

## **Identification of Congestion with DEA Approach**

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### **Abstract**

The economic concept of “congestion” is a widely observed phenomenon either in micro or macro level of industry. The presence of congestion is an economic state where inputs are overly invested. Congestion is identified and said to be present whenever reduction in one or more inputs can be associated with increases in one or more outputs or proceeding in reverse , when increases in one or more inputs can be associated with decreases in one or more outputs without worsening any other input or output. In other words, congestion is identified with input increments that result in output decrements. The presence of congestion impacts the overall efficiency of a firm. In such a case it is inevitable not to measure the presence and the amount of congestion. There are different approaches to measure congestion from an empirical perspective. One of the approaches that deals with congestion is the one which is introduced by Cooper, W.W. & et al.in 1996. The approach uses DEA efficiency models to investigate congestion. The primary aim of the present study is to determine the amount of congestion in Turkish universities using the DEA approach.

**Keywords** : Congestion, Data Envelopment Analysis (DEA), Turkish universities.