A topsis-based performance assessment study in wood panel industry

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Abstract: One of the important elements of economic and social development is production activities. Wood panel sector which is a leading producer of byproducts in forest products sector has an important place especially in the development and competition of the furniture sector. Performance analysis is defined as the collecting, analyzing and reporting process of data on a regular and systematic basis, In order to follow resources used, product and services produced and results obtained by an company. The aim of this study is to assess performance of 3 wood panel manufacturers taking place among the best 500 firms explained for the year 2015 in the Journal of FORTUNE Turkey. These companies have superiority in terms of different performance factors. However, to make a holistic assessment, it was used TOPSIS method which is one of the multi-criteria decision making techniques. TOPSIS approach includes all criteria (performance factors) into the solution, in order to provide a single result. In order to evaluate the performance of these manufacturing companies; financial performance factors such as equity, active assets, leverage ratio, number of employees, net sales and operational profit margin factors were analyzed. The financial performance scores of the companies were calculated and were evaluated based on their score proximity to the positive value and negative value range (ideal values) according to the TOPSIS method. As a result of study, the findings suggest that Yıldız Sunta MDF Company (ideal value: 0.7861) is first place in terms of performance in wood panel industry. Other companies were determined as Çamsan Company (ideal value: 0.6549) and AGT Company (ideal value: 0.2526) respectively. The TOPSIS method provides an objective evaluation opportunity for decision makers by evaluating a large number of evaluation criteria. Thus, these results provide information about the financial performance of companies to managers and facilitate decision-making for existing or potential investors.

Keywords: Wood panel industry, Performance analysis, TOPSIS method