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THE SILENCE AT THE STANDS: AGONY IN THE PORTUGUESE MARKET FOR TAXIS

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A QUANTILE REGRESSION ANALYSIS OF GROWTH AND CONVERGENCE IN THE EU: POTENTIAL IMPLICATIONS FOR PORTUGAL

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LINKAGES AND PERFORMANCE COMPARISON AMONG EASTERN EUROPE STOCK MARKETS
This paper applies a quantile regression approach to examine the growth and convergence process of fourteen EU member states over the period 1986-2009. From the results of the estimation of an accounting growth regression we conclude that an increase in the weight of the non-tradables sector and a loss of (price) competitiveness are especially harmful for growth for under-performing countries, while these benefit the most from physical capital accumulation and are less negatively affected by an increase in government consumption. Additionally, technological convergence is felt less strongly by low-growth member states. The variables retained are robustly related to growth at all quantiles, but the quantitative importance of the respective coefficients differs across quantiles in some cases. Given the changes in growth rhythms that Portugal recorded throughout the period under analysis, we derive some potential implications from these results for a better understanding of the Portuguese growth and convergence process after European integration. Our findings suggest that, given the growth deceleration that the Portuguese economy has been experiencing since the late 1990s, policies to enhance growth should pay more attention to promoting competitiveness and changing the specialization pattern away from the non-tradables sectors, as well as to increasing investment.

JEL Classification: C23; O47; O52
1. Introduction

In 1986, Portugal (and Spain) joined the European Economic Community (EEC) that later became the European Union (EU). During the 25 years that ensued, European integration proceeded at a fast pace with the signature of the Single European Act in 1986 and the Treaty of the European Union in 1992, the single market was established in 1993, and the euro was introduced in 11 countries in 1999, Portugal included. Accession by Portugal to the EU was accompanied by a growth acceleration of the Portuguese economy relative to the previous decade, 1974-1985. Over this period, following political and economic turmoil, the Portuguese economy became almost stagnant, undergoing two IMF interventions in 1978-79 and 1983-85. From 1986 to 1998, the Portuguese economy enjoyed a phase of sustained economic growth in which real convergence with the core European economies took place. This convergence process was accompanied by the implementation of better macroeconomic policies (associated with the process of nominal convergence on the way to the euro in the 1990s), structural reforms, especially in the financial, labour and product markets, but also investments in physical and human capital, and technology enhancing factors (e.g. Barros and Garoupa, 1996; Duarte and Simões, 2002; Vamvakidis, 2002; Lains, 2003; Freitas, 2006; Mateus, 2006; Santos Pereira and Lains, 2010). Yet this expansionary phase did not last, and since 1999 Portugal has been experiencing a stagnation/divergence period highlighting the need for further structural reforms to recover the ground lost during the last almost 15 years (see Alexandre et al., 2014).

This paper applies quantile regression analysis to estimate an empirical growth model for a sample of fourteen EU member states over the period 1986-2009 in order to get a better understanding of the changes in the Portuguese convergence process and in its growth rhythm. Our main aim is to identify the relevant growth determinants for Portugal, as a member of the EU, adding to the literature by applying an estimation methodology we believe more suitable for the period and countries under analysis, the quantile regression technique. This estimation approach allows for the identification of different impacts of the explanatory variables across the growth rate distribution. Given the changes in growth rhythms registered over the period under analysis in the EU, and particularly in Portugal, this seems a suitable approach. According to Mello and Perelli (2003), quantile regression is a suitable estimation methodology in a growth context as it allows to capture countries' heterogeneity and assess how policy variables affect countries according to their position on the conditional growth distribution. In fact, the quantile regression estimator gives, potentially, one solution to each quantile. In terms of policy implications, as suggested by Barreto and Hughes (2004), it may the case that, due to the presence of other (un-modelled) factors countries grow slower (or faster) relative to the conditions suggested by the variables that are included in the model. This happens because the factors that are not included in the estimated model create an unfavourable (more favourable) environment for the impact of the included growth determinants. Quantile regression analysis allows us to identify those growth determinants that do not have the expected notable effect on growth and hence determine the policy implications specifically for under-performing versus over achieving countries in terms of output growth. We also depart from the previous literature on growth and convergence in the EU by focusing on a more recent period (1986-2009) that is usually missing from older analysis or is included in a longer time frame in more recent studies (e.g. Soukiazis and Castro, 2005; Castro, 2011).

We first review the recent growth and convergence process of the Portuguese economy focusing on the period 1986-2009, the 25 years since Portugal joined the EEC, now EU, and comparing it with the average EU14 economy¹. We start by presenting some descriptive data on convergence.

¹ Together with Portugal this group, composed of the member countries in the European Union prior to the accession of the ten candidate countries on 1 May 2004, is usually known as EU15. The EU15 includes the following 15 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden and the United Kingdom. The EU14 includes all the previous countries except Luxembourg.