

# Analysis of the economic efficiency of the research activity of public universities proposal of a model for the evaluation of performance

E. Fuente-Gutiérrez. PhD student University of Granada

## Motivation

The search for methods that allow an optimal result and that is somehow measurable

Taking advantage of the huge amount of information that is produced every day from university institutions, which cannot be accepted initially, but needs to be processed

Observe how Critical Thinking and Research works, as an element for direct and indirect reflection.



## Objectives

1. Proposal of a model for evaluating the economic efficiency of the research activity of public universities through the use of management indicators and cost calculations, including methodological procedures necessary for its application to the case of the Autonomous Community of Andalusia.
2. Design batteries of management indicators that allow identifying, measuring and evaluating the outputs achieved by the research activity of public universities, including both basic research (obtaining new, unpublished knowledge) and applied research (knowledge transfer). The indicators are always considered associated with the costs generated by the research activity of public universities, which makes it possible to measure the consumption of resources derived from it.

## Methodology

We will use a quantitative analytical methodology, of an evaluative and critical nature; we can apply cost-benefit analysis is used to determine whether the benefits of a given process or procedure are in proportion to the costs. Our sample will be the Andalusian Public University System (SUPA). The time frame to which the extracted data will refer will be the period 2015 – 2020

### Scientific Production Indicators:

No. of works WOS +ESCI (Emerging Sources Citation Index is a citation index produced since 2015); nº citable works; % citable works; % citable papers JCR with IF; Normalized Impact [SUPA-Spain-EU Evaluation]; indicators of excellence (highly cited papers, papers published in SCIENCE and/or NATURE); research projects, comparative national plan SUPA – Spain; outstanding SUPA researchers

## Conclusions

The main contribution of the thesis will be the generation of an evaluation model of the scientific performance of the Andalusian Public University System (SUPA) and by extension in the Spanish public Universities that attends to the costs of research. Approaching a better understanding of the efficiency of the public higher education system

Likewise, this model will present the correlation of cost indicators / scientific production that can lead us to establish a ranking of groups and/or departments ordered from these indicators.

## References

- Barra, C., Lagravinese, R., & Zotti, R. (2018). Does econometric methodology matter to rank universities? An analysis of Italian higher education system. *Socio-Economic Planning Sciences*, 62, 104-120. <https://doi.org/10.1016/j.seps.2017.09.002>
- CRUE. (2018). La universidad española en cifras: 2016/2017. <http://www.crue.org/Documentos compartidos/Publicaciones/Universidad Española en cifras/2018.12.12-Informe La Universidad Española en Cifras.pdf>
- Luque-Martínez, T., Faraoni, N., & Doña-Toledo, L. (2020). Los rankings académicos y la distribución por género de las universidades. *Rev. esp. doc. cient.*, 43(2), 261. <https://doi.org/10.3989/redc.2020.2.1663>
- Ministerio de Ciencia Innovación y Universidades. (2019). Datos y Cifras del Sistema Universitario Español 2018-2019. Datos y Cifras, 1-130. <https://cpage.mpr.gob.es>

