

## Editorial

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The EURO Working Group on Efficiency and Productivity Analysis (EWG-EPA) was formed in 2003, as the successor of the EURO Working Group on DEA and Performance Measurement that was established in 1997. The change in the name reflected a strategic move to open the Group to researchers using other methodologies (e.g. SFA) which made significant contributions in the field of efficiency and productivity analysis. The main objectives of the working group are to: (1) Foster collaborative research between members from different institutions, countries, and professional backgrounds, (2) Coordinate specialist publications of issues in the area, (3) Organise specialist conferences and workshops, and high-quality conference streams in the area of efficiency and productivity analysis, (4) Integrate Ph.D. students into the research community.

The EWG-EPA organized a highly successful International Conference on “Global Trends in the Efficiency and Risk Management of Financial Services” in Chania (Greece) on July 2–4, 2010, in collaboration with the Financial Engineering Laboratory of the Technical University of Crete, the Efficiency and Productivity Research Unit of the University of Leicester School of Management, and the UK Efficiency and Productivity Analysis Network. The event attracted 70 participants from around 20 countries, forming a broad program that covered topics in banking, insurance, mutual funds, quantitative modeling,

regulations, mergers & acquisitions, competition & market power, financial markets, etc. After a rigorous review process, four of the presented papers were selected for publication in the *Journal of Productivity Analysis*.

The first paper by Cummins and Xie, examines efficiency, productivity and scale economies in the U.S. property-liability insurance industry over the period 1993–2009. This study adds to the literature in several ways. First, there are no comprehensive studies of scale economies in the U.S. P-L industry using data subsequent to the 1980s. Second, the paper focuses on the dynamic changes in firm efficiency and productivity and tests the relationship between technology investment and improvements in firm performance. Third, the paper links firms’ financial and operational characteristics to their realization of scale economies in a regression analysis framework. Using Malmquist indices, and data envelopment analysis, the authors find that the majority of firms below median size in the industry are operating with increasing returns to scale, and the majority of firms above median size are operating with decreasing returns to scale. Nonetheless, there exist an important number of firms in each size decile that achieve constant returns to scale. The results also reveal that the industry experienced significant gains in total factor productivity, along with an upward trend in scale and allocative efficiency over the period of the study. Finally, the authors conclude that more diversified firms and insurance groups were more likely to achieve efficiency and productivity gains, as well as that higher technology investment is positively related to efficiency and productivity improvements.

The European banking sector witnessed a large number of M&As in the late 1990s and early 2000s. The second paper by Ayadi, Boussemart, Leleu and Saidane examines whether such deals lead to higher productivity or better

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synergy among business lines. Their sample consists of 42 M&A transactions during 1996–2003 period and 587 non-merging banks from which they extract a matched group composed of banks with similar input–output levels and mixes as the merging bank groups. The authors adopt a two-step approach. First, they obtain estimates of technical efficiency and structural efficiency using the Free Aggregation Hull framework. Then, they test a catching-up effect for technical efficiency and a convergence process for structural efficiency previously estimated by a directional distance function. The authors conclude that M&As were not mainly conducted to increase productivity; nonetheless, they document an actual convergence process of input–output mixes for the merged banks which is not the case for the control group. Thus, M&As appear to be motivated by an attempt to take advantages of complementarities among different business lines of merged financial institutions rather than to achieve cost management improvements.

Over the last three decades, the Portuguese banking sector witnessed fundamental changes and it was transformed from a government-controlled system to a market-driven one. The third paper by Boucinha, Ribeiro and Weyman-Jones uses a translog cost frontier to examine the performance of 25 banks operating in Portugal over the period 1992–2006. Thus, the authors cover a long time period that spans from the pre-euro reforms to the start of the financial crisis. The main findings of the study can be summarized as follows. First, technological progress has shifted the cost frontier downwards throughout the period under consideration, whereas the distance at which banks have operated from the frontier seems to have remained constant. Second, increases in production under scale economies have also contributed to the recorded increase in productivity. Third, banks with higher credit risk, higher liquidity ratios, higher capital ratios, and lower size were found to be less cost efficient.

Most of the existing studies in banking analyze efficiency under the assumption of a common best-practice technology without accounting for firm-specific heterogeneity. However, one can easily argue that different types of banks employ different types of technology, questioning

the validity of the obtained results. Within this context, the last study by Almanidis suggests a way to split the sample of banks into unknown number of size-technologies. More detailed, he applies a non-dynamic panel threshold effects model while accounting for time-varying inefficiencies. Thus, the employed threshold effects estimation allows the sorting of banks into discrete groups based on their size in a structural and consistent manner, where as banks are also allowed to change the group that they belong to over time, and in essence have time-varying technologies. Using total asset size as an exogenous threshold variable, the application to a large sample of commercial banks operating in the US between 1984 and 2009 identifies seven distinct technology-groups within which banks are allowed to share the same technology parameters. The main finding of the study is that the pooling of banks into a single class was not justified by the result of the bootstrap test and produced distorted estimates and different efficiency ranking than estimates based on the technology-specific effects model. The study also provides estimates of individual and group efficiency scores, along with returns to scale and estimates of technological change. The average efficiencies were found to be time-varying with level and slopes being different across groups. Another interesting finding is that all groups experienced a decline in their average efficiencies during the financial crisis; however, the impact of the crisis was not the same for all groups both in timing and magnitude. Finally, Almanidis concludes that large banks have already exploited their scale efficiencies and display technological progress which improves over time.

In closing, we would like to thank Robin C. Sickles (Editor-in-Chief) for giving us the chance to assemble this collection of very interesting studies to be published in the *Journal of Productivity Analysis*. Special thanks are also due to all the anonymous referees, as well as to the conference participants for their numerous comments that proved of particular use in revising the manuscripts. Last, but not least, we would like to thank the authors for submitting their work for publication consideration. We hope that you will enjoy reading the manuscripts.