

## CHAPTER 13

### ECONOMICS

#### Doctoral Theses

01. BANSAL (Renu)  
**Capital Inflows, Exports, and Formal Employment: Some Theoretical and Empirical Issues.**  
Supervisors: Prof. Dibyendu Maiti and Prof. Uday Bhanu Sinha  
Th 27446

#### *Abstract*

This thesis comprises three chapters on capital inflows. The first chapter examines the impact of violation of international labour regulations on FDI inflows. The second chapter focuses on the role of foreign technology and the strategic use of informal labour on formal wages and employment. The last chapter examines the impact of foreign technology on exports and employment. The first chapter extends a global sourcing model by informal labour and analyses the impact of violation of international rules and regulations, such as the ILO tripartite declarations, FairTrade, GoodWeave, etc., to access informal labour, using transaction cost and property right theory approach. Violations result in the emergence of reputation and extra-legal costs, which impact the willingness to invest and the ownership decisions of integration or outsourcing of a foreign firm in labour-abundant developing countries. Theoretical and empirical investigation shows that the attractiveness of integration falls with the rise in reputation and extra-legal costs. However, such adverse effects of these costs decline with a rise in the capital intensity of a foreign firm. The second chapter extends an international duopoly model of strategic competition to analyse the impact of inward FDI accompanied by foreign technology and strategic use of informal labour on formal wages and employment in a unionised formal sector. Mathematical simulations and empirical exercise show that increased FDI and access to the informal sector results in a rise in formal wage and employment. In the third chapter, the results of a designed Cournot duopoly model and a stochastic frontier approach applied to firm-level cross-sectional data show the positive impact of R&D expenditure and skill acquisition on foreign technology absorption and raise the technical efficiency of manufacturing firms in China and India. Further, the 3SLS methodology finds technical efficiency boosts exports and formal employment. The last chapter concludes and draws some policy implications.

#### *Contents*

1. Introduction: 2. Informal Labour Regulations, Firm Boundaries, and Global Sourcing. 3. Capital Inflow, Strategic Subcontracting, and Formal Employment. 4. Technology Inflow, Adoption, and Efficiency: Dichotomy of Exports and Employment in India and China. 5. Summary and Conclusions. Bibliography.

02. GUPTA (Shweta)  
**Essays on Environment and Climate Change.**  
 Supervisors: Prof. Mausumi Das and Prof. Shreekant Gupta  
Th 27447

*Abstract*

The thesis explores the effects of climate change on agriculture, focusing on India. It identifies three factors: static specifications, neglect of intra-year variability in climate variables, and asymmetric impacts of climate shocks. Using dynamic panel data, it analyzes the long-term impact of climate anomalies on major crops, revealing significant yield reductions. It emphasizes the need for granular analysis considering regional variations in climate and economic conditions. Another essay extends this analysis to regional levels, finding persistent yield impacts across different regions. It stresses the importance of tailored interventions for local vulnerabilities and food security. Lastly, it predicts future yield losses under climate scenarios, identifying vulnerable districts. By 2050, India is projected to experience warmer temperatures and erratic rainfall patterns, leading to substantial yield reductions. The essays collectively highlight the detrimental effects of climate change on India's agricultural sector, underscoring the urgency of mitigation and adaptation measures.

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1. Introduction 2. Data. 3. Long-run and short-run impacts of climate change on crop yields: a disaggregated analysis for India 4. Regional sensitivity of crop yields to climate change 5. Future climate change impacts on agricultural yields.

03. SHEIKH (Ridwan Ah)  
**Essays on Intellectual Property Rights and Trade.**  
 Supervisor: Prof. Sunil Kanwar  
Th27448

*Abstract*

This dissertation studies the empirical relationship between three distinct but related aspects of international trade, and the strength of intellectual property rights (IPRs) that countries provide. The first issue that we investigate is whether technology-intensive imports into developing countries are influenced by their levels of patent protection. We find that stronger patent protection in developing countries has a significant positive impact on their manufacturing imports, both in the aggregate as well as dis-aggregated product categories. Furthermore, we show that this increase in import value is driven by changes in quantity, and not merely changes in prices. The second issue that we study is the impact of the Trade-Related Intellectual Property Rights (TRIPS) agreement on IPRs-intensive export flows. Employing a difference-in-differences approach that leverages variation in the timing of TRIPS compliance of the sample countries, we find that IPR-intensive exports exhibit a U-shaped response to TRIPS compliance. Moreover, countries that comply with the agreement earlier, generally experience a significant positive impact on trade, while no such gains are observed for countries that comply with the agreement later. These findings can be attributed to the timing of trade liberalization such that countries trade more (less) if they liberalized trade earlier (later). The third issue examines the impact of preferential trade agreements (PTAs) and deep trade agreements (DTAs) on export flows, with a specific focus on the provisions related to intellectual property rights. Although there is no significant

contemporaneous effect of PTAs or DTAs with IP-related provisions on export flows, we do find a significant effect with a time lag, in both high-IP and low-IP export sectors. Within the high-IP group, the provisions related to patents, copyrights and trademarks have a significant lagged effect on export flows in the industry type(s) where the respective IP-protection holds the most significance.

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1. Introduction 2. Does Host Country Intellectual Property Protection Matter for Import Flows? 3. Revisiting the Impact of TRIPS on IPR-intensive Export Flows: Evidence from Staggered Difference-in-Differences. 4. Do Deep Trade Agreements with Intellectual Property Provisions Actually Increase International Trade? 5. Conclusion.