

Centralized resource allocation for connecting radial and nonradial models

ABSTRACT

This paper examines an alternative approach to the centralized resource allocation model that indicates that all the units are under the control of an entity of the centralized decision maker. The proposed approach is a technique for connecting the two basic Radial CRA-BCC and Nonradial CRA-SBM models in an integrated structure called connected CRA-SBM. In the proposed model, exchanging the two parameter amounts can change the location of the analysis between the CRA-BCC and the CRA-SBM models and deal with the weaknesses inherent in such models. By remedying all the weaknesses in one model, the entire units are simply projected on the frontier line and one can obtain suitable benchmarks for each of them. In the offered model, all of the inputs and outputs, respectively, decrease and increase simultaneously. Lastly, numerical examples emphasize the significance of the offered method.

Keyword: Centralized resource allocation model; Radial CRA-BCC; Nonradial CRA-SBM