

[DOI: 10.20472/IAC.2017.034.012](https://doi.org/10.20472/IAC.2017.034.012)

SERRA ÇELİK

Istanbul University Informatics Department, Turkey

AN ASSESSMENT METHOD FOR EMPLOYEES PERFORMANCE EVALUATION USING CLUSTER ANALYSIS

Abstract:

Call Center industry has rapidly increased in number over the last ten to 15 years in the world. Nowadays call centers have become an important part of Customer Relationship Management (CRM). They are often the primary source of contact for customers. As a result, customer representatives are most important components of such call centers. The customer representatives first welcome the customers. The customers assume that the agents represent both the company and themselves. Thus, the quality of the service by given the agents represent the company. In this context, the performance of the agents are extremely important for the company. Staffing costs account for over half of a call center's total operations costs. Every call center has its own performance measurements that help internal managers to determine the level of success or failure of various agent activities. In this study, it is considered the criteria that the call centers consider in performance appraising of the customer representatives. The Cluster Analysis and Multidimensional Scaling techniques are used to classify the performance criteria. Clustering is the grouping of similar objects using data from the objects (Seber, G.A.F., 1984). This study is aimed to classify the customer representatives according to their similar performance characteristics using Cluster Analysis. The data used in analysis is taken from a inbound call center in Istanbul which belongs to 190 employees. This data contains number of calls, sales and churn rates. Firstly hierarchical clustering methods were used to decide the number of clusters. Five different performance levels (groups) were created and then were used Multidimensional Scaling. The basic result of multidimensional scaling is a spatial map. Similar results were obtained when two analysis results were compared. It is seen the best variables for evaluating the performance of employees are the number of calls and sales values. In the clustering analysis a clear clustering was occurred especially according to the number of calls. In multidimensional scaling outcomes, it is easier to observe customer representatives that differ from other performance criteria, such as sales, sales proposal and cancellation. The evaluation of employee performance is of great importance for both managers and employee motivation. A fair assessment can be made using Cluster Analysis for employee performance evaluation.

Keywords:

Performance Evaluation, CRM, Cluster Analysis, Multidimensional Scaling, Call Center

JEL Classification: C38, M50