RTNeT

Asia-Pacific Research and Training Network on Trade

Asia's international production networks: Will India be the next assembly centre?

By Rahul Sen and Sadhana Srivastava

No. 118/August 2012

ARTNeT Working Paper Series

ARTNeT Working Paper Series
No. 118/August 2012

Asia's international production networks: Will India be the next assembly centre?

By Rahul Sen and Sadhana Srivastava[*]

Please cite this paper as:
Sen, Rahul and Sadhana Srivastava, 2012. Asia's international production networks: Will India be the next assembly centre? ARTNeT Working Paper No. 118, August, Bangkok, ESCAP. Available from www.artnetontrade.org.

[*] This paper draws on existing literature on this subject by Srivastava and Sen (2011). Rahul Sen is a Senior Lecturer in Economics, Faculty of Business and Law, Auckland University of Technology (AUT), New Zealand. Sadhana Srivastava is a Lecturer in Economics, Faculty of Business and Law, Auckland University of Technology (AUT), New Zealand, The authors would like to thank Gandhip Rai for excellent research assistance. The opinion, figures, and estimates are the responsibility of the authors and should not be considered as reflecting the views or carrying the approval of the United Nations. Any remaining errors are the responsibility of the author, who can be contacted at e-mail: rahul.sen@aut.ac.nz and sadhana.srivastava@aut.ac.nz.

Contents

Acronyms

ACMA	Automotive Component Manufacturers Association
AMP	Automotive Mission Plan
ASEAN	Association of Southeast Asian Nations
CAGR	Compound Annual Growth Rate
CV	Commercial Vehicles
ESC	Electronics and Software Exports Promotion Council
EU	European Union
FDI	Foreign Direct Investment
FTP	Foreign Trade Policy
GDP	Gross Domestic Product
G-L	Grubel-Lloyd
HS	Harmonized System
IBEF	India Brand Equity Foundation
ICT	Information and Communication Technology
IIT	Intra-industry Trade
IPN	International Production Network
ISIC	International Standard Industrial Classification
IT	Information Technology
P&C	Parts and Components
PPP	Purchasing Power Parity
PTA	Preferential Trade Agreement
MPV	Multipurpose passenger vehicle
MNC	Multinational Corporation
NAFTA	North American Free Trade Agreement
NATRiP	National Automotive Testing and R&D Infrastructure Project
NES	Not included elsewhere
NMP	National Manufacturing Policy
NTB	Non-tariff Barrier
OECD	Organisation for Economic Co-operation and Development
OEM	Original Equipment Manufacturer
R&D	Research and Development
RIS	Research and Information Systems for Developing Countries
RoO	Rules of Origin
SAARC	South Asian Association for Regional Cooperation
SEZ	Special Economic Zone
SITC	Standard Industrial Trade Classification
SME	Small and Medium-sized Enterprises
TKAP	Toyota Kirloskar Auto Parts
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UK	United Kingdom
US	United States
USD	United States Dollars
WTO	World Trade Organization

Asia's international production networks: Will India be the next assembly centre?

Rahul Sen and Sadhana Srivastava

Abstract

This paper analyses the current state of participation of India in the international production networks (IPNs) of manufacturing industries in Asia, and identifies the constraints and challenges for India's deeper participation in the near future. Using the disaggregated 5 digit SITC (Rev 3) level data, the estimates of intra-industry trade and export revealed comparative advantage in Parts and Components (P&C) in India's manufacturing sector are analysed separately from that of total trade flows over the period from 1994 and 2008. This provides useful insights into the nature and magnitude of production fragmentation involving Foreign Direct Investment (FDI). The analysis demonstrates that India has reoriented its growth strategy, towards an outward orientation, during the past two decades, but the pace of its reform has not caught up with this paradigm shift. As a result, the level of participation by Indian industries in global and in Asian IPNs is low. Most of India's exports comprise low-technology, labour-intensive goods that do not involve much fragmentation, such as textiles, gems and jewellery and animal and leather products.

Five key policy recommendations are proposed, based on the current state of India's participation in IPNs and the associated policy challenges. It is particularly noted that India's existing Preferential Trade Agreements (PTAs) do not appear to be designed with the objective of reducing the costs involved in setting up an IPN. A critical review is therefore required of India's current PTAs, including more inputs from businesses, to identify specific areas of gains from PTAs in order to create a business environment that would make India a potential assembly centre for global manufacturing activities in the near future. Implementation integrity and effective utilization of PTAs involving India and member countries will also be a key to whether PTAs will be successfully able to play a role in plugging India into global and Asian IPNs

Keywords: India, international production networks, intra-industry trade, Asia, PTAs

JEL code: F13, F14, F23

1. Introduction

Rapid globalization over the past two decades has increased the prevalence of production fragmentation, which is the division of the production process among different suppliers, with the constituent parts, components and accessories of products being produced by various producers in different countries. Production is divided on the basis of each country's comparative advantage, with each country specializing in a particular stage of the production sequence. This divides up the value added chain and facilitates firms to create cost-based advantages through small differences in costs, resources, logistics and markets.[1]

In the Asian context, this phenomenon has had a significant impact on merchandise trade patterns and regional integration since the 1980s. At that time, international production networks (IPNs) were created by multinationals in labour-intensive manufacturing industries in several East and South-East Asian countries, including in China, Indonesia, the Republic of Korea, Malaysia, Singapore and Thailand. These IPNs have resulted in an increasing share of trade in machinery parts and components in both the exports and imports of these countries (Athukorala and Yamashita, 2005; Ando, 2006). This phenomenon has also provided development opportunities for the Indian manufacturing sector through technology transfer and access to global markets.[2] The creation of such Asian IPNs was fuelled by the adoption of an export-led outward oriented growth strategy by most Asian countries in the 1980s, in which foreign direct investment (FDI) played a major role. The pace of this outward orientation was more rapid in the above-mentioned countries than in India, despite India being one of the most rapidly growing economies in the world in terms of purchasing power parity (PPP).[3] India followed an entirely different growth strategy, in favour of self-reliance and import-substitution growth until about 1991 when it adopted (almost a decade later than most of the East and South-East Asian countries) an outward orientation. As a result, India was largely left out of the global division of labour in the 1980s, and therefore lagged in the development of intra-industry trade in parts and components (P&C) of manufacturing goods, which has been critical to the development of IPNs.

Since July 1991, the adoption of an outward orientation, with unilateral reduction of trade barriers and involving "calibrated" globalization, has allowed market forces and the private sector in India to play a significant role in India's growth process and to further integrate India into the global economy.[4] India's economy grew very rapidly between 2000 and 2009, with an average annual growth rate of 7.2 per cent and with the merchandise trade

---

[1] See Rajan 2003; Hummels et al., 2001; Yi, 2003; Krugman, 1995; Ng and Yeats, 2001, 2003; and Grossman and Helpman, 2005.

[2] See McKendrick et al., 2000; Kuroiwa and Toh, 2008 and Fujita, 2007.

[3] In 2010, India's GNI at PPP was about USD 4.2 trillion (World Bank, 2010).

[4] India adopted wide-ranging economic policy reforms. These reforms aimed to achieve macro-economic stabilization through improved fiscal management, reduction of distortions in the production structure and concomitantly increasing the competitiveness of India's external sector through reduction of trade barriers and encouragement of private capital flows (of which FDI was a major constituent).

to GDP ratio doubling from about 21 per cent in 2000 to 42 per cent in 2008, compared with just 13 per cent in the pre-reform period in 1990. Rajan and Gopalan (2011) observed that after a decade of the ongoing reforms, India experienced an international trade renaissance with regard to its merchandise exports (including re-exports), with revenue more than doubling, rising from about 95 billion United States Dollars (USD) in fiscal year April 2005 to March 2006 to nearly USD 220 billion in 2011. India's exports grew at an average of almost 20 per cent per annum over the period between 2000 and 2009. Consequently, Indian policymakers have set an ambitious export target of USD 400 billion per annum by 2014 (Rajan and Gopalan, 2011). India's merchandise imports more than doubled from about USD 138 billion to USD 327 billion over the same period.

From being among the relatively insignificant players in global trade in 1990 (ranked below fortieth position globally, and constituting a share of 0.5 per cent of global merchandise exports and a share of 0.7 per cent in global merchandise imports), India moved rapidly up the global trade rankings over the next 20 years. It was ranked twentieth in world exports in 2010, with its share of global merchandise exports increasing to 1.4 per cent, and thirteenth in world imports, with its global merchandise import share increasing to 2.1 per cent. In the area of trade in commercial services, India's performance was highly impressive in 2010, when the country gained seventh position among both world exporters and importers of commercial services, constituting a share of 3.3 per cent for that year, compared with thirty-fourth among exporters and twenty-eighth among importers in 1995 (WTO, 2011a). Among developing countries globally, in 2010 India was ranked as the second largest exporter and importer of commercial services, after China (WTO, 2011a).

India's "look east policy" and its integration with South-East and East Asia production networks was a significant policy development. Since the beginning of the outward orientation policy, China has emerged as India's most important Asian trade partner (Figure 1 and Figure 2). Likewise, India's trade with Singapore has expanded considerably since the signing of the India-Singapore Comprehensive Economic Cooperation Agreement in 2005. In the period between April 2009 and September 2010, most of India's exports went to the Asian region, accounting for 55 per cent of total exports, up from 40 per cent in 2001/02;[5] during that period China accounted for 10 per cent of India's total exports.