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# Towards solving the PPP puzzle: evidence from 113 countries

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## Abstract

Several different approaches have been followed by researchers to test the validity of Purchasing Power Parity (PPP). Since the introduction of the unit-root tests, researchers have applied a battery of these tests to determine whether the real exchange rates are stationary. If the answer is in the affirmative, PPP is validated. While application of the standard augmented Dickey–Fuller test has not provided much support for PPP, a test that incorporates nonlinearity in the rates has. Under both tests, however, the null of nonstationary is tested against the alternative of stationarity. In this article, when we switch the null with the alternative and apply Kwiatkowski et al. ([1992](#)) test, we provide relatively more support for the theory, getting closer and closer towards solving the PPP puzzle.

# Notes

<sup>1</sup> For some other issues such as adjustment speed and PPP see Paya et al. ([2003](#)), Bayesian unit root and PPP see Ahking ([1997](#)), different regions of a country and PPP see Carrion-I-Silvestre et al. ([2004](#)). For some application of cointegration technique and PPP, see Taylor ([1988](#)) and Enders and Chumrusphonlert ([2004](#)).

<sup>2</sup> For some other aspects of the puzzle, see Rogoff ([1996](#)).

<sup>3</sup> In response to the lack of evidence for the PPP theory, some researchers have turned to panel unit root tests for an answer. Examples of these studies include Papell and Theodoridis ([2001](#)), Macdonalds ([2002](#)), Alba and Park ([2003](#)), Bahmani-Oskooee and Miteza ([2004](#)), Koedijk et al. ([2004](#)) and Lopez and Papell ([2007](#)).

<sup>4</sup> For some other exchange-related and PPP issues see Moosa ([1994](#)), Beach et al. ([1993](#)), Bleaney ([1992](#)), Horne ([2004](#)), Baffoe-Bonnie ([2004](#)), Arize et al. ([2002](#)), Holmes ([2002](#)), Apergis ([1998](#)), Jung ([1995](#)) and Hojman ([1989](#)).

<sup>5</sup> This section closely follows Bahmani-Oskooee and Mirzaie ([2000](#)) and Bahmani-Oskooee and Kandil ([2007](#)) in this journal.

<sup>6</sup> Outlined by Equation 13 in Kwiatkowski et al. ([1992](#)) on page 165.

<sup>7</sup> Note that Taylor et al. ([2001](#)) also applied nonlinear tests on the dollar-based bilateral real rates of France, Germany, Japan and the UK and supported PPP. Except Japan, the KPSS test in this article supports PPP in the other three countries. Again, this could be due to the use of the REER.

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