

THE IMPACT OF PURCHASING POWER PARITY ON THE WELL-BEING OF THE POPULATION (IN THE CASE OF COUNTRIES)

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ANNOTATION

The theory of purchasing power parity in its simplest form determines that the various ratios of prices for goods in countries are equal to or proportional to the exchange rate. In practice, the calculation of the valuation depends on observable reasons, the exchange rate is quite different from price comparison, which requires special analysis and explanation, including the formulation and testing of a more complex theory of relative purchasing power parity and the exchange rate. The situation is further complicated by the presence of important barriers, a fairly large share of non-tradable goods in the consumption of economic agents, and the discovery of other reasons.

KEYWORDS: the impact, innovation, innovation potential, absorption potential, parity, small business.

Basic Approaches to Evaluation of the PPP Theory The attitude towards the theory of purchasing power parity has changed a lot over the past century - its implementation, both in the short term and in the expected perspective, has been repeatedly called into question. Over the past 50 years, a huge amount of work has been published on the empirical procedure for fulfilling purchasing power parity.

Data on prices and features of knowledge exchange for various time intervals for the indicated countries were studied in detail.

McCloskey Zecher (1984) found that in the Anglo-American period of the gold standard (before 1914), the theory held not only in the long run, but also in the medium run. Diebold, Husted, Rush (1991) found confirmation of this frequency for the six most frequent countries using data at a lower frequency but over a longer period of time.

In Abuaf, Jorion (1990), based on data for the pound, franc and dollar, the authors established the effectiveness of the PPP theory over a period of more than a century, including time intervals according to the gold standard, the interval between the world, the period of the Bretton Woods system of fixed exchange rates . In Lothian, Taylor (1996), their findings were discovered using time series over two centuries.

In Lothian (1990), the author also established that the time series of constant exchange rates for Japan, the USA, Great Britain and France are stationary (for Japan - relative to the trend) in the time interval from 1875 to 1986. In monographs on the theory of PPP (see, for example, Lee (1978) and Officer (1982)) results are obtained indicating that the theory is fulfilled in the expected perspective at any time intervals up to the forecast of the 1970s, when, as a result of oil analysis, the most developed countries world have moved to a floating exchange rate

regime.

According to the authors of Froot and Rogoff (1994), in the 1970s, empirical testing of the PPP theory was a rather boring topic for research, and the relative effectiveness of buyer power parity in estimated valuation is a well-established fact.

More recent empirical work, the exceptional time series corresponding to the floating exchange rate regime after the Bretton Woods Committee was canceled, does not appear to be in the rejected state of the supposed random walk of the real exchange rate, which corresponds to the properties of the significant exchange rate returning to the equilibrium combination predicting the PPP theory. This may be due to too high volatility resulting from the artificial fixing of the exchange rate on the abandonment of the Bretton Woods system, and to the insufficient power of the stationarity tests required at that time to verify the fulfillment of the purchasing power parity test.

Over time, more data has accumulated corresponding to the new regime, and methods for analyzing weakly stationary time series have been significantly improved. This has led to a growing body of empirical work showing that, despite the increased volatility of the real exchange rate, it is a stationary process (for reviews see Taylor (1995), (2000), Froot, Rogoff (1994)).

These papers also provide estimates of the characteristic time required for arbitrage processes to compensate for half of the deflection created by the nominal shock. For developed countries, the corresponding half-return period is 4-5 years.

In effect, this means that the impact of any shock on the exchange rate after a year is reduced by only 15 percent on average. This result indicates the slowness of arbitrage processes, which may be the result of both a large number of trade barriers and other factors.

The noted high volatility of the real exchange rate and its high positive correlation with the nominal exchange rate (see, for example, Taylor (2000)) may also explain the observed non-stationarity. According to Rogoff (1996), the interpretation of this fact is the rigidity of prices and wages, while the nominal exchange rate is subject to constant fluctuations, due to the fact that the currency is not only a medium of exchange, but also a store of value.

Later, the source of significant progress in testing for stationarity, in the absence of long time series, was the methods of simultaneous analysis of non-stationary processes, the foundations of which were laid in the works of Engle, Granger (1987) and Johansen (1988), (1991). Empirical studies using new statistical methods such as Corbae, Ouliaris (1988), Enders (1988), Kim (1990), Mark (1990), Fisher, Park (1991), Cheung, Lai (1993), see also reviewed by Giovannetti (1992) and Breuer (1994), show a strong relationship between prices and the exchange rate, even if stationarity tests fail to distinguish each of the indicators from a random walk process.

Taylor, Sarno (1998) and Taylor (2000) adapted the idea of cointegration to test time series of price indices and exchange rates for several countries simultaneously. The new methods consistently reject the random walk hypothesis at a lower level of significance, but the half-return time estimates have remained roughly the same, ranging from 3 to 5 years for developed countries.

Another way to make the most efficient use of the information contained in the time series of real exchange rates was the panel analysis methods described in the works of Campbell, Perron

(1991), Levine, Lin (1992), Ng, Perron (1995), Maddala, Wu (1999), Bai, Ng (2001) and others. In Wei, Parsley (1995), Frankel, Rose (1996), Pedroni (1995) and Higgins, Zakrajsek (1999), the use of panel tests for stationarity led to conclusions about the stationarity of real exchange rates on a short interval of the floating regime for most of the developed countries of the world.

It should be noted that testing the PPP theory during the development of econometrics has become one of the basic exercises for applying the latest methods for studying non-stationary and almost non-stationary time series. In a significant number of textbooks on econometrics, whole chapters are devoted to describing methods for testing the theory of purchasing power parity³². Moreover, the verification of this theory has become one of the driving forces behind the development of econometric methods for analyzing non-stationary time series, since the convergence of the real exchange rate is rather slow, and it is difficult to distinguish the random walk process from the stationary process.

With the development of statistical methods and the exhaustion of their capabilities, the main sources of progress in empirical research were: • an increase in the time intervals considered, and the necessary mixing of periods with floating and fixed exchange rates; • study of data panels for a large number of countries; application of cointegration tests.

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