## Dynamics of Efficiency and Productivity in the Greek Hospital Sector

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## Abstract

The objective of this study was to explore the dynamics of efficiency and productivity of Greek public hospitals during the crisis, as well as to review the effect of implemented policies on hospital efficiency before and the implementation of the clawback for hospital pharmaceutical expenditure. We implemented Data Envelopment Analysis and decomposed the Malmquist productivity index (MPI) to investigate the fluctuations of the Greek public hospital productivity frontier and therefore their technical efficiency between 2009 and 2019. The MPI components allowed us to capture the frontier shift, as well as pure efficiency changes and scale efficiency changes. Through the period 2009-2019 hospital inputs were reduced drastically. Doctors were reduced by 54% while beds were reduced by 15%. Hospital expenditure was decreasing between 2009 and 2015 but increased by 23% since due to fixed hospital budgets and the "claw-back". Moreover, output seems to have increased. Patient discharges increased by 14% while diagnostic procedures were reduced by 10% between 2009 and 2016 but have been continuously rising since. Nonetheless, under variable returns to scale (VRS) average hospital efficiency was stable (~75%) for most of the period under study while declining since 2016. Policymakers in Greece have always chosen to implement cost- or input-oriented policies, instead of opting to improve outputs and quality of services. Our analysis indicated that fixed-budget-oriented reforms have impacted hospital efficiency negatively by creating a counterincentive to adopting best practices and improving hospital efficiency. Highlights Technical Efficiency under CRS was stable in Greece (0.70) over the period 2012-2016, and declined to 0.51 in 2019. Hospital Fixed Budget reforms had a negative impact on hospital efficiency. During the economic crisis 2009-2019 hospital inputs were reduced drastically Memorandum Policies introduced by Troika focused exclusively in reducing cost and not improving efficiency.

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