Asymmetric Reactions of the U.S. Natural Gas Market and Economic Activity*

Bao H. Nguyen† and Tatsuyoshi Okimoto‡

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Abstract

This paper provides new empirical evidence on the asymmetric reactions of the U.S. natural gas market and U.S. economy to its market fundamental shocks in different phases of the business cycle. To this end, we employ a smooth-transition vector autoregression (STVAR) model to capture the asymmetric responses. Our results indicate that the STVAR model provides a plausible explanation to the behavior of the U.S. natural gas market, which asymmetrically reacts in bad times and good times. In addition, U.S. economic activity is found to be much more sensitive to energy price shocks occurring in recessions than in expansions.

JEL-codes: C32, E32, Q4

Keywords: Natural gas market, Business cycle, Oil price shock, STVAR model

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Investment Subsidies and Redistributive Capital Income Taxation in a Neoclassical Growth Model*

- Preliminary version -

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Abstract

In this paper it is analyzed how investment subsidies bear on pure redistribution when coupled with capital income taxes. In a heterogeneous-agent, neoclassical growth framework it is found that in the short run and absent optimizing behaviour investment subsidies are good for growth but bad for redistribution. They may, however, stabilize the investment return in a recession. But when the agents and the government act optimally for the long run the investment subsidies should be such that the tax scheme does not distort accumulation anymore. This holds regardless of social preferences. I find that redistribution and so capital income taxes may be nonzero in the long run optimum, depending on the social weight of those who receive redistributive transfers, the distribution of pre-tax factor incomes, and the intertemporal elasticity of substitution. It is argued that investment subsidies may be an important indirect tool for redistribution.

KEYWORDS: Growth, Redistribution, Investment Subsidies, Capital Income Taxes

JEL classification: O41, H21, D33

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The Transition from Exchange Rate Targeting: The Case of Sri Lanka * †

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Abstract

This paper uses an elemental macro model to quantify the effect of a range of alternative Sri Lankan monetary policy regimes to which its transition from exchange rate targeting might be directed. Faced with a variety of supply, demand and external shocks, the inflation targeting regime is shown to offer lower macro-economic volatility than the alternatives, most strongly under demand and external shocks. This is notwithstanding the sensitivity of real purchasing power to inflation targets, even where employment is stabilised. Consistent with Mundell's financial trilemma, the increase in Sri Lanka's financial integration after 2012 is shown to have made external shocks more prominent, further supporting the transition to inflation anchored monetary policy framework.

JEL classification: E37, E52, F15, N15

Keywords: Exchange rate, Financial integration, Monetary policy, Shocks

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†The results and views enunciated in this paper are those of the authors alone and in no way represent those of the Central Bank of Sri Lanka.

Optimal Credit Allocations*

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Abstract

This paper examines how commercial banks should allocate their deposits among three different agents: households, firms, and the government to achieve socially optimal allocations. The paper finds that the main driving force of the allocation of loans among three agents are the discount factor, which represents the interest rate, and the risk factor, which is associated with each agent. The discount factor does not exert an important influence on optimal loan allocations when risk is high but becomes highly influential in the presence of low risk. Quantitatively, when the risk of households increases, optimal loan to households converges to zero. On the other hand, when the risk of the government decreases, the optimal loan to the government reaches its upper bound, which is 55% of total loans. Also, a standard calibration of the model reveals that 60% of the total loan should allocate equally between households and firms and the rest should allocate to the government.

Keywords: Risk and discount factors, Real shocks, Social optimal allocation

JEL: E32, E43

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Do International Crude Oil Price and Public Investment Affect Private Investment? An Empirical Analysis for a Large Emerging Economy

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Abstract: Using the annual data, this study attempts to examine the impact of the international price of crude oil on private investment in India during the period 1980-2014, by endogenizing public sector investment, real interest rate, financial sector development, economic growth and economic globalization as other additional key determinants in a private investment model. This framework also serves as another additional objective of verifying whether public investment crowds out private investment or crowds in private investment of India. From our empirical estimation, we observed that crude oil price, public investment, and interest rate have detrimental effects on the growth of domestic private investment, whereas financial development, economic growth, and globalization help to boost up private investment. From a policy perspective, the study suggests that India should intensively shift its focus towards both production and consumption of renewable energy and tap other alternative potential sources of energy in order to offset the risks arising on account of India's heavy reliance on the imports of crude oil from other oil exporting countries. This study further urges that the role of international crude oil price, public investment, and real interest rate can't be under-emphasized while designing for a comprehensive growth and energy policy strategies for India in order to achieve a sustainable economic development of the economy.

Key Words: Oil Price, Private Investment, Public Investment, interest rate, Bayer-Hanck Cointegration & DOLS

JEL Codes: E22, F4, O10, Q31, Q32 & Q430

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Macroeconomic Policy: Evidences from Growth Laffer Curve for Sri Lanka

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Abstract: Public economic policies are vital for the provision of efficient public services, in which optimal taxation system to promote economic growth in Sri Lanka. The research question intends to identify the optimal taxation policies and government size for promoting economic growth. Rationale for the research is to provide pragmatic evidences on the economy to investigate the different macroeconomic indicators with empirical models, while supporting to build up tax systems that generate optimal tax revenues through Laffer curve estimation. An empirical approach is used to estimate the Laffer curves with Instrumental Variable Generalized Method of Moments (IV-GMM) in factors affecting optimal taxation. The results expose a strong correlation of the tax revenue, and GDP with respect to tax rate for the Laffer curves, includes significant covariates such as tax rate, tax^2, tax^3, lag (tax), young dependency ratio, total factor productivity, exchange rate, foreign direct investment, and openness. The U-test shows that extreme points are at 17.36 and 17.93 of the tax rate implying U-shape for Laffer and growth Laffer curves respectively. The implications of the study are to deliberate on the macroeconomic determinants of the optimal taxation for reform the tax systems. Finally, the paper guides policymakers to reform tax systems with empirical evidences on impacts of public economic policies to improve optimal taxation for the economic growth in Sri Lanka.

Keywords: Taxation, Laffer Curve, Economic Size, Economic Growth, IV-Generalized Methods of Moments

JEL: B23, E60, E62, F43, H21, O47

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Terms of Trade and the Sri Lankan Economy: A Sign-Restricted Var Approach

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Abstract

The deteriorating terms of trade in the past two decades has been a concern for the policy-makers of Sri Lanka. The recent literature has argued that the effect of the terms of trade shocks on an economy depends on the characteristics of the underlying shock. Using a sign restricted VAR model, this paper examines the effect of external shocks that cause terms of trade fluctuations on the Sri Lankan economy. Three external shocks, viz., world demand shocks, world supply shocks and globalization shocks are considered in this study. The world demand shocks do not have a significant long-term effect on Sri Lanka's real output, but the negative world supply shocks are contractionary. Conversely, positive globalization shocks increase domestic output permanently. Both positive world demand shocks and globalization shocks are inflationary while negative world supply shocks increase domestic prices initially but reduce the prices after two quarters. World demand shocks have largely contributed to the fluctuations in trade balance in Sri Lanka since 2007, whereas the importance of globalization shocks on the imports, exports and trade balance has increased since 2010. Further, the contribution from globalization shocks to the variance in domestic output and price levels has increased since 2007.

Keywords: Terms of Trade; Small Open Economy; External Shocks
JEL Classification: F410; F140

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Competition and credit procyclicality in European banking

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Abstract

This paper empirically assesses the effects of competition in the financial sector on credit procyclicality by estimating both an interacted panel VAR (IPVAR) model using macroeconomic data and a single-equation model with bank-level data. The findings of these two empirical approaches highlight that an exogenous deviation of actual GDP from potential GDP leads to greater credit fluctuation in economies where competition among banks is weak. According to the financial accelerator theory, if lower competition strengthens the cyclical behavior of financial intermediaries, it follows that these "endogenous developments in credit markets work to amplify and propagate shocks to the macroeconomy" (Bernanke et al., 1999). Furthermore, since credit booms are closely associated with future financial crises (Reinhart and Rogoff, 2009; Schularick and Taylor, 2012; Gourinchas and Obstfeld, 2012), our results can also be read as evidence that greater competition in the financial sphere reduces financial instability, which is in line with the competition-stability view denying the existence of a trade-off between competition and stability.

JEL Codes: E32, E51, G20, D40, C33

Keywords: credit cycle; business cycle; bank competition; interacted panel VAR

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