A parsimonious model of Government debt-to-GDP and GDP growth rate

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Abstract

In this paper, I describe a parsimonious model of Government debt-to-GDP and GDP growth rate.
The paper ends with "The End"

Introduction

In a previous paper, I've described the Ghosh factor of an independent variable X vis-à-vis the dependent variable y.

In this paper, I define a parsimonious model and then describe a parsimonious model of Government debt-to-GDP and GDP growth rate.

The definition of a parsimonious model

A model is **parsimonious** iff

1. the total number of variables, dependent and independent, is no more than five (5).
2. at least one of the independent variables is the Ghosh factor of another independent variable.
3. the explanatory power of the model is high ($R^2 \geq 50\%$).

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A parsimonious model of Government debt-to-GDP and GDP growth rate with the specification

$$y = \alpha_1 X + \alpha_2 G_X + \alpha_3 (y < \mu_y) + \alpha_4 (X \geq 120\%) + \epsilon$$

where
y is GDP growth rate
X is Government debt-to-GDP
G_X is the Ghosh factor of X
$(y < \mu_y)$ is a binary variable using a **windowed mean**
$(X \geq 120\%)$ is a binary variable
ϵ is the residual

is available here.

The End