

Construction Cost and Service Quality for the Supply Chain by Using Weighted RST Decision Rules

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ABSTRACT As well known, the rough set theory (RST) has better identification ability for processing similar or conflict information. When applying the RST to the supply chain management, it is possible that the cost would not be the only consideration for the decision maker and customers. There were many other attribute elements that need to be involved. Different groups of attributes would represent the degree of importance that the supply chain could provide to variety customer needs. But the information model of RST was limited by the universe and attribute sets, the decision maker could only select the well-defined decisions. This would cause the final decision driven by the system coding process. In this paper, weighted decision rules of the rough set theory would be developed, and the method of balancing construction cost and service quality for the supply chain combination would be deduced. By using weighting factors on different groups of attributes would help the designated company to select the optimal combination of supply chain members. The selected criteria could be useful to enhance business decision-making ability.