

Inclusive Developments Through Socio-economic Indicators



New Theoretical and Empirical Insights

Edited by

Ramesh Chandra Das

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Inclusive Developments Through Socio-economic Indicators: New Theoretical and Empirical Insights

EDITED BY

RAMESH CHANDRA DAS

Vidyasagar University, India



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INVESTOR IN PEOPLE

To my sister and brother-in-law

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About the Contributors

Arpita Chaudhury Aich is pursuing PhD in Geography at Raja N. L. Khan. Women's College (Autonomous), Vidyasagar University, Paschim Midnapore (West Bengal), India. She is working as an Assistant Professor at the Department of General Studies, University of Engineering and Management, Kolkata, India. Her main area of research interest is the study of socioeconomic issues.

Md. Saifullah Akon is an Assistant Professor in Japanese Studies at the University of Dhaka. He obtained his Bachelor's and Master's degrees in International Relations at the University of Dhaka. His areas of interest include foreign policy, security, Japan–South Asia relations and disaster governance.

Chandan Bandyopadhyay, PhD, is currently an Associate Professor of Economics at Asansol Girls' College, India. He obtained his MA in Economics from The University of Burdwan securing the Gold Medal in 1994 and PhD from the same university in 2007. He has research interests in Gender Economics, Environmental Economics, Development Economics, etc.

Aparna Banerjee, PhD, is currently an Assistant Professor in Economics at Serampore College, India. She has research interests in various fields of Economics and almost 25 publications in reputed International/National Journals/Edited books are there in her credit.

Suparna Banerjee, PhD, is currently an Assistant Professor in Chemistry at Bangabasi Evening College, Kolkata, India. She has more than 20 publications in reputed international/national journals/edited books. Her research interests lie in various fields of nanoscience.

Mainak Bhattacharjee is presently an Assistant Professor in Economics at Loreto College, Kolkata, India, and formerly in The Heritage College, Kolkata, India. He has obtained MPhil and MA degrees in Economics from the Jadavpur University, Kolkata. He has been working in the areas of macroeconomics and international trade.

Sreelata Biswas, PhD, is presently working as an Assistant Professor at the Department of Economics, Sudhiranjan Lahiri Mahavidyalaya, Nadia, India. She has completed her PhD from Department of Economics, University of

Kalyani. She has published a number of research papers in nationally and internationally scholarly journals.

Suchismita Bose, PhD, is an Economist with ICRA for 18 years and a major contributor to the *ICRA Bulletin Money & Finance*. Her work focussed on financial markets. She received her doctoral degree from the Indian Statistical Institute. Presently, the Chief Economist at SURGE Research Support, she continues research in Applied Econometrics.

Alessia Bruzzo, PhD, received her PhD in ‘Real Estate Market Analysis’ in 2017 from the University of Genoa. Her main research interests are in real estate, particularly the macroeconomic evaluation of the 2007 subprime crisis and the estimation of real estate prices with respect to geographic and social indicators.

Manh-Tien Bui is a PhD Candidate in Economics at the Crawford School of Public Policy, the Australian National University. His research focuses on Political Economy, Energy Economics and Applied Economics. He has participated in various research projects related to regional and provincial development planning, COVID-19 policy evaluation and other economic-related policy studies in Vietnam.

Mehmet Akif Ceylan, PhD, is Professor in the Faculty of Art and Sciences at the Marmara University. He received his undergraduate degree from the Dicle University in 1986. He has accomplished his master’s degree at the Istanbul University and received PhD from the Marmara University, Turkey.

Amrita Chakraborty is currently associated with University of North Bengal as Research Scholar. She has got good number of publications in reputed national and international journals and edited volumes.

Chandrima Chakraborty, PhD, is working in the Department of Economics, Vidyasagar University, India, as Assistant Professor. She did her MPhil and PhD in Economics from Jadavpur University, India. Currently, she is pursuing an ICSSR Major Research Project as Principal Investigator. Her major area of academic interest includes applied econometrics, gender studies, health, education, industrial economics and environmental economics.

Saptarshi Chakraborty, PhD, works as Professor of Economics in the Department of Commerce and the Principal of Panchakot Mahavidyalaya, Purulia, India. He has several papers and chapters published in journals and books, besides completion of two Minor Research Projects of The University Grants Commission, Government of India to his credit.

Suman Chakraborty, PhD, is working as an Assistant Professor and Head of the Department of Economics of Raja N. L. Khan Women’s College (Autonomous), West Bengal, India. His research and teaching experience is more than 14 years.

His main area of research interest is the study of socioeconomic issues and also the issues of financial economics.

Nilendu Chatterjee, PhD, is an Assistant Professor in the Department of Economics, Bankim Sardar College, India. His research interests in resource economics, international economics, econometrics and development economics. He has a list of publications with internationally reputed journals and books.

Tonmoy Chatterjee, PhD, is an Assistant Professor in the Department of Economics, Bhairab Ganguly College, India. He has research interest in International Trade Theory, General Equilibrium, Health Economics and Development Economics, and has a list of publications with the internationally reputed journals and books.

Somnath Chattopadhyay, PhD (Quantitative Economics) from Indian Statistical Institute, is an Active Researcher in Applied and Theoretical Econometrics. Presently he is an Assistant Professor of Economics at KRKKM, a degree college affiliated to the University of Burdwan. Earlier he worked as Economist at the Monetary Research Project of ICRA.

Anjan Ray Chaudhury, PhD, is a Senior Assistant Professor and the Head of the Department of Economics, Durgapur Government College, West Bengal, India. He has obtained MSc and PhD in Economics from the University of Calcutta, India. He has the credit of 22 years of research and teaching experience. His research interests are welfare economics, development economics, advanced econometrics, etc.

Duc Manh Chu is currently working as Research and Teaching Assistant at Fulbright School of Public Policy and Management after obtaining a Master's degree in Public Policy there. His research interests include economics, public policy and development policy.

Aghaulor Kosy Cletus is associated with the Department of Economics, University of Delta, Nigeria. His main areas of research lie in Environmental Economics, Social Sectors and Public Economics. He has published a list of articles in reputed journals and books.

Dipankar Das, PhD, is a Research Scholar in the Department of Economics at West Bengal State University, India. He has published a number of research articles in different journals. His areas of interest are finance, econometrics, education and environment economics.

Promila Das, PhD, is working as an Assistant Professor of Economics in School of Business, University of Petroleum and Energy Studies (UPES), Dehradun, India. She obtained her PhD degree in Development Economics from Assam

University, Silchar, India, in 2017. Her current research interests are related to development economics, gender economics, energy economics and applied economics.

Ramesh Chandra Das is presently Professor of Economics at Vidyasagar University, India. Dr. Das has published several articles in internationally reputed journals and edited dozens of books in the fields of macroeconomics, environmental economics and development economics.

Sunanda Das has done her master's in Economics from Vidyasagar University, India, with first class. She also holds a diploma in Data Science from the same university. She has research interests in agricultural economics, social sector, inclusive growth and development.

Hasan Dinçer, PhD, is Professor of Finance at Istanbul Medipol University, Istanbul-Turkey. He has more than 100 scientific articles and some of them are indexed in SSCI. He is also the Editor of many different books published by Springer and IGI Global.

Dipti Ghosh is currently working as Junior Research Fellow in Economics at Jadavpur University, Kolkata, India. She did her Master's in Economics from Presidency University, Kolkata, India, and received a MPhil degree in Economics from Jadavpur University, Kolkata, India. Her research interests lie in macroeconomics and Indian economy. She has been associated with Bijoy Krishna Girls' College, Howrah, India.

Adem Gök, PhD, is currently employed in Department of Economics at Kırklareli University, Türkiye as an Associate Professor. He holds a PhD in Economics from Marmara University since 2016. His research areas include economics of governance, environmental economics, economics of education and financial economics.

Enrico Ivaldi, PhD, is Professor of Social Statistics and Demography in the Department of Political Science, University of Genoa, Italy. He is the Member of C.I.E. (Centro de Investigaciones en Econometría) – Universidad de Buenos Aires and member of C.I.E.L.I., the Italian Center of Excellence on Logistics Transports and Infrastructures. He researches on the topic of social indicators and sustainable development.

Elena Viktorovna Korchagina, PhD, is a Professor at the Graduate School of Service and Trade, Peter the Great St. Petersburg Polytechnic University, St. Petersburg, Russia. She has supervised several doctoral students and projects in poverty eradication.

Napoleon Y. D. Kurantin, PhD, is a Senior Research Fellow in Natural Resource Management, Development Economics, International Development, Geographic Information Science and Systems (Geo-spatial Intelligence). He is the Vice Dean

of the Academic Division of the Ghana Armed Forces Command and Staff College (GAF CSC).

Thai-Ha Le, PhD, is the Managing Director at the VinFuture Foundation. She holds a PhD in Economics from Nanyang Technological University, Singapore. Her primary research fields include Energy Economics, Environmental Economics and Applied Economics. According to rankings compiled by Stanford University and published in *PLoS Biology* in 2021 and Elsevier in 2022, she is among the world's top 1% of most influential scientists across all scientific fields.

Abhijit Maity is a Research Scholar in the Department of Economics, Vidyasagar University, India. He is pursuing PhD in Economics on Education and Health. He completed his MPhil in the year 2018 from Vidyasagar University. Besides, he is working as a State Aided College Teacher in Hijli College, West Bengal.

Abdullah-Al-Mamun, PhD, is the Associate Professor and Chairman of the Department of Japanese Studies, University of Dhaka and Research Director of the Centre for Governance Studies. He did his PhD at the University of Huddersfield, UK. He earned his BSS & MSS in Sociology from the University of Dhaka. He is an MBA and did a Diploma in Japanese Studies.

Prosenjit Mukherjee, PhD, is currently an Assistant Professor in Economics at Bangabasi Evening College, Kolkata, India. He published several publications in reputed international/national journals/edited books, etc. His research interests are in various fields of economics.

Sayantana Mukherjee is presently a Research Scholar at the Department of Economics, The University of Burdwan. His areas of research interest are development economics, agrarian economics, poverty and inequality.

Sovik Mukherjee is presently an Assistant Professor in Economics (Morning Section) under the Faculty of Commerce and Management at St. Xavier's University, Kolkata, India. He is a former Visiting Research Fellow (2019–2020) at NISPAcee, Bratislava, Slovak Republic. His current research interests are in applied econometrics, applied game theory, economics of climate change and public policy.

Debabrata Mukhopadhyay, PhD, is a Professor in the Department of Economics, West Bengal State University, India. He has 20 years of teaching and research experience in different fields of economics. He has been presently working on green finance and social determinants of health.

Partha Mukhopadhyay has been a Research Scholar at Department of Humanities and Social Sciences, National Institute of Institute Durgapur, India; and works at Business Excellence Department of Durgapur Steel Plant, Steel Authority of India Limited. His research interest includes business management, agricultural

management, applied econometrics, etc. He has a number of publications in reputed journals and books.

Debasish Nandy, PhD, is an Associate Professor and Head, Department of Political Science, Kazi Nazrul University, Asansol, West Bengal, India. He is a Visiting Faculty in the Department of Foreign Area Studies, Tajik National University, Republic of Tajikistan. His research areas include India's Foreign Policy, South Asian Politics, South-East Asian Affairs and Security Studies.

Rohini U. Nikam, PhD, is presently associated with the Faculty of UG and PG levels. She worked as Examiner/Paper Setter for SPPU. Her areas of interest in law and human resource management.

Okoh John Onuwa is presently a Lecturer at the Department of Economics, University of Delta, Nigeria. His main areas of research lie in economic development and international economics. He has published a list of articles in reputed journals and books.

Bertha Z. Osei-Hwedie, PhD, is a Professor of International Relations and former Coordinator of PhD Programme, School of Public Service and Governance, Ghana Institute of Management and Public Administration (GIMPA). She was the Founding and Acting Dean of the School of Research and Graduate Studies, GIMPA. Her research interests include China, Japan, gender and development, African politics and development, and globalization.

Riddhima Panda has completed MSc in Economics from Calcutta University. She is working as an Assistant Professor (Guest) at the Department of Economics & Commerce, Syamaprasad College, Kolkata, India. Her main area of interest in research is the study of socioeconomic issues and also the issues of financial economics.

Samrat Ray is presently working as Professor & Dean, International Institute of Management Sciences, Pune, India. He is Senior Researcher at Peter the Great Saint Petersburg polytechnic University, Russia, specializing in big data analytics in poverty eradication and development economics. He has authored more than 60 articles in Scopus listed journals and published books on Machine Learning.

Anup Kumar Saha, PhD, is presently working as an Assistant Professor, Department of Economics, Nabadwip Vidyasagar College, India. He has completed his PhD from Department of Economics, University of Kalyani. He has published a number of research papers in nationally and internationally renowned journals. SEBI has recognized him as a certified Resource Person.

Bibhas Saha is Associate Professor of Economics at Durham University, UK. Before joining Durham, he worked at the University of East Anglia, UK and Indira Gandhi Institute of Development Research, India. He studied MA in Economics at Calcutta University, India, before completing his PhD from the

University of Southern California, Los Angeles. His main field of interest is applied micro theory, spanning over several sub-fields such as mixed oligopoly, trade union bargaining, corruption, behavioural economics, economics of betting, microfinance and political economy. He has published in journals like *Games and Economic Behavior*, *Social Choice and Welfare*, *Journal of Development Economics*, *Journal of Management and Strategy*, *Journal of Economic Behavior and Organization*, *Labour Economics*, *Economic Letters*, *Southern Economic Journal*, *Journal of Economics*, *Review of Development Economics*, among others. Previously he was the Co-editor of the *Journal of Quantitative Economics*, and currently, he is one of the Co-editors of *Review of Development Economics*.

Otene Samson is associated with the Department of Economics, University of Delta, Nigeria. His main areas of research lie in economic development, environmental economics and public economics. He has published a list of articles in reputed journals and books.

Atanu Sengupta, PhD, is presently Professor of Economics at Burdwan University, India. He earned Gold Medal in MSc Economics from the same university. His PhD was from Economic Research Unit, Indian Statistical Institute, Kolkata. Professor Sengupta has research interests in theoretical and applied economics, social economics and development economics.

Begum Sertyesilisik, PhD, is presently a Professor. She has been awarded a PhD at the Middle East Technical University; a MSc and a MBA at the Istanbul Technical University. She has specialised in the field of construction project management, sustainability, sustainable built environment, contract and dispute management.

Egemen Sertyesilisik, PhD, currently a Freelancer, has received an MA degree in Politics and Mass Media from the University of Liverpool, UK, and a MBA degree from the Yildiz Technical University, Turkey. He has received his PhD at the Marmara University, Turkey, in the field of political economy of the Middle East.

Shamsunnahar is a Research Associate at the Pan Asia Research Institute (PARI). She obtained her Bachelor's and Master's degrees in Peace and Conflict Studies at the University of Dhaka. Her research interest includes peace, development, security, etc.

Roop Kishore Singhal, PhD, is presently Professor & Dean, International Institute of Management Sciences, Pune, India, having academic experience of more than 20 years. He is working on diverse portfolios of development economics.

Madhabendra Sinha, PhD, is an Assistant Professor at Department of Economics & Politics, Visva-Bharati University, Santiniketan, India. Previously he served as an Assistant Professor at Department of Business Administration, Raiganj University, India. He obtained Masters and Doctoral degrees in Economics from University of Calcutta and NIT Durgapur, India. His research

interests include international economics, development economics and applied econometrics.

Ashu Tiwari, PhD, currently works as an Assistant Professor of Economics at the University of Petroleum and Energy Studies in Dehradun, Uttarakhand (India). She completed her PhD from the Indian Institute of Management Rohtak, Haryana, in Economics and Public Policy. Apart from academics, she has more than eight years of industry experience in management, consultancy and research.

Gülsüm Sena Uluç is a 4th grade Business Administration Student in Istanbul Medipol University. She is also a student of Business Administration Integrated Master with Thesis at Istanbul Medipol University. Her research interests are sustainable energy economics and project finance, electricity, renewable energy, and nuclear energy.

Serhat Yuksel, PhD, is a Professor of Finance at Istanbul Medipol University, Istanbul-Turkey. He has more than 80 scientific articles and some of them is indexed in SSCI. He is also the Editor of many different books published by Springer and IGI Global.

List of Abbreviations

ADB:	Asian Development Bank
ADF:	Augmented Dickey Fuller
ADP:	Annual Development Program
AIC:	Akaike Information Criterion
ANOVA:	Analysis of Variance
APEC:	Asia-Pacific Economic Cooperation
ARDL:	Autoregressive Distributed Lag
ARIMA:	Autoregressive Integrated Moving Average
BDF:	Bangladesh Development Forum
BDNA:	Balochistan Drought Needs Assessment
BIMARU:	Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh
BITE:	Balochistan Institute of Technical Education
BLA:	Balochistan Liberation Army
BOP:	Balance of Payments
BPM:	Business Process Management
BPO:	Business Process Outsourcing
BRICS:	Brazil, Russia, India, China, South Africa
BSE:	Bombay Stock Exchange
CAEd:	Children's Average Education
CDS:	Current Daily Status
CGE:	Computable General Equilibrium
CHI:	Coefficient of Human Inequality
CIA:	Confidence Interval Approach
CLMRM:	Classical Linear Multiple Regression Model
CSA:	Climate-Smart Agriculture
CSS:	Climate-Smart Soil
CSSC:	Selection of Course of Study for the children
CV:	Coefficient of Variation
DAI:	Digital Adoption Index
DCBMHEdC:	Decision regarding Choice Between Marriage and Higher Education
DCGs:	All Developing Countries Groups
DEI:	Dalit Exclusion Index
DEMATEL:	Decision-Making Trial and Evaluation Laboratory
DEMU:	Diesel Electrical Multiple Unit
DEW:	Development Effectiveness Wing

xx List of Abbreviations

DHS:	Demographic and Health Surveys
DP:	Development Partners
DPP:	Development Project Proforma
DR:	Dependency Ratio
DRMC:	Decision regarding Marriage of Children
DS:	Difference Stationary
ECEC:	Early Childhood Education and Care
ECM:	Error Correction Mechanism
ECNEC:	Executive Committee of the National Economic Council
ERD:	Economic Relations Division
ES:	Economic Sustainability
EU:	European Union
FATA:	Federally Administered Tribal Areas
FDI:	Foreign Direct Investment
FE:	Fixed Effects
FII:	Foreign Institutional Investors
FYP:	Five-Year Plan
GDDP:	Gross District Domestic Product
GDP:	Gross Domestic Product
GE:	Government Expenditure
GER:	Gross Enrolment Ratio
GITE:	Gwadar Institute of Technical Education
GMM:	Generalized Method of Moments
GNI:	Gross National Income
GNP:	Gross National Product
GNPAR:	Gross Non-Performance Asset Ratio
GoB:	Government of Bangladesh
GPEDC:	Global Partnership for Effective Development Cooperation
GSDP:	Gross State Domestic Product
GSDPE:	Gross State Domestic Product Expenditure on Education
GST:	Goods and Services Tax
GSVA:	Gross State Value Added
GVA:	Gross Value Added
HAI:	Household's Annual Income
HD:	Human Development
HDGs:	Human Development Groups
HDI:	Human Development Index
HDR:	Human Development Report
HI:	High Income
HSS:	Higher Secondary School
IBEF:	India Brand Equity Foundation
ICI:	Income Concentration Index

ICT:	Information and Communication Technology
ID:	Index of Democracy
IE:	Inequality in Education
ILO:	International Labour Organization
IMED:	Implementation Monitoring and Evaluation Division
IMF:	International Monetary Fund
IoMT:	Internet of Medical Things
IoT:	Internet of Things
IR:	Industrial Revolution
ISTAT:	Istituto Nazionale di Statistica
IT/ITES:	Information Technology/Information Technology Enabled Services
JCS:	Joint Cooperation Strategy
JWA:	Jordan Water Authority
LCG:	Local Consultative Group
LCG-WG:	LCG Working Group
LDC:	Least Developed Countries
LDCGs:	Least Developed Countries Groups
LEB:	Life Expectancy at Birth
LI:	Low Income
LMI:	Lower Middle Income
LMP:	Labor Market Programs
LNG:	Liquefied Natural Gas
LQM:	Location Quotient Method
LR:	literacy Rate
LSDV:	Least Square Dummy Variable
MA:	Mother's Age
MBRT:	Multi-brand Retail Trade
MCDM:	Multiple Criteria Decision Making
MCSAS:	Myanmar Climate Smart Agriculture Strategy
MDMP _{CEdu} :	Mother's Decision-Making Power regarding Children's Education
MED:	Education of mother in years
MENA:	Middle East and North Africa
MFDI:	Modified Fundamental Index of Fiscal Decentralisation
MFI:	Micro Finance Institution
MNC:	Multi National Corporation
MoSPI:	Ministry of Statistics and Programme Implementation
MP:	Mother's Property
MRA:	Multiple Regression Analysis
MRT:	Mass Rapid Transit
MSEs:	Micro and Small Enterprises
MSERA:	MSE Rating Agency

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MSMEs:	Micro, Small, and Medium-sized Enterprises
MWI:	Ministry of Water and Irrigation
NaBFID:	National Bank for Financing Infrastructure and Development
NASSCOM:	The National Association of Software and Service Companies
NPP:	Nuclear Power Plant
NS:	Negative Ideal Solution
NSDP:	Net State Domestic Product
ODA:	Official Development Assistance
OECD:	Organisation for Economic Co-operation and Development
OLS:	Ordinary Least Squared method.
OMI:	Outlying Mean Index
PCA:	Principal Component Analysis
PCCE:	Per Capita Consumption Expenditure of Households
PCE:	Per Capita Expenditure
PCEE:	Per Capita Expenditure on Education
PCI: Per	Capita Income
PCNSDP:	Per Capita Net State Domestic Product
PESRP:	Punjab Education Sector Reform Programme
PIAAC:	Programme for the International Assessment of Adult Competencies
POV:	Poverty Headcount Ratio
PPP:	Purchasing Power Parity
PS:	Positive Ideal Solution
R&D:	Research and Development
RBI:	Reserve Bank of India
RD:	Research and Development Expenditure
RE:	Random Effects
REI:	Real Estate Index
RMG:	Readymade Garments
RSDSCP:	Red Sea Dead Sea Canal Project
SA:	Social Assistance
SCB:	Scheduled Commercial Bank
SD:	Standard Deviation
SDG:	Sustainable Development Goals
SI:	Social Insurance
SIDBI:	Small Industrial Development Bank in India
SL:	Skilled Labour Force
SLM:	Segmented Labour Markets
SMA:	Simple Moving Average
SMEs:	Small and Medium Scale Enterprises

SS:	Social Sustainability
SSE:	Social Sector Expenditure
SSEE:	Social Sector Expenditure on Education
SSFC/CCFC:	Selection of School or College for the children
STP:	Sewage Treatment Plant
SWOT:	Strength, Weakness, Opportunity and Threat
TFPG:	Total Factor Productivity Growth
TIB:	Transparency International Bangladesh
TOPSIS:	Technique for Order Preference by Similarity to Ideal Solution
TOR:	Trade Orientation Ratio
TOSA:	Test of Significance Approach
TPP:	Technical Project Proforma
TS:	Trend Stationary
UHC:	Universal Health Coverage
UMI:	Upper Middle Income
UMIC:	Upper Middle Income Country
UN:	United Nations
UN:	United Nations
UNDP:	United Nation Development Programme
UNGA:	United Nations General Assembly
UNICEF:	United Nations International Children's Emergency Fund
VIF:	Variance Inflation Factor
WB:	World Bank
WDR:	World Bank Report
WTO:	World Trade Organization
Z&A:	Zivot and Andrews

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Foreword

The last 200 years of global trade show that not only is trade a necessity but also is desirable for growth and prosperity of nations. If we use the contemporary terminology of globalization, we may be allowed to present the world's economic history in terms of three distinct phases of globalization. While the first phase of it, lasting from 1814 to 1914, was known for free trade and unfettered movement of labour spreading economic benefits to countries that could engage in free trade, the second phase lasting from 1915 to 1980, was marred by two world wars, extreme contraction in global trade, tariff wars and protectionist trade regimes that benefitted mainly the USA, Japan and Western Europe, the so-called developed world. In this phase, trading blocs were important platforms of intra-bloc free trade, but tariff barriers were placed to ward off the competing blocs, as a result of which the benefits of free trade and investment were restricted to fewer countries. This phase can hardly be called a phase of globalization. The third and current phase of globalization began to integrate free trade with domestic competition and deregulation, and boldly promote private enterprises, trade in services and free cross-border movement of capital. We are truly living through a regime of internationally mobile capital and skilled labour, and our daily lives are serviced by a globally sourced supply chain, thanks to modern communication and information services technology, and last but not least, the opening up of two remarkably important countries, China and India, which will continue to shape the global trade in goods and services.

Some of the benefits of the current phase of globalization are evident in the sharp decline of absolute poverty (an early achievement of the first Millennium Development Goals), not just in India and China, but also in much of Africa. Per capita incomes of some of these countries grew unmistakably. The rich and the middle class populations of China, India, Brazil, Argentina, Russia, Indonesia and South Africa enormously benefitted, although in relative terms which section gained more remains an open question. While by some studies, the first three decades of the current phase of globalization (1980–2010) have reduced global income inequality, most authors now fear that the picture has changed of late. Within-country inequality has been growing, and the very poor have been left behind everywhere; even for the middle class, the growth momentum is disappearing. Whether free trade is the root cause of it is yet to be determined. But the public manifestation of growing despair and disappointment is too obvious to miss, as populist politics is spreading across continents often promising to reverse globalization, at least the free trade part of it. Serious doubts have emerged about

the world's capacity to create inclusive societies amidst the high-speed traffic of trade and finance that globalization has unleashed.

Against this backdrop of waning support for globalization, this edited volume by Ramesh Chandra Das has attempted to compile a number of important studies from a distinguished body of international academicians that have rightly turned our attention to inclusive growth and development in a much broader sense than what mere economic categories permit. The studies discuss the goals of inclusive development in respect of different socio-economic sectors and groups in the presence of good governance practices. With 25 chapters divided in to two sections, the book includes various theoretical modelling and empirical exercises. The issues of convergence in socio-economic indicators have been elaborately dealt with for groups of countries as well as for individual nations. Scholars and researchers from different fields such as Economics, Sociology, Political Science, Public Finance, among others, should benefit from this book. The policy-makers, practitioners, public officials and NGOs will also find something from this book that they can apply to their development discourse and practice.

Dr Bibhas Saha
Department of Economics
Durham University Business School
Durham University, UK

Introduction

There is no doubt that the world economy has progressed rapidly after the different phases of the globalization process initiated by the major part of the world. But there is a by-product of this huge progress. According to the World Bank, the globalization process has led to bring down the inequality in income at the world level, but there are increasing inequalities across countries and some groups of economies. There are so many economic, social and environmental factors in determining the income and wealth of a country as well as a group of countries. There have been immense studies on the income aspects of these inequality factors across the countries and regions but there is a crunch of studies on the social indicators behind the presence of such inequalities. The 17 points agenda of the United Nations Sustainable Development Goals (SDGs) cover many sectors from the social sector. The social sector is the foundation of any nation which not only generates income in the long run, it also generates social justice and moral values which ultimately helps in the true development of the countries in the long run.

The principle of the market economy usually does not nurture the social indicators; it solely plays with the capitalistic mode of production out of the profit maximizing behaviour of the entrepreneurs. It does not bother what the roles of the social sectors like education, health, etc., will be in the economic decision-making processes. The rule of the market strongly nullifies the intervention by the government sector in economic activities. But market principle sometimes fails and the roles of the unknown forces, the set of natural forces, hold the key to the operation of the system. The issues of risks and uncertainties bear the credit for haltering the performance of the pure market theory. The emergence of the different economic crises in the past and the outbreak of COVID-19 in recent times have pointed out the flaws of the market principle and justified the roles of the public policies in restoring the socio-economic bonding. The huge investment in the health sector, sizeable amounts of government stimulus packages for food security, online aids for education, etc., are the key policies that had to be undertaken for the sake of the economic and social well-being. The role of the government institutions thus in general has been to upgrade the socio-economic status of the poor and backward classes without hampering the richer ones in the society to have an equitable distribution of income and social indicators. The countries are seemed to earn the capacity to converge to the relatively richer ones and reap the benefits step-by-step to reach the ultimate goal of sustainable development.

The present edited book titled *Inclusive Developments Through Socio-economic indicators: New Theoretical and Empirical Insights* throws light upon the roles of different socio-economic indicators in ensuring or explaining convergence and inclusiveness of income across different income groups in the world. The studies cover up the highly related issues in the social sector and posit alternative source of explanations for the convergence and inclusiveness of income in these groups of economies. The book has compiled a list of highly rich 25 studies in the related themes that explain inclusive developments through several socio-economic indicators in both theoretical and empirical lines from across the world.

Keeping in mind its broad coverage, the book is structured in two separate sections to present the list of the finalized chapters. Section I encapsulates the discussions on economic growth, convergence and inclusive development through different socio-economic indicators in the groups of countries. It covers both the theoretical as well as empirical analysis of the said issues for the groups of economies. Section II captures the deliberations on the poverty and inequality aspects of different socio-economic indicators in countries. There are 12 chapters in Section I and 13 chapters in Section II. The modicum of the chapters is outlined below.

Section I: Growth, Convergence and Inclusive Development Through Different Socio-economic Indicators in Groups of Countries

Chapter 1 seeks to examine the impacts of international trade and informational globalization on income inequality in both the developing and developed groups of nations of the world using dynamic panel GMM estimates. The results of first difference dynamic panel GMM estimates imply the analogous impacts of trade and informational globalization on income inequality in both developing and developed nations, while the financial and political measures of globalization have dissimilar effects on income inequality across the two groups of economies.

Chapter 2 investigates the convergence of several socioeconomic indicators in a sample of 137 countries over the period 1990–2019 applying the log-*t* convergence tests and finds that most of the socio-economic indicators' convergence is divergent. Out of the seven different indicators, there are two indicators, life expectancy and access to the internet, which are converging at the global level, while the remaining indicators of GDP per capita, FDI inflow, urbanization, fertility and CO₂ emissions do not.

Chapter 3 emphasizes on determining the socio-economic variables of countries that have nuclear energy investments using the DEMATEL method. The profiles of the countries that make nuclear energy investments demonstrate that education level and income inequality are the essential socio-economic factors for the improvement of the nuclear energy investments.

Chapter 4 focuses on the roles of different socio-economic indicators in explaining convergence or inclusiveness of income across different income groups in the world and as a result, overall greater role of socioeconomic factors of

social sustainability than economic sustainability has been found, causing greater income inequality among these various income groups of the world, with income diverging among various groups of countries.

Chapter 5 explores the concept of enhancing welfare through the expenditure in healthcare in BRICS nations by the way of α & β convergence approaches for the period 2006–2018 and finds that these countries catch up with significant convergence. Further, with the help of the panel data analysis, it is found that such convergence is significantly explained by GDP per capita, life expectancy at birth, elderly ratio, CO₂ emissions and prevalence of undernourishment.

Chapter 6 analyzes the global historical change between 2007 and 2014 mainly emanating from economic and political game played between USA and European countries starting with the Great Crisis and ending with Arab Spring from the perspective of contemporary philosophy and observes that The Great Crisis is not a global crisis, but a Trans-Atlantic financial crisis initiated by incapable corporate governance of US-based financial MNCs.

Chapter 7 examines the role of state activity, and labour force variables on the variation of Digital Adoption Index (DAI) across 169 countries over two different years such as 2014 and 2016 by using a static panel regression with a fixed effect approach and finds that digitalization is influencing business operations. Furthermore, the labour force becomes a crucial factor in the case of DAI in the countries and it is stated that educational factor as the literacy rate is very crucial in that regard.

Chapter 8 analyses the types of protection aiding in the expansion of credit and the alleviation of capital constraints and simple credit guarantee policies to provide adequate credit flow and thus continued MSME growth. It also considers the importance of priority sector lending policies in ensuring adequate credit distribution to this sector. The results show that protection helps in enhancing flow of credit and thereby works in relaxing the capital constraint. However, the tariff protection for the organized sector may positively or negatively affect the non-traded unorganized sector.

Chapter 9 aims to investigate the socio-economic challenges of the tribal people of Pakistan and the reluctant outlook of the federal government. It also delineates how the tribal youths are being attached to terrorist groups due to unemployment and how it has more dangerous to the security of Pakistan. The basic finding is that the tribal groups are excluded from most of the social sector policies and thus it argues that socio-economic inclusiveness is required in a multi-ethnic country for ensuring social harmony, national integration and national security.

Chapter 10 examines the issues which impede development effectiveness and governance related to the Government of Bangladesh (GoB) as well as development practices (DPs) and observes that the DPs and GoB don't represent a horizontal relationship to implement the development effectiveness agenda in Bangladesh mainly because of dominant attitude, lack of alignment and harmonization, and accountability of DPs and weak policy, institution and leadership of GoB. However, COVID-19 economic crisis makes a renewed call to both DPs and GoB.

Chapter 11 intends to construct an index to explain how inclusive social contextual factors influence the price level of real estate in Genoa of Italy using the non-parametric methodologies of factor analysis and cluster analysis. The results suggest that most of the variability in the fluctuation of the average price of properties is strictly connected to the features of the reference social context such as neighbourhood prestige, type and level of education of residents, access to services, etc.

Chapter 12, the last one in this section, aims to investigate Jordan's water scarcity problem, highlighting its political and economic aspects and its impacts on socio-economic development, and to propose solutions to the water scarcity problem in Jordan. The study observes that it is important for Jordan to use its water resources in an efficient, effective and sustainable way so that socio-economic development of Jordan can be supported. Unsustainable use of water resources can cause depletion of Jordan's scarce water resources that can exacerbate magnitude of water resource problem and hinder socio-economic development.

Section II: Poverty and Inequality Aspects of Different Socio-economic Indicators in Countries

Chapter 13 seeks to determine or identify the impact of social protection index on inclusive growth through poverty alleviation in a few Asian countries using secondary data of ADB on government social protection programs in the some countries of Asia. It is obtained that the impact of components of social protection index such as social insurance programs, social assistance programs and labour market programs plays a vital role in eradication of poverty and attaining inclusive growth.

Chapter 14 inspects the influence of public expenditure on the growth of SMEs in Nigeria employing unit root and co-integration tests for the period 1981–2019. The results reveal that SMEs and selected macroeconomic variables have a long-run relationship with SMEs output performance. It also shows that government expenditure has direct and significant impact on the growth of SMEs in Nigeria. The study thus recommends that government should ensure the proper management of the capital expenditure and recurrent expenditure in raising the growth of SMEs in Nigeria to achieve inclusive growth.

Chapter 15 discusses the drivers for sustainable smart villages and ways for enhancing and supporting their effectiveness in socio-economic development, in enhancing welfare and living conditions of people living in villages, and reducing income gap between urban and rural people. It finds that effective and successful sustainable smart villages can play important role in sustainable development, and social inclusion and achievement of socio-economic indicators.

Chapter 16 aims to enquire to what extent is fiscal decentralization effective in combating social tension arising out of absolute (poverty) and relative (income inequality) deprivations? Using GMM Kernel estimations in the presence of the control variables like-modified fundamental index of fiscal decentralisation, the size of the government, etc., the study finds that fiscal decentralization reduces

poverty levels while it deteriorates the inequality in the distribution of income below a threshold size of the government.

Chapter 17 aims to inspect the growth in the service sector in India is inclusive or not. The observations of the study have shown that the service sector has been growing at fast pace compared to the other two sectors and making the system into job-less status. Revival of high linkage sectors with higher potential of employment growth such as agriculture and manufacturing can be game changer towards the goal of inclusiveness, as recommended by the study.

Chapter 18 analyzes labour market segmentation and income inequality in the Western, Eastern and Ashanti regions of Ghana. The application of labour market segmentation and the Gini coefficient for personal income is found to be significantly associated with the type and levels of mining employment maintaining a Kuznets curve pattern. This implies that the segmented labour market within the mining industry is likely to be a problem as it results in increased income inequality among locales relative to foreign expatriates.

Chapter 19 attempts to analyze patterns in social sector expenditure on education (SSEE) and its impact on human development index (HDI) among different states in India. The combined SSE of Centre and States which provides the best picture of India's commitment towards the social sector on education may be assessed. The results show a positive relationship between SSEE and HDI. Further, SSEE may lead to an increase in gross enrolment ratio and literacy rate and an increase in gross enrolment ratio and literacy rate may help in increasing the HDI.

Chapter 20 analyses how diverging bank credit affects macroeconomic performances of the Indian states, through an alternative approach of composite indicators-based rankings of States adopting the methodology of TOPSIS. The results show that wealthier and better performing states continue to attract the larger chunk of bank credit, while weaker states have not been able to catch up. The study thus prescribes putting more emphasis on higher levels of credit growth for weaker states to achieve a degree of income convergence throughout the Indian economy.

Chapter 21 analyses the security and secrecy challenges, together with the necessities, the danger involved and proposed secured blockchain-based framework which is capable of future research scope in the e-healthcare under Industry 5.0. The study has described an Eye Hospital case study that stores the eye donors' details. With such critical scenario, the study addresses healthcare scenario with poverty-led agenda and social developmental features.

Chapter 22 aims to conceptualize the exclusion of Dalits within a rigorous quantitative structure for all the districts of India using both the positive and negative aspects of social indicators and the results show a close relation between Dalit exclusion index and a number of variables. General impression is that as the general well-being of people rises, there is a fall in the Dalit exclusion, also that public policies have a strong effect on Redresser of Dalit exclusion. Policy-makers should give emphasize the three pillars of human development such as health, education and livelihood to counter Dalit exclusion.

Chapter 23 goes for examining convergence in forest products in West Bengal, India, and observes both absolute convergence as well as conditional convergence,

but significant sigma divergence has been found. Hence, growth rate of total output of forest products along with growth rate of income from forestry has been falling in all three forestry regions of West Bengal under the study. But their variances do not converge, that is, the dispersion rises.

Chapter 24 examines mothers' educational profiles and ascertains the extent to which their education influences their children's educational attainments. The results show that woman's education has a direct role in enhancing the overall welfare of children, and thus, indirectly improve the economic status of the family. The results provide definite causal connections between a mother's education and children's educational attainment.

Chapter 25, the last one in the book, deals with the disparities in different paddy production and irrigational facilities in different blocks of the Paschim Medinipur District of the West Bengal State in India in order to justify the inclusiveness via different channels. The results show positive association between the two and prescribe inclusive arrangements of irrigational facilities to all the blocks under the district to have long-run solutions.

The studies have dealt several issues of growth, convergence and inclusive developmental aspects of different socio-economic and environmental indicators across different groups as well as individual countries in the world. The essence of the covered studies are that socio-economic and environmental indicators becoming important factors in reducing cross country income and wealth differences, reducing levels of poverty and income inequality. The governments of the countries are recommended to take part in carrying out projects in building economic and social infrastructures to allow the under privileged section of the society to reap the benefits of them and permit them to be the part of inclusive growth and development. The process, if successfully continues, will not only benefit the particular sections of the society, it will also involve the other sections of the society to get benefits through interlink effects so that the goal of sustainable development can be achieved at a faster pace.

The contents of the book may provide thought provoking solutions to the existing problems on the global economic and social fronts and there may be the possibilities of enlargement in the literature base in this area. The readers and policy-makers will be immensely benefitted from the contents of the book.

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Ramesh Chandra Das