

PUBLIC ECONOMICS

THEORY and POLICY

Essays in honor of
Amaresh Bagchi

Edited by

M. Govinda Rao

Mihir Rakshit



Public Economics

Theory and Policy

Essays in Honor of Amarendra Bagchi



Edited by

M. Govinda Rao

Mihir Rakshit

 **SAGE** www.sagepublications.com
Los Angeles • London • New Delhi • Singapore • Washington DC



Copyright © M. Govinda Rao and Mihir Rakshit, 2011

All rights reserved. No part of this book may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording or by any information storage or retrieval system, without permission in writing from the publisher.

Jointly published in 2011 by



SAGE Publications India Pvt Ltd

B1/I-1 Mohan Cooperative
Industrial Area
Mathura Road,
New Delhi 110 044, India
www.sagepub.in

and

**National Institute of
Public Finance and Policy**

18/2 Satsang Vihar Marg
Special Institutional Area
New Delhi 110 067, India

SAGE Publications Inc

2455 Teller Road
Thousand Oaks, California 91320, USA

SAGE Publications Ltd

1 Oliver's Yard, 55 City Road
London EC1Y 1SP, United Kingdom

SAGE Publications Asia-Pacific Pte Ltd

33 Pekin Street
#02-01 Far East Square
Singapore 048763

Published by Vivek Mehra for SAGE Publications India Pvt Ltd, Phototypeset in 10.5/12.5 Joanna MT by Tantla Composition Pvt Ltd, Chandigarh and printed at Chaman Enterprises, New Delhi.

Library of Congress Cataloging-in-Publication Data

Public economics: theory and policy: essays in honor of Dr. Amaresh Bagchi/
edited by M. Govinda Rao, Mihir Rakshit.

p. cm.

Includes bibliographical references and index.

1. Fiscal policy. 2. Finance, Public. I. Govinda Rao, M.
II. Rakshit, Mihir. III. Bagchi, A. (Amaresh)

HJ192.5.P797

336—dc22

2010

2010038413

ISBN: 978-81-321-0502-2 (HB)

The SAGE Team: Elina Majumdar, Sushmita Banerjee, Amrita Saha and
Deepti Saxena

List of Abbreviations

BBLR	Broad Based Low Rate
CBD	Convention on Bio-diversity
CENVAT	Central Value Added Tax
CGF	Credit Guarantee Finance
CSO	Central Statistical Organization
DCRF	Debt Consolidation and Relief Facility
EPAP	Eleventh Plan Approach Paper
FD	Fiscal Deficit
GDP	Gross Domestic Product
GEF	Global Environment Fund
GHG	Green House Gas
GPF	General Provident Fund
GPG	Global Public Goods
HRD	Human Resources Development
HSN	Harmonized System of Nomenclature
HST	Harmonized Sales Tax
ICOR	Incremental Capital Output Ratio
IIP	Index of Industrial Production
IT	Income Tax
MDG	Millennium Development Goals
MRP	Maximum Retail Price
NAIRU	Non-Accounting Inflation Rate of Unemployment
NDP	Net Development Product
NHDP	National Highway Development Project

List of Abbreviations

OECD	Organization for Economic Cooperation and Development
PAN	Permanent Account Number
PDS	Public Distribution System
PPP	Public-private Partnership
PVAT	Prepaid Value Added Tax
QST	Quebec Sales Tax
RD	Rural Development
RNR	Revenue Neutral Rate
SDG	School Development Grant
SEEA	Settled System of Environmental Economic Accounting
SNA	System of National Accounts
SSA	Sarva Shiksha Abhiyan
TFC	Twelfth Finance Commission
TLM	Teaching and Learning Material
UNCTAD	United Nations Conference on Trade and Development
UNICEF	United Nations Children's Fund
WTO	World Trade Organization



डॉ. सी. रंगराजन
Dr. C. RANGARAJAN



अध्यक्ष
प्रधानमंत्री की आर्थिक सलाहकार परिषद्
विज्ञान भवन सौध ई हाल
मौलाना आज़ाद रोड
नई दिल्ली-110 011

CHAIRMAN
Economic Advisory Council to the Prime Minister
Vigyan Bhavan Annexe, 'E' Hall
Maulana Azad Road
New Delhi-110 011

Foreword

It is an honor to write the Foreword to this volume, which is a collection of essays in honor of Dr Amaresh Bagchi who passed away in February 2008. I had known Dr Bagchi intimately for the last three decades. We had served together in one or two committees.

Dr Bagchi was an outstanding economist who gave shape to the discipline of public finance in our country. He came to the academic field a bit late. He joined the academia after about two decades of working in the income tax department of Government of India. His essays were models of logic and precision. They were marked by analytical rigor and clarity. His writings covered all aspects of public finance—direct and indirect taxes, tax administration, fiscal deficit and public debt, fiscal decentralization and public expenditure. On the question of fiscal deficit, we shared a common interest. While he approached it from the angle of fiscal policy, I looked at it from the angle of monetary policy. We agreed that fiscal deficits must be kept under control, while there were differences on the modalities of monitoring it.

The death of Dr Bagchi has left a deep void in the arena of public finance in India. The essays included in the volume cover a wide range. This volume is a fitting tribute to one who had spent his entire life working on different facets of public finance. I must thank all the authors for their excellent contributions. This volume is an important addition to the literature on public economics in our country.

C. Rangarajan

(C. Rangarajan)

Acknowledgments



Working on this book in honor of Dr Amaresh Bagchi has been a great pleasure. It is due to the popularity of Dr Bagchi that his friends and colleagues were very forthcoming in contributing to the volume and attending to the several queries in spite of their extreme demand on time. The family members of Dr Bagchi, particularly his wife, Mrs Ratna Bagchi, daughter, Dr Uttara Chatterjee, and son, Dr Kaushik Bagchi were very forthcoming in sharing with the authors the various aspects of his life and works. We would also like to thank SAGE Publications, particularly Ms Elina Majumdar for the keen interest shown in publishing this collection of essays. Thanks are also due to Mr N. Natarajan who attended to the logistics of getting the editorial queries answered by various authors and for looking after various aspects of publication.

Introduction

This volume is a tribute to Amaresh Bagchi, a pre-eminent scholar in public finance who passed away in February 2008. Amaresh Bagchi was a keen researcher who relentlessly undertook policy research and advocacy in public economics, in an academic career spanning over three and a half decades preceded by almost two decades of experience in tax and economic administration in Government of India. The chapters included in the volume have been contributed by his close friends and colleagues and deal with both theoretical and applied topics in public economics. Most of the topics dealt with in the collection were dear to Amaresh and it is hoped that the volume will be a fitting tribute to the scholar who had unparalleled passion for both theory and empirical research in public economics.

Much of Amaresh Bagchi's research was in applied public economics, but he had tremendous love for theory and never missed an opportunity to studiously learn, admire, and get excited about nuances in theoretical developments. Amaresh Bagchi was a late entrant to a full-time academic profession; he spent the first two decades of his career in tax and economic policy administration in the Ministry of Finance. He put the knowledge gained from his experience of policy administration to great advantage by combining rigor with relevance in his research studies. Amaresh Bagchi made significant contributions in several areas, including tax policy and administration and fiscal federalism. His love for theory is best evidenced in the review article of a book which put together the outcome of a week-long symposium organized

by the Centre for Economic Studies at the University of Munich. The symposium involved two great stalwarts in public finance and public choice—Richard Musgrave and James Buchanan, the former firmly rooted his analysis on the assumption of a benevolent state and the latter approached the subject from the perspective of public choice, in which the state was assumed to be a problem rather than a solution. Amaresh Bagchi was also concerned about the poor quality of teaching and research in public economics in India and went on to edit a volume that contained basic contributions to theory and applied public economics for the benefit of the students (Bagchi, 2005). Unpretentious and affable, Amaresh Bagchi was very concerned with poverty and deprivation and firmly believed that the end of all policies should be to usher in a just society. Indeed, he was the bridge between the left and the right, often torn between them, but nevertheless was equally at home across ideological spectrums.

Amaresh Bagchi's scholarship, unpretentious character, and humility earned him a large number of friends and admirers. Some of us who worked closely with him decided to put together this volume in memory of our association with him and as a tribute to his scholarship. All the contributors to this volume were close friends and colleagues of Amaresh Bagchi and all of us benefited immensely from close professional associations with him. The volume has 10 papers besides two tributes, one from Professor Tapas Majumdar who, in fact was Amaresh Bagchi's teacher, and another by Shankar Acharya, who was his close friend and colleague initially at National Institute of Public Finance and Policy (NIPFP) and later in the Ministry of Finance.

The first paper in the volume by Sudipto Mundle highlights the life and works of Amaresh Bagchi. Mundle traces his journey from his birth in Malda in 1930 to his education at the Presidency College, Kolkata. It is here he developed friendship and professional association with the likes of Dr D.N. Ghosh and Professor Mihir Rakshit which lasted his entire professional journey. Mundle records Bagchi's tenacious pursuit of tax cases of high profile political personalities as an Indian Revenue Service Officer. His entry into scholarly pursuits such as economics research, though late, was helped by his experience with institutional realities. As an official of the Ministry of Finance, he was called upon to provide background research to the policy on bank nationalization. He also assisted the K.N. Raj Committee on "Taxation of Agricultural Wealth and Incomes". These are just two examples of the many that

left an imprint on his scholarship on policy making. Joining the NIPFP as Reserve Bank of India (RBI) Chair Professor and later as its Director led him to make significant contributions in fiscal policy research, advocacy, and capacity building.

As an expert in fiscal policy, Amaresh Bagchi was very concerned about persistence of large deficits but was not in favor of the mechanical way in which the fiscal consolidation targets were set. Mihir Rakshit's paper in this volume questions the very logic of the targets on revenue and fiscal deficits, and their phasing under the Fiscal Responsibility and Budget Management (FRBM) Act, 2003, as well as the fiscal restructuring plan recommended by the Twelfth Finance Commission. Although the FRBM Act, 2003 was forced to be abandoned in 2008 due to the global financial crisis, Rakshit points out that the Act itself was a veritable source of discord among the three policy making bodies in India, namely, the Finance Ministry, the Planning Commission, and the Reserve Bank of India. While the Planning Commission questions the definition of revenue deficit, it does not really have a fundamental objection to the FRBM Rules. Of course, it wants to extend the fiscal deficit target to be achieved by two years. In contrast, Rakshit has fundamental objections to the nature as well as phasing of the fiscal deficit targets required for achieving socio-economic goals. It contends that static targets for revenue and fiscal deficits are clearly inappropriate when the economy is faced with business or agricultural cycles. In fact, fiscal policy will have to take a pro-cyclical stance when such cycles are in vogue. Rakshit argues that the targets set by the fiscal structuring plan of the Twelfth Finance Commission are clearly sub-optimal from the long-term developmental perspective. Although it has a broadly consistent macroeconomic exercise, it is devoid of cost benefit calculations of borrowing.

Reforming the tax system was at the heart of Amaresh Bagchi's research, and while he was fascinated by the nuances of optimal tax theory, he saw that actual tax reforms will have to follow the best practice approach of broadening the base, lowering rates, and reducing differentiation in tax rates to evolve a simple and administrable tax system. Richard M. Bird's paper on "broadening base, lowering rate" approach to tax reforms in developing countries, makes a critical appraisal on the applicability of the best practice approach to tax reform. The essence of this approach is to broaden the tax base so that equivalent revenue can be realized at a lower tax rate. Levying the tax at lower

rates is necessary to minimize the distortions because the distortion is equivalent to square of the tax rate. Bird discusses the broad contours of broad-based low-rate approach and more specifically, the desirability of developing countries relying on (a) consumption versus income tax; (b) broader base versus narrower base; (c) policy to reduce the size of the informal economy; and (d) the usefulness of tax incentives. He argues that the growth-oriented tax system should minimize the three costs in taxation—the cost of collection, the compliance cost, and the cost of economy in terms of distortions. In his scheme, a growth-oriented tax system should have low and stable taxation of profits, some taxation of agricultural and informal sectors of the economy, and major reliance on broad-based consumption tax. He also cautions against tax incentives and that tax policy and reforms should not become a hostage to profits, and economic considerations should rule it.

Amaresh Bagchi was one of the pioneers of consumption tax reform in the country. The Expert Committee Report on the Reform of Trade Taxes in India in 1995 headed by Amaresh, characterized the Indian consumption tax system in the mid-1990s as “archaic, irrational, and complex, and according to notable experts the most complex in the world”. Although the introduction of Value Added Tax (VAT) has improved the structure of consumption tax in significant ways from what was described here, much remains to be done and Goods and Services Tax (GST) reform is the way forward. Ehtisham Ahmad and Satya Poddar in their paper on the “GST Reforms and Intergovernmental Considerations in India” comprehensively deal with various constitutional, structural, and operational issues relating to the introduction of GST in India. They examine the design issues pertaining to GST in the country to replace the prevailing multiple consumption taxes. Combining taxes on goods and services in a unified manner is necessary to eliminate cascading. GST reform at the central level will help to broaden the base to cover stages subsequent to manufacturing. Similarly, at the state level, the VAT, at present, is levied only on goods and needs to be extended to services, not only to minimize cascading but also to expand the base of the tax. The chapter discusses alternative models of GST, including concurrent dual GST, the national GST, state GSTs, and non-concurrent dual GSTs, and underlines the formidable challenges of center-state coordination and harmonization, whichever option is chosen. The authors discuss various other design aspects such as measuring the revenue neutral rates, the issues of taxing food items, and

hard-to-tax areas such as land and real properties, non-profit sector, and financial services. The difficulties in taxing services of interstate nature at the state level, and the need for harmonizing law and administration in different states too are pointed out in the chapter.

Fiscal federalism was another area which fascinated Amaresh Bagchi and he himself did considerable work on intergovernmental fiscal issues. Notable among his contributions on fiscal federalism was the Kale Memorial Lecture he delivered at the Gokhale Institute of Politics and Economics, Pune. The normative framework on fiscal federalism or what has come to be known as the first-generation theories of fiscal federalism has been developed with the assumption of a benevolent state and keeping in view the advanced market economies. The implementable rules derived from this framework cannot be applied uncritically to developing country situations, particularly those in transition from plan to market. The policy responsiveness to regional resource allocations depends on the nature of policies and institutions and even as centralized planning strategy is no more relevant to resource allocation, the legacy left by adopting the plan strategy has continued. These include controls on prices and outputs, and impediments placed on the mobility of factors as well as products with significant implications for regional pattern of resource allocation. Govinda Rao's paper attempts to identify important institutional features of these economies that make the modifications in the normative propositions necessary. These include impact of planning in distorting the budgetary systems, overhang of public enterprises and its inhibiting influence on the development of the market, controls over prices and output and the distortions and invisible regional transfers they create, physical barriers to mobility and trade across different regions, need to replace public enterprise profits with taxes and variety of instruments used to establish regional equity under planning, and the problems that can get created in a market economy.

Public goods and externalities are at the core of public finance. Much of the literature in this area focuses on public goods within countries. The large gains from international peace, trade, and environment have led to considerable interest in these global public goods. In his paper, U. Sankar reviews the different definitions of global public goods and chooses the definition and framework provided by Kaul, Conceicao, Goulven, and Mendoza for evaluating the provision of global public goods. He considers different ways of classifying global

public goods. Using the above framework, particularly the concept of triangle of public-ness, the chapter assesses the working of three global regimes, namely, the World Trade Organization, the United Nations Framework Convention on Climate Change, and the Convention on Biological Diversity. It discusses issues such as subsidiary principle, incentives and delivery systems in the provision of global public goods. It concludes that in the three existing global institutions there are no built-in measures for achieving dynamic efficiency and that development concerns get low priority.

Ehtisham Ahmad and Nicholas Stern were the pioneers in applying modern public finance methods to the reform of indirect taxes in the early 1980s and NIPFP under Raja Chelliah and Amaresh Bagchi provided them the intellectual environment to initiate studies on India. In their chapter "Effective Carbon Taxes and Public Policy Options", they extend the methodology to the issues relating to the design and implementation of environmental taxes. Designing such a tax involves varying tax rates, according to the carbon content of different goods.

An important issue in carbon taxation concerns the assignment of the function to different levels of government, the allocation of carbon quotas to industries and trading in them and compensation to the poorest household that may be affected by the tax. For both administrative and political economy considerations, it is desirable to design carbon taxes uniformly across states, and this could be achieved by a central tax or harmonized state level taxes. In the Indian context, they recommend central excise as the most appropriate instrument for carbon taxation because, at the state level, levying state VAT at different rates would not be desirable. The authors also introduce a cap-and-trade scheme in which trading can take place between enterprises, if prior quotas are assigned to key upstream industries, and revenues can be generated by auctioning of the quotas. The carbon tax or quota-trading scheme must be accompanied by measures to compensate the poorest households that might be affected. These could be administered by state governments, and partially financed by the revenues from carbon tax or auctioning of quotas. The revenues from these instruments can also be used to finance any required restructuring of manufacturing or other activities.

Keeping in view the deep interest Amaresh Bagchi had on the sustainability of the development process, Ramprasad Sengupta in his chapter, "Sustainable Economic Growth and Modeling for Resource and Income Accounting", focuses on the conceptual and methodological

issues. The chapter begins by examining the basic feasibility of the long run steady-state growth while maintaining the ecosystems of the natural environment. He argues that in the growth model, capital should include knowledge capital as well. The human capital often embodies technological progress. This has warranted the use of the concept of weak sustainability in the literature to answer the questions relating to the feasibility of steady growth. The paper identifies the conditions of sustainable growth defined in a framework of weak sustainability and endogenous growth as driven by research and development (R&D) and human innovations of various kinds. This brings out the need for the development of a more comprehensive macroeconomic accounting system with the additional coverage and its reclassification for treating explicitly natural, human, and knowledge capital formations for characterizing economic changes and calibrating development policies.

In order to operationalize the concept of sustainable development in the accounting context, the paper further develops a theoretical approach of resource and income accounting using an input-output framework. The model depicts the environment-economy interaction along with the material balances. From this interaction model the estimates for the environmentally adjusted indicators of macroeconomic development like GDP, NDP, and savings are derived. The chapter highlights the importance of the interaction of environmental and economic accounting for sustainable development policies.

Amaresh Bagchi had tremendous interest in the economics of education, mainly as a humanist economist and also due to his close association with his teacher and friend, Professor Tapas Majumdar. Keeping this in view, Arnab and Anjan Mukherjee in their chapter, "Do Public Funds Increase Days of Instruction in Primary Schools?", investigate the role of public funds in ensuring a certain minimum number of instructional days in primary schools. Using data on primary schools from three districts, the chapter first documents that the distribution of instructional days may reasonably be thought of as a binary variable where a school is either functional (i.e., with more than 201 instructional days) or is not (i.e., has less than 201 instructional days). Second, it is shown that receiving any public funds is important for the schools to be functional; however, the marginal effect of volume of public funding diminishes with larger amounts of funding. Finally, monitoring schools in terms of the number of academic visits by Block Resource Centre (BRC) and Cluster Resource Centre (CRC)

coordinators as well as the presence of head teachers are important in ensuring that primary schools are functional in the sense that we have defined. These findings emphasize the important ways to improve the quality of primary schooling in India.

Amaresh Bagchi had considerable concern on the quality and content of teaching of public economics courses in universities. Keeping this in view, Arindam Das-Gupta, in the last chapter, identifies important gaps in the coverage of typical public economics courses, if they are to remain relevant given the rapidly changing scope of the public sector in the past 50 years. The chapter takes as its starting point topics not covered or inadequately covered in leading undergraduate public finance and public economics textbooks. Of the various topics identified, three topics discussed in detail are economic principles of the government budget, non-tax revenues, and the global fiscal commons. The discussion in each case focuses on definitions and principles—both theoretical and applied—rather than real-world examples. Other topics identified but not discussed in detail include the choice between modes of intervention for public service delivery, the role of government in the information sector, and public financial management and administration.

We hope these chapters do justice to the enormous appetite for knowledge that Amaresh Bagchi had. In this volume the readers would find that some chapters are theoretical and while others discuss policy matters. This has been done in order to commemorate Amaresh Bagchi's enormous love for both theoretical and applied subjects in public economics. In producing this volume we hope, we have tried to give this noble scholar something in return for his contributions.

M. Govinda Rao

Mihir Rakshit

Reference

Bagchi, Amaresh (ed.). 2005. *Readings in Public Finance*. New Delhi: Oxford University Press.

Contents

List of Tables and Figures	vii
List of Abbreviations	ix
Foreword by C. Rangarajan	xi
Acknowledgments	xiii
Introduction	xv
1. Amaresh Bagchi: His Life and Work	1
Sudipto Mundle	
2. Budgetary Rules and Plan Financing: Revisiting the Fiscal Responsibility Act	12
Mihir Rakshit	
3. The BBLR Approach to Tax Reform in Emerging Countries	37
Richard M. Bird	
4. GST Reforms and Intergovernmental Considerations in India	64
Satya Poddar and Ehtisham Ahmad	
5. Normative Framework of Fiscal Federalism for Economies in Transition	118
M. Govinda Rao	

6. Global Public Goods: Provision, Production, and Benefits	142
U. Sankar	
7. Effective Carbon Taxes and Public Policy Options	163
Ehtisham Ahmad and Nicholas Stern	
8. Sustainable Economic Growth and Modeling for Resource and Income Accounting	180
Ramprasad Sengupta	
9. Do Public Funds Increase Days of Instruction in Primary Schools? A Study of Three Districts in India	228
Arnab Mukherji and Anjan Mukherji	
10. Neglected Topics in Public Economics Courses	259
Arindam Das-Gupta	

Reminiscences

A Teacher Remembers	323
Tapas Majumdar	
My Friend Amaresh	326
Shankar Acharya	
About the Editors and Contributors	330
Index	333