Analisis Optimalisasi Produksi Dalam Pencapaian Keuntungan Maksimum dengan Pendekatan *Linear Programming* PT Mandiri Jogja Internasional

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ABSTRAK

Produktivitas dan efisiensi dalam produksi sangat penting bagi kelangsungan bisnis suatu perusahaan. Optimalisasi produksi dapat meningkatkan kualitas produk dan mengurangi biaya produksi. Oleh karena itu, penting bagi perusahaan untuk terus mengoptimalkan produksi. PT Mandiri Jogja Internasional dalam proses produksi belum memiliki strategi perencanaan berapa banyak sepatu dan sandal yang seharusnya diproduksi setiap harinya, dalam pembelian bahan baku pemilik usaha hanya memperkirakan jumlah bahan baku yang dibutuhkan untuk proses produksi. Sehingga dalam proses produksi sepatu dan sandal penggunaan sumber daya belum optimal dan efisien. Salah satu cara untuk meminimalisir permasalahan di atas adalah dengan menganalisis optimalisasi produksi dalam pencapaian keuntungan maksimum pada perusahaan tersebut dengan menggunakan metode linear programming.

Penelitian ini menggunakan metode kuantitatif. Pengumpulan data dilakukan dengan melakukan observasi langsung dan wawancara dari pihak perusahaan. Teknik analisis data yang digunakan dalam penelitian ini adalah menggunakan pemrograman linier dengan aplikasi POM QM Windows 5.2.

Hasil penelitian ini menunjukkan bahwa jumlah produksi sepatu optimal adalah 363 pasang yaitu 123 pasang sepatu tipe A, 120 pasang sepatu tipe B, dan 120 pasang sepatu tipe C, sedangkan jumlah optimal produksi sandal yaitu 366 dengan rincian 122 pasang sandal tipe D, 122 pasang sandal tipe E, dan 122 pasang sandal tipe F. Selain itu, dengan menggunakan *linear programming* metode simpleks didapatkan keuntungan maksimal dari masing-masing produk sepatu sebesar Rp129.660.400 dan produk sandal sebesar Rp85.297.770.

Kata kunci: Optimalisasi produksi, Keuntungan maksimum, *Linear programming*

Analysis of Production Optimization in Achieving Maximum Profits with the Linear Programming Approach PT Mandiri Jogja Internasional

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ABSTRACT

Productivity and efficiency in production are very important for the continuity of a company's business. Production optimization can improve product quality and reduce production costs. Therefore, it is important for companies to continue to optimize production. PT Mandiri Jogja Internasional in the production process does not yet have a planning strategy for how many shoes and sandals should be produced each day, in purchasing raw materials the business owner only estimates the amount of raw materials needed for the production process. Thus, in the production process of shoes and sandals the use of resources is not optimal and efficient. One way to minimize the problems above is to analyze the optimization of production in achieving maximum profits in these companies by using the linear programming method.
This research uses quantitative methods. Data collection was carried out by direct observation and interviews from the company. The data analysis technique used in this study was linear programming with the POM QM Windows 5.2 application.
The results of this study indicate that the optimal number of shoe production is 363 pairs consisting of 123 pairs of type A shoes, 120 pairs of type B shoes, and 120 pairs of type C shoes, while the optimal number of sandal production is 366 with details of 122 pairs of type D sandals, 122 pairs of type E sandals, and 122 pairs of type F sandals. In addition, by using linear programming the simplex method, the maximum profit from each shoe product is IDR 129,660,400 and sandal products is IDR 85,297,770.

Keywords: *Optimization of production, Maximum profit, Linear programming*

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