DEVELOPMENT OF QFD MODEL : INTEGRATION OF KANO QUALITY FUNCTION DEPLOYMENT AND FUZZY GOAL PROGRAMMING MODEL

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ABSTRACT

Customer preferences based on criteria is utilized by company for achieving a customer satisfaction in designing a product development. In the point of view of producer taking into account of objective to maximize a satisfaction of customer is important. To do so, QFD is able to accommodate voice of customers into product that are suitable for attribute of the customer requirement. However traditional QFD model considered only to maximize customer satisfaction but not simultaneously to minimize cost of product development. Meanwhile, Kano theory could be useful to identify technical responsiveness attribute that could be satisfied for the customer. An integration of Kano, QFD and Fuzzy Goal Programming allow to make a decision of product development by which customer satisfaction and minimize cost of development are well considered.

Fuzzy theory offers a framework for representing vague information that reflects the real condition. Based on relationship between technical response and customer requirement are in fuzziness condition by nature. This study proposed a model which combine fuzzy model into problem of multi objective goal programming by which a multi objective solution could be achieved simultaneously. This research generated a new mathematical model that consists of maximization of customer satisfaction and minimization cost of development.

Keywords : Product development, QFD, Kano, Fuzzy Goal Programming