

# Assessment of the Total Factor Productivity Change in the English and Welsh Water Industry: a Färe-Primont Productivity Index Approach

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## Abstract

The assessment of productivity change across companies and over time is of great importance for water utilities managers and regulators. In this paper, for the first time, we apply the Färe-Primont productivity index (FPI) to evaluate the productivity change for the 10 water and sewerage companies (WaSCs) and 12 water only companies (WoCs) in England and Wales during the years 2001–2008. The FPI is the only index that without price data allows making comparisons involving many firms and many periods. The results indicate that during the years 2001–2004 productivity improved which was mainly attributed to gains in efficiency whereas technical change remained constant, the exception being the year 2004. During the years 2005–2008 productivity showed a declining trend and any gains in efficiency were lost to the highly negative technical change on productivity growth. From a policy perspective, it has been illustrated the importance of using a reliable index to compute the productivity change of water companies when the performance of companies is used to set water tariffs. Finally, the decomposition of productivity change into several drivers allows water utilities and managers to identify the main factors on which they should act to improve productivity of the company.

**Keywords:** Total factor productivity | Färe-Primont index | Regulation | Water and sewerage industry

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