



## Determination of seasonal impacts on log prices in auctions and future log price forecast

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**Abstract:** Seasonality refers to periodic fluctuations that occur regularly in certain business areas based on a certain season. Forestry activities are influenced by the seasons because of its ability to be open to external factors. Some forestry activities, such as the increase in firefighting activities in summer, the increase of spring afforestation activities, and the increase of wood production activities in spring and summer months, are examples of seasonal effects. Because of the dependence of production on seasonal conditions, the effects of seasonality are also seen on log sales prices. In this study, the seasonal effects on the auction log sales prices of third-class normal sized Fir (*Abies nordmanniana subsp. bornmülleriana Mattf.*), Black pine (*Pinus nigra subsp. pallasiana*), Beech (*Fagus orientalis*) and Scots pine (*Pinus silvestris*) in the Kastamonu Regional Directorate of Forestry, which provides the largest log product supply in Turkey, has been determined and the log prices for the next year were estimated. For this purpose, 103060 auction sales figures were used in the Kastamonu Regional Directorate of Forestry between 2009-2016. For this purpose, time series analysis was used and analyzes were performed using Microsoft Excel. According to the results of the study, it was determined that all of the third-class normal height Fir, Black pine, Beech and Scots pine logs had a seasonal effect on the auction selling prices. It was determined that winter and spring seasons are positive on log prices and summer and autumn seasons are negative effects.

**Keywords:** Auction log sales price, Seasonality effect, Fir log, Black pine log, Beech log, Scots pine log, Kastamonu Regional Forest Directorate, Turkey