A novel heuristic for optimization aggregate production problem: Evidence from flat panel display in Malaysia

Abstract

This paper contribute to the flat panel display industry it terms of aggregate production planning. Methodology: For the minimization cost of total production of LCD manufacturing, a linear programming was applied. The decision variables are general production costs, additional cost incurred for overtime production, additional cost incurred for subcontracting, inventory carrying cost, backorder costs and adjustments for changes incurred within labour levels. Model has been developed considering a manufacturer having several product types, which the maximum types are N, along a total time period of T. Results: Industrial case study based on Malaysia is presented to test and to validate the developed linear programming model for aggregate production planning. Conclusion: The model development is fit under stable environment conditions. Overall it can be recommended to adapt the proven linear programming model to production planning of Malaysian flat panel display industry.