CHAPTER 13

ECONOMICS

Doctoral Theses

01. GARG (Ankush)
Essays on the Theory of Voting.
Supervisors: Prof. Parikshit Ghosh
Th 26627

Abstract

This dissertation consists of three essays on the theory of voting. The first two essays use game theoretic models to study decision-making in committees where individual members have noisy private information about which of two choices (e.g., two job applicants of opposite genders or races, or two policy options) maybe the better one. The purpose is to understand how well such dispersed information is aggregated in collective decisions under various institutional settings and under alternative assumptions about the committee members' motives (bias and reputation). The third essay brings together the literatures on voting and relational contracts, using techniques from the theory of repeated games. It addresses an overarching question – is social cooperation better fostered by a centralized, democratic state, or through decentralized self-enforcing relational contracts? The first essay studies voting behavior and optimal committee design in the presence of possible bias among some committee members towards a certain policy. The bias may be counteracted at two levels – private and institutional. Unbiased committee members tend to oppose bias by displaying the reverse bias in their voting behaviour. However, I show that the optimal response to individual bias is to adjust voting rules to counteract it, i.e., implement some form of institutional affirmative action. This involves less information loss. The chapter concludes by examining Condorcet's jury theorem within its framework. The second essay introduces reputational concerns into the framework of the first essay. Committee members who are truly unbiased not only care about whether the right decision is taken, but also whether they are perceived as biased by outsiders. I study the information aggregation properties of two information regimes (i) private information, where only the decision of the committee is publicly revealed (ii) public information, where individual votes of members are revealed. iii Reputation concerns considerably weaken information aggregation, since even unbiased members may not vote sincerely and posture to protect their reputation. I show that CJT fails in public regime while not in private information regime. In the third essay, I study a problem of social insurance among risk-averse individuals who face idiosyncratic and stochastic incomes. I do a comparative study of two mechanisms- enforcement by a centralized state vs enforcement through relational contracts. Specifically, The state has the authority to enforce redistributive policies, but they must receive majority support in elections, while any income-sharing arrangement through relational contracts must be self-enforcing. I show that the relational contract dominates the voting mechanism in two sense, (i) voting implements lower transfers than relation contracts and (ii) there are delays in adoption via voting while relational contracts are immediately implemented.

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1. Voting in committees with blas 2.Political correctness in committees 3. Social insurance: Voting vs. relational contracts. Bibliography.

02. GUPTA (Srishti)
Buyer Power in Vertical Contracts: Theoretical and Empirical Analyses.
Supervisors: Prof. Aditya Bhattacharjea and Prof. Uday Bhanu Singh
Th 27025

Abstract

In most markets, upstream and downstream firms come together to produce and distributed products and services to consumers. These firms can choose to vertically integrate to form a single entity, or function as separated firms. If they integrate, they resolve the problem of double marginalization which arises when an upstream firm sells to a downstream firm it adds its mark up to its cost of production and sells at wholesale price. When the downstream firm sells in the final good market.it adds its mark up to wholesale price and sells at retail price. When firms integrate these margins are ruled out as the integrated firm maximises its profit by minimizing the cost of production to the manufacturer's cost. The allocation of bargaining power between these two agents influences the market outcomes. This thesis aims to provide a theoretical explanation to how contractual agreements between upstream and downstream firms affects consumer and social welfare when downstream firms have more bargaining power and products are differentiated. We further aim to study the effect of vertical mergers on these outcomes and channels choice to integrate or not. In the second chapter we outline a theoretical model with two upstream and two downstream firms in an imperfectly competitive vertical structure where each upstream firm sells a differentiated product to each downstream firm exclusively, forming two competing supply channels. The purpose it to compare and contrast five different types of exogenous relationship between upstream and downstream firms, in the presence of price competition and product differentiation, and increased downstream firm's bargaining power, on basis of equilibrium market outcomes, consumer surplus and social welfare. These five exogenous regimes are: (i) benchmark regime with linear pricing where upstream firms are leaders and downstream firms are followers; (ii) downstream first mover pricing regime where downstream firms are leaders and upstream firms are followers; and (iii) linear and (iii) non linear tariffs; and (iv) vertical integration regime. The existing literature focuses on the effect of upstream firm's bargaining power on these variables or comparison between vertical integration, retailer first mover pricing and manufacturer first mover pricing. No study so far focused on the comparison across all these five regimes in respect of equilibrium prices and quantities as well as upstream and downstream firms, profits, which we have done in our theoretical model.

Contents

1. Introduction. 2. Models of competing supply chains with buyer power. 3. Buyer power and vertical mergers in competing supply chains. 4. Effects of subcontracting on firms in India's informal manufacturing sector: an empirical investigation. 5. Conclusions. References.

03. JUMRANI (Jaya)
Essays in the Economics of Food and Nutrition in South Asia.
Supervisors: Prof. J.V. Meenakshi
Th26625

Abstract

This dissertation investigates three core issues surrounding the economics of food and nutrition in South Asia. Within South Asia the focus is limited to India and Bangladesh, Besides the introductory chapter (chapter 1) the dissertation comprises of three independent essays (chapter 2-4). The key research questions and main conclusions from each of these are described below. Fat taxes are often deployed in the developed world to encourage healthier diets. In a similar vein, this chapter investigates whether and how effective such fiscal instruments (in this case a negative tax policy) can be in the context of an emerging economy. India. The main objective of this essay (chapter 2) is to evaluate the impacts of a palm oil subsidy introduced as part of the public distribution system (PDS) of three Indian state. In 2007 Tami Nadu introduced palm oil in its PDS. Maharashtra and Andhra Pradesh followed suit a year late. This study adds to the body of literature by analysing the causal links between palm oil subsidy in the PDS and changing consumption patterns an aspect that has not been previously investigated.

Contents

1. Introduction 2. How effective is a fat subsidy? Evidence from edible oil consumption in India. 3. How responsive are nutrients in India? Some recent evidence. 4. Agricultural production diversity and women's nutrition: Evidence from rural Bangladesh.

04. KHURANA (Sanyyam)
Essays on the Theory of Auctions the Implications of Perturbing the Standard Model.
Supervisors: Prof. Sudhir A. Shahi
Th 26626

Abstract

This dissertation consists of four essays on the theory of auctions. The auctions considered in these essays have certain commonalities and differences. The common features are (a) one indivisible object for sale, (b) two bidders, (c) independent and private valuations, and (d) asymmetries. The points of difference are (i) strategic resale of the object with fixed time delays, (ii) strategic resale of the object without time delays, (iii) finer information sets via revelation of value rankings, (iv) different attitudes to risk, and (v) uncertainty about future cash flows. The first essay considers (i) the second essay considers (ii) and (iii) the third essay considers (ii) and (iv) and the fourth essay considers (v). In the first essay, we study auctions with the possibility of resale after a fixed time delay. The time delay may impact the bidders valuations of the object. In particular, the auction's winner may obtain some value by depleting the object either by consuming it or exploiting it, over the interim period and the loser may lose some value by virtue of the object having been depleted by the winner. The characteristics of the object determine whether this depletion occurs. The situation wherein the characteristics of the object do not change over time is situation wherein the characteristics of the object do not change over time is called the one-sided case. The complementary case wherein the characteristics of the object change with time is called the twos sided case.

Contents

1. Introduction 2. Auctions with resale at a late date. 3. Unravelling of value-rankings in auctions with resale. 4. Auctions with resale and risk aversion 5. Auctions with uncertain state of the world Technical Appendix. Bibliography.

05. VERMA (Neha)
International Capital Flows in Emerging and Developing economics.
Supervisor: Prof. Pami Dua
Th 25528

Abstract

The landscape of cross-border capital flows has altered significantly in the past three decades with increased financial integration among economies and the share of emerging market and developing economies (EMDEs)1 in the world capital flows accelerating sharply over the same period. Foreign capital provides the much-needed financing for investment and technology transfer in EMDEs but also entails the risk of a sudden stop or withdrawal which disrupts the output and credit channels in the emerging economies. High volatility in the movement of capital flows to and from EMDEs can lead to exchange rate fluctuations and financial instability in these economies. Therefore, the optimal policy response by EMDEs to the movement of international capital flows requires an understanding of the role of global financial conditions in affecting the movement of inflows and outflows for these economies, the possible domestic and global determinants of these flows, the domestic fundamentals that can reduce the vulnerability of EMDEs to global financial risks and the dynamics of inflow of capital and the growth in the economy. The present thesis contributes to this field of study by empirically exploring the dynamics of international capital flows in EMDEs under three research issues. The first research issue explores how domestic macroeconomic and structural factors influence the responsiveness of gross capital flows to changes in global financial conditions in EMDEs. In the second research issue, the analysis focuses on how global and domestic factors contribute to attracting foreign direct investment (FDI) in Asian EMDEs. Under the third research issue, the analysis explores the non-linearrelationship between FDI inflows and the economic growth rate in EMDEs. Additionally, it investigates whether the development of the domestic financial sector in these economies amplifies the growth impact of FDI inflows. By analyzing these research issues, the study sheds light on the factors that can contribute to more stable and sustainable international capital flows, which can in turn support economic development and growth in EMDEs. The thesis specifically focuses on EMDEs for the three research issues, but a comparison with advanced or high-income economies is made wherever applicable. The first research issue is titled 'Dynamics of Capital Flows and Global Factors' and examines the commonality in the movement of capital flows across EMDEs using the quarterly data from 2000-2019 for 23 EMDEs from Asia, Europe, and Latin America and the Caribbean. In addition to estimating the common components (global factors) for gross inflows and outflows in EMDEs, the study also analyzes the covariates of the estimated global factors and investigates the impact of domestic macroeconomic and structural factors on the sensitivity of gross capital flows to changes in the global financial conditions for EMDEs. The analysis is conducted using a three-part econometric strategy. In the first step, a two-level dynamic factor model is utilized to estimate global, regional, and country-specific factors from cross-country panel data of gross capital flows through the Expectation-Maximization (EM) algorithm. In the second step, the Autoregressive Distributed Lag Model (ARDL) is applied to

identify the long-term relationship between the extracted global factors for capital inflows and outflows for EMDEs and the global financial variables. Finally, in the third step, the Panel Generalized Least Squares (GLS) technique is utilized to regress the factor loadings of global factors for gross inflows and outflows on the country-specific macroeconomic and financial variables in order to assess the sensitivity of capital flows in EMDEs to global factors. The results of the first research issue confirm the presence of a Global Financial Cycle (GFCy) in capital flow movement in EMDEs. The gross inflows and outflows are found to be driven by similar global financial conditions while the region-level analysis reveals that the regional factors of gross inflows and gross outflows in the case of Asian EMDEs have a much larger positive correlation in comparison to the two other regions in the sample, European EMDEs and Latin America and the Caribbean EMDEs. The major drivers of the commonality in capital flow movement in EMDEs are found to be global risk, global liquidity, global commodity prices, the US economic growth, the US real effective exchange rate, and the US monetary policy. The factor loadings for each economy were obtained in the estimation of the dynamic factor model, with a high factor loading indicating a greater exposure to the common dynamics represented by the global factors. Based on the regression analysis, the sensitivity of gross capital flows (factor loadings) to global factors is found to be influenced by several determinants, including trade openness, capital account openness, exchange rate flexibility, macroeconomic and financial instability, and volatility of foreign exchange reserves. This study does not find evidence of the 'Mundellian Trilemma' being reduced to a dilemma in the presence of GFCy, as examined in the related literature. Using the dynamic factor model, the commonality in gross capital inflows to and outflows from advanced economies is also estimated, enabling a comparison with the corresponding results of the EMDEs. The global factors of gross inflows and outflows in the case of AEs show lesser volatility in comparison to that of EMDEs, implying that the cross-border movement of capital in the EMDEs is more vulnerable to global financial conditions. However, the global financial variables explaining the global factors extracted for AEs are similar to the ones obtained using the ARDL regression of the global factors of EMDEs, providing robustness to the results. Based on the analysis undertaken in the first research issue, gross inflows to EMDEs are larger in magnitude, more volatile in nature and more strongly affected by the world financial conditions, compared to the gross outflows from these economies. Moreover, within the gross inflows to EMDEs, the FDI inflows are found to have the highest share among all types of capital flows. Therefore are found to have the highest share among all types of capital flows. Therefore, in the second and third research issues, the thesis focuses specifically on gross FDI inflows to EMDEs. The second research issue is titled 'Drivers of Foreign Direct Investment Inflows in Emerging Asian Economies' and examines the global and domestic determinants of foreign direct investment (FDI) inflows in Asian EMDEs, which are the recipient of the majority of FDI inflows into the emerging markets in comparison to other regions. The study uses the quarterly panel data of six Asian EMDEs, namely, China, India, Indonesia, Malaysia, Philippines, and Thailand, from 2000-2019. The selected set of economies has a share of more than 95 per cent in the GDP of Asian EMDEs during the period of analysis. Understanding the factors influencing capital flows is vital for policy responses and controlling volatility. FDI inflows depend on global and domestic variables. Domestic factors like growth or return differential between emerging and advanced economies, domestic infrastructure, and trade openness are the 'pull' factors, while global factors like global liquidity, risk aversion and advanced economies growth are the 'push' factors. This study examines both, push and pull factors in attracting FDI to Asian EMDEs. The analysis finds evidence of the existence of cointegration or long-run relationship among the variables in the model, but the standard panel cointegration techniques do not control for cross-sectional dependence (CSD). The

major contribution of this study to the literature is in terms of the novel technique used to control for CSD in panel data estimation. The Augmented Mean Group (AMG) regression technique is employed to extract the proxy for CSD which is used as a separate variable in the Fully-modified OLS (FMOLS) and Dynamic OLS (DOLS) estimations of the cointegrating vector. This novel estimation technique allows the analysis to account for four major econometric issues in the panel data: CSD, nonstationarity, cross-sectional heterogeneity, and endogeneity. According to the findings, a significant positive association exists between FD inflows to Asian EMDEs and growth rate differential, trade openness, physical infrastructure, and financial development within the domestic economy. Conversely, macroeconomic instability is found to have a negative influence on attracting FDI inflows to Asian EMDEs. Among the global variables, global liquidity is found to exert a positive effect in driving capital towards Asian emerging economies. In contrast, global risk and global economic policy uncertainty are found to have a negative impact. Instead of taking dummies for the crisis period during 2000-2019, the study controls for GFCy discussed in the first research issue. The FDI inflows to EMDEs are significant for capital accumulation, technology advancement, knowledge spillover, managerial expertise, crowding in domestic investment and facilitating international trade by linking local firms to global value chains. But the empirical evidence on the positive association between FDI and the growth of an economy is inconclusive. Therefore, given the high magnitude of FDI inflows into EMDEs, policymakers must analyze the impact of FDI inflows on growth and understand the role of domestic variables in strengthening this relationship. The third research issue is titled 'FDI-Growth Nexus in Emerging Economies: Role of Financial Sector Development' and examines the non-linear relationship between FDI inflows and growth rate in an economy and whether the development of the domestic financial sector can enhance the growth effect of FDI inflows for EMDEs. The empirical analysis addresses three key concerns, including the impact of FDI inflows on economic growth, the presence of the 'vanishing effect of finance' phenomenon in EMDEs, and the extent to which domestic financial sector development (FSD) can affect the FDI-growth nexus. The analysis employs annual data from 2000-2019 for 71 EMDEs including countries from Emerging and Developing Asia, Emerging and Developing Europe, Latin America and the Caribbean, Middle East and Central Asia and Sub-Saharan Africa. To align with the nature of the research question and the objective of exploring the determinants of sustained economic growth, the thesis transitions from analyzing quarterly data in the first two research issues to utilizing annual data in this specific issue. This shift is motivated by the recognition that growth regressions are more appropriate and effective when conducted with annual data. The empirical investigation is motivated by an endogenous growth model where foreign financing in the form of direct investment affects the level of investment in the economy and the proportion of funds lost in financial intermediation depends on the level of FSD. The dynamic panel threshold model (DPTM) is employed to estimate the threshold level of FSD beyond which the growth effect of FDI turns significant. Moreover, the kink specification of DPTM is used to access the financegrowth relationship and examine the existence of the 'vanishing effect of finance' for EMDEs. The robustness checks based on 4-year averaged non-overlapping data as the observational unit are done using the system-GMM technique (that controls for endogeneity), fixed-effects regression, DPTM and DPTM with kink. FSD and growth are found to be linked in a U-shaped parabolic function, where FSD has a negative effect on growth in the early stages of development and beyond a threshold of FSD, the effect turns positive. Therefore, the study does not find evidence of the 'vanishing effect of financial development' or the hypothesis of 'too much finance' in the case of EMDEs. A well-developed domestic financial sector establishes the groundwork for growth facilitated by FSD for EMDEs. There may exist an additional threshold at much higher levels of FSD beyond which the growth effect turns negative or becomes

negligible owing to asset price bubbles and enhanced financial fragility, as is found in the literature for high-income economies. The present study also finds a threshold of FSD beyond which FDI has a significant growth effect, thereby concluding that to maximize the positive impact of FDI on growth, it is important to establish a robust financial system through effective macroeconomic policies that promote financial resilience, encourage innovation in the financial sector, and safeguard the rights of investors. Based on the empirical investigations of the three stated research issues, the results provide valuable insights into the dynamics of international capital flows in the EMDEs. A favourable global financial environment in terms of high liquidity, and high growth of advanced economies is found to facilitate the movement of capital to these economies, while adverse conditions like elevated global risk, high policy uncertainty, and tight credit conditions are found to lower inflows or lead to withdrawals. However, if the domestic fundamentals and institutions are strong, EMDEs can insulate themselves from global financial turbulence. The study finds higher sensitivity to global factors for the economies with price instability, financial instability and fixed exchange rate regime. Moreover, the opening up of capital account is found to increase the vulnerability of the economy. Therefore, a correct approach for the policymakers is to follow a gradual and sequential approach in opening the capital account where the most stable types of flows are opened first, followed by the volatile types of flows once the financial system is well-developed. The findings in the thesis also indicate that FDI inflows positively impact the growth of EMDEs but the effect is conditional on the level of FSD crossing a certain threshold.

Contents

Introduction 2. Dynamics of capital flows and global factors. 3. Drivers of foreign direct investment inflows to emerging Asian economies. 4. FDI growth nexus in emerging economies: role of financial sector development. 5. Conclusion and Policy Implications. Bibliography.

06. VIRENDER KUMAR
Analysis of Foreign Capital Flows to India and Brics Countries.
Supervisors: Prof. Pami Dua
Th 27026

Abstract

The thesis focuses on three issues related to foreign capital flows to India and BRICS counties. The first two issues of the thesis analyse the impact of domestic monetary policy shock on foreign capital flows to India at the aggregate and disaggregated levels, respectively. The third issue considers a panel of BRICS countries and examines and identifies the long-term determinants of foreign portfolio investment (FPI) inflows to these countries. The basic research questions and the main conclusions from the three issues are described as follows. The first issue empirically examines the impact of domestic monetary policy shock on total net foreign capital flows to India for the period 2000-2019. The study uses two variables, interest rate differential and domestic money supply growth to assess the impact of domestic monetary policy shock on foreign capital flows to India and employs the structural vector autoregressive (SVAR) model approach for the empirical analysis innovation accounting (impulse response function and variance decomposition function) under the structural VAR model is utilized to derive empirical results. Impulse response function (IRF) helps trace the dynamic path of one variable when there is a shock to another variable. Variance decomposition function (VDF) tells how much proportion of total variation in one variable is

explained by shock to other variables in the model. The two applications together help establish the impact and the relative importance of domestic monetary policy shock vis-à-vis other variables in causing foreign capital flows to India.

Contents

1. Introduction. 2. Examining the impact of domestic monetary policy on foreign capital flows to India. 3. Examining the impact of domestic monetary policy on disaggregated foreign capital flows to India. 4. Determinants of foreign portfolio investment to BRICS countries: a panel cointegration approach. 5. Summary, conclusions and policy implications.