HABILITATION THESIS

Research on Efficiency of Banking Systems and Monetary Policy

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Summary

The present habilitation thesis summarizes a part of my research activity following the successful PhD Thesis defense at University of Craiova in 1999. The first part of the habilitation thesis reviews some of the major contributions of the author, which are grouped in two sections: contributions in banking and contributions in monetary policy. The selected papers are considered to be relevant in terms of originality and importance.

In the first section, contributions in banking, we presented the results of my bank efficiency analysis in transition countries and in the European banking systems, with a special emphasis on the Romanian banking system, and the financial nexus between efficiency and soundness in banking and capital markets. First, we adopt Wang’s (2002) heteroscedastic stochastic frontier model, which allows us to investigate bank cost efficiency and to measure the marginal effects of some variables on both the level and the variability of inefficiency, in order to study the determinants of bank cost efficiency in transition economies from Latin America, Central and Eastern Europe and South-East Asia. In recent years, the financial crisis has significantly affected the banking systems of the transition countries. Hence, the efficiency is of major importance for the stability of the banks. Regarding the determinants of efficiency, we find evidence that banks that follow a more cautious strategy, characterized by lower risk appetite and average expectations on profitability, have higher cost efficiency. We also find that traditional deposit-taking and loan-making still remain the most efficient activity of the banks. Additionally, the results showed that a higher Gross Domestic Product growth rate implies an increase in the inefficiency level, indicating an unsustainable bank management behaviour, which in periods of economic growth adopts policies that can generate inefficiency in order to gain market share and to obtain higher bonuses. Country cost efficiency results show significant differences. The banking systems in transition countries in South Eastern Asia appear to have a higher cost efficiency level. Also, the effects of the financial crisis were less significant in this region.
Second, using a data envelopment model and an input slack-based productivity index, we will investigate commercial banks’ cost efficiency and productivity patterns in the Romanian banking system over the period of 2005 to 2011. In a second stage, we will assess the determinants of efficiency, emphasizing the relation between efficiency and risks. In the Romanian banking system, the relationship between concentration and efficiency supports Hicks’s ‘quiet life hypothesis’. With respect to the impact risk factors on efficiency, we find that a lower failure risk and a higher liquidity are positively associated with efficiency, while solvency risk is negatively associated with efficiency. We also find that banks with a higher return on equity and a higher level of financial intermediation are more efficient. An increase in the net interest margin leads to a decrease in efficiency, signalling a higher credit risk. The effects of the financial crisis on commercial banks in Romania were observable in 2008, when the cost efficiency and productivity decreased. Empirical results suggest that the contribution of the funds to the increase of productivity is the most significant, while that of labor and capital productivity is lower.

Third, we used a stochastic frontier model to estimate the cost efficiency of cooperative banks and savings banks from nine countries over the period 2005 to 2011. In addition, we analysed the influence of certain variables that quantify the risk and performance of cooperative banks and savings banks on the level of inefficiency. We found that both the cooperative banks from Switzerland and the savings banks from Norway and Sweden have a high level of cost efficiency. With regard to the variables that influence the inefficiency level, the results showed that a higher risk implies the growth of this level, while an increase in performance leads to a decrease in inefficiency. The results showed that a higher rate of the Gross Domestic Product (GDP) growth implies an increase in the inefficiency level. Smaller cooperative and savings banks are more efficient in managing costs compared to larger banks. We interpreted this result as being a consequence of the advantages from which this institutions benefit within the groups to which they belong.

Forth, based on a modified version of a model used in Corvoisier and Gropp (2002) and de Guevara et al. (2005), we argue that banks’ soundness, the structural characteristics and efficiency of the banking sector and the development of the capital markets are forming a financial nexus. For a data set of 63 developed and developing countries, we find evidences that efficiency significantly modulates the linkages between concentration and soundness. We also find that capital markets’ development is supporting a stable evolution in banking sector. For the relationship between capital markets and soundness, our findings appear to be robust for various measures of the considered variables as well as for different estimation techniques.
In what concerns the impact of the concentration upon soundness, the results obtained display a certain sensitivity regarding the way concentration is measured.

In the second section, contributions in monetary policy, we presented the results of the monetary transmission mechanism analysis and the inflation inertia and persistence in Romania. First, we highlight the monetary transmission mechanism and how the main economic and monetary variables react to various shocks in Romania over the period 2001 to 2012 using a BVAR model with a KoKo Minnesota/Litterman prior. BVAR models solve the over-parameterization of VAR and have advantages in terms of objectivity and flexibility. The analysis reveals important conclusions. The interest rate channel is being more and more consistent in the last years, the positive aspect that emerges from this study being related to the absence of output and price puzzle. Under these circumstances, the role and the responsibilities of the central bank acquire a greater importance, given its ability to control the interest rate in accordance with its objectives. The relationship between inflation and unemployment rate is consistent with the Phillips curve in Romania.

Second, we use an Autoregressive Structural Vector, with some restrictions on short term, in order to know the response functions of the main macroeconomic variables at various economic shocks and to analyse the monetary policy dynamics in Romania. Knowing the functions of response of the main macroeconomic variables to different economic shocks represents an essential step for investigating the Romanian monetary system. The findings reflect the efficiency of the inflation targeting strategy adopted by the central bank of Romania in 2005. We also underline the importance and the consistence of the exchange rate channel within the monetary policy, as well as the importance of the monetary aggregates channels in order to explain the evolution of the level of the prices.

Third, we analyze the monetary policy of the Romanian central bank and evaluate the inflation inertia and persistence. Thus, we estimate two DSGE models, a simple neokeynesian standard model built around a forward-looking component and in order to offer a more complex perspective we also estimated a DSGE model that captures the inflation inertia. The results show that the prices evolution reflects the difficulties of eliminating the inflation inertia. In Romania, the historic inflation evolution has a major impact on the way the inflation expectations are formed. Even if the inflation decreased at a moderate level, its persistence continues for a long period of time.

The second part of the habilitation thesis reviews my perspectives in research and teaching activities. Future research objectives include the analysis of the productivity in banking systems and the nexus between financial stability and performance in banking systems.

The third part of the habilitation thesis includes the references list.