

ABSTRAK

Nur Musthofa, 183700083, Analisa *Forecasting* Produk Flexibel Packing untuk pemenuhan permintaan (Studi Kasus PT Lumina Packaging), Program Studi Teknik Industri Fakultas Teknik Universitas PGRI Adi Buana Surabaya, 2022.

Skripsi ini merupakan hasil Penelitian yang dilatar belakangi oleh adanya kecenderungan kekurangan (*shortage*) persediaan produk *flexibel packing* pada periode bulan tertentu dan kelebihan stock (*overstock*) pada jumlah akhir periode. Kekurangan (*shortage*) yang dimaksud disebabkan karena beberapa mesin produksi telah berusia cukup lama, sehingga efisiensi kinerja mesin menurun sedangkan permintaan relatif stabil. Penelitian ini bertujuan untuk mengetahui berapa estimasi persediaan, permintaan serta estimasi biaya produk *flexibel packing* (*roll packing*, *blown film*, dan *vacuum pack*) pada periode berikutnya dengan upaya peramalan (*forecasting*) di PT. Lumina Packaging Trosobo, Sidoarjo.

Penelitian ini merupakan penelitian kuantitatif yang berparadigma peramalan (*forecasting*) dengan metode *trend linier* dan *exponential smooting*. Teknik pengumpulan data penelitian ini menggunakan teknik wawancara, studi literatur, dan observasi. Data yang diambil dari perusahaan diperoleh dengan teknik purposive sampling dalam bentuk laporan permintaan, persediaan, dan biaya produk *flexibel packing* periode bulan Januari-Desember tahun 2021 yang bersumber dari divisi marketing PT. Lumina Packaging. Analisa data penelitian ini berdasarkan nilai *tracking error* setiap produk yang meliputi *roll packing*, *blown film*, dan *vacuum pack*.

Hasil penelitian dari skripsi ini dikatakan cukup akurat dan layak diaplikasikan pada perusahaan kedepannya. Karena masing masing ramalan produk memiliki rata-rata persediaan diantara lain *roll packing* sebanyak 615 rolls dengan estimasi penurunan 22,8%, *blown film* sebanyak 760 roll dengan estimasi penurunan 4,4%, dan *vacuum pack* sebanyak 6361 pack dengan estimasi penurunan 17,8% dengan rata-rata nilai *tracking error* setiap produk -1 dari batas yang ditentukan $e < 4$.

Kata kunci: permintaan, persediaan, peramalan

ABSTRACT

Nur Musthofa, 183700083, Forecasting Analysis of Flexible Packing Products to fulfill demand (Case Study of PT Lumina Packaging), Industrial Engineering Study Program, Faculty of Engineering, Universitas PGRI Adi Buana Surabaya, 2022.

This thesis is the result of research which is motivated by the tendency of shortage (shortage) supply of flexible packing products in a certain month period and excess stock (overstock) at the end of the period. The shortage in question is due to the fact that some production machines are quite old, so that the efficiency of the machine's performance decreases while demand is relatively stable. This study aims to find out how much is the estimated supply, demand and estimated cost of flexible packing products (roll packing, blown film, and vacuum packs) in the next period with forecasting efforts at PT. Lumina Packaging Trosobo, Sidoarjo.

This research is a quantitative research with the paradigm of forecasting (forecasting) with the linear trend method and exponential smoothing. Data collection techniques in this study used interview techniques, literature study, and observation. Data taken from the company was obtained by purposive sampling technique in the form of reports on demand, supply, and costs of flexible packing products for the period January-December 2021, sourced from the marketing division of PT. Lumina Packaging. The analysis of this research data is based on the tracking error value of each product which includes roll packing, blown film, and vacuum packs.

The research results from this thesis are said to be quite accurate and feasible to be applied to companies in the future. Because each product forecast has an average inventory, including roll packing of 615 rolls with an estimated decrease of 22.8%, blown film of 760 rolls with an estimated decrease of 4.4%, and vacuum packs of 6361 packs with an estimated decrease of 17.8. % with the average tracking error value for each product - 1 from the specified limit $e < 4$.

Keywords: *demand, supply, forecasting*