

CONTRIBUTION OF ACADEMIC RESOURCES ON INNOVATION AND ENTREPRENEURSHIP: ASSESSMENT OF UNIVERSITIES THROUGH DEA

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Abstract:

It is important to evaluate how universities turn their academic resources and activities into a quantitative measurable scale using a reliable model. The aim of this study is to assess the innovation and entrepreneurship performance of universities considering their investment and resource allocation on the critical academic issues. The proposed efficiency measurement model consists of 5 common academic indicators (i.e. inputs) such as total document publishing, citation score, PhD studies and available faculty, and 5 output factors (competence on scientific and technological research, intellectual property, cooperation and interaction, entrepreneurship and innovation culture, and economic contribution and commercialization) with their 23 relevant measurement variables. An output-oriented DEA model is introduced to evaluate and compare the performance efficiencies of the 47 state and private universities using the above-mentioned performance variables. The model successfully displays which universities turn their academic performances into innovation and entrepreneurship capabilities efficiently. As a remarkable result of this study, more than half of the universities (34 universities out of 47) are found inefficient when they turn their academic recourses into innovation and entrepreneurship. Through the projection analysis with DEA, all inefficient universities are able to detect the necessary change for converting to be an efficient unit. Thus, understanding capabilities of the universities and utilizing resources efficiently can allow those universities to get a successful view of direction towards to innovative and entrepreneur institutions.

Keywords: Innovation, Entrepreneurship, Higher Education Performance, Data envelopment analysis, efficiency measurement