ABSTRACT

PT. XYZ is a distribution company of FMCG (Fast Moving Consumer Goods) products such as noodle, snack, biscuit, cereal, and seasoning which is located in Bandung. On its inventory management, stock out that is influenced by demand fluctuative, is often occurred. This causes lost sales and reduces service level of the company because of the unfulfilment demand.

Variation in demand causes the demand is characterized probabilistic. Therefore in this research, inventory management with Q model probabilistic method is being used to minimize the probability of stock out, with deciding the inventory policy for reorder quantity and safety stock based on reorder point which has been determined. Calculated inventory policy for all of SKU (Stock Keeping Units) will result inventory total cost and service level.

Calculation using Q model probabilistic method gives inventory total cost reduction until 30,05% and increasing service level until 4,31%.

Key words : Inventory, Fast Moving Consumer Goods, Stock Out, Probabilistic, Q Model.