



Implementing Yager Fuzzy Screening and Entropy Methods for Selecting E-readiness Assessment Indicators in the Agricultural Organization

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The role of information and communication technologies in organizational development has been growing exponentially. The main purpose of this study was to identify and priority effective dimensions and indicators on assessing electronic readiness of Guilan province Agricultural Organization (jihad e Keshavarzi) based on opinions of experts. At the first, an e-readiness assessment pattern was designed based on reviewing literature on electronic readiness that theoretically proposed and practically applied by researchers over the past 10 years. This model consists of seven main dimensions including Infrastructural factors, Human factors, Educational factors, Government factors, Management factors, Socio-cultural factors and Legal factors) and 44 indicators. The research design of the study was a descriptive one and the target population included 10 faculty members, Agricultural Organization experts and researchers familiar with the concepts of IT and the organization status. They were selected by using purposive sampling method. The instrument used was an electronic questionnaire with a seven-level Likert scale. Each expert gave his/her point of view about the significance of the factors and indicators. After that, importance of selected indicators for measuring organizational e-readiness were measured by using Yager fuzzy screening method, based on opinion of experts. Based on the results, 40 indicators out of 44 selected indicators for assessing e-readiness in Guilan province Agricultural Organization are appropriate because their importance degree were more than average level. In the last step, weight of each of the dimensions and indicators was calculated using shanon's entropy method. Results showed that, among seven main dimensions, management factor is placed in the first grade. Educational, legal, social, government, infrastructure and human are placed in later grades. Also, priority of indicators of each dimensions were determined based on Entropy weights and final model of e-readiness assessment was designed.

Key words: Electronic readiness, information and communication technology, Yager Fuzzy Screening Method, degree of importance, Shanon's Entropy