

# APPLICATION OF FACTOR ANALYSIS IN THE INVESTIGATION OF COAL MINING PARAMETER

---

**Süheyla Yerel Kandemir**

*Bilecik Şeyh Edebali University, Bilecik, Turkey*  
syerel@gmail.com

**Hüseyin Ankara**

*Eskişehir Osmangazi University, Eskişehir, Turkey*  
hankara@ogu.edu.tr

**Keywords:** Coal Mining, Parameter, Eigenvalues, Factor Analysis, Multivariate Statistic Analysis.

## ABSTRACT

In this paper, the selected coal mining parameter such as pickling, production, sale and investments are investigated by using the factor analysis. Factor analysis is one of the multivariate statistical analysis techniques. The main purpose of factor analysis is to reduce the contribution of less significant variables. As a result for this analysis, a small number of factors is usually account for approximately the same amount of information as do the larger set of original variables.

According to the selected coal mining parameter, the first two eigenvalues were found to be bigger than 1, Thus, factor analysis revealed two factors including Factor 1 and Factor 2. Factor 1 was associated pickling and investments. Factor 2 was composed production and sale. The factors are explaining the %76.12 of the total variance in the coal mining parameters. Finally, it was determined that the factor analysis usefulness for analysis and interpretation of coal mining parameters.