

Analyzing competitiveness features with DRSA and fuzzy measures

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Abstract

In times when national leaders are facing crucial decision making, the interaction effects among criteria of national competitiveness become more important, and usually complicated. This research takes dominance-based rough set approach (DRSA) to construct a utility function for solving the fuzzy measure. Then it is applied in the World Competitiveness Yearbook (WCY) to disclose interactive degree for criteria. The results in WCY 2010 show that only a small substitutive effect happens in the fuzzy measure for criteria. In addition, the top-ten nations performed well in business finance and positive attitudes, and the top-half nations took ahead in the institutional framework.

Keyword : national competitiveness, fuzzy measure, dominance-based rough set approach (DRSA), utility function