

# **The LASSO (Least Absolute Shrinkage and Selection Operator) Method to Predict Indonesian Foreign Exchange Deposit Data**

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## **Abstract**

*Multicollinearity is the condition that there is a correlation between independent variables which is a problem. This event often occurs in regression analysis. LASSO (Least Absolute Shrinkage and Selection Operator) method regression can reduce multicollinearity and increase the accuracy of linear regression models. The lasso parameter estimator can be solved by the LARS (Least Angle Regression and Shrinkage) algorithm which calculates the correlation vector, the largest absolute correlation value, equiangular vector, inner product vector, and determines the LARS algorithm limiter for LASSO. LASSO method regression with a more detailed procedure and selecting the best model using the  $C_p$  Mallows statistics is discussed in this paper. LASSO method will be applied to Indonesia's foreign exchange deposit data.*

## **Keywords**

*LASSO, LARS,  $C_p$  Mallows and Multicollinearity*

## **Acknowledgements**

Acknowledgments are conveyed to the Rector, Director of Directorate of Research, Community Involvement and Innovation, and the Dean of Faculty of Mathematics and Natural Sciences, Universitas Padjadjaran.

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**Abdul Talib Bon** is a professor of Production and Operations Management in the Faculty of Technology Management and Business at the Universiti Tun Hussein Onn Malaysia since 1999. He has a PhD in Computer Science, which he obtained from the Universite de La Rochelle, France in the year 2008. His doctoral thesis was on topic Process Quality Improvement on Beltline Moulding Manufacturing. He studied Business Administration in the Universiti Kebangsaan Malaysia for which he was awarded the MBA in the year 1998. He's bachelor degree and diploma in Mechanical Engineering which his obtained from the Universiti Teknologi Malaysia. He received his postgraduate certificate in Mechatronics and Robotics from Carlisle, United Kingdom in 1997. He had published more 150 International Proceedings and International Journals and 8 books. He is a member of MSORSM, IIF, IEOM, IIE, INFORMS, TAM and MIM.