

## عنوان مقاله:

A fuzzy regression decision methodology for Six Sigma projects selection

## محل انتشار:

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## نویسندگان:

Hooman Malekly - *Department of Industrial Engineering, Graduate School, Islamic Azad University..south Tehran Branch, Young Researchers Club, Tehran, Iran*

Masoud Salehi

## خلاصه مقاله:

The evolution of Six Sigma has gained from a method or set of techniques to a movement focused on business-process improvement. Business processes are transformed through the successful selection and implementation of competing Six Sigma projects. However, the efforts to implement a Six Sigma process improvement initiative alone do not guarantee success. To meet aggressive schedules and tight budget constraints, a successful Six Sigma project needs to follow the proven define, measure, analyze, improve, and control methodology. Any slip in schedule or cost overrun is likely to offset the potential benefits achieved by implementing Six Sigma projects. In this paper we aim to develop a novel decision methodology based on fuzzy linear regression to select one or more Six Sigma projects that result in the maximum benefit to the organization. In this regard, fuzzy regression is introduced in the model to assess the vagueness of functional relationships among decision variables and to account for inexact data. The usefulness of the methodology is validated by an application of a real-world problem in a leasing corporation and comparing the results with the current status. The results indicate that the proposed methodology can provide a practical tool to significantly satisfy the organization's objectives.

## کلمات کلیدی:

Fuzzy set theory, Project selection, Regression model, Six Sigma

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