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Proving the efficiency of alternative linear regression model based on mean square error (MSE) and average width using aquaculture data (Article)

(Open Access)

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Abstract

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Multiple linear regressions (MLR) model is an important tool for investigating relationships between several response variables and some predictor variables. This method is very powerful and commonly used in finance, economic, medical, agriculture and many more. The main objective of this paper is to compare mean square error (MSE) and the average width between alternative linear regression models and linear regression model. The alternative method in this study is a combination of four methods, namely multiple linear regression method, the bootstrap method, a robust regression method and fuzzy regression through the construction of algorithms by using SAS software. Typically, the alternative method optimized by minimizing the mean square error (MSE) and average width. The results of the study showed a positive improvement for the estimation of parameters generated through these alternative methods. © BEIESP.

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(Alternative linear regression)   (Average width)   (Mean square error)

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