

# Analysis Of Changes In Productivity In The Colombian Banking Sector

**Gloria Rodríguez-Lozano**

School of Business Administration and Public Accounting  
Universidad Nacional de Colombia  
Bogotá, Colombia  
[girodriguez1@unal.edu.co](mailto:girodriguez1@unal.edu.co)

## Abstract

The objective of this research is to establish the evolution of the productivity of the Colombian banking sector from 2002 to 2016, based on the information of the banks reported to the Colombian Superintendence of Finance; through the application of the non-parametric methodology of the Malmquist Index of Data Envelopment Analysis (DEA). Generating relative efficiency indicators for each of the banks for each period, over the fifteen years of the study. The results show that in 64% of the periods the average productivity improved, being the period 2003-2004 the one that shows a better result; a period in which the Colombian banking sector is considered to be in full development and consolidation. In addition, in 4 periods there is a decrease in average productivity, the greatest decrease occurs in the period 2009-2010 during the first global financial crisis of this century.

## Keywords

Malmquist index, Productivity measurement, DEA, banking sector.

## Biography

**Gloria Rodríguez-Lozano** is Associate Professor of the School of Administration and Accounting of the Faculty of Economic Sciences of the National University of Colombia. She has a PhD in Economic Sciences, a Master's degree in Industrial Engineering and is a Business Administrator. Throughout his career she has attended more than thirty invitations to international conferences and symposiums, always obtaining very positive comments regarding his research presentations. These investigations are related to non-parametric models to generate efficiency and productivity indexes. A few months ago, she received the Meritorious Research Award - Year 2018 from the Faculty of Economic Sciences of the National University of Colombia. She has also held administrative academic positions such as Director of the School of Administration and Accounting, Director of the Master of Administration, Academic Secretary of the Faculty of Economic Sciences and Director of Registration of the National University of Colombia. He has directed several research projects and projects aimed at providing advice to both public and private companies.