

عنوان مقاله:

Impact of water resources sustainability on Technological Gap Ratio of agricultural sector

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خلاصه مقاله:

Water as a major necessity of sustainable development is essential for agricultural production and food security. Increasing water productivity, especially in agriculture, is one of the key issues for optimum water resource management. The present study applied a Stochastic Metafrontier Model to estimate Technical Efficiency (TE) and Technology Gap Ratio (TGR) of agricultural production from selected countries. The frontier and metafrontier production functions of ۲۷ countries from ۲۰۱۱ to ۲۰۱۶ were used for estimation of the TE. The results showed that the mean of group efficiency ranged from ۰.۳۲ to ۰.۸۳ and the mean of technology gap ratio based on water crisis indicator in three groups were ۰.۳۷, ۰.۳۹ and ۰.۴۴, respectively. Considering the global water scarcity mainly in arid and semi-arid environments, it is vital to seek appropriate policies directed towards the provision of technology for irrigation infrastructures that would enhance resource use efficiency

کلمات کلیدی:

Falkenmark indicator, Stochastic Metafrontier, Technical efficiency, Technology gap ratio, water crisis

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