Using Fuzzy-TOPSIS Method to Rank Investors’ Decision Variables in Venture Proposals Evaluation

Ferran Giones, David Riu
La Salle URL

Xari Rovira
ESADE Business School

Keywords: Fuzzy variables, Group Decision-Making, Ranking, Entrepreneurial Investment

ABSTRACT
Understanding the criteria used by investors to evaluate new ventures’ proposals remains an active area of research in entrepreneurship (Nunes et al. 2014). Prior research identifies that there are differences in the types and importance of criteria used to evaluate venture proposals (Streletzki & Schulte 2013), and suggests that in some cases just a few elements define the criteria used to make investment decisions (Maxwell et al. 2011). Despite scholars’ interest in understanding the evaluation criteria it is still remains unclear the criteria and order of importance (Franke et al. 2008; Nunes et al. 2014).

We propose a method based on Fuzzy Order Preference by Similarity to an Ideal Solution (Fuzzy TOPSIS) to help entrepreneurs to analyze the evaluation, in terms of fuzzy opinions, of new ventures proposals. To this end a set of fuzzy linguistic terms based on triangular fuzzy numbers are considered.

A group of investment experts has been considered to assess different factors and variables by means of linguistic terms with different levels of precision. Results provide not only a ranked list of variables obtained from the group of experts’ opinion but also a measure of the consensus reaches. A real example is presented to show the real applicability and efficiency of the proposed methodology.

References:

