ROUTLEDGE STUDIES IN DEVELOPMENT ECONOMICS

Trade, Investment and Economic Development in Asia

Empirical and policy issues

Edited by
Debashis Chakraborty
and Jaydeep Mukherjee

Trade, Investment and Economic Development in Asia

In an era of globalization, trade in goods and cross-border services and capital flows play a key role in determining the economic growth path of countries. Over the last two decades, countries have embarked on several alternate tracks to liberalize and deepen their linkage with the world economy. The growing trade–investment nexus and the emerging developments lead to deeper international production networks, rise in cross-border trade in services and in regional trade agreements and so on.

The debate of whether it is possible to empirically validate the potential benefits of this deepening trade–investment linkage is ongoing. The evidence in literature is, however, ambiguous. This book contributes to the literature by looking at Asian economies and at the EU, Maghreb countries and Pacific Island economics. It examines the issues under four broad areas, namely: (1) trade: theoretical and policy issues, (2) factor flows: impact on trade and welfare, (3) impact of trade and factor flows on environment and (4) institutions, international trade and policy issues.

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Foreword

Driven by a vision to be an academic centre of excellence in the domain of international business and also as an internationally well-networked institution committed towards delivering globally competitive business education, training and research, the Indian Institute of Foreign Trade (IIFT) has emerged as a national institute in India in international business education and research. With a modest beginning as a facilitator for external trade in 1963, IIFT has become a pioneering university for foreign trade and policy matters besides being a hub for research and knowledge dissemination in the Asia-Pacific and African region.

Being a consistent catalyst for new ideas and concepts when world economy got into turbulent weather, IIFT undertook an academic initiative in 2008 to organize research conference series with an aim to provide a platform for academic debate and discourse on contemporary empirical issues in international trade and finance (EIITF) at regular intervals. The institute organized the Fourth EIITF on 18 and 19 December 2014 at its New Delhi campus. This was a unique conference which had a fair balance of representations from academia, policy researchers, multilateral agencies, industry and policy-making communities across the globe. The conference was aimed at pushing the frontiers of academic research in international trade and finance.

The timeline of organizing EIITF 2014 could not have been more appropriate. World trade and investment flows, since the turn of the new millennium, were showing interesting dynamics. The trade patterns in both developed and emerging economies had experienced significant transformations, particularly in the aftermath of the global financial crisis of 2008–9 and the subsequent Eurozone crisis of 2011–12. According to the Trade and Development Report 2014 by UNCTAD, in the two decades preceding the crisis, global trade in goods and services expanded at an annual average rate of 6.8 per cent, which is twice as fast as the corresponding annual global output growth figure at 3 per cent. The leading Asian economies like India and China contributed significantly to this impressive rise in global trade growth. The deepening of global value chains (GVCs) and international production networks (IPNs) in Asia in recent times further underlines the growing synergies between the economies of this region.

However, growth in global trade volume slowed down substantially in the aftermath of these crises, with merchandise trade growing at close to 2 per cent

in volume during 2012–13 and the first few months of 2014, which is below the global output growth. Trade in services, however, registered a faster growth at around 5 per cent at current prices in 2013 and at about 7 per cent in the first quarter of 2014, with tourism and transportation services being the major components of services trade. While some policy makers have attributed supply-side bottlenecks like higher trade barriers as obstacles to global trade expansion, many point to the lack of global demand as the main cause for such slowdown and strongly advocate for a resilient domestic demand-led output recovery as the means for reviving global trade. At the same time, in line with a policy that is consistent for reduction in global imbalances, such demand-driven recovery needs to be geographically distributed in an appropriate manner. Also, a reduction of the trade barriers through negotiations at the multilateral forum is the need of the hour.

Given the fact that developed countries still have to cover a long way to get back to their pre-crisis growth path, developing countries, particularly the emerging economies in Asia like China, India, Indonesia and so forth, need to take a lead to boost South–South trade in the coming days. Asia has strengthened its presence in the trade-investment sphere over the last decade (2001–13), with the share of the continent in merchandise export and FDI inward flows increasing from 30.43 per cent to 38.84 per cent and 18.41 per cent to 29.36 per cent respectively.

At the multilateral front, the period since the launch of the Doha Ministerial (2001) has witnessed intensified negotiations between developed and developing countries at the World Trade Organization (WTO) forums. The agreement on trade facilitation at the Bali Ministerial of WTO (2013) is a welcome progress, which is expected to contribute significantly in the global merchandise trade growth. The trade reforms, both multilateral and unilateral ones, over the past decade have significantly augmented the cross-border trade-investment waves. Nevertheless, a time-bound conclusion of the Doha Round negotiations appears to be the effective remedy for promoting global trade-investment integration further.

Interestingly a number of regional/free trade agreements (RTAs/FTAs) and international investment agreements (IIAs) also have come into existence over the last decade, which underlines the persisting significance of the preferential trading arrangements in the age of multilateral negotiations. Although comparatively laggard in initial stages, the RTAs/FTAs route as a trade policy instrument have emerged as major channels for international trade. While the inclination towards regionalization was witnessed since the eighties, the trend indeed attracted more countries since the nineties, as export-oriented growth strategy became the mantra. Furthermore, the Asian crisis during 1997–8 demonstrated that both the economic linkages among the countries in the region as well as a country's exposure to economic problems that beset its neighbours are crucial. The remarkable success by several East and Southeast Asian economies over the last decade in terms of deepening integration in advanced production networks and value chains has contributed significantly to increase intra-regional trade in Asia, particularly in the production of parts and components. The regionalization

within the Association of Southeast Asian Nations (ASEAN) Free Trade Area itself has been a major driver behind deepening of these networks and value chains. It is expected that the ongoing discussions on the Regional Comprehensive Economic Partnership (RCEP), involving the FTA partners of ASEAN, namely Australia, China, India, Japan, South Korea and New Zealand, will fuel the intra-Asian trade and investment flows further.

Last but not least, too much focus on growth by ignoring the sustainability considerations can lead to disastrous outcomes for the planet, as evident from the recent concerns over global warming, ozone layer depletion and so forth. The ongoing United Nations Framework Convention on Climate Change (UNFCCC) negotiations in general and the recently concluded twenty-first session of the Conference of the Parties (COP) at Paris in particular are crucial in mitigating such challenges.

The current volume, contributed by select scholars participating at the EIITF 2014 conference, captures all these developments, providing empirical analyses on crucial policy issues in trade-investment and their role in fostering economic development in the context of India and several Asian economies. The volume also captures analyses on BRICS countries, EU, Maghreb countries and Pacific Island economies. The eighteen chapters included in the volume are classified appropriately under four broad themes, namely: (1) trade: empirical and policy issues, (2) foreign capital flows: impact on trade and welfare, (3) trade-fiscal policy interface and environmental implications and (4) institutions, international trade and policy issues, all of which are extremely relevant in the current context. The chapters in the current volume have been contributed by leading academicians and researchers involved in applied international economics and finance. I am confident that the empirical evidence and analyses provided in this comprehensive volume would serve as ready reference for academicians, researchers and policy makers, particularly in emerging economies facing similar challenges.

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Abbreviations

ACCSQ	ASEAN Consultative Committee for Standards and Quality
ADB	Asian Development Bank
ADBI	Asian Development Bank Institute
ADF	Augmented *Dickey-Fuller*
AE	Azhar and Elliott
AEC	ASEAN Economic Community
AFAS	ASEAN Framework Agreement on Services
AFTA	ASEAN Free Trade Area
AMS	Aggregate Measurement of Support
AMU	Asian Monetary Union
AoA	Agreement on Agriculture
APTA	Asia-Pacific Trade Agreement
ARIC	Asia Regional Integration Center
ARTNeT	Asia Pacific Research and Training Network on Trade
ASCC	Asia Pacific Study Centers Consortium
ASCM	Agreement on Subsidies and Countervailing Measures
ASEAN	Association of Southeast Asian Nations
ATR	asset turnover ratio
BCAs	border carbon adjustments
BIICS	Brazil, China, India, Indonesia and South Africa
BITs	Bilateral Investment Treaties
BRICS	Brazil, Russia, India, China and South Africa
BRIE	*Berkeley* Roundtable on the International Economy
BTAs	border tax adjustments
BTADU	border tax adjustment based on domestic unrestricted carbon content
BTAFU	border tax adjustment based on foreign unrestricted carbon content
BTDIxE	Bilateral Trade Database by Industry and End-Use Category
BTIA	Bilateral Trade and Investment Agreement
C	Chapter
CA	chartered accountants
CAGR	compound annual growth rate

CAREC	Central Asian Regional Economic Cooperation
CDM	clean development mechanism
CECA	Comprehensive Economic Cooperation Agreement
CEE	Central and Eastern European
CEIEUI	Center of Excellence for International Economics, University of Isfahan
CEPA	Comprehensive Economic Partnership Agreement
CEPII	Centre d'Etudes Prospectives et d'Informations Internationales
CEPR	Centre for Economic Policy Research
CEPS	Centre for European Policy Studies
CEPT	Common Effective Preferential Tariff
CER	closer economic relations
CIF	cost, insurance, freight
CMIE	Center for Monitoring Indian Economy
CoA	Committee on Agriculture
COP	Conference of the Parties
CPI	Consumer Price Index
CRS	Constant Returns to Scale
CSERGE	Centre for Social and Economic Research on the Global Environment
CU	Customs Union
DGCI&S	Directorate General of Commercial Intelligence and Statistics
DGET	Directorate General of Employment and Training
DGFT	Directorate General of Foreign Trade
DIPP	Department of Industrial Policy and Promotion
DOTS	Direction of Trade Statistics
DS	dispute settlement
EBOPS	extended balance of payment statistics
ECBs	external commercial borrowings
EEA	European Economic Area
EKCH	Environmental Kuznets Curve Hypothesis
EMC	electromagnetic compatibility
EMEs	emerging market economies
EMU	European Economic and Monetary Union
EPAs	economic partnership agreements
EPZs	Export Processing Zones
ERF	Economic Research Forum
ERIA	Economic Research Institute for ASEAN and East Asia
ERM	exchange rate management
ETS	emission trading system
ETS	emissions trading schemes
EU	European Union
FAO	Food and Agriculture Organization
FCI	Food Corporation of India
FD	first differences

FDI	Foreign Direct Investment
FEH	Factor Endowment Hypothesis
FF	Fontagane and Freudenberg
FGLS	feasible generalized least squares
FHIPR	Freedom House Index on Political Rights
FICs	Forum Island countries
FPI	Foreign Portfolio Investments
FOB	free on board
FTAs	Free Trade Agreements
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GE	general equilibrium
GFA	gross fixed asset
GHGs	greenhouse gases
GHM	Greenaway, Hine and Milner
GIRF	generalized impulse response functions
GL	Grubel and Lloyed
GMM	generalized methods of moments
GMS	Greater Mekong Subregion
GTAP	Global Trade Analysis Project
GVCs	global value chains
HD	Human Development
HHDI	Hybrid Human Development Index
HIC	higher-income country
HIIT	Horizontal Intra-Industry Trade
H-O	Heckscher-Ohlin
HS	Harmonized System
HT	high-technology
HT	Harris–Todaro
HT	Hausman-Taylor
HVIIT	high-quality vertical intra-industry trade
I	investment
IAF	International Accreditation Forum
ICAI	Institute of Chartered Accountants of India
ICIO	Inter-Country Input-Output
ICRIER	Indian Council for Research on International Economic Relations
ICT	information and communication technology
ICTSD	International Centre for Trade and Sustainable Development
IDB	Inter-American Development Bank
IEA	International Energy Agency
IEC	International Electrotechnical Commission
IFRS	International Financial Reporting Standards

IFS	international financial statistics
IGIDR	Indira Gandhi Institute for Development Research
IIFT	Indian Institute of Foreign Trade
IIT	Intra-Industry Trade
ILAC	International Laboratory Accreditation Cooperation
IMF	International Monetary Fund
INCCA	Indian Network for Climate Change Assessment
ILO	International Labour Organization
IO	input–output
IPNs	international production networks
IPPC	International Plant Protection Convention
IRDAI	Insurance Regulatory and Development Authority of India
IRS	increasing returns to scale
ISEC	Institute for Social and Economic Change
ISO	International Organisation of Standardisation
ITU	International Telecommunication Union
IZA	Institute for the Study of Labor
JETRO	Japan External Trade Organization
LDCs	Least Developed Countries
LIC	low-income country
LLPs	limited liability partnerships
LM	Lagrange Multiplier
LMIC	lower-middle-income country
LPI	Logistics Performance Index
LT	low-technology
LTD	long-term debt
LVIIT	low-quality vertical intra-industry trade
M&A	merger and acquisition
MAF	multinational accounting firm
MBIs	market-based instruments
MDP	multi-disciplinary partnerships
MENA	Middle-East and North Africa
MFN	most favoured nation
MHT	medium-high-technology
MIDC	Maharashtra Industrial Development Corporation
MLT	medium-low-technology
MNCs	Multinational Companies
MoUs	memoranda of understanding
MRAs	mutual recognition agreements
MSG	Melanesian Spearhead Group
MSP	Minimum Support Price
MSTQ	metrology, standards, testing, quality management, accreditation and certification
MVTAR	multivariate threshold autoregressive model
NAFTA	North American Free Trade Agreement

NAMA	Non-Agricultural Market Access
NBER	National Bureau of Economic Research
NCAER	National Council of Applied Economic Research
NCLT	National Company Law Tribunal
NFA	net foreign assets
NFRA	National Financial Regulatory Authority
NIC	National Industrial Classification
NIEs	newly industrialized economies
NRCH	natural resource curse hypothesis
NRIs	Non-Resident Indians
NSSO	National Sample Survey Organisation
NT	National Treatment
NTBs	Non-Tariff Barriers
NTMs	Non-Tariff Measures
OECD	Organisation for Economic Co-operation and Development
OEMs	original equipment manufacturers
OIE	International Office of Epizootics
OLI	ownership, location, and internalization
OLS	ordinary least squares
OPEC	Organization of the Petroleum Exporting Countries
PACER	Pacific Agreement for Closer Economic Relations
PBTIDA	profits before taxes, interest payments, dividends and amortization
PCGDP	per-capita GDP
PCGNI	per-capita gross national income
PFDI	primary-sector FDI
PHH	pollution haven hypothesis
PICs	Pacific Island countries
PICTA	Pacific Island Countries Trade Agreement
PP	Phillips-Perron
PPML	Poisson pseudo-maximum likelihood
PPMs	processes and production methods
PPP	purchasing power parity
PQS	product quality space
PTB	Physikalisch-Technische Bundesanstalt
QLH	quality ladder hypothesis
RCA	revealed comparative advantage
RCEP	Regional Comprehensive Economic Partnership
ROCE	return on capital employed
ROOs	Rules of Origin
RTAs	regional trade agreements
RTFP	Regional Trade Facilitation Program
R&D	research and development
S	Section
SAARC	South Asian Association for Regional Cooperation

SADC	Southern African Development Community
SAFTA	South Asia Free Trade Area
SAH	smooth adjustment hypothesis
SAPTA	SAARC Preferential trading Arrangement
SARS	SAARC Regional Standards
SARSO	South Asian Regional Standards Organisation
SD	sustainable development
SEGA	SAARC Expert Group on Accreditation
SEZ	Special Economic Zone
SFDI	secondary-sector FDI
SIA	Secretariat of Industrial Assistance
SITC	Standard International Trade Classification
SME	small and medium enterprise
SOM AMAF	Senior Officials of the ASEAN Ministers of Agriculture and Forestry
SPARTECA	South Pacific Regional Trade and Economic Co-operation Agreement
SPS	Sanitary and Phytosanitary Measures
STD	short-term debt
STRI	Services Trade Restrictiveness Index
TBT	Technical Barriers to Trade
TFDI	tertiary-sector FDI
TIS	trade in services
TISP	trade in services by partner country
TIVA	trade in value added
TMNP	temporary movement of natural persons
TNCs	transnational corporations
TPDs	Targeted Public Distribution System
TPP	Trans-Pacific Partnership
TRIPS	Trade-Related Intellectual Property Rights
TTFS	transport and trade facilitation strategy
UMIC	upper-middle-income country
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
UNSD	United Nations Statistics Division
USA	United States of America
UPSS	usual and subsidiary status
UV	unit value
VAR	vector autoregression
VER	Voluntary Export Restraints

VIF	variation inflation factor
VIIT	vertical intra-industry trade
WCO	World Customs Organization
WDI	World Development Indicators
WHO	World Health Organization
WIOD	World Input Output database
WITS	World Integrated Trade Solutions
WMD	Weapon of Mass Destruction
WPI	Wholesale Price Index
WRI	World Resources Institute
WTO	World Trade Organization

1 Editors' introduction

An Asian perspective of global trade and investment dynamics

Debashis Chakraborty and Jaydeep Mukherjee

Evolving trade-investment nexus: through the looking glass of literature

Over the last two decades, countries have embarked upon several alternate tracks (viz., unilateral, bilateral, regional and multilateral) to liberalize and deepen their linkage with the world economy. This growing strength of globalizing forces have resulted in a phenomenal rise in world trade and investment flows over the past three decades, which has been hailed by the multilateral bodies. The World Trade Report (2013) has noted that in gross terms, the dollar value of world merchandise trade has increased by more than 7 per cent per year on average between 1980 and 2011, reaching a peak of US$18 trillion at the end of that period. The trade in commercial services grew even faster, at roughly 8 per cent per year on average, and stood at around US$4 trillion in 2011. In all, since 1980, world trade has grown on average nearly twice as fast as world production (WTO 2013).

The evolving volume and pattern of trade and investment flows has called for fresh inquiries through advancements in theoretical and empirical frameworks for explaining them in newer light from time to time. The rise in trade across countries at similar development planes from the sixties onwards highlighted the limitations of the traditional factor endowment model in explaining these trade flows and paved the road for intra-industry trade (IIT) models, which explains simultaneous exports and imports within product categories (Grubel and Lloyd 1975). Empirical investigations have revealed that a significant proportion of trade flows across countries are of the IIT type, explained by trade in parts and components, and the trend has only deepened in the recent period. The IIT analytical framework has been further extended, with segregation of overall IIT in vertical and horizontal types (Greenaway, Hine and Milner 1994), and the growing literature on this front imparts deeper understanding of trade patterns.

The limitation of the classical trade theories in explaining the frequent use of trade practices like dumping, emerging specialization patterns and the like paved the stage for the imperfect completion literature during the late seventies. In particular, the specialization patterns were explained with internal and external scale considerations, thereby discussing the possibility of establishing comparative advantages in narrower product lines (Krugman 1980). The rise in regional trade

agreements (RTAs) from the eighties fuelled this effect further by creating scale and competition advantages for the local firms, in addition to ensuring higher foreign direct investment (FDI) inflows through the market expansion effect (Urata 2002). The gravity model framework contributed significantly in understanding the trade flows in the context of old and new trade theories as well as the trade effects of the RTAs (Bergstrand 1989).

In addition to deepening of trade flows in merchandise products, trade in knowledge-intensive services has significantly increased since the nineties in line with technical progress, crucially contributing in raising productivity of value-added merchandise products (Markusen 1989). Furthermore, the rise in FDI flows, particularly within RTAs, and greater access to high-end technical services over the last decade has contributed significantly in deepening the international production networks (IPNs) and cross-country participation in value chains, with significant influence on off-shoring and outsourcing decisions (OECD, WTO and World Bank 2014).

Evolution in investment patterns are also worth mentioning. Until the seventies, cross-border FDI flows could broadly be explained by market-seeking, tariff-jumping or resource-seeking motivations, depending on the scenario in the recipient country in question. The eclectic paradigm based on the ownership, location, and internalization (OLI) framework provided a newer outlook to analyse the determinants of FDI by focusing on the institutional factors apart from other characteristics (Dunning 1977). The gradual liberalization of tariff barriers and industrial policies across countries witnessed a surge in FDI flows during the eighties, and the theoretical and empirical literature on determinants of FDI since then has been significantly enriched (Faeth 2008). Two resulting investment-related developments are worth mentioning. First, in light of the North–South FDI flows, the relationship between environmental governance and trade-investment flows emerged as a key research question in the 'pollution haven hypothesis' (PHH) framework. Second, the strategic interest of FDI flows vis-à-vis the regulatory role of the foreign government has become important with the growing volume of sovereign wealth fund (SWF) –supported investments (Chaisse, Chakraborty and Mukherjee 2011). Over time empirical methodologies have come up to measure preparedness of a country for hosting a successful SWF programme (Park and Estrada 2009).

The recent development of IPNs and deepening of the value chains underline the growing intra-firm relationship, thereby emphasizing the firm heterogeneity-related factors for explaining trade patterns. Recent empirical and theoretical evidences reveal that final firm decisions on whether to invest or trade are influenced by several factors, including, relative wage, protection and productivity (Helpman 2006). It is observed that firm-level export decisions to a large extent are reliant on factors like trade costs (Lanz and Miroudot 2011) and efficiency levels (Melitz 2003). With newer developments in theoretical frameworks, advancements in gravity model literature have significantly contributed in explaining trade patterns in light of newer dimensions, such as bilateral trade costs (Bergstrand, Egger and Larch 2013).

Realizing the potential benefits from the deepening globalization waves, the countries, cutting across the development spectrum, are now constantly engaged in negotiating market access for trade and investment, both regionally and multilaterally. In 1995, the General Agreement on Tariffs and Trade (GATT) gave way to its successor, the World Trade Organization (WTO), which has spearheaded the multilateral trade negotiations over the past two decades. Finalizing the modalities for the next level of reforms in agricultural, non-agricultural and service sectors as well as procedural issues like anti-dumping measures are, however, long overdue, owing to the delays in completion of the Doha Round negotiations (Martin and Mattoo 2011). As the perceived need for protection changes with incremental development, WTO members tend to adopt a cautious approach at the negotiating forums, which explains the delay in conclusion of the Round. Moreover, the recent growth in the number of RTAs is particularly notable in the context of the slow progress of WTO Doha Round negotiations. The negotiation experience of the recent mega-regional blocs, such as Regional Comprehensive Economic Partnership (RCEP) and the Trans-Pacific Partnership (TPP), indicates that multilateralism still remains the best solution (Menon 2014).

Apart from reforms in the areas of tariff and non-tariff barriers (NTBs), the recent negotiations have focused extensively on enhancing trade facilitation measures to promote commercial exchanges (Beverelli, Neumueller and Teh 2014; Neufeld 2014a). Reaching an agreement on this front at the Bali Ministerial (2013) is expected to augment the cross-border trade and investment flows on one hand and provide a model to break the current stalemate on the other (Neufeld 2014a). In addition, an agreement has been reached there on the question of ensuring food security through public procurement of foodgrains from poor farmers at prices higher than the market price (FAO 2014).

Is it possible to empirically conclude whether the least developed countries (LDCs) and other developing and emerging economies have benefitted by this deepening trade-investment linkage? The Prebisch-Singer thesis during the formative years of GATT argued that the poorer nations specializing in primary products might face deterioration of their terms of trade with respect to richer economies specializing in manufacturing products. The empirical result of the phenomenon is, however, found to be mixed (Arezki, Hadri, Loungani and Rao 2013). Rise of IIT between developed and developing countries from the eighties, however, underlined the expanding industrial base in the latter group. On a macro level, a comparison of the shares of North–North, South–South and North–South exports in manufactured products over the last three decades provides a heartening answer. The share of North–North trade (i.e. trade between developed countries) as a percentage of the global figure has declined from a peak of 56 per cent in 1990 to 36 per cent in 2011, while the corresponding figure for South–South trade has increased from 8 to 24 per cent over the same period. The share of North–South trade over 2000–12 period has remained at around 37 per cent, which is found to be considerably higher as compared to the corresponding 1980 figure (WTO 2013).

The macro influence of the globalizing forces on the South can also be observed by looking at the FDI inflow figures. In 2013, FDI flows to developing countries reached above US$778 billion, while the corresponding figure for developed countries stood at around $672 billion. On the whole, FDI inflows to the South accounted for a record share of 54 per cent of the total FDI inflows in 2013, reinforcing the key role that FDI is expected to play as a source of financing as well as fuelling the growth-enhancing technology spillovers (UNCTAD 2014). The growing FDI flows to the South can be explained by several underlying motivations, namely, resource seeking, market seeking, tariff jumping and so on. Economic integration and FDI flows in particular have already emerged as an important area of research (Berger, Busse, Nunnenkamp and Roy 2010). For instance, the expected post-NAFTA increase in cross-border investment inflows played a key role for Mexico to sign the agreement (Medvedev 2012). However, the evidence from developing countries suggests that while RTA membership may not necessarily improve FDI attractiveness, adoption of a favourable special economic zone (SEZ) and transnational policy significantly influence the same (Cherif and Dreger 2015). Understandably, specific commitments in the area of investment liberalization have been a defining feature in the recent RTAs, while the number of bilateral investment treaties (BITs) is also on the rise. Subsequently, newer methodologies have evolved to estimate the influence of various regulatory provisions in BITs on FDI inflows (Chaisse and Bellak 2011).

Does such higher trade-investment flow necessarily securing welfare improvement? To measure the welfare effect of liberalization policies, application of both partial and general equilibrium models are widely used. Partial equilibrium studies have generally focused on the influence of trade and investment flows on employment, skill formation, wage rate and so on through sectoral, cross-sectional or firm-level analysis (OECD 2008). Among general equilibrium studies, Global Trade Analysis Project (GTAP) modelling is extensively used for analysing the influence of RTAs, NTBs and the like (Fugazza and Maur 2008; Nag and Sikdar 2011). It is observed that the trade welfare effect of globalization may be mixed, depending on the comparative advantages of the economy in question, which underlines the role of supporting policy intervention (di Giovanni, Levchenko and Zhang 2012; Khan 2005). In addition, evidence from literature reveals that an adverse environmental effect of trade-investment flows may create a negative repercussion on sustainability scenarios (Chakraborty and Mukherjee 2013), thereby leading to a social welfare loss in the long run.

Two decades of deepening globalization waves, the financial crisis of 2008–2009 and the Eurozone crises of 2011–12 and 2014–15, have significantly influenced the trade-investment patterns in both developed and developing countries. It is widely acknowledged that the spectacular rise in trade-investment share of developing countries and LDCs, such as the South, can be explained by the fact that over the last two decades, the deepening of the IPNs in manufacturing goods, particularly in the emerging countries in Asia, has led to enhanced participation of these economies in global value chains through specialization in narrow product lines. Such specialization and associated welfare effects are in line with the

growing importance of scale economies, strategic trade policies and economic geography-related undercurrents (Krugman 1991).

In this background it is important to analyse and address the pending market access reform issues relating to trade-investment flows through negotiations at the appropriate WTO forums. Moreover, given the global climate change concerns, there is a growing need to ensure that the growth trend continues along an environmentally sustainable path. In line with the global scenario, the major challenge for Asian economies in the recent period is to address the imbalances caused by the financial crisis, deepen trade integrations with the world and translate the enhanced trade flows into sustainable development.

Trade-investment scenario in Asia in the global context

Asia has strengthened its presence in the trade-investment sphere with the share of the continent in merchandise export and FDI inward flows over 2001–13, increasing from 30.43 per cent to 38.84 per cent and from 18.41 per cent to 29.36 per cent in that order. Outward orientation of Asian economies has undergone interesting transformations since the sixties. While during the fifties several countries followed import-substitution policies, export orientation received prominence in the aftermath of the industrial export success by the Asian Tigers (i.e. Singapore, Hong Kong, Taiwan and South Korea), thanks to the 'Flying Geese' model, aided through FDI from Japan (Hayter and Edgington 2004). The dynamic capital accumulation that followed led to changes in structure of comparative advantage and production and trade patterns of Asian economies (Kojima 2000). Moreover, the selective state intervention in South Korea and Taiwan ensured high rates of return in manufacturing, which fuelled the industrialization process (Jenkins 1991).

Japanese transnational corporations (TNCs) deepened their presence in the East Asian region through sub-contracting, licensing, joint ventures, FDI and so forth (Kasahara 2013). Both real and financial asset flows from Japan led to greater inter-economy linkages (Kojima 1978). Industrial development deepened in Southeast Asia in the subsequent period, when US firms, to counter the Japanese challenge, deepened their operation in the region to procure parts and components on one hand and to benefit from product and process innovation through the enhanced role of their Asian affiliates on the other (Zysman and Doherty 1995). This industrialization and export-orientation drive in several Asian economies have received considerable boost from the special economic zones (SEZs) and export processing zones (EPZs), which attracted FDI on one hand and boosted exports and employment on the other (Tantri 2011; Zeng 2011). The growing number of EPZs created several export-oriented enclaves, though neither competition nor interactions with local firms was facilitated till the mid-1980s (Kimura 2006).

Since 1986, with the initiation of GATT Uruguay Round negotiations, trade policy reforms gradually deepened. China entered the trade-investment mainstream through negotiations in multilateral forums and continuous domestic

reforms (Jacobson and Oksenberg 1993). India, another major Asian player, also joined the reform path in 1991 following the International Monetary Fund (IMF) recommendations, and the erstwhile import-competing growth model gave way to the export-oriented development strategy (Joshi and Little 1996). In Southeast Asia, the Association of Southeast Asian Nations (ASEAN) countries in 1992 agreed to liberalize trade further through implementation of the Common Effective Preferential Tariff (CEPT) Scheme that gradually eliminated tariffs in the ASEAN Free Trade Area (AFTA), which facilitated intra-region trade flows further (Okabe and Urata 2013). These developments played a crucial role in consequent evolution of Asian IPNs in manufacturing products, particularly in Southeast and East Asia (Hiratsuka 2011). In South Asia, a similar regionalization drive followed through implementation of the SAARC Preferential trading Arrangement (SAPTA) in 1995, but intra-regional trade volume remained low given various trade restrictions (Sawhney and Kumar 2008). The South Asia Free Trade Area (SAFTA) was implemented in 2006, but the development of IPNs in the region is only a recent phenomenon (Anukoonwattaka and Mikic 2011).

Asia in the recent period has seen the emergence of several bilateral, regional and cross-regional agreements for promoting trade-investment flows with both Asian and non-Asian partners. Among the 'Asian' regional forums apart from AFTA and SAFTA, Gulf Cooperation Council (GCC), Asia-Pacific Trade Agreement (APTA), *Pacific Island Countries Trade Agreement (PICTA)* and Central Asian Regional Economic Cooperation (CAREC) deserve mention, while a number of bilateral and regional agreements are in the making. Several Asian economies are presently part of ten or more RTAs, with intra-bloc trade explaining more than 50 per cent of total trade for eight countries (Kawai and Wignaraja 2010). The rise of these Asian RTAs promotes trade-investment flows on one hand and deepens their presence in global value chains (GVCs) on the other (Brunner 2013). In particular, adoption of specific trade-facilitation measures in Asian RTAs augments both trends (Neufeld 2014b). However, the Asian RTAs are also faced with multiple challenges, namely, simplification, coordination and management of the rules of origin (ROOs) provisions across trade blocs, securing greater reform commitments in agricultural trade, deepening commitments including 'WTO-plus' commitments in the areas of investment, competition policy, trade facilitation and so on (Kawai and Wignaraja 2010).

The integration process in Asia is likely to deepen further, with the likely formation of Regional Comprehensive Economic Partnership (RCEP) in coming years that will facilitate deeper trade-investment linkage between the existing RTAs of ASEAN and its six RTA partners, namely, Australia, China, India, Japan, New Zealand, South Korea (Urata 2013). Another cross-regional mega RTA, namely, Trans-Pacific Partnership (TPP), is also on the making, which includes both East and Southeast Asian economies and several countries from the North and South American continents. The political undercurrent of both these proposed blocs is crucial here, as the American and Chinese hegemony might play a role in denying entry to each other at TPP and RCEP respectively (Hamanaka 2014).

One unintentional by-product of the outward orientation in Asia has been the emergence of environmental and climate change–related challenges. Given the income-related constraints that motivated most of the Asian economies to opt for export-led growth models, increasing utilization of both natural and human resources has been a crucial strategy for them right from the beginning. Hence the growth engine has led to intensification of primary activities (including agriculture, fishery and mining), rise in thermal and hydro power generation plants, conversion of forests and wetlands and so on, among other things, with obvious environmental repercussions. Existence of PHH–confirming FDI flows has often been noted in economies characterized by high growth (Chakraborty 2012; He 2006; Merican, Yusop, Noor and Hook 2007). Most of the Asian economies shifted their focus on environmental sustainability concerns only in the recent period, but the local-level political economic compulsions play a crucial role in determining the policy effectiveness (Mukherjee and Chakraborty 2015).

The evolving trade-investment-sustainability scenario of selected Asian economies can be explained with the help of Tables 1.1 and 1.2. It is observed from Table 1.1 that over the last decade, per-capita GDP (PCGDP) has increased in all the select Asian countries, barring countries heavily dependent on energy product exports (e.g. Brunei and Bahrain). While the lower-income countries have generally witnessed a structural shift towards the manufacturing sector, the importance of the service sector has grown in the middle-income countries. The divergence between growth and development, however, becomes apparent from the human development (HD) ranking and CO_2 emission trends compared over two time periods. On one hand, Singapore and Qatar have performed commendably on both fronts, in line with their PCGDP growth. Income growth in China, India and Japan, on the other hand, has been associated with downward movement of their HD ranking as well as rising emission volumes. Economies like Kazakhstan, Saudi Arabia, South Korea, Sri Lanka and Turkey have improved their HD rankings but performed poorly on the sustainability front. The deterioration in HD ranking of Tajikistan and Uzbekistan has, however, been accompanied by improved emission records. The diverse performance of countries with varying economic profiles on the HD sustainability front underlines the importance of country-specific policies and resource base in shaping their present status.

Table 1.2 reveals that merchandise trade as a percentage of GDP has improved for a number of Asian countries over the two reported time periods, although exceptions in Indonesia, Philippines, Sri Lanka and Tajikistan reveal the growing importance of their domestic sectors. Growing FDI inwardness is another defining feature of several Asian economies in the new millennium. Service trade as a percentage of GDP is found to be quite significant for Cambodia, Fiji, Hong Kong, Maldives, Singapore and Thailand. Conversely, importance of FDI outflow in GDP has sharply increased for Hong Kong, Singapore and Kuwait. The rising outward orientation has been associated with an improved foreign exchange reserve scenario in several Asian countries, which is likely to ensure favourable expectations and better stability. Contributions of the professions working abroad in Bangladesh, Philippines, Nepal, Pakistan, Sri Lanka, Tajikistan and Vietnam

Table 1.1 Key economic features of select Asian economies

Country	*GDP Group*[1]	*GDP Per Capita (Constant, 2005 USD)*		*Share of Manufacturing Sector in GDP (%)*		*Share of Service Sector in GDP (%)*		*Human Development Ranking*		*CO_2 Emissions (Metric Tonnes Per Capita)*	
		2003	*2013*	*1992–2002*	*2003–2013*	*1992–2002*	*2003–2013*	*2003*	*2013*	*1992–2001*	*2002–2011*
East Asia											
China	Upper-middle-income	1436.53	3619.44	32.48	31.96	36.89	43.44	85	91	2.65	4.89
Hong Kong, SAR China	High-income	23109.44	33638.97	4.14[2]	2.18	88.31[3]	92.10	22	15	5.56	5.62
Japan	High-income	34521.28	37573.37	21.80	19.32	65.91	71.41	11	17	9.36	9.46
South Korea	High-income	17214.20	23875.18	25.63	29.17	57.25	59.75	28	15	8.35	10.31
Southeast Asia											
Brunei	High-income	26712.88	24184.71	13.81	12.48	41.65	29.55	33	30	17.41	18.20
Cambodia	Low-income	389.35	708.50	13.06[4]	17.44	38.31[4]	40.84	130	136	0.12	0.24
Indonesia	Lower-middle-income	1180.48	1797.54	25.51	25.52	39.75	40.37	110	108	1.21	1.69
Laos	Lower-middle-income	427.36	752.41	12.82	8.51	28.10	37.61	133	139	0.12	0.20
Malaysia	Upper-middle-income	5126.90	6997.73	28.20	26.08	44.70	46.58	61	62	5.16	6.97
Myanmar	Lower-middle-income	–	–	7.16	10.68[5]	30.64	35.28[5]	129	150	0.16	0.21
Philippines	Lower-middle-income	1116.12	1581.49	23.63	22.41	48.90	54.77	84	117	0.87	0.84
Singapore	High-income	26297.10	37491.08	25.24	23.30	66.40	70.91	25	9	14.92	6.05
Thailand	Upper-middle-income	2458.30	3437.84	30.97	34.56	49.61	44.85	73	89	2.79	4.01
Vietnam	Lower-middle-income	619.30	1028.63	16.47	18.44	42.12	42.63	108	121	0.52	1.36

South Asia											
Afghanistan	Low-income	241.62	415.00	18.75[6]	15.50	37.81[6]	46.64	–	169	0.06	0.14
Bangladesh	Lower-middle-income	444.99	715.83	14.95	16.42	51.64	55.77	139	142	0.19	0.31
Bhutan	Lower-middle-income	1171.12	1976.55	9.38	8.35	36.17	37.83	134	136	0.58	0.62
India	Lower-middle-income	646.65	1189.78	15.58	16.01	48.35	52.53	127	135	1.02	1.40
Maldives	Upper-middle-income	3690.27	5829.81	7.26[7]	5.59	76.75[8]	78.95	96	103	1.37	2.86
Nepal	Low-income	306.03	409.04	9.30	7.40	37.57	47.59	136	145	0.11	0.13
Pakistan	Lower-middle-income	621.47	789.58	15.96	14.97	50.26	53.85	135	146	0.70	0.89
Sri Lanka	Lower-middle-income	1136.29	2004.26	16.22	18.40	51.65	57.86	93	73	0.40	0.63
West Asia											
Bahrain	High-income	18107.94	17501.73	16.10[8]	–	60.99[9]	–	43	44	27.04	20.35
Iran	Upper-middle-income	2548.03	2945.29	12.66	10.94[9]	49.58	45.90[7]	99	75	4.81	7.02
Kuwait	High-income	31313.25	30146.92	–	5.61[10]	–	33.44[10]	44	46	30.96[8]	29.70
Qatar	High-income	52630.11	59893.40	–	–	–	–	40	31	59.23	52.22
Saudi Arabia	High-income	12265.73	17545.38	9.83	10.08	44.81	36.62	77	34	14.03	16.65
United Arab Emirates	High-income	46661.39	25140.75	13.19[2]	9.62	49.17[2]	43.21	41	40	28.17	25.07
Central Asia and Eurasia											
Kazakhstan	Upper-middle-income	3186.76	5425.34	15.22[8]	12.63	51.21	53.76	80	70	10.45	12.94
Tajikistan	Lower-middle-income	300.90	480.63	28.09	17.92	33.78	47.03	122	133	0.55	0.37
Turkey	Upper-middle-income	6178.62	8728.76	22.52	18.41	53.96	63.16	94	69	3.06	3.77
Uzbekistan	Lower-middle-income	485.59	902.77	11.09[11]	11.67	39.99	46.73	111	116	4.88	4.37
Pacific Island Economies											
Fiji	Upper-middle-income	3469.79	3825.50	14.35	14.48	57.58	66.91	92	88	1.05	1.34

Source: (a) Human Development Ranking obtained from UNDP (2005, 2014)

(b) All other figures computed by Authors with data obtained from World Bank (undated)

Table 1.2 Trade-investment scenario of select Asian economies

Country	*Merchandise Trade as % of GDP*		*Service Trade as % of GDP*	*Regional Trade Agreements Participation*		*FDI Inflows as % of GDP*		*FDI Outflows as % of GDP*	*Total Reserves as % of Total External Debt*		*Personal Remittances Received as % of GDP*	
	1992–2002	*2003–2013*	*2005–2013*	*Signed and in Effect*	*Ongoing Negotiations*	*1992–2002*	*2003–2013*	*2003–2013*	*1992–2002*	*2003–2013*	*1992–2002*	*2003–2013*
East Asia												
China	37.82	53.38	6.65	14	8	4.25	4.03	1.34	90.12	404.38	0.32	0.55
Hong Kong, SAR China	233.76	350.24	63.27	4	1	15.90	26.44	30.76	–	–	0.08	0.14
Japan	16.31	26.73	5.76	14	10	0.10	0.17	1.80	–	–	0.03	0.03
South Korea	50.25	73.48	15.71	12	11	0.71	0.95	1.98	–	–	0.85	0.62
Southeast Asia												
Brunei	91.36	88.34	18.11	8	4	2.51	3.23	0.15	–	–	–	–
Cambodia	65.53	115.25	28.71	6	2	4.89	6.50	0.17	15.77	68.33	1.85	1.98
Indonesia	53.13	46.00	7.96	9	8	0.42	1.66	0.88	16.32	36.39	0.50	1.11
Laos	52.50	49.29	9.50	8	2	3.30	3.63	–	5.04	14.54	1.14	0.40
Malaysia	166.17	158.30	27.27	14	7	4.79	3.45	5.00	73.83	92.39	0.28	0.59
Myanmar	–	31.93	5.00	6	4	–	2.81	–	7.20	47.87	–	0.38
Philippines	73.49	67.38	14.24	7	3	1.83	1.20	1.44	21.80	75.04	7.60	11.38
Singapore	264.91	302.68	86.83	22	10	11.75	17.90	10.62	–	–	–	–
Thailand	84.00	122.18	27.26	12	9	2.79	3.34	1.52	41.53	128.25	1.03	1.01
Vietnam	73.78	133.38	14.75	8	7	6.60	5.65	0.54	16.34	52.21	3.92	6.09

South Asia												
Afghanistan	66.73	41.03	24.07	2	2	0.62	1.70	–	–	219.45	–	1.70
Bangladesh	24.76	38.79	6.00	3	3	0.17	0.89	0.004	12.88	31.63	3.46	8.62
Bhutan	66.52	85.23	14.10	2	1	0.12	1.97	–	129.56	85.06	–	0.49
India	17.63	33.68	13.81	13	15	0.60	1.73	0.90	32.32	101.50	2.14	3.31
Maldives	79.01	70.48	91.74	1	2	2.35	8.07	–	43.73	41.84	0.44	0.21
Nepal	37.68	37.59	10.62	2	1	0.21	0.22	–	31.41	74.70	2.47	19.51
Pakistan	30.71	32.68	7.55	10	7	0.88	1.62	0.05	9.41	27.34	2.62	4.86
Sri Lanka	68.00	53.93	12.39	5	2	1.31	1.40	0.11	20.32	26.37	6.55	8.24
West Asia												
Iran	39.00	40.27	–	1		0.39	1.05	–	–	–	1.00	0.44
Kuwait	70.62	75.55	19.10	3	11	0.15	0.65	7.66	–	–	–	0.003
Qatar	79.04	81.28	17.04	3	11	2.05	3.52	2.82	–	–	–	0.35
Saudi Arabia	53.86	72.20	15.44	3	11	0.20	3.72	0.39	–	–	–	0.04
United Arab Emirates	84.52	127.72	–	8	11	0.21	3.89	–	–	–	–	–
Central Asia and Eurasia												
Kazakhstan	53.69	70.04	11.58	8	6	6.36	8.18	2.13	36.29	21.27	0.53	0.17
Tajikistan	126.67	86.46	16.98	7	2	1.44	4.50	–	5.97	13.38	6.43	35.68
Turkey	31.79	43.38	7.94	18	13	0.54	1.93	0.30	18.82	28.91	1.76	0.19
Uzbekistan	47.56	57.13	–	8	2	0.56	2.17	–	23.44	–	–	–
Pacific Island Economies												
Fiji	77.45	83.63	46.30	3	2	2.67	7.99	0.05	201.70	132.33	2.32	5.52

Source: (a) Regional Trade Agreements Participation noted from ADB (undated), Ersoy (2013), WTO (2012a, 2012b, 2012c, 2014).

(b) All other figures computed by authors with data obtained from World Bank (undated)

can be understood from the rise in personal remittances inflows as percentage of GDP in these locations. Finally, most of the Asian economies in East, South and Southeast Asia have actively engaged with trade partners (often Asian neighbours) through multiple RTAs. In addition, all the economies from these regions are presently part of several ongoing RTA negotiations, signifying the premium attached to regional trade partnerships.

India, a country at the crossroads of West, Central, East and Southeast Asia, plays a crucial role in the Asian trade-investment context, given its shared land border with several neighbours. The country has grown at a rate consistently higher than 6 per cent since the East Asian crisis in the late nineties. Only in the aftermath of the recent recession, the growth rate has faltered (Chakraborty 2013). The country's presence in the global trade-investment sphere has considerably deepened over the past two decades. The share of India in merchandise export and FDI inward flows over 2001–13 has increased from 0.72 per cent to 1.87 per cent and from 0.30 per cent to 1.94 per cent respectively. It has partnered several Asian countries through RTAs and is presently engaged in negotiation with the European Union (EU) for a bilateral trade and investment agreement (BTIA) (Chaisse *et al.* 2011). It is also a key member in the BRICS group, which consists of Brazil, Russia, India, China and South Africa. The country is now integrating fast with the GVCs, particularly with the ones located in Asia (Anukoonwattaka and Mikic 2011). India is also a participant of the 'Asian Highway Network', the success of which would crucially influence trade and welfare scenarios in the South Asian region. However, the network has faced several challenges, including resource- and governance-related constraints (Rohatgi, Bandyopadhyay and Gupta 2011).

The present volume focuses on the trade-investment-sustainability scenario in the Asian context, through both empirical and theoretical analysis. The empirical analyses included in the volume have used the relevant indices, for example, IIT indices, OECD Trade in Value Added (TIVA) indices on one hand and various modelling techniques, for example, dynamic panel data modelling, gravity modelling, application of input–output–based analysis, time series models and the like on the other. The chapters included in the volume have focused on trade-investment policies in the Asian context, India's trade relationship with select Asian and non-Asian partners, implications of India's trade policies and multilateral negotiations and so on. The chapters included in the volume offer a perspective on the scenario in developing countries, in recognition of their growing in the global trade and investment canvas.

Structure of the volume

The proposed volume intends to contribute to the existing literature by covering select empirical analyses, relating to crucial policy issues in the trade-investment sphere and their role in fostering economic development in the context of India and several Asian economies, though studies on BRICS countries, EU, Maghreb countries and Pacific island economics have also been included in the volume. The

chapters included in the volume are classified under four broad themes, namely: (1) trade: theoretical and policy issues, (2) factor flows: impact on trade and welfare, (3) impact of trade and factor flows on environment and (4) institutions, international trade and policy issues. The chapters included in the current volume deal with contemporary research questions on these broad themes. In addition, detailed literature surveys, discussions on data availability and issues relating to statistical estimation techniques in theoretical background ensures that each chapter significantly contributes to the ever-growing literature on international trade and investment.

Part I includes seven chapters, covering both theoretical and empirical analysis. The first chapter by Hemangi K. Kelkar and L. G. Burabnge analyses the nature of India's IIT over 1990–91 to 2013–2014 at HS eight-digit level. A sharp rise in IIT indices signifies that the process of trade liberalization favoured reallocation of resources within the same industry rather than among the industries. Furthermore, segregation of IIT in horizontal and vertical types on the basis of product quality shows that India's major export basket is characterized by high product differentiation. While low-quality vertical IIT has increased as compared to high-quality vertical IIT, the empirical results indicate that India is improving on the quality ladder of traded products.

Consistently growing intra-sector IIT involving several regional partners indicates emergence of IPNs from market-driven forces, for example, vertical specialization, higher production costs in home countries and institutional-led reasons like free trade agreements (FTAs). Taking note of the gradual implementation of the India–ASEAN FTA since 2010, the second chapter by Biswajit Nag notes that the resulting tariff reforms have opened up a new opportunity for the expansion of the ASEAN production network to India. Through an analysis with the OECD TIVA database, the chapter analyses the degree of foreign value-added component in India's gross exports in selected sectors between 2000 and 2009, and the empirical findings confirm deepening of IPNs.

While the growth in bilateral IIT facilitates deepening of IPN–led trade linkage among partners, external sanctions and global financial crises exert an opposite effect. The third chapter by Seyed Komail Tayebi and Zahra Zamani attempts to analyse the determinants of Iran–India trade flows for a range of products over 1991–2013. Bilateral IIT indices reveal a growing trend, although there is ample scope for both partners to expand their trade relations through IIT–type trade. The augmented gravity model estimation results indicate strong influence of the gravity variable set including GDPs, per-capita incomes in determining the bilateral trade flows, although trade imbalance and international sanctions against Iran as well as global financial crises play crucial roles.

While the market, climatic and institutional drivers significantly influence the export pattern and decisions, firm-level characteristics are increasingly playing an important role. The fourth chapter by Anirban Biswas traces the factors affecting the export performance of Indian manufacturing firms belonging to different technology groups over 1994–2010. While age of firm, advertisement expenses and import of capital goods and so on significantly boost export orientation,