

## Copula-Based Estimation of Direct and Indirect Effects in Path Analysis Models

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**Abstract :** Path analysis is a statistical technique used to evaluate the direct and indirect effects of variables in path models. One or more structural regression equations are used to estimate a series of parameters in path models to find the better fit of data. However, sometimes the assumptions of classical regression models, such as ordinary least squares (OLS), are violated by the nature of the data, resulting in insignificant direct and indirect effects of exogenous variables. This article aims to explore the effectiveness of a copula-based regression approach as an alternative to classical regression, specifically when variables are linked through an elliptical copula.

**Keywords :** path analysis, copula-based regression models, direct and indirect effects, k-fold cross validation technique

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