

An Integrated Model Of Kano And Quality Function Deployment For Evaluation Of Lean Production Tools In Assembly Environment

Amir Azizi, Daniel Osezua Aikhuele

Faculty of Manufacturing Engineering Universiti Malaysia Pahang, 26600 Pekan, Pahang Darul Makmur, Malaysia

ABSTRACT

The idea of introducing decision support system in manufacturing is to enable companies work more economically by using their manufacturing skills, time, space, money, and other manufacturing influencing factors more efficiently and effectively. The challenges associated with decision-making in manufacturing are numerous and sometimes complicated, most especially when faced with large number of factors and criteria to choose from. Many of the decisions in practice are usually made without a formal method or discussion and in most cases often leads to conflicts and waste of resources. In this study, a decision making model was developed for the evaluation and selection of lean production tools for the implementation of lean technique in a product assembly environment using a combined Kano model and Quality Function Deployment (QFD). The combined Kano model and QFD method was tested and applied in a simulated multiple decision-making problems with numerical examples. The proposed model in this study was found to be helpful and effective in dealing with multi-criteria problems.

KEYWORDS: Quality function deployment; Kano Model; Lean production; Assembly; Decision-Making Problem

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