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## DEALING WITH KANO MODEL DYNAMICS: STRENGTHENING THE QUALITY FUNCTION DEPLOYMENT AS A DESIGN FOR SIX SIGMA TOOL

*Hendry Raharjo*

### Abstract

Six Sigma has been known to be a breakthrough business strategy to achieve customer satisfaction through defect reduction and cost optimization. A flawless product or service would, however, be of little value if it does not sell. Thus, it is of considerable importance to begin with the customer. Quality Function Deployment (QFD), as a customer-driven tool in Design for Six Sigma (DFSS) toolset, can be regarded as one of the most powerful tools to serve this purpose. The success of QFD user relies heavily on the accuracy of the primary input, that is, the Voice of the Customer (VOC). To better identify and obtain more accurate VOC, the use of Kano Model in QFD has been incorporated in the literature. Unfortunately, the dynamics of Kano Model, such as the fact that what now delights the customer will become an expected need in the future is often oversimplified and has not been adequately addressed. The aim of this paper is to shed some light to Kano Model dynamics modeling by providing a quantitative technique which is based on compositional data analysis. It is expected that a timely update of customer needs data may serve as a useful indicator to monitor the progress of how well a company satisfies its customer over time, and at the same time provide a ground for formulating the next strategies as to enable the company to respond differently and continuously over time of its operations. To give some practical insights, an illustrative example is provided.

### Keywords

six sigma, kano model dynamics, compositional data, QFD.

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Quality Function Deployment (QFD), as a customer-driven tool in Design for Six Sigma (DFSS) toolset, can be regarded as one of the most powerful tools to serve this purpose. The success of QFD use relies heavily on the accuracy of the primary input, that is, the Voice of the Customer (VOC). The aim of this paper is to shed some light to Kano Model dynamics modeling by providing a quantitative technique which is based on compositional data analysis. It is expected that a timely update of customer needs data may serve as a useful indicator to monitor the progress of how well a company satisfies its customer over time, and at the same time provide a ground for formulating the next strategies as to enable the company to respond differently and continuously over time of its operations. Cost Of Quality. Design for Six Sigma (DFSS). Efficiency of Estimators. Process Maps and Flow Charts. Gap Analysis. Common & Special Cause Variation. Quality Function Deployment (QFD). In Control Process. Kanban. Kano Model. Key Performance Indicators (KPI). Lean Production. Management Strategies. MANOVA. Multivariate Analysis. Pareto Charts. Six Sigma is specifically designed to help large organizations with quality management. In 1998, Jack Welch, CEO of GE, helped thrust Six Sigma into the limelight by donating upwards of \$1 million as a thank you to the company, recognizing how Six Sigma positively impacted GE's operations and promoting the process for large organizations. After that, Fortune 500 companies followed suit and Six Sigma has been popular with large organizations ever since. Six Sigma principles. The Six Sigma DMAIC project methodology includes five phases, each represented as a letter in the DMAIC acronym. These include: Define the problem, the customer, the project requirements and the ultimate goals and expectations of the customer. Six Sigma

Design for Six Sigma. New Product Development. New Service Development Determine Market Strategies. Key Elements Identify the Voice of the Customer Translate Voice of the Customer into Critical to Quality Characteristics (CTQs) Rank the CTQs into three categories: Dissatisfier. - Must bes Cost of Entry. The Kano Model: Recent Developments. The eighteenth symposium on Quality Function Deployment. Related Interests. Strategic Management. Ch11-Dynamic Behavior & Stability of Closed-loop Control System. Uploaded by. Mark Goodmore. CCNA Dis4 - Chapter 6 - Using IP Address in the Network Design\_ppt [Compatibility Mode]. Uploaded by. <http://heiserz.com/>. Cognos Time and Date Functions. Uploaded by. maneniin2042.