

## 2<sup>nd</sup> International Conference and Exhibition on **Industrial Engineering**

November 16-18, 2015 Dubai, UAE

### **Supplier selection by using AHP And TOPSIS techniques and an application in a Turkish textile company**

**Volkan Cakir, Yavuz Selim Ozdemir and Ezgi Kececi**  
Istanbul Arel University, Turkey

One of the alternative investment strategies of large-sized enterprises is to improve the supplier's processes. Selecting the right suppliers will decrease company's purchasing cost, increase customer satisfaction and improve the competition capacity. Supplier selection is a complex multi-criteria problem which includes both qualitative and quantitative criteria. In order to select the suppliers, it is necessary to make a tradeoff between these criteria some of which may conflict. Different approaches are suggested to solve the supplier selection problem in the literature. The main purpose of this study is to solve the supplier selection problem of the textile firm by using AHP and TOPSIS. Quality, cost, delivery and service criteria that are mostly used in literature are defined as main criteria in the paper, and also their sub-criteria are defined. AHP method is used to determine the importance degree of main criteria and sub-criteria, TOPSIS method is developed to rank the suppliers.

#### **Biography**

Volkan Cakir obtained his BSc in Electronics Engineering from Turkish Air Force Academy, Istanbul in 1992. He obtained his MSc in Industrial Engineering from Middle East Technical University, Ankara in 2001. He received his PhD in Engineering Management at the Old Dominion University, Norfolk, Virginia in 2011. His research interest areas are simulation, statistical quality control, system dynamics and risk analysis. He is currently an Assistant Professor and Head of the Industrial Engineering Department at Istanbul Arel University.

[volkancakir@arel.edu.tr](mailto:volkancakir@arel.edu.tr)

#### **Notes:**