

Assessing productivity changes in water companies a comparison of the Luenberger and Luenberger-Hicks-Moorsteen productivity indicators

Sala-Garrido, R., Molinos-Senante, M., & Mocholí-Arce, M. (2018). Assessing productivity changes in water companies: a comparison of the Luenberger and Luenberger-Hicks-Moorsteen productivity indicators. *Urban Water Journal*, 15(7), 626-635. Accessed 09 Mar 2021.

Abstract

Interest in evaluating productivity changes in water companies has increased in recent years. In this paper, for the first time, we employ the Luenberger-Hicks-Moorsteen Productivity Indicator (LHMPI) to evaluate productivity changes in a sample of Chilean water companies from 2010 to 2016. Productivity change estimations obtained by both the Luenberger Productivity Indicator (LPI) and the LHMPI are compared. Moreover, both indicators were computed assuming constant and variable returns to scale technologies. The LHMPI estimates illustrate that productivity in Chilean water companies has slightly improved over the period studied due to the positive trend of outputs, whereas the inputs negatively contributed to productivity changes. Results from the empirical analysis enabled us to verify that the LHMPI and LPI (and their drivers) are statistically different. This conclusion illustrates that water regulators need to pay attention to the indicators used when assessing productivity changes in water companies..

Keywords

Productivity change, Luenberger productivity indicator, Luenberger-Hicks-Moorsteen, Water utilities, Performance.