

## ABSTRACTS

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### **COLLINEARITY FACTORS IN ASSESSING THE PARAMETERS OF THE COBB-DOUGLAS PRODUCTION FUNCTION**

Theoretical and methodological problems of the use of the regression models, including linear homogeneous Cobb-Douglas production function, in the economic analysis of the major indicators of the economic activity of the enterprises are considered. The features of estimating the parameters in a linear correlation between the productive resources, in particular, the impact of collinearity of the aggregated factors such as “capital” and “labor” on the accuracy and stability of the model coefficients. The mathematical and statistical measures of collinearity of factors of Cobb-Douglas function are presented. It is proposed to change from the traditional model with two factors of Cobb-Douglas function with linearly dependent production resources to the one- and two-factor model of labor productivity (of capital productivity) with zero or reduced collinear. On the example of PJSC “Odeskabel” data the benefits of such a transition are illustrated and the effects of the collinearity of the productive function Cobb-Douglas factors for the modeling results are analyzed. The recommendations to overcome these consequences in a small sample are given.