

Oil prices and real exchange rates

Shiu-Sheng Chen^{a,*}, Hung-Chyn Chen^{b,1}

^a Department of Economics, National Taiwan University, No. 21, Hsu-Chow Road, Taipei, Taiwan

^b Taiwan Research Institute, 29F., 27, JungJeng E. Rd., Sec. 2, DanShuei, Taipei, 251 Taiwan

Received 7 February 2006; received in revised form 3 August 2006; accepted 3 August 2006

Available online 11 September 2006

Abstract

In this paper, we investigate the long-run relationship between real oil prices and real exchange rates by using a monthly panel of G7 countries from 1972:1 to 2005:10. We first test whether exchange rates are cointegrated with real oil prices. It is shown that real oil prices may have been the dominant source of real exchange rate movements and that there is a link between real oil prices and real exchange rates. We then examine the ability of real oil prices to forecast future real exchange returns. Panel predictive regression estimates suggest that real oil prices have significant forecasting power. The out-of-sample prediction performances demonstrate greater predictability over longer horizons.

© 2006 Elsevier B.V. All rights reserved.

JEL classification: Q43; F31; F47

Keywords: Real oil prices; Real exchange rates; Prediction; Long horizons; Panel cointegration

1. Introduction

It is well known that real exchange rate fluctuations can be attributed primarily to non-monetary shocks. Clarida and Gali (1994) use the Blanchard–Quah identification strategy to estimate the share of exchange rate variability that is due to different shocks by using quarterly US–Canada, US–Germany, US–Japan, and US–UK real exchange rate data from 1974:Q3 to 1992:Q4. They find that real shocks can account for more than 50% of the variance of real exchange rate changes over all time horizons. Lastrapes (1992) also uses the Blanchard–Quah

* Corresponding author. Tel.: +886 2 2351 9641x481.

E-mail addresses: sschen@ntu.edu.tw (S.-S. Chen), 229@tri.org.tw (H.-C. Chen).

¹ Tel.: +886 2 8809 5688x229.

approach to estimate structural VARs and obtains similar results to those of [Clarida and Gali \(1994\)](#).²

Different sources of real shocks have been investigated in [Zhou \(1995\)](#). Among many sources of real disturbances, such as oil prices, fiscal policy, and productivity shocks, it has been shown that oil price fluctuations play a major role in explaining real exchange rate movements. Moreover, [Chaudhuri and Daniel \(1998\)](#) investigate 16 OECD countries and find that the nonstationary behavior of US dollar real exchange rates is due to the nonstationary behavior of real oil prices. Similar results are obtained by [Amano and Norden \(1998a,b\)](#). By using data on real effective exchange rates for Germany, Japan, and the US, they find that the real oil price is the most important factor determining real exchange rates in the long run. [Camarero and Tamarit \(2002\)](#) use panel cointegration techniques to investigate the relationship between real oil prices and the Spanish peseta's real exchange rate.

In this paper, we study the nexus between real oil prices and real exchange rates for a sample of G7 countries by using monthly panel data from 1972:1 to 2005:10. By using a panel study, we first reexamine whether exchange rates are cointegrated with real oil prices, as has been documented in the existing literature, which comprises mainly time-series case studies of individual countries. That is, we investigate whether pooling across currencies and using panel cointegration techniques generate different implications for real oil prices and real exchange rates. The second issue is to examine the ability of real oil prices to forecast future exchange rate returns in line with research from prediction regression tests that investigate the relationship between exchange rates and fundamentals. See, for example, [Mark \(1995\)](#), [Kilian \(1999\)](#), [Mark and Choi \(1997\)](#), and [Mark and Sul \(2001\)](#).

This paper contributes to the literature in three distinctive ways. First, we consider different measures of oil prices, including the world price of oil, the United Arab Emirates price of oil (Dubai), the British price of oil (Brent), and the US West Texas Intermediate price of oil (WTI); in previous work, only one of these oil prices has been used. Second, we pool the data and apply tests for panel unit roots and heterogeneous panel cointegration, which may help improve the power of the tests. Most importantly, to the best of our knowledge, this is the first paper to assess the role of real oil prices in predicting real exchange rates over long horizons. Although other real factors, such as productivity differentials and real interest rate differentials, have been investigated previously (see [Mark and Choi, 1997](#)), no study has yet focused on the long-horizon forecasting power of real oil prices. In this paper, we fill this gap and explore the ability of real oil prices to explain movements in real exchange rates in a predictive regression framework.

The rest of the paper is organized as follows. In Section 2, we present a simple theoretical model. In Section 3, we describe the sources of data and report our country-by-country test results for unit roots and cointegration. In Section 4, we report the panel test results. In Section 5, we use the prediction regression test to determine whether the real oil price is able to predict real exchange rate movements. Out-of-sample forecasting performance is also examined. In Section 5, we also present robustness checks. Concluding remarks are provided in Section 6.

2. A simple theoretical model

In this section, we present a simple theoretical model to motivate our investigation of the link between real exchange rates and oil prices. Suppose that both traded and nontraded goods are

² [Clarida and Gali \(1994\)](#) identify three shocks: supply shocks, demand shocks, and monetary shocks, whereas [Lastrapes \(1992\)](#) only identifies two shocks, a real shock and a nominal shock.

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات