

Model Misspecification as the Causes of Flypaper Effect [†]

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Abstract: The aim of this paper is to investigate the relationship between the Fly-paper effect (FPE) and possible errors in the specification of econometric models used in the empirical analysis of FPE. Using desk research method to gathering and analyzing scientific papers considering different aspects of misspecification problem, it was executed classification of papers in three groups depending on the type of errors in the model specification: incorrect functional form, incorrect choice of explanatory variables and incorrect statements about stochastic error of model. Research results showed that the wrong specification of the model affects the presence or absence of FPE) and the size of the FPE. The originality of this paper is reflected in the original classification of scientific papers devoted to the problem of misspecification of regression models used for econometric modeling of FPE. The contribution of this work is reflected in the identification of possible errors in the specification of the model for the empirical analysis of FPE and their implications on the properties of the parameter estimates of the used model.

Keywords: flypaper effect; misspecification; functional form; omitted variables

1. Objectives

Although the Flypaper effect (a phenomenon that claims that transfers from the central government to local government have a larger effect on local government expenditure than an equivalent increase in own local revenues) was discovered almost 50 years ago, it is very intensively studied in the literature of fiscal federalism and local public finance, both from a theoretical and even more from an empirical point of view [1–9]. The aim of this paper is to investigate the relationship between the Flypaper effect (FPE) and possible errors in the specification of econometric models used in the empirical analysis of FPE.

2. Methodology

There are a large number of scientific papers considering different aspects of the misspecification problem. In this paper, a desk research method was used to gather and analyze those papers, classifying them into three groups depending on the type of errors in the model specification: incorrect functional form, incorrect choice of explanatory variables (omitting relevant explanatory variables or including irrelevant variables) and incorrect statements about stochastic error of the model [10–20].

3. Results

Research results showed that misspecification of the regression model implies (a) biased and ineffective parameter estimates, (b) unbiased but ineffective parameter estimates or (c) biased parameter estimates depending on whether the source of error in the model specification is (a) omitting relevant explanatory variables, (b) including irrelevant variables, or (c) an incorrect functional form. Moreover, the results of the research showed that incorrect specification of the model affects both the manifestation (the presence or absence of FPE) and the size of the FPE.



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4. Implications

Examination of the impact of misspecification of the model on the empirical results—if FPE exists, if FPE is symmetric, what the size of FPE is—has particular importance for econometric modeling of FPE considering the importance of information on whether total local expenditures or some items of local expenditures in a specific country or specific region behave according to the FPE model or not, which is especially important not only for transfer policy but for fiscal policy as well.

5. Originality Value

The originality of this paper is reflected in the original classification of scientific papers devoted to the problem of misspecification of regression models used for econometric modeling of FPE, through pointing out the implications of different types of errors in model specification, and highlighting the importance of model specification tests and other elements of strategy in the process of choosing an appropriate model for empirical analysis of FPE.

6. Contribution

The contribution of this work is reflected in the identification of possible errors in the specification of the model for the empirical analysis of FPE and their implications on the properties of the parameter estimates of the used model. It also highlights the implications of the wrong specification of the model on the manifestation of FPE. Finally this work explains how it may contribute to a better understanding of the phenomenon of FPE.

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