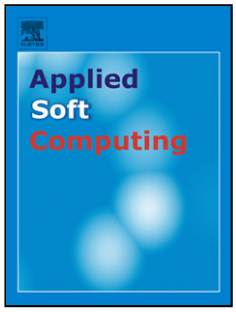

Title: Value determination method based on multiple reference points under a trapezoidal intuitionistic fuzzy environment

Authors: Xihua Li, Xiaohong Chen

PII: S1568-4946(17)30666-X
DOI: https://doi.org/10.1016/j.asoc.2017.11.003
Reference: ASOC 4547

To appear in: *Applied Soft Computing*

Received date: 26-5-2017
Revised date: 28-9-2017
Accepted date: 2-11-2017

Please cite this article as: Xihua Li, Xiaohong Chen, Value determination method based on multiple reference points under a trapezoidal intuitionistic fuzzy environment, Applied Soft Computing Journal https://doi.org/10.1016/j.asoc.2017.11.003

Value determination method based on multiple reference points under a trapezoidal intuitionistic fuzzy environment

Xihua Li [a*], Xiaohong Chen [a,b]

[a] *School of Business, Central South University, Changsha, 410083, China*

[b] *Mobile E-bussiness Collaborative Innovation Center of Hunan Province, Hunan University of Commerce, Changsha, 410205, China*

[*] Corresponding author. Tel.:+86 15802537504
E-mail address: xihuali@126.com (X.H. Li).

Highlights

- We propose a trapezoidal intuitionistic fuzzy prospect function based on multiple reference points.
- The properties of the new prospect function are investigated.
- We develop a procedure for utility measurement under uncertainty.
- We utilize the proposed utility measurement to solve uncertain decision making problems.

ABSTRACT

Previous studies on decision analyses typically assume a single reference point, yet under a complex environment, decision behavior is often influenced by multiple reference points (mRPs). This paper develops a prospect value determination method based on