STOCK MARKET FORECASTING OF THE PLYWOOD INDUSTRY IN INDONESIA

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Abstract

Understanding and predicting customer demand is an essential for manufactures to avoid stock-out and maintain adequate inventory levels. Therefore, forecasts must be as accurate as possible because many activities within the firm are based on the sales forecasts, particularly for planning of raw material. While forecasts are never perfect, they are necessary to prepare for actual demand. In order to maintain an optimized inventory and effective supply chain accurate demand forecasts are imperative. The aim of this study was to determine projected sales or predict the number of stock market needed of the plywood industry for the next three years (medium term forecasting). This study was focus on the plywood industry in South Sulawesi, Indonesia. For the purpose of the study, data sales for fifteen years (1997-2011) were collected. The obtained data were analyzed by using double exponential smoothing model. Mean Absolute Percentage Error, Mean Squared Error and Mean Absolute Deviation are also used to calculating demand sales forecast accuracy. The results indicated that demand of plywood in South Sulawesi will continue to rise. Forecast shows that export market there has been a significant increase in the value of the volume. On the other hand, the local market is forecast to decrease for next three years.

Keywords: stock market forecasting, plywood industry, exponential smoothing model

Introduction

Indonesian plywood industry was set up in the later part of the 1960s and began to develop rapidly in 1980s, when the Government issued a policy requiring every forest concessionaire to establish a wood-processing plant. This policy was followed by on the banning of logs export in 1985. The Government policy encouraged the growth of domestic wood industries, mainly the plywood industry, were only 3 companies, and it increased to 101 companies in 1980. It further increased in 1987 to 118 companies, and in 1992 the number of companies reached 120 [1]. The plywood industry hit its peak in 1993, when the manufacturers employed up to 455,500 workers and manufactured 10 million m³ of plywood, with 90% heading to export markets. Since then, production has declined to 3.1 million m³ in year 2008, a drop of 27% compared to 2007. In 2008, Indonesia exported 2.5 million m³ of plywood, worth USD 1.5 billion. It faced the grim prospect of a further decline in exports by at least 40% in 2009 [2].

The government policies relating to the forestry industry have spurred highest growth of timber industry and reached its peak in the 1990s. However, the growth of this