

ABSTRACT

The development of the design of the company's strategy is growing in line with the changing times in which every company competing with the aim of meeting customer needs. PT.KTG is a company engaged in the heavy equipment has a philosophy "your total partner", which has the meaning that the sale of the product must always be supported by the availability of services. In order to be able to get a competitive advantage, companies are trying to increase the power effectiveness for the best local market in particular industry Forklift unit, making it possible to get a more competitive price. The basic issue of concern is how the inventory system of the product is done so as to benefit the company in terms of efficiency of inventory management and material procurement cost reduction.

Initial analyzes by forecasting using time series forecasting models. Methods Linear Regression most low against ME, MAD and MAPE and compared with QM Software (Quantitative Management) for Windows version 3.0 Linear Regression method feasible to use. Forecasting projected results used as a basis for comparative analysis simulation inventory costs. The second analysis In calculating the amount of raw material ordering (lot sizing) using five methods, the method of Q models, Method P models, safety stock, re-order point and Maximum Inventory.

Analysis of inventory system by comparing two methods of Q models and P models with reorder point once every 1 year produces the smallest total inventory costs.

Keywords: Forecasting, Naïve Method, Moving Average, Weight Moving Average, Exponential Exponential Smoothing, Smoothing With Trend, Linear Regression, Method Q models, Method P models, safety stock, re-order point and Maximum Inventory

ABSTRAK

Perkembangan perancangan strategi perusahaan semakin berkembang seiring dengan perkembangan jaman dimana setiap perusahaan saling berkompetisi dengan tujuan memenuhi kebutuhan pelanggan. PT.KTG merupakan perusahaan yang bergerak dibidang alat berat yang mempunyai filosofi “*your total partner*”, yang memiliki makna bahwa penjualan produk harus selalu didukung dengan ketersediaan pelayanan. Dalam rangka untuk bisa mendapatkan keunggulan bersaing, perusahaan berusaha untuk meningkatkan kekuatan efektifitas untuk pasar local terbaik khususnya industry unit Forklift, sehingga memungkinkan untuk mendapatkan harga yang lebih kompetitif. Dasar pokok permasalahan adalah bagaimana sistem persediaan terhadap produk tersebut dilakukan sehingga dapat memberikan keuntungan bagi perusahaan dalam hal efisiensi pengelolaan persediaan dan penekanan biaya pengadaan material.

Analisa awal dengan melakukan peramalan menggunakan model *time series forecasting*. Metode *Linear Regression* yang paling rendah terhadap ME, MAD, dan MAPE serta dibandingkan dengan Software *QM (Quantitative Management) for Windows versi 3.0* metode *Linear Regression* layak untuk digunakan. Hasil proyeksi peramalan dijadikan sebagai dasar untuk melakukan simulasi analisa perbandingan biaya inventori. Analisa kedua Dalam melakukan perhitungan jumlah pemesanan bahan baku (lot sizing) menggunakan 5 metode, yaitu Metode Q model, Metode P model, *safety stock*, *re-order point* dan Persediaan Maksimum.

Analisa sistem inventori dengan membandingkan 2 metode Q model dan P model dengan *reorder point* setiap 1 tahun sekali menghasilkan total biaya inventori terkecil.

Kata Kunci : *Forecasting, Naïve Method, Moving Average, Weight Moving Average, Exponential Smoothing Exponential, Smoothing With Trend, Linear Regression, Metode Q model, Metode P model, safety stock, re-order point dan Persediaan Maksimum*

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