

Measuring the efficiency of the Colombian higher education system: a two-stage approach

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Abstract

Purpose – The purpose of this paper is to examine the efficiency of the Colombian higher education system, differentiating between public and private universities. **Design/methodology/approach** – A data envelopment analysis (DEA) model is applied to separately and jointly evaluate the teaching and research efficiencies of universities. The empirical application considers a sample of 78 Colombian universities across the period 2015–2017. A two-stage DEA is performed in which DEA scores are first evaluated and then regressed on potential covariates via truncated regression. **Findings** – Public universities outperform their private counterparts in terms of teaching and research efficiency, whereas private universities have higher global efficiency. Furthermore, the proportion of PhD faculty positively impacts all dimensions of efficiency and in fact is the only variable improving research efficiency. **Research limitations/implications** – First, the data do not permit a direct analysis of the impact of improvements in resources or capabilities on knowledge transfer. Second, policies and their efficiency may be influenced by differences in cultural contexts, regulatory frameworks and knowledge transfer activities. Finally, the country specificity of this research study calls for obvious caution when generalizing and interpreting its findings. **Practical implications** – The analysis of this data set will help decision and policy makers identify resources that are used efficiently by universities and interventions for improving resource management by inefficient universities. **Originality/value** – Few studies have addressed the efficiency of higher education in developing economies. This paper contributes to the literature by applying a two-stage methodological approach to estimate the efficiency of Colombian universities and provide a better understanding of the factors driving university efficiency.

Keywords:

Higher education, Data envelopment analysis (DEA), Efficiency measurement, Public and private universities