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Mathematics

Testing absolute purchasing power parity in West Africa using fractional cointegration panel approach

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Abstract

One of the most effective ideas for comparing the values of two or more currencies is the purchasing power parity hypothesis (PPP). Most earlier works on PPP focused on using the standard cointegration approach by assuming a unit root for the observed series. This assumption is not always valid, especially in series with short-term dynamics. Thus, in this paper, we developed the fractional cointegrated panel approach for testing the absolute Purchasing Power Parity (PPP) model. The empirical illustration was achieved using the exchange rates and price ratios for the 16 West African countries for 52 years (1970 - 2021). The results from the fractional cointegration test confirm the presence of relative PPP for the panel of countries in the long run, while the estimation of long-run intercepts and cointegration vector confirms the absence of the absolute PPP for the panel of countries.

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Keywords

Purchasing power parity; Fractional cointegration; Panel unit root test; Panel cointegration test; ECOWAS countries

Subject classification codes