# Optimizing the Manpower Distribution in Manual Packaging Section through Line Balancing Method

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**Abstract:** The study demonstrates a line balancing approach to optimize the manpower distribution in a manual packaging line of a local food manufacturing company. The main objective of the study is to control the labor cost for manual packing of products and also to prevent forcing the workers from performing beyond their normal pace. The initial phase is the establishment of standard time for manual activities involved in the process. Subsequently, a line balancing approach aids in determining the optimal number of workers for every workstation. The study uses different measures to gauge the success of line configurations developed from the line balancing iterations. The considerations made in the study are eliminating the build-up of work-in-process, minimizing the deviation of workstations utilizations, maximizing the capacity of the line and trimming down the labor-hour expended per unit of product. The study targets to develop a decision support system for estimating the ideal number of crew for every workstation. The study also highlights the advantages of having "walking-workers" performing with conventional fixed workers.

**Keywords*:*** *Line Balancing, Manpower, Standard Time, Time Study*