The Effect of the Missing Data Quantity on Error of Regional Purchasing Power Parity

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Abstract: In the study of RPPP (Regional Price Parities Power), compared with GEKS (Gini-Elteto-Koves-Szulc), the CPD (Country Product Dummy) methods is more favored because it can estimate the error of regional dummy variable parameters in the regression equation and tolerate missing data. However, no studies have been conducted to estimate the overall error of RPPP (not only the error of regional dummy variable parameters), and the effect of the number of missing data on the error is not known. In this study, the error range of RPPP was estimated by bootstrap method using simulation data, and the influence of different data missing ratios on error was discussed. Related results can help people better understand the error range of RPPP and how much missing data is acceptable.

**Keywords** RPPP, CPD, GEKS, error estimating

**缺失数据数量对地区购买力平价误差的影响**

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摘要：在RPPP（Regional Price Parities Power）研究中，和GEKS(Gini-Elteto-Koves-Szulc) 相比，CPD(Country Product Dummy)方法由于可在回归方程中估计地区哑变量参数的误差和容忍数据缺失而更受青睐。但是尚未见到有研究对RPPP的整体误差（不仅仅是地区哑变量参数的误差）进行估计，数据缺失的数量对误差的影响也不可知。本研究采用模拟数据以bootstrap方法对RPPP的误差范围进行估计，并探讨了不同的数据缺失比例对误差的影响。相关结果可以帮助人们更好的理解RPPP的误差范围以及缺失多少数据是可以接受的。

关键词：地区购买力平价 国家产品虚拟法 GEKS，误差估计