tendency in receiving direct capital flows from foreign investors, we aim to test the importance of FDI over per capita income distribution in Euro-Mediterranean countries. Empirical evidence is nevertheless conditioned by the absence of data, which are not available for all the considered proxies and years.

The approach to test convergence is chosen according to Quah's (1996) criticisms about statistical and econometric methodologies employed by literature. As density estimates of per capita GDP distribution in selected years show bimodality, Quah's (1997) stochastic kernel nonparametrical approach is also particularly useful, since it does not lead to estimate a parameter which refers to an average or representative unit. The methodology considers instead the whole income distribution, in order to detect the changes in its shape due to time evolution. This methodology is also consistent with the club convergence evidence found by Baumol and Quah, since it puts in evidence the presence and the evolution of clubs of countries with a similar level of income.

Stochastic kernel applied to Euro-Mediterranean countries' relative-to-the-mean per capita GDP rejects the hypothesis, showing no convergence and persistence of countries in clubs over 1960-2003.

The same approach is employed in order to test the influence of FDI as *conditioning factor* over per capita GDP, as in Quah (1997). Empirics about FDI inflows of EMP countries, plus EU new comers, show the influence of FDI in reducing bipolarization of income distribution. A further analysis concerns FDI outflows from Italy to EMP countries plus EU new comers. The same growth effect of the previous evidence seems to appear, although it concerns low and medium income countries.

References

Balasubramanyam V. N., Salisu M., Sapsford D. (1999), *Foreign direct investment as an engine of growth*, in: "The journal of international trade & economic development", 8/1.

Barro R.J., Sala-i-Martin X. (1992), *Convergence*, in" The Journal of Political Economy", 100.

Baumol W.J. (1986), *Productivity Growth, Convergence, and Welfare: What the Long-Run Data Show*, in: "The American Economic Review", 76.

Berthélemy J.-C., Démurger S. (2000), *Foreign Direct Investment and Economic Growth: Theory and Application to China*, in: "Review of Development Economics", 4.

Borensztein E., De Gregorio J., Lee J.-W. (1995), *How does foreign direct investment affect economic growth?*, NBER Working Paper 5057.

Carkovic M., Levine R. (2002), *Does Foreign Direct Investment Accelerate Economic Growth?*, University of Minnesota Department of Finance Working Paper, June.

Durlauf S.N., Quah D.T. (1998), *The New Empirics of Economic Growth*, Centre for Economic Performance Discussion Paper no. 384, January.

Notarstefano G., Scuderi R. (2004), *Il partenariato Euro-Mediterraneo: prospettive e percorsi di integrazione*, in: "Rivista Internazionale di Scienze Sociali", 4.

Petri P.A. (1997), *The Case of Missing Foreign Iinvestment in the Southern Mediterranean*, OECD Development Centre, Technical Paper 128.

Quah D.T. (1996), *Empirics for economic growth and convergence,* in:" European Economic Review", 40.

— (1997), *Empirics for Growth and Distribution: Stratification, Polarization, and Convergence Clubs*, in: "Journal of Economic Growth".

Silverman B.M. (1986), *Density Estimation for Statistics and Data Analysis*, Chapman & Hall, New York.

Solow R.M. (1956), *A contribution to the theory of economic growth*, in: "The Quarterly Journal of Economics", 70.

The World Bank (2005), *World Development Indicators online*.

Ufficio Italiano Cambi (2006), Data on foreign direct investment inflows to Italy, and outflows to foreign countries.