

Production structure and Cost efficiency of irrigated agriculture: A shadow cost approach

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Summary

The improvement of irrigated agriculture needs sound performance assessment based on economic principles. This is particularly relevant to design adequate policies in terms of water allocation. In this paper we endeavour to assess irrigation efficiency using a behavioural approach in which the cost function (shadow cost) is based on shadow prices of inputs. This approach is useful to derive price distortion coefficients to indicate the level of allocative efficiency in two irrigated areas: Jendouba and Kairouan, in Tunisia. Results show that in the case of Jendouba price ratio shows an even distribution around one with 50% of farmers having values below one and 50% greater than one. In the case of Kairouan the same distribution is observed except that the magnitude of the distortion is greater (values around Two). This shows that inefficiencies are greater in Kairouan than in Jendouba. Such difference is explained by the prevalence of irrigation tradition which is older in Jendouba than in Kairouan.

Key words: water allocation, efficiency, shadow cost, Tunisia