Gaurav Bhattacharya

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Education

Ph.D. Economics
Centre for International Trade and Development (CITD), Jawaharlal Nehru University (JNU), New Delhi, 2020, (submitted; examiners' reports awaited)
Thesis Title: Trade and Environmental Linkages: A Political Economy Perspective
Thesis Supervisor: Professor Meeta K. Mehra

M.Phil. Economics
Centre for International Trade and Development (CITD), Jawaharlal Nehru University (JNU), New Delhi, 2016

M.A. Economics
Centre for International Trade and Development (CITD), Jawaharlal Nehru University (JNU), New Delhi, 2013

B.Sc. Economics (Hons.)
Scottish Church College, University of Calcutta, Calcutta, 2010
Minors: Mathematics and Statistics

Experience

Climate Policy Initiative (CPI), New Delhi
Research assistance on a monograph on "Renewable Energy in India: Implications for the Macro Economy and Energy Security" Climate Policy Initiative (CPI) as a part of the study on "Research on An Assessment of India's Energy Choices", (with Meeta K. Mehra, Saptarshi Mukherjee and Sk. Md. Azharuddin), October 2016- February 2018

CITD, JNU, New Delhi
Statistical Analysis of Categories Used for Target Setting of Specific Energy Consumption (SEC) for Various Units in Energy-Intensive Industries for the Perform, Achieve and Trade (PAT) Scheme, 2012

Centre for Science and Environment, New Delhi
Monograph on, "How do refineries mobilise their resources to invest in refinery expansion?, 2012

Teaching

Gargi College, University of Delhi
Ad-hoc Assistant Professor, 2018-present

Kamala Nehru College, University of Delhi
Ad-hoc Assistant Professor, 2016

CITD, JNU, New Delhi
Remedial Tutor, M.A. course on Statistics and Econometrics, 2013-15

Courses Taught

Undergraduate courses
Mathematical Methods for Economics, Statistical Methods for Economics, Data Analysis, Environmental Economics, Microeconomics, Macroeconomics, Research Methodology

Research Interests

International Trade, Political Economics, Environmental Economics

Presentations

"Duopoly and trade in polluting goods in the presence of special interest politics" at the Research Scholar's Workshop, University of Calcutta, Kolkata, India, 2018

"How transport costs and pollution taxes affect location decisions of a firm? A theoretical approach" at the conference on Issues in Economic Theory and Policy, Presidency University, Kolkata, India, 2015

"Investing for clean fuels: How do refineries in India mobilise their resources to invest in refinery expansion?" at the Fifth National Seminar on Industrial Statistics, CSO, Kolkata, India, 2014

Workshops

RIS-EXIM Bank Summer School on International Trade Theory and Practice, Research and Information System for Developing Countries,New Delhi, India, June 11-18, 2018

DAAD CEDS Workshop on "New Paradigm of Economic Development: Social and Environmental Dimensions", CITD, JNU, New Delhi, India, December 2017

DAAD CEDS South–South research exchange programme, East China Normal University, Shanghai, China, November 2017

Global South Workshop, Pontifícia Universidade Católica do Rio de Janeiro, Brazil, October 2017 (Paper presented through skype)

4th IGC-ISI Summer School in Development Economics, ISI Delhi, India, July 2016

Publications

Bhattacharya, Gaurav (2019). Location decisions of industries in the presence of transportation costs and environmental regulations: Empirical evidence from India. *Journal of Social and Economic Development,* 21(1), 24-53

Mehra, Meeta K. and **Bhattacharya, Gaurav** (2018). Energy Transitions in India: Implications for Energy Access, Greener Energy, and Energy Security. *Georgetown Journal of Asian Affairs,* 4(2), 88-97

Chapters in Edited Volumes

Mehra M. K., Mukherjee S., **Bhattacharya Gaurav** and Azharuddin Sk. Md. (2021). Renewable Energy in India: What It Means for the Economy and Jobs. In P. Dasgupta, A. R. Saha, & R. Singhal (Eds.), *Sustainable Development Insights from India* (pp. 343-375). Springer Singapore. https://doi.org/10.1007/978-981-33-4830-1

Working Papers

Trade Wars and Trade Talks Revisited: An extension of the Grossman-Helpman Model (1995) (with Meeta K. Mehra), CITD Discussion Paper 21-01. https://www.jnu.ac.in/sites/default/files/citd/DP01_2021.pdf

Interaction between Trade and Environment Policies with Special Interest Politics: A Case when Commodity Markets are Imperfect (with Meeta K. Mehra)

Industry Size and Trade Protection in the Presence of Environmental Regulations: An Empirical Analysis for the Indian Manufacturing Sector

Awards and Fellowships

UGC Senior Research Fellow in Economics w.e.f July, 2018

Cleared CBSE- UGC NET JRF, December, 2014

Awarded Certificate of Merit by Scottish Church College, Calcutta in 2009, 2010

Secured First Place in Economics at college level in the C.U. Examinations in 2010

Awarded Sekhar Das Memorial Prize, Miller Prize by Scottish Church College in 2009

Awarded Hindi Scholarship by Government of West Bengal in 2006, 2008

Awarded for Academic Excellence by St.Augustine's Day School, Barrackpore, Kolkata in 2006, 2007

Positions of Responsibility

Member of NAAC sub-committee for Criterion VII, Gargi College, University of Delhi, September 2020-present

Faculty Convenor of the Economics Association, Gargi College, University of Delhi, July 2019-present

Member of the BA Programme Association, Gargi College, University of Delhi, July 2019-present

Member of Gargi Humanities Pathfinder Project, Gargi College, University of Delhi, July 2019-present

Student-Faculty Coordinator, CITD, JNU, 2013

Member of the Placement Cell, CITD, JNU, 2011-12

Software Skills

MS Office, EViews, STATA, R, GAMS, LaTeX, Scientific Workplace

References

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Journal of Social and Economic Development
https://doi.org/10.1007/s40847-019-00074-0

RESEARCH PAPER

Location decisions of industries in the presence of transportation costs and environmental regulations: empirical evidence from India

Gaurav Bhattacharya[1]

Abstract
This paper examines how transport costs and pollution taxes both jointly determine the location of production in a spatial framework. In a two-region model, a firm produces a dirty good through a single production plant in one region and serves consumers in both regions. Production, which causes local pollution, is subject to some pollution tax. Furthermore, the firm has to incur transport costs in order to serve consumers in the other region. Using factory level data for the Indian manufacturing sector for the year 2011–2012, I find evidence that both these factors play a significant role in firm location decision. States with relatively stringent environmental regulations are less attractive for plant location. On the contrary, the impact of transport infrastructure is dependent on the level of soft means of communication. Effective means of communication networks reduce the need for transport infrastructure. Apparently, communication networks act as a substitute for effective transport infrastructure. However, this does not hold true for the sub-sample of highly polluting industries.

Keywords Firm location · Environmental regulations · Transport cost · Consumers' surplus

JEL Classification L60 · R11 · R12 · R30

Introduction

A firm undertakes production activities to make profits and meet the demand of consumers. Consumers, who are geographically dispersed across regions, are buyers of the products manufactured by the firm. In the presence of market imperfections, such as in case of monopoly markets, the monopolist may have a single plant or multiple plants to undertake production. The question of multiple plants arises only if there exist more than one market. In a spatial framework, distance is costly. Hence, transportation costs play a crucial role in driving producers to set up multiple plants.

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[1] Centre for International Trade and Development, School of International Studies, Jawaharlal Nehru University, New Delhi, India

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Renewable Energy in India: What It Means for the Economy and Jobs

Meeta Keswani Mehra, Saptarshi Mukherjee, Gaurav Bhattacharya, and Sk. Md. Azharuddin

1 Background

Energy is an important input for spurring economic growth and development in that both fossil energy (FE) and renewable energy (RE) have strong interlinkages with crucial factors that characterize the macroeconomy, demographic profile, employment and energy economy of an emerging market economy such as India. Until 2017–2018, India recorded among the highest economic growth rates in the world, with an annual gross domestic product (GDP) growth of around 7–8%. However, in the second half of 2019, India began to experience a phase of economic slowdown attributed to the sluggish growth of industrial production, mainly, capital goods and electricity generation (Economic Times, 2020). In the last three quarters of the financial year (FY) 2019–20, the growth rate (at 2011–12 prices) witnessed a steady

The present study builds on the authors' earlier work as a four-report series published by the Climate Policy Initiative (CPI), New Delhi (Mehra et al. 2018). The authors are grateful to CPI for supporting this earlier work.

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P. Dasgupta et al. (eds.), *Sustainable Development Insights from India*,
India Studies in Business and Economics,
https://doi.org/10.1007/978-981-33-4830-1_17

Energy Transitions in India

Implications for Energy Access, Greener Energy, and Energy Security

Meeta Mehra and Guarav Bhattacharya

Today, India is one of the fastest growing economies in the world, with an expected annual GDP growth rate of 7.6 percent. With a target of eight percent annual growth in the twelfth five-year plan (2012–2017) and significant policy initiatives toward sustaining growth for the next forty years, India's energy needs cannot be overlooked.[1] Energy is a vital input to production and consumption processes and it is pertinent that its uninterrupted supply to various sectors of the economy be ensured to meet their growing energy demand.

At present, India accounts for nearly eighteen percent of the world population estimated to be approximately 7.6 billion in the year 2018, yet comprises a mere six percent of global energy demand.[2] While India's energy consumption nearly doubled between 2000 and 2015, its per capita energy demand remains around one-third of the world average, and much below the levels reached by the United States and the European Union. Herein lies the potential for India's energy economy to grow substantially in the future.

India's Energy Outlook (IEO) 2015—produced by the International Energy Agency— predicts trends in the growth of energy supply and consumption to be staggering.[3] By 2040, India's energy demand will explode due to an economy that is expected grow by more than five times its current level in terms of aggregate GDP, and a population growth rate that would make India the most populous country in the world. Accordingly, IEO 2015 projects India's aggregate energy consumption to more than double by 2040, with a rise in the offtake of coal, oil, and natural gas, making it among the highest energy consumption growth countries across the globe.

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[1] Ministry of Statistics and Programme Implementation (MoSPI), *Second Advance Estimates of National Income, 2016-17 and Quarterly Estimates of Gross Domestic Product for the Third Quarter (Oct-Dec), 2016-17.* (India: Ministry of Statistics and Programme Implementation, 2017). http://mospi.nic.in/sites/default/files/press_release/nad_pr_28feb17r.pdf. Accessed November 30, 2016

[2] United Nations Population Division, *2017 Revision of World Population Prospects, Department of Economic and Social Affairs* (UNDESA, 2017).

[3] International Energy Agency (IEA), "India Energy Outlook (IEO)," *World Energy Outlook Special Report.* (Paris, France: 2015).

Georgetown Journal *of*

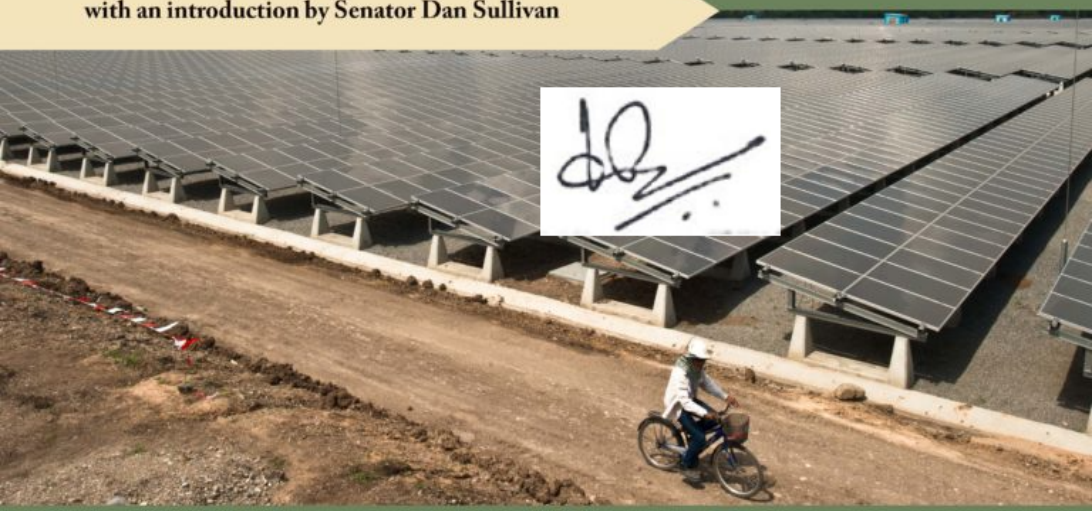
ASIAN AFFAIRS

POLICY FORUM

Energy Politics in Asia

A Time of Transition

with an introduction by Senator Dan Sullivan



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