

Data Mining Based Strategic Decision Making Support Tool

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Abstract

Strategic decisions such as new product development, technology selection, etc., lacks the formal analytical structure that most of operational problems that OR/MS researchers frequently address have. On the other hand, strategic decisions have significant long term influence on firms' competitiveness. Therefore, providing structural insights based on objective data is invaluable and would enhance the senior decision makers' ability to make better decisions. Among these strategic decisions, innovation management has been receiving a lot of attention from both researchers and practitioners due to its ever increasing role thanks to the global competition. One line of research is about the determinants of innovation performance. In this paper, various data mining techniques such as feature selection, classification and association rule mining is utilized on an empirical survey data from 184 manufacturing companies. The results reveal that such data mining techniques are promising and can be used as the engine of decision support systems.

Biography

Dr. Kemal Kilic received the B.Sc. degree from the Electronics Engineering Department, Bogazici University, Istanbul, Turkey, M.Sc. degree from Industrial Engineering Department, Bilkent University, Ankara, Turkey and PhD degree from the Mechanical and Industrial Engineering Department, University of Toronto, Canada. He is currently an assistant professor in the Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul, Turkey. His current research interest includes data mining, innovation management, health informatics and decision making under uncertainty.