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REVISITING THE GROWTH-INFLATION NEXUS: A WAVELET ANALYSIS

Saumitra N Bhaduri
Professor

Abstract

Motivated by the concern that the recent surge in inflation could retard growth, the paper revisits the nexus between inflation and growth from the perspective of an emerging economy, India. Examining this relationship using a wavelet multi resolution analysis with varying time scale decomposition suggests a strong and persistent negative relationship between growth and inflation for the short time scale, while it is not significant for the longer time scale.

FORECASTING DISTRIBUTION OF INFLATION RATES: FUNCTIONAL AUTOREGRESSIVE APPROACH

Kaushik Chaudhury
Professor

Abstract

This paper utilizes the semi-parametric functional autoregressive approach to model the time-varying distribution of UK monthly inflation rates using sectoral inflation rates. Our approach is free of any assumptions on the structure of the distributions, or the number of dimensions in which the distributions may vary. Our framework provides an alternative for use by the independent researchers to the forecasts made by the central bank, and allows us to incorporate complex and time varying responses by the policy-makers to the disaggregate shocks. The in-sample forecasting evaluation results provide superior performance of our proposed approach compared to the benchmark autoregressive models in forecasting both the cross-sectional distribution of sectoral inflation rates and the density function of national inflation rate. Furthermore, out-of-sample forecasting results suggest that the mean is projected to be stable at around 2.3%-2.6% whilst the uncertainty bands stay between 1.5% and 4.5% over the period March 2008 - February 2010, correctly accommodating inflation rates observed during this period.

Key Words: *Inflation, Forecasting. Semi-parametric model*
JEL Codes:

GLOBAL OIL TURBULENCE AND THE INDIAN ECONOMY

D.K.Srivastava
Director

Abstract

This paper looks at the impact of the developments in the global oil sector, particularly, changes in global crude oil prices, on the Indian economy. Global oil prices are subject to trend increases overlaid by periodic large shocks. The movement of global crude oil prices affects the Indian economy in several interdependent ways. Changes in the oil prices affect the overall inflation rate, exchange rate, government revenues, environment and growth. Oil prices shocks have a stagflationary effect on the macro-economy of an oil importing country leading to a slow down and an increase in the price level. For the U.S. economy, which is also a net oil importer, as observed by Roubini and Setser (2004), 'An oil price hike acts like a tax on consumption and, for a net oil importer like the United States, the benefits of the tax go to major oil producers rather than the U.S. government.' In India, however, because of administered prices relating to important petroleum products accompanied by a large subsidy regime around oil products, the benefits may not be going to oil companies. Rather, considerable distortions are caused affecting prices, consumers and investors as well as the profitability and operations of the oil companies.

There are several important channels through which the effects of changes in global oil prices propagate into the domestic economy. The price channel involves global crude oil prices affecting directly the prices of fuel and energy and indirectly all other prices through cost side linkages. The impact on fuel and energy prices is normally filtered through various ad hoc and administrative interventions.

The tax revenue channel becomes important as most indirect taxes are ad valorem and prices of petroleum products bear a heavy excise duty and sales taxes that have remained outside the cenvat and state vat mechanisms. Taxes are complemented by subsidies for a variety of petroleum products. As a result, the overall fiscal deficit is also affected leading to wide ranging macro-economic implications.

For an economy that is heavily dependent on imported oil, the exchange rate channel is also important since oil price upsurges lead to an increase in the current account deficit and exchange rate depreciation. The higher domestic inflation rate relative to inflation rates in other major economies leads to further depreciation of the currency resulting into a self-perpetuating spiral.

Another channel is foreign investment channel. The surpluses obtained by the oil producing countries seek investment avenues in other countries and an oil importing country may attract such investment depending on its growth prospects and other relevant domestic conditions.

Since the petroleum products are polluting, the environment is impacted and taxation and price regimes need to be designed taking into account the environmental implications of use of petroleum products. The overall growth is affected through inter-sectoral linkages. This production and pollution channel affects the environment leading to a number of welfare consequences emanating from the trade-offs between growth and pollution.

The effects of oil price movements including the periodic shocks depend on external factors like the size, duration, and persistence of the shock and internal factors like the degree of dependence of the economy on oil imports, tax and subsidy regimes, etc.

In this paper, these effects are analyzed by using a macro-econometric model of the Indian economy along with a small model of the global economy focusing on the oil sector. Short-rum and long-run impact multipliers are estimated. The Indian model captures the basic inter-relationships among the real, monetary, trade, and fiscal sectors and endogenously determines most of the prices. The global model captures major drivers of global demand for oil and supply side factors. The results are compared with impulse responses generated from competing cointegrating VAR models. The paper ends with a discussion of short term and long term strategies for coping with the global oil shocks.

Key Words: *Oil, Exchange rate, Tax revenue, Foreign investment, Pollution. VAR*
JEL Codes: *H54, N75, F32*

USE OF CONTINGENT VALUATION METHOD TO DETERMINE FARMER PREFERENCE FOR ON-FARM CONSERVATION OF SMALL MILLETS: A CASE STUDY FROM KOLLI HILLS, TAMIL NADU, INDIA[1]

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Abstract

The farmers, predominantly the small and tribal, all over the world, particularly in regions of rich agro-biodiversity immensely contribute to the on-farm conservation and enrichment of this diversity, often at personal cost. The past and present agricultural progress could not have happened without these genetic resources and associated knowledge conserved by farmers. On-farm conservation, unlike conservation in gene banks, assumes more importance in the context of climate change in view of the gene evolution it promotes. Therefore it plays crucial role to the future global food and nutritional security. Small millets are a group of grain crops common in India and widely adapted to low and erratic rainfall and marginal growing conditions. Six species of small millets are grown in India in more than 2 million ha. Kolli Hills in Tamil Nadu had been a region where these crops were under cultivation during last several hundred years. Farmers here over this period had evolved significant genetic variability in these crops. They are, however, under threat due to high competition from tapioca as well as the easy access to PDS rice at low prices. There had been decline in the number of farmers growing these grains and the varieties they conserve. In this context we conducted this study in 50 villages, grouped under four zones and on 20 varieties of these millets, which were classified as the most preferred variety (MPV) and the least preferred variety (LPV). We applied contingent valuation method to assess the farmers' decision on cultivation and conservation of these local varieties and found that elderly

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farmers preferred MPV, including improved variety, and showed willingness to grow millets in lieu of tapioca and other commercial crops if their opportunity cost is compensated. For example, the bid for conservation of LPV in lieu of growing MPV was Rs 676 in zones 1 and 3, where millet offers higher productivity although its area is declining. The paper describes in detail the sample size, methodology and results together with policy implications.

DISCOUNT RATE FOR ENVIRONMENTAL HEALTH RISKS: A COMPARATIVE STUDY

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Professor

Abstract

Economic analyses of life saving policies require appropriate discount rate for comparing long-term health benefits. Since the human health/life can not be traded explicitly in an inter temporal market, the literature provides two approaches to estimate the discount rate for health impacts empirically, namely stated preference approach and revealed preference approach. In the former, individuals are asked to evaluate the stylized inter temporal prospects involving real or hypothetical outcomes such as health and life years, while in the latter rates are computed from economic decisions that people make in their ordinary life.

   This study attempts to estimate the discount rate for long term health related job risks using the revealed preference approach and the original data from Indian labour market. Specifically, it uses three alternative but equally plausible models: discounted expected life years model, Markov decision model and life cycle model. The discount rate is imputed from wage-risk trade-offs in which workers decide whether to accept a risky job with higher wages. The estimated real discount rate in three models ranges between 2.7 percent and 8.2 percent, which is closer to the financial market rate for the study period. The results thus provide no empirical support for utilizing a separate rate of discount for health benefits of life saving policies in developing countries like India.

COMMENTARY ON CLIMATE CHANGE, AGRICULTURAL IMPACTS AND MIGRATION

Brinda Viswanathan, Associate Professor
and
K.S. Kavi Kumar, Professor

Abstract

In developing countries – which are largely dependent on climate sensitive economic activities such as agriculture – climate extremes and changing climatic conditions may accelerate growing levels of rural-to-urban migration. While people at the upper end of the socioeconomic spectrum may be tied-up with their household/business capital which would also help them resist climate change induced hardships and avoid migration, the people at the lower end of the spectrum (such as landless labourers) may easily be displaced by climate hardships. Though the mechanisms through which climate change would induce migration could be varied, the likely adverse impacts of climate change on agricultural crops may necessitate rural-to-urban and rural-to-rural migration.

While international migration in the context of climate change has largely been studied in the case of sea level rise and inundation of coastal regions, recent literature (Feng et al., 2010) analyzed the sensitivity of international migration to climate change induced agricultural yield losses. Acknowledging that migration can take place due to several reasons, this commentary will specifically focus on climate change induced migration, especially through the channel of agricultural productivity changes induced by climate change.

Reviewing the possible methodologies to study such three way inter-linkages between climate change, agricultural yield changes and migration, the paper specifically attempts to address the following issues:

(a)   Is the reported empirical evidence in the recent literature stands the scrutiny of rigorous estimation? In an attempt to answer this, the paper re-estimates the semi-elasticity of migration to crop yield in the context of Mexico-US emigration studied by Feng et al. (2010).

(b)   What is the evidence in the Indian context? In an attempt to answer this, the paper estimates the semi-elasticity of migration to crop yield using state-level Census data in India over the period 1981 to 2001. The paper explores the three way inter-linkage using both all India data and rural data excluding migration due to marriage and other such social reasons.

The results suggest that, (i) firstly, the reported evidence of climate change induced migration may be exaggerated; and (ii) secondly, the evidence of migration caused by climate change through agricultural distress in the Indian context is fairly weak.

LEARNING ACROSS POLICY REGIMES:
A CASE STUDY OF THE INDIAN AUTOMOBILE INDUSTRY

Madhuri Saripalle
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Abstract

Learning is an important factor that explains inter-firm differences in performances over time. This paper analyzes the impact of government policy regime on the learning abilities of firms and markets over time. Through a case study analysis of the Indian automotive industry, the paper develops three hypotheses relating policy regimes with learning strategies of firms. The paper tests these hypotheses through a model of learning using a panel data for the Indian automotive industry. The study finds that speed of knowledge assimilation is more important in the liberalized policy regime vis-à-vis protection when knowledge assimilation per se was a more important economic goal.

ATTITUDE AND PRACTICES TOWARDS FOOD SAFETY IN DOMESTIC CONSUMPTION: A CASE STUDY FROM INDIA

ANINDITA CHAKRABARTI
Associate Professor

Abstract

Ability to ensure 'safe food' for its populace is a key issue for developing countries from the public health perspectives. In recent years there has seen some efforts towards generation of 'consumer awareness' through actions by non-governmental organizations and other research institutions. Our study has two objectives: first to assess the existing regulatory and administrative framework guiding domestic food safety policies in India; the lacunae there of; and provide an inter-state comparison in terms of some broad indicators of prevention of food adulteration. Secondly, capture the importance of household and village characteristics in explaining consumer awareness on food safety. Secondary data reveals that there is a steady decline in the number of food samples examined and more importantly a fall in the number of prosecution against the adulterated samples. Apathy of the consumers regarding deliberate adulteration and unawareness of existing food quality control parameters has accentuated problems further. Hence we want to address the following question: what drives consumer awareness about adulteration in domestic food market? Using a primary survey data from India, this paper examines the link between consumer awareness and household and village level characteristics. We show that number of years of education of the household members, wealth status of the household along with village level infrastructural facility play a role in raising consumer awareness about food adulteration in domestic market.

Keywords: *Consumer Awareness, Food Adulteration, India*
JEL Codes:

DEMAND FOR HEALTH CARE AMONG URBAN AND RURAL POOR IN INDIA

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Professor

Abstract

This paper examines the demand for health care services in India. Applying a utility maximization model that allows estimating the impact of poverty, socio-economic variables and government policies, the results based on information across low, middle income and rich, in all nineteen Indian states depict a considerable scope to enhance the availability, accessibility and positive health status depicted in terms of improved life expectancy and lower incidence of both chronic and communicable diseases. Using a set of twenty five dependent and eighty explanatory variables we observe that unlike the present clamoring, a better outcome of health sector for the poor both in poorer and rich states is feasible without an undue reliance on private health provider. It is suggested that a fine tuning of policies could result in much sought favorable impact on poorer states. This is reflected through elasticity coefficients pertaining to some socio-economic variables. It is further emphasized that a low uptake of various health insurance schemes initiated by central and different state governments owes to lack of appropriate policies and not because of a dearth of demand for health care.

LABOUR INTENSITY AND EMISSION INTENSITY LINKAGES AND ITS IMPLICATIONS FOR INCLUSIVE GROWTH IN INDIA

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and
Brinda Viswanathan*, Associate Professor

Abstract

Providing stable and productive employment has been among the key policy goals towards poverty reduction in developing countries. A recently added dimension to the challenge of poverty reduction is in terms of degradation and depletion of natural resources and the likely impacts of climate change on the lives of the poor in these countries. The path of industrialization and urbanization that were followed by the currently developed countries seem to no longer exist for the developing countries due to limited natural capital available to them globally and locally and the extreme international pressure to reduce green-house gas pollution while moving up the development ladder. Given this backdrop, there is a greater emphasis on both intra and inter-generational equity -that is inclusive growth which is also environmentally sustainable- while economic growth is taking place.

This study has three objectives: Firstly it provides an overview of the existing theoretical and empirical literature on the linkages between labour intensity (labour per unit of GDP) and emission intensity (carbon emission per unit of GDP). Secondly, it tries to draw inferences for India to identify the sub-sectors of the economy that are likely to provide higher employment and value addition while simultaneously lowering carbon emissions. By focussing on sectors like waste and water management, renewable energy, construction, and transportation, people with lower skills are likely to benefit more across both rural and urban areas making the low carbon growth path inclusive. The study finally concludes with a discussion of the recent public policies on the enabling conditions and regulations that are being put in place to strengthen the linkage between labour and emission intensity.

Key words: *Labour Intensity, Emission Intensity, Inclusive Growth, India*
JEL Codes: J2, O1, Q5

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INITIAL PUBLIC OFFERS' UNDERPRICING AND SHORT RUN PRICE PERFORMANCE OF BOOK BUILT IPOS IN INDIA

Madhuri Malhotra*, Assistant Professor and **Manjusha Nair,** MSc(2011)

Abstract

Initial Pubic Offerings (IPOs) have been studied in the literature showing a puzzling positive short-run performance regardless of the regulation or the placement system. Financial literature suggests that issuing shares through book building process leads to efficient price discovery in the capital market. This study examines the performance of book built IPOs (initial public offers) in India in the short run. Stock returns of 288 book built IPOs have been examined for a period of seven years (2004 to 2010). Based on this set of observations this study builds a comprehensive model of the short term price performance of the new offerings. Results indicate that the IPOs are underpriced in India by 22 percent on an average. The subscription rate and market volatility influence excess returns, irrespective of the number of underwriters, the value and the characteristics of the firm.

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POISONING THE FUTURE: ARSENIC CONTAMINATION OF DRINKING WATER WELLS AND CHILDREN'S EDUCATIONAL ACHIEVEMENT IN RURAL WEST BENGAL

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Assistant Professor

Abstract

In the parlance of the World Health Organization, arsenic has been responsible for the largest mass poisoning of a population in history. The victims are 35-40 million in West Bengal, India and Bangladesh have been drinking groundwater contaminated with naturally occurring inorganic arsenic for over two decades. Continuous drinking from arsenic-laced wells can cause various health disorders including birth complications and cancer. Low doses of arsenic, consumed over years, can ultimately cause death. A low-cost solution to the problem is yet to become commercially available in developing countries. Rural households do not have easy access to an affordable technology that can either remove arsenic from drinking water or at least reduce it to a level at which it has no adverse effect on human well-being. Therefore, the majority of the affected population continues to remain exposed to the crisis. While health consequences of such natural disaster are well-documented for adults, very little is known about the negative impact on children's developmental outcomes. To fill this gap, the present research work was planned to examine the effect of arsenic contamination of tubewells, the primary source of drinking water at home, on the learning outcome of school-going children in rural West Bengal using recent state-level secondary data on school children. As mentioned earlier, the pollution is entirely natural. The distribution of arsenic in rural Bangladesh is highly variable spatially but this variability is geological. Hence exposure to arsenic contaminated drinking water is exogenous. Nonetheless, identifying the causal effect of arsenic contamination in cross-section data can be difficult. The study explicitly demonstrated a negative relationship exists between arsenic contaminated drinking water wells at home, and test scores among children currently enrolled in school, net of school level exposure and socioeconomic background of the child. This relationship is robust to the choice of dependent variables and controls for a variety of fixed-effects. The estimated effects range

from −0.08 to −0.17 standard deviations for the primary mathematics test scores and for secondary mathematics, they range between −0.05 and −0.07 standard deviations. To the extent that health is an important input in educational production and children in arsenic-affected households have suffered in terms of health owing to arsenicosis, the finding is unsurprising. However, there are a number of other potential explanations for the observed correlation between arsenic exposure and test scores. In this study, such possibilities were not exhaustively tested. Nonetheless, it was investigated the extent to which the potential effect of arsenicosis could hamper learning outcomes through social channels. A discussion on the policy implication has also been carried out over the findings in the context of the current debate over the adverse effect of arsenic poisoning on children.

OPERATIONAL EFFICIENCY OF BANKS IN INDIA: A CIR AND CAR PERSPECTIVE

Sreejata Banerjee

Associate Professor, Union Bank Chair for Excellence

Abstract

This paper evaluates the efficiency of banks functioning in India from the profitability and stability viewpoint, between 2000 and 2009. Cost-to-income ratio is used to measure profitability, whereas capital adequacy ratio reflects bank's soundness. Banks are classified on the basis of their ownership: public, private and foreign. ROE, ROA, business per employee, asset growth, core capital are included in the analysis to capture the diverse nature of banking. Random effects panel data regression model is applied to examine factors that affect the two efficiency ratios – Cost-to-income ratio and the capital adequacy ratio. Return on equity, returns on asset, business per employee, asset growth, core capital are the variables included in the analysis to capture the diverse nature of banking. Cost to income is negatively related to bank profitability, while capital adequacy ratio is positively related to bank profitability. The ownership factor influences bank efficiency; foreign and private banks are found to be performing better in terms of cost efficiency than public sector banks. Data Envelope Analysis is applied with operating expense, interest expense, loans, and employee cost as inputs and interest income, non interest income, deposits as outputs. Since 2003 all the banks in India show an increase in their level of efficiency except in 2008. The growing competition in the banking sector in India with the entry of foreign banks has driven both public and private banks to be relatively more efficient.

CORPORATE GOVERNANCE, PRODUCT MARKET COMPETITION AND FIRM VALUE - EVIDENCE FROM INDIA

Ekta Selarka

Assistant Professor

Abstract

On one hand product market competition acts as an ultimate solution to align interests of managers and shareholders, and on the other hand, competition alone may not be sufficient because it may not prevent managers from expropriating the competitive return after the capital is sunk. These hypotheses motivate us to investigate the interaction between corporate governance and product market competition in India where predominance of owner-mangers might cause corporate governance reforms to have a slow impact. Using a sample of listed firms during the period 2001-2010 we attempt to capture various attributes of corporate governance by constructing an index of corporate governance based on board structure, ownership structure, audit quality and investor information disclosure. The index is then used along with traditional measures of competition to analyze the question of whether corporate governance and competition are complements or substitutes. In general the empirical analysis suggests that relying on product market competition to improve corporate governance of firms may not be appropriate in the Indian setting and therefore, direct corporate governance reforms seem to be necessary and effective.

EFFICIENCY OF RAISING HEALTH OUTCOMES IN THE INDIAN STATES

Prachitha J. Research Scholar and **K. R. Shanmugam*** Professor

Abstract

As health is a state subject and merit good, the state Governments in India spend increased amounts on it. However, the health outcomes vary across the states. This study assesses the performance of states in raising health outcomes, using the stochastic frontier methodology for panel data for the period 2000-2009. The results show that health outcomes increase with public expenditure on health and the number of medical professionals/specialists. States differ in efficiency in using the inputs. There is a scope for improving health performances by following best practices or with reduced costs.

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VALUE CHAIN ANALYSIS AS A TOOL TO UNDERSTAND RESOURCES, GREENHOUSE GASES, TECHNOLOGY AND VALUE ADDITION IN RICE IN INDIA

R.Hema
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Abstract

Value Chain Analysis (VCA) as a methodological tool was developed largely from two strands of literature: the literature on business strategy and organization following Michael Porter's *Competitive Advantage* (1985) and the literature on global commodity chains following Gereffi and Korzeniewicz (1994). The "value chain" is defined by Kaplinsky (2000) as "the full range of activities which are required to bring a product or service from conception, through the intermediary phases of production, delivery to final consumers, and final disposal after use". It is basically a descriptive construct that provides a framework for the generation of data for the entire range of activities within and across the various links in the chain. Value chains are repositories of economic rents and the role of governance is central to the power relationships within the chain. This in turn influences the shares of the total value addition in the chain that different actors within the chain can appropriate. And the underlying institutional arrangements and the dynamic nature of comparative advantages or market power for different links in the chain have a bearing on the governance structure.

With globalization reducing the barriers to the global flow of information, ideas, technology, factors and goods and with different links of the value chain for various commodities being dispersed across different countries, the distribution of income across countries, within countries, between skilled and unskilled labour groups became more complex and dynamic. The traditional firm specific or industry specific approach proved inadequate to unravel these complexities and the VCA increasingly was found to be a useful tool for this.

In an ongoing study on rice in India, we propose to use VCA in conjunction with Life Cycle Analysis (LCA) to simultaneously understand

the greenhouse gas implications and the value additions at each of the various links in the production and supply chain for rice in India.

This paper presents a review of the literature on VCA in general and then focuses on the literature on VCA in rice. It then provides the rationale for and usefulness of combining LCA and VCA and indicates how this combination can be exploited to address a range of the analytical issues ranging from technological choices and innovations, labour relations and policy implications.