

BURSA MALAYSIA NETWORK ANALYSIS: EVIDENCE FROM MINIMUM SPANNING TREE (MST) METHOD

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ABSTRACT

This paper aims to investigate the topological structure of Malaysian shariah stock market in the year 2014 until 2018 by using daily closing prices of the 122 shariah stocks. The method used to construct the network is the minimum spanning tree (MST) by using Kruskal's algorithm. Besides, the important stocks in the network were determined using centrality measures such as degree, betweenness, closeness, eigenvector and eccentricity centrality measures. In order to identify the overall role of each stock, the overall centrality measure was calculated using principal component analysis (PCA). The results show that, during the five years of study, twelve main clusters are determined, and the most important stock in the network was Muhibbah Engineering (5703) from the construction sector. This study will help the investors, policy-makers, academicians and others to identify the current five years the latest topological structure of shariah-compliant stocks in Malaysia as well as the most critical stocks and sectors in Malaysia market.

Keywords: Bursa Malaysia, shariah-compliant stock, minimum spanning tree, centrality measure, principle component analysis.