ABSTRACT

UMKM XYZ is a micro business engaged in the field of convection business, currently the company runs a convection business business that focuses on the production of alma mater suits. The problem at UMKM XYZ is currently experiencing demand that cannot be fulfilled because it exceeds its production capacity. The problem is faced with the time of each operator that has not been balanced due to the division of time that has not been standardised. Problem solving will be done by forecasting consumer demand and planning resource requirements based on demand forecasting using the linear regression method with the concept of takt time. The results of demand forecasting get a MAPE error value of 3.466%. Takt time is done to find the standard time limit on the work process of each operator. The takt time results get the standard time limit for each operator is 888 seconds. The results of the planning, getting the required number of operator employees as many as 17 and the number of machines needed as many as 13 machines. The addition of the number of operator employees and machines makes the production capacity of UMKM XYZ increase to 754 with an average demand forecast of 717 and the simulation of planning results is appropriate in fulfilling demand forecasting. Estimated profits related to the planning results get an increasing amount of profit based on cost analysis evaluation, this indicates that planning has been done well on the problems that occur in UMKM XYZ. **Keywords — Convection, Takt Time, Linear Regression, Forecasting, Production Capacity.**