"Banking and Growth: Quality versus Quantity?"

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## We will concentrate the discussion in the following aspects:

- 1. Background
- 2. Research design and results
  - -2.1. Data
  - -2.2. Research methodology
  - -2.3. Obtained results
- 3. Conclusions

- The link between economic growth and the quality of financial systems dates back at least as far as Schumpeter (1911)
- Since then the link between economic growth and the quality of financial systems has been studied by more or less sophisticated analysis and empirical studies

- Particularly since the renowned King and Levine (1993) paper there has been an increase of empirical studies at the aggregate level
- According to most of these studies, financial development may be an important condition to economic growth

 However, there are authors, like for example, Stiglitz (1985), Bhide (1993), Bencivenga et al. (1995), who stress that there may exist some costs associated with the role of financial intermediaries

- Over the past two decades the structural features of the European banking institutions have changed significantly
- In addition to the profound changes due to the implementation of the single currency and the common monetary policy, and despite all the recent political shocks, EU banks have demonstrated a remarkable robustness, generally speaking

 Philip Molyneux (2007) concludes that "The European banking sector has been transformed in recent years by a broad range of developments including: globalization, deregulation, technological change, integration and harmonization through the creation of a European single market in banking"

 Goddard et al. (2007) survey the recent academic literature on developments in European banking and underline that "The banks responses to the changing competitive environment include the strategies of diversification, vertical product differentiation and consolidation"

 They are also refer the cross border activity which takes place more through the creation of subsidiaries rather than branches revealing that there are still important barriers to full market integration even in the context of the EU-15 banks.

# Research design and results Data

- The authors use data on financial accounts available from Bankscope database for the years 1997, 1999, 2001 and 2003
- The descriptive statistics on regional and bankspecific data show that the number of regions grew up from 108 in 1997 to 148 in 2003
- while the number of banks first increased (they were 3185 in 1997 and 3318 in 1999) and then decreased significantly (in 2003 they were only 2802)

# Research design and results Data

 There is a quite detailed explanation of the proceedings to map the banks to NUTS 2 regions

 Nevertheless we think that it would be desirable to specify a few features of the database, namely the following ones:

# Research design and results Data

- How many banks are from each region and from which countries?
- Are these banks representatives of the bank system in their countries?
- Are they similar or not in what concerns to specialization and to property?

# Research design and results Methodology

- The methodological approach has clearly two stages:
- <u>First</u> The use of a translog stochastic profit frontier following the panel frontier estimator suggested by Greene (2005) and,
- although the results are not presented in the paper, HKW say that the aggregated point estimates of profit efficiency are used to serve as proxy for the regional quality of the financial institutions

# Research design and results Methodology

- Second The growth estimation of the regional GDP per worker uses GMM, one step difference estimator of Arrellano and Bond (1991) and the explained variables are
  - the obtained proxy for quality (FQ),
  - a quantitative measure (FV, that is, the ratio bank credit volume relative to GDP),
  - the product of these two variables (FQ\*FV)
  - as well as the growth rate of the working population.

# Research design and results Methodology

- These estimations are quite useful as they consider the model as a system of equations, one for each time period.
- By this use of instruments based on lagged values of the explanatory variables, GMM controls for the potential endogeneity of all explanatory variables, although only for "weak" endogeneity and not for full endogeneity, as explained by Bond (2002).

# Research design and results 2.3. Obtained results

- The obtained results with GMM Arrellano-Bond one step difference estimations show the great importance of the lagged dependent variable (y<sub>t-1</sub>) and the growth rate of the working population.
- The quantitative measure (FV) has the weakest influence on the growth of the regional GDP per worker while the proxy for quality (FQ) reveal that, as expected, more efficient banks clearly contribute to the regional economic growth.

# Research design and results 2.3. Obtained results

- The robustness analysis of the subsamples results confirms most of the obtained results.
- Nevertheless we would suggest to test the model without
  - The lagged dependent variable (y<sub>t-1</sub>) and
  - The quantitative measure (FV)

# Research design and results 2.3. Obtained results

- So, although the obtained results generally confirm the importance of the bank efficiency on regional growth,
- we agree with the authors who defend that future studies on the finance-growth nexus are still needed.

### 3. Conclusions

- I enjoyed this paper, particularly the quite honest presentation of the research aims, methodology and obtained results.
- The authors have produced a well written paper in an already explored field (finance and growth) but with a remarkable contribution in the regional approach.

### 3. Conclusions

- Overall, we agree that this field deserves further attention, and we thank the authors, the organisers of the SUERF Conference and the Bank of Finland for the opportunity to discuss this interesting paper.
- THANK YOU VERY MUCH FOR YOUR ATTENTION

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