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厦门大学

博 士 学 位 论 文

购买力平价理论及其在中国的实证检验

The Purchasing Power Parity Theory and Its Empirical Testing in China

孙 晓 峰

指导教师姓名：黄 良 文 教授

专 业 名 称：统 计 学

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中文摘要

本文先介绍一些汇率的基本常识，接着介绍汇率的决定理论，在比较了传统汇率决定理论的基础上，介绍了汇率决定理论的最新进展，主要是非线性系统方面的进展。

本文着重要研究的是传统汇率决定理论中的购买力平价理论，所以接下来，文章对购买力平价理论进行了进一步认识，在经典理论的基础上进行扩展，如：在理论上考虑了交易成本和进口关税对购买力平价理论的影响；引入工资指数的工资成本汇率理论；将两国之间的购买力平价模型扩展到多国；将静态的模型发展到动态的模型。

文章接下来对购买力平价这一理论的检验方法的六个不同阶段的历史演变过程进行了回顾。第一阶段是关于 PPP 的早期经验文献；第二阶段是检验真实汇率随机游走假设；第三阶段是协整研究；第四阶段是长期跨时研究；第五阶段是面板数据研究；最后一个阶段是运用非线性计量经济学技术的研究。提出了较新的界限检验方法。接着对解释普遍存在的购买力平价短期内不成立的模型进行了介绍。

本文的实证重点是要检验购买力平价理论在人民币汇率的决定中是否成立，主要运用的计量方法是单位根检验和协整研究，数据采用了 01 年 1 月到 06 年 10 月的 70 个月份的月度数据。分别验证了人民币对美元和人民币对日元的汇率，价格指数采取相同和不同两种情况。相同情况下，是两国都采用居民消费价格指数。不同的情况分别有：中国都还是采取消费者价格指数，但美国先后采用生产者价格指数（加工品）和工业生产者价格指数，日本先后采用生产者价格指数（加工品）和批发价格指数（工业品）。每个汇率的实证都分别采用单变量形式、两变量形式和三变量形式。得出的结论为：当日本的价格指数采用生产者价格指数（加工品）时，三变量的购买力平价形式在人民币对日元的汇率中成立；当日本的价格指数采用批发价格指数（工业品）时，两变量、三变量的购买力平价形式在人民币对日元的汇率中都成立；其他情况下任何形式的购买力平价理论都不成立。

美元是世界上主要的货币，而购买力平价在人民币对美元的汇率实证检验中都不成立。文中接下来分析了不成立的原因，主要从购买力平价理论自身存在的

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缺陷以及目前存在的检验的技术问题两方面来分析。

本文的主要贡献与创新之处在于：对购买力平价理论和检验进行了比较全面的总结；实证检验的创新，前人的研究主要针对在发达国家，购买力平价理论是否成立，而本文主要研究购买力平价在发展中国家的中国是否成立，数据用的是最近数据，并且能分别用相同和不同的指数进行实证检验；对购买力平价理论存在的问题进行了一定的分析。

关键词：购买力平价；实际汇率；价格指数

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Abstract

Before 1973 China's exchange rate system was pegged on the US dollar. However, with the collapse of the Briton Forest System in 1971 and the first petroleum crisis in 1973, the major western countries started to adopt a floating exchange rate system in March 1973. China's official exchange rate system followed suit. Beginning in late 1984 China adopted a managed floating exchange rate system, which lasted until the end of October, 1985. In July 1986, December 1989 and November 1990 official devaluations of Chinese currency happened. From April 1991 to January 1994 the managed floating exchange rate system was resumed in China. Beginning in January 1994 the official management system was blended with the market floating system, and a new managed exchange rate system came into being. Since July 21, 2005, a managed floating exchange rate system based on market demands and adjusted with reference to a package of currencies has been employed in China. Hence, the study of exchange rate systems is significant.

This dissertation makes an introduction to the basic knowledge concerning exchange rates and systems, the theories about the formation of exchange rates, and the latest developments in the theories involved, particularly those in the nonlinear systems, with reference to the traditional theories in this regard.

The focus is laid on purchasing power parity (PPP) tackled in the traditional theories about the formation of exchange rates and systems. Therefore, in the third part of the dissertation a further introduction is made to the theories on PPP, The dissertation proposes some ways for improvement, such as the theoretical account of the effects of transaction costs and import tariffs on PPP, the theory on the effects of salary costs on exchange rate,the extension of the PPP model based on two countries to that based on a number of countries, and the change from the static model to the dynamic one.

Then,a review is conducted on the historical evolutions of these theories in six stages. The first stage is related to the literature on the early experiences of PPP. The second stage is about the hypotheses testing the random walking of the real exchange rates. The third stage has to do with a co-integration study. The fourth stage is a long-time study. The fifth stage is a panel data study. The sixth stage is a nonlinear econometric study. Next. In terms of the methods of testing, the method of bonds testing is recommended.An introduction is made to the model concerning the account

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for the non-feasibility of the universal PPP within a short period.

The empirical focus of the dissertation is to test whether PPP exists in the formation of the exchange rate system of Renminbi yuan by means of unit root test and co-integration study, based on the monthly data from January 2001 to October 2006 (altogether 70 months). Tests are made on the exchange rates between Renminbi yuan and the US dollar as well as between Renminbi yuan and Japanese yen in two situations where the price indexes are the same and different respectively. In the situation where the price indexes are the same, the consumer price indexes are taken from both countries. In the situation where the price indexes are different, China adopted the consumer price indexes whereas the USA adopted successively the producers' price indexes (processed products) and the industrial producers' price indexes, and Japan the producers' price indexes (processed products) and the wholesale price indexes (industrial products). Conclusions are drawn as follows: (1) when Japan's price indexes are the producers' price indexes (processed products), the three-variable PPP is feasible in the exchange rates between Renminbi yuan and Japanese yen; (2) when Japan's price indexes are the wholesale price indexes (industrial products), the two-variable and three-variable PPPs are feasible in the exchange rates between Renminbi yuan and Japanese yen; (3) in other situations, any form of PPP is not feasible.

The US dollar is a major currency in the world. It is found that PPP is not feasible in the exchange rates between Renminbi yuan and the US dollar, mainly because of the defects in PPP and the technical constraints present in testing it.

The originality of the dissertation lies in empirical studies. The precious studies focus on whether PPP is feasible in advanced countries, whereas this dissertation mainly studies whether PPP is feasible in developing countries, based on the latest data and the differential indexes.

Key Words: Purchasing Power Parity; Real Exchange Rate; Price Index

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