

## Essays on efficiency and productivity of hospital services

### Summary

Hospitals play a pivotal role in communities by providing essential health care services to citizens. Measuring their efficiency is imperative in a period of resources scarcity that may jeopardise some of those services delivery and quality. Nonetheless, empirical applications and models usually consider hospitals as indivisible units, ignoring the existence of heterogeneous operational environment, outliers, and data noise, and then losing a significant amount of information and biasing the results. Such models are unable to correctly find out scale and scope economies and to test the influence of some policies and of the operational environment on performance. Accordingly, reliable results are difficult to disclose. The employment of recent models, overcoming most of the drawbacks of classical methods, is required and is the main objective of this thesis. This work proposes to improve existing models used to assess efficiency and productivity,

to evaluate possible trade-offs between efficiency and quality/access to health care services, to investigate possible strategies so as to improve patients' satisfaction, to analyse some topics of health economics (including congestion, economies of scope, and optimal tariffs), to evaluate some recent health policies, and finally to help health managers and policy makers on planning a better, more efficient and productive, National Health Service in Portugal.

Some remarkable conclusions include the lack of consistent links between quality/access and efficiency (as results depend on the adopted model), the existence of scale and scope economies in the Portuguese public hospitals, both depending on the size of the entity, the similar social performance of public and public-private partnerships (PPPs) hospitals and absence of (verifiable) moral hazard of the latter, and finally the lack of success of the corporatisation reform of public hospitals concerning their productivity. These findings suggest/ reinforce the introduction of a benchmarking framework into the public sector to evaluate entities and identify best practices in the. outputs allow to measure tariff suitability and to build tailored tariff policies, within their useful life time, i.e., considering that all policies have to be adjusted / updated to the current challenges.

### Keywords

Hospital and hospital services, benchmarking, efficiency, productivity, effectiveness.



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#### Period

2015-2018

#### Funding

FCT scholarship  
(SFRH/BD/113038/2015)