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**MODELLING THE NON-LINEAR DEPENDENCIES BETWEEN THE  
GOVERNMENT EXPENDITURES AND THE SHADOW ECONOMY  
USING DATA-DRIVEN APPROACHES**

**Abstract:**

This paper aims to provide an original perspective on the Machine Learning algorithms applied for current macroeconomic phenomena and of interest both for society and predominantly for the states that need leverage in sustaining the formal economy. The research has revealed that shadow economy is also influenced by the decisions of the government, when it comes to the distribution of expenditure by health, education and social protection sectors.

**Keywords:**

machine learning, shadow economy, government spending

**JEL Classification:** C63, E26, G28