The secretariat of the ESCAP is the regional development arm of the United Nations and serves as the main economic and social development centre of the United Nations in Asia and the Pacific. Its mandate is to foster cooperation between its 53 members and 9 associate members. It provides the strategic link between global and country-level programmes and issues. It supports governments of countries in the region in consolidating regional positions and advocates regional approaches to meeting the region's unique socio-economic challenges in a globalizing world. The ESCAP secretariat is located in Bangkok, Thailand. Please visit the ESCAP website at www.unescap.org for further information.

The Asian Development Bank Institute (ADBI), located in Tokyo, is the think tank of the Asian Development Bank (ADB). It was established in 1997 to identify effective development strategies and to improve development management in ADB’s developing member countries. ADBI is a leading center for the creation and dissemination of information and knowledge on development in the Asia and Pacific region. For more details, visit http://www.adbi.org.

Asia-Pacific Research and Training Network on Trade (ARTNeT) is an open regional network of research and academic institutions specializing in international trade policy and facilitation issues. IDRC, UNCTAD, UNDP, ESCAP and WTO, as core network partners, provide substantive and/or financial support to the network. The Trade and Investment Division of ESCAP, the regional branch of the United Nations for Asia and the Pacific, provides the Secretariat of the network and a direct regional link to trade policymakers and other international organizations. For more information, please contact the ARTNeT Secretariat at artnetontrade@un.org or visit www.artnetontrade.org.
SERVICE SECTOR REFORMS

ASIA-PACIFIC PERSPECTIVES

Edited by:

Pierre Sauvé, Gloria Pasadilla and Mia Mikic
Foreword

Services, the largest sector in many middle-income and developed economies, holds the key to increased productivity and dynamic growth. Previously unthinkable technologies have resulted in a multitude of new avenues for trade in services, and the future holds still greater possibilities. Yet understanding services remains a challenge, particularly in terms of the impact of services liberalization on development. To design future domestic reforms, policymakers want to have a clearer idea about how the concessions they made on services in various trade agreements or in the unilateral liberalization of key service sectors have contributed to growth and human development. However, very few studies that could shed some light on such questions have been undertaken. The reform of service sectors and their link to equity and increased access have not been explored widely enough to be able to explain the importance of services trade and service sector liberalization to ordinary citizens.

By organizing a conference on “Reforming Services for Inclusive and Sustainable Development in Asia and the Pacific,” the ADB Institute and its partners, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the Asia-Pacific Research and Training Network on Trade (ARTNeT), hoped to make a contribution to the discussion about how services sector reforms have benefited the poor, and more generally, how regulatory reforms in services have increased the opportunities for more inclusive growth. The papers presented at the conference pointed to several important shared conclusions. First, there appears to be a link between regulatory restrictions in services, wage inequality, and access to services. Second, the service sector faces major data problems that need to be tackled to improve and increase analytical work in this area. Third, an “out-of-the-box” approach to services policy reform that goes beyond a narrow focus on market access is needed.

Considering the number of the economies in Asia and the Pacific and the great diversity of service sectors, the papers put together by the organizers are insufficient to address all the important issues. Nevertheless, they provide a good starting point and make an important contribution to further stimulating services-related work by researchers in the region.

On behalf of the ADB Institute, I thank the contributors to this volume and the discussants who provided their insights during the conference and in the preparation of this book.

Masahiro Kawai
Dean and CEO
Asian Development Bank Institute
Foreword

The global economic crisis of 2008-2009 and the continuing weak economic performance in the major developed economies have hastened the need for the developing Asia-Pacific countries to improve the resilience of their economies to various external shocks. There is solid evidence that economies that are more diversified are also more stable and resilient. Building more diversified economies greatly relies on the share and quality of services activities, both tradable and non-tradable. Despite most of the Asian economies depending on a strong manufacturing sector in their export-led growth during the past several decades, the service sector has been receiving increasing attention by economic planners and regulators, the private sector and international organizations. This is because services are a crucial factor in reducing costs of production; services such as telecommunications, transportation, finance, insurance, accounting, marketing, among others, directly influence the competitiveness of domestic industries in local and international markets. Furthermore, other services such as education, health, energy or environmental services influence changes in national productivity and affect the quality of economic growth.

ESCAP’s Trade and Investment Division promotes service sector development through a more coherent approach to liberalization and regulation of services by providing capacity-building programmes for policymakers, negotiators and regulators as well as by producing necessary analyses. As the host of ARTNeT secretariat, the Division also collaborates with other partners and members of ARTNeT in order to strengthen analytical capacity in developing countries themselves – this being indispensable for evidence-based policymaking. We often partner with other international organizations and independent experts to also enrich the results of our own work.

This publication is a result of such collaboration between the Asian Development Bank Institute and ARTNeT. The project brought together researchers, regulators, negotiators, practitioners and other stakeholders from a wide range of Asian countries and international organizations in an effort to offer insights and better understanding of the outcomes of the development of service sector, particularly with regard to how services influence inclusivity of economic growth. These topics are only just starting to be tackled by the research community in the region, and this publication is thus welcomed as an early collection of work relevant to this region.

On behalf of ESCAP and ARTNeT, I thank the editors and contributors to this volume and the discussants who provided their insights, both during the conference and in the preparation of this book.

Ravi Ratnayake
Director, Trade and Investment Division
United Nations ESCAP
Contents

Foreword
Masahiro Kawai
Asian Development Bank Institute ................................................................. iii

Foreword
Ravi Ratnayake
United Nations Economic and Social Commission for Asia and Pacific ........ iv

Acknowledgements .............................................................................................. vii

Abbreviations and acronyms ............................................................................... ix

Country codes ....................................................................................................... xiii

List of contributors ............................................................................................... xv

Service sector reforms: Asia-Pacific perspectives
Pierre Sauvè, Gloria Pasadilla and Mia Mikic ....................................................... 1

Part I. Services and development

1. Harnessing services trade reform for inclusive growth: Lessons from the 1980s vs. the 2000s
Bernard Hoekman ............................................................................................. 27

2. Trade in services and human development: A first look at the links
Ben Shepherd and Gloria Pasadilla ................................................................. 49

3. A comparison of the industrialization paths for Asian services outsourcing industries, and implications for poverty alleviation
F. Ted Tschang .................................................................................................. 77

Part II. Measurement challenges in services trade

4. Access through presence: Australian perspectives on measuring Mode 3 trade
Jane Drake-Brockman ........................................................................................ 111

5. Measuring trade in services in Mode 4
Andreas Maurer and Joscelyn Magdeleine ....................................................... 141

6. Measuring barriers to trade and investment in services
Hildegunn Kyvik Nordås .................................................................................... 175
Part III. Sectoral and national liberalization and deregulation: Progress and unresolved issues

7. Exploring access and equity issues in private higher education institutions: Insights from Malaysia
   Tham Siew Yean .......................................................... 197

8. Services liberalization and wage inequality in the Philippines
   Glenita Amoranto, Douglas H. Brooks and Natalie Chun .................. 221

9. Economy-wide impacts of liberalization in the Vietnamese banking sector
   Huong Dinh .......................................................... 247
Acknowledgements

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The project was funded by ADBI and ARTNeT, with the contribution by the latter being provided by the International Development Research Centre, Canada.
### Abbreviations and acronyms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>AANZFTA</td>
<td>ASEAN-Australia-New Zealand Free Trade Area</td>
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<td>ABS</td>
<td>Australian Bureau of Statistics</td>
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<tr>
<td>ACT</td>
<td>Australian Capital Territory</td>
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<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>ADBI</td>
<td>Asian Development Bank Institute</td>
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<td>AIC</td>
<td>American International Group</td>
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<tr>
<td>ANU</td>
<td>Australian National University</td>
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<td>APC</td>
<td>Australian Productivity Commission</td>
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<td>APTIAD</td>
<td>Asia-Pacific Trade and Investment Agreements Database</td>
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<tr>
<td>ARTNeT</td>
<td>Asia-Pacific Research and Training Network on Trade</td>
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<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
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<tr>
<td>BIDV</td>
<td>Bank for Investment and Development of Viet Nam</td>
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<tr>
<td>BLES</td>
<td>Bureau of Labour and Employment Statistics</td>
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<tr>
<td>BOP</td>
<td>balance of payments</td>
</tr>
<tr>
<td>BPM6</td>
<td>Balance of Payments Manual, sixth edition</td>
</tr>
<tr>
<td>BPO</td>
<td>business process outsourcing</td>
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<tr>
<td>BSIPC</td>
<td>Beijing Software Industry Productivity Center</td>
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<tr>
<td>CGE</td>
<td>computable general equilibrium</td>
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<tr>
<td>CPI</td>
<td>Consumer Price Index</td>
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<td>DDA</td>
<td>Doha Development Agenda</td>
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<td>DFAT</td>
<td>Australian Department of Foreign Affairs and Trade</td>
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<td>DPT</td>
<td>diphtheria, pertussis and tetanus</td>
</tr>
<tr>
<td>EBOS</td>
<td>extended balance of payments statistics</td>
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<td>Employee Provident Fund</td>
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<tr>
<td>EO</td>
<td>Executive Order</td>
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<tr>
<td>FATS</td>
<td>foreign affiliates trade statistics</td>
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<td>foreign direct investment</td>
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<tr>
<td>FDI-RI</td>
<td>Foreign Direct Investment Restrictiveness Index</td>
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<tr>
<td>FISIM</td>
<td>financial intermediation services indirectly measured</td>
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<tr>
<td>Acronym</td>
<td>Full Form</td>
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<tr>
<td>MFN</td>
<td>most-favoured-nation</td>
</tr>
<tr>
<td>MNE</td>
<td>multinational enterprise</td>
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<td>MSITS</td>
<td>Manual of Statistics on International Trade in Services</td>
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<td>Ministry of Trade and Industry Malaysia</td>
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<td>MOHE</td>
<td>Ministry of Higher Education</td>
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<td>MP</td>
<td>Malaysia Plans</td>
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<td>MQA</td>
<td>Malaysian Qualifications Agency</td>
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<td>NASSCON</td>
<td>National Association of Software and Service Companies</td>
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<tr>
<td>NEP</td>
<td>New Economic Policy</td>
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<tr>
<td>NESP</td>
<td>National Education Strategic Plan</td>
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<td>NHEFC</td>
<td>National Higher Educational Fund Corporation</td>
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<tr>
<td>NPC</td>
<td>National Power Corporation</td>
</tr>
<tr>
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<td>non-performing loans</td>
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<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>OLI</td>
<td>ownership location and internationalization</td>
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<tr>
<td>OLS</td>
<td>ordinary least squares</td>
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<td>OWS</td>
<td>Occupational Wages Survey</td>
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<td>Product Market Regulation Index</td>
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<td>PTA</td>
<td>preferential trade agreement</td>
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<tr>
<td>PRC</td>
<td>People’s Republic of China</td>
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<tr>
<td>PrHEIs</td>
<td>private higher education institutions</td>
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<tr>
<td>PuHEIs</td>
<td>public higher education institutions</td>
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<td>PRMTR</td>
<td>Trade Department in the Poverty Reduction and Economic Management Vice-Presidency</td>
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<td>PRMVP</td>
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<td>PSD</td>
<td>Public Services Department</td>
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<td>QR</td>
<td>quantitative restrictions</td>
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<td>Republic Act</td>
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<td>R&amp;D</td>
<td>research and development</td>
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<td>RSIM</td>
<td>Recommendations on Statistics on International Migration</td>
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<td>RTA</td>
<td>regional trade agreement</td>
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<td>Abbreviation</td>
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<td>SBV</td>
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<td>SDT</td>
<td>special and differential treatment</td>
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<td>SLI</td>
<td>Service Liberation Index</td>
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<td>SOE</td>
<td>state-owned enterprises</td>
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<td>state-owned commercial banks</td>
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<td>SOPEMI</td>
<td>International Migration Outlook</td>
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<td>SPM</td>
<td>Malaysian Certificate of Education</td>
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<td>Malaysian Certificate of Vocational Education</td>
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<td>sanitary/phytosanitary measures</td>
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<td>STAM</td>
<td>Malaysian Religious Certificate of Education</td>
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<td>SVI</td>
<td>Software Ventures International</td>
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<td>TBT</td>
<td>technical barrier to trade</td>
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<td>Worldwide Governance Indicators</td>
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# Country codes
*(ISO ALPHA-3 codes)*

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Source: [http://unstats.un.org/unsd/methods/m49/m49alpha.htm](http://unstats.un.org/unsd/methods/m49/m49alpha.htm)
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Huong Dinh is a PhD graduate in economics at the Australian National University. Her research focuses on trade in services, especially regulatory barriers to trade in financial services. She has contributed several chapters to the book of the Australian Research Council-funded Linkage Project, “Setting Priorities for Services Trade Reform”. Previously,
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Joscelyn Magdeleine is a statistician working in WTO’s International Trade Statistics Section, particularly with regard to trade in services. Before joining WTO he worked in the OECD Statistics Directorate from 1996 to 2003, notably on services statistics (services output and employment, and trade in services). He has participated in the activities of the United Nations Interagency Task Force on Statistics of International Trade in Services since 1999 as well as the Task Force’s Subgroup on the Movement of Natural Persons – Mode 4.

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Service sector reforms: Asia-Pacific perspectives

Pierre Sauvé, Gloria Pasadilla and Mia Mikic

1. Introduction

Gaining a better understanding of the service economy and its linkages to other key sectors; identifying the types of policies that can sustain the development of a knowledge-based economy; developing the analytical tools and proper metrics with which to gauge with greater precision the impacts of service sector reforms, policies and trade policy commitments on the growth and development of nations and how such spoils are divided among citizens; and enhancing the service sector data upon which sound policy decisions must ultimately rest; are all centrally important elements to countries’ long-term prosperity given the dominant role that services play in the economic life of all countries.

The Asia-Pacific region is no exception to the above reality. Throughout the Asia-Pacific region, service industries generate a predominant share of output and account for an increasing share of employment. Services have also become a major source of product and process innovation, and are the target of increasing research and development (R&D) expenditure. In the advent of IT revolution-unleashed supply chains and vertical linkages within and across service and manufacturing industries, services are allowing some countries at a lower level of development to leapfrog entire stages of industrial development and insert themselves productively into the new geography of trade and investment patterns (Ghani and Kharas, 2010; and Saez 2010). Services rank among many Asia-Pacific countries’ most dynamic capital exporting sectors, accounting for a growing volume of outward investment activity even as they remain the predominant target for inward foreign direct investment (FDI) activity in most countries of the region.¹ They are, moreover, a source of significant and increasing returns to labour mobility at all skill levels.

Yet, despite their rising salience in the domestic and regional economies and after almost two decades of frenetic trade and investment negotiating activity in the sector, services still tend to receive far less attention than manufacturing or even agriculture, both in public policy debates and in policy research priorities. The intangible and heterogeneous nature of tertiary activities, the relative novelty of market contestability and pro-competitive reforms in many major service sectors, and the far weaker supply of quality disaggregated data that is prevalent in the sector has meant that services continue to receive scant attention in the training of graduates in economics. This is particularly true in the trade field, where the bias towards goods (i.e., agriculture and especially manufacturing) continues to dominate much academic output and theorizing.

¹ In developing economies, of which many are in Asia, services account for 65 per cent of inward FDI stock (UNCTAD 2011).
This volume, and the ADBI-ESCAP-ARTNeT conference on “Regulatory Reforms and Liberalization in Services: Examining Impacts on Inclusive and Sustainable Development”, held in Bali, Indonesia on 11 and 12 October 2010, at which most of the papers in the following chapters were presented, attest to the desire of both institutions to contribute to redressing the imbalances noted above. This publication provides the academic and policy communities in the Asia-Pacific region and beyond with a very rich, and still rapidly evolving, agenda for future empirical research. The work presented in this volume needs to be perceived as a starting point. Its aim is to pinpoint key research questions and policy challenges, for which more focused analytical scrutiny, better data and more fine-tuned modelling efforts can hope to produce robust findings capable of informing improved public policies. Work of this nature can also usefully underpin the formulation, conducting and implementation of trade and investment policies, both within the autonomous remit of domestic reforms as well as in terms of international cooperation and engagement in preferential and multilateral negotiations.

2. Characterizing the service economy

Why, it might be asked, should governments devote greater attention to the service sector and to the impacts of ongoing service sector reforms? The answer can be found in a number of recent global economic trends that are easy to see within the Asia-Pacific context. The following points characterize some of the most salient facts of the modern services landscape emerging in the region and beyond:

(a) Some of the most pressing meta-challenges facing the world community – enhancing human capital; tackling the challenge of climate change mitigation and its financing; designing intelligent cities and workplaces; nurturing the revolution in life sciences; designing intelligent new forms of mobility (transportation systems); growing the digital economy (e.g., e-commerce, e-governance and e-health) – will all require major doses of innovation in product design and delivery platforms. The efficiency with which services – finance, ICT, business services, architecture, design, R&D and education – are delivered will be the key to addressing them. Responding to such challenges can also be expected to create vast new trade and investment opportunities, with or without trade agreements;

(b) Services are central to overall economic performance, both as dominant activities in their own right as well as through the intermediation function they perform across all sectors of a modern economy, from fisheries to mining, from agriculture to manufacturing, and indeed across the service sector itself. An inefficient service infrastructure acts like a prohibitive tax on the whole economy;

(c) The contribution of services to output and employment is predominant throughout the Asia-Pacific region, and is rapidly approaching Organisation for Economic Co-operation and Development (OECD) averages in a growing
number of the region’s middle- and upper-middle income countries. For 2008 (the most recent year for which data are available for all country groups), the average share of services value-added in gross domestic product (GDP) and services employment in total employment for high-income OECD countries is 74 per cent and 72 per cent, respectively. For all East Asia and the Pacific countries these average shares reach 65 per cent and 39 per cent, respectively, while in the case of South Asia the share of value-added in GDP is 54 per cent, while services contributed less to total employment (28 per cent in 2005);

(d) For much of the past two decades, services have been one of the most dynamic sources of job creation, exports and FDI growth (both inward and outward) in the Asia-Pacific region. While services trade still contributes only about 12 per cent of GDP globally, for South Asia the share is 15 per cent. In 2010, OECD high-income countries still accounted for almost 70 per cent of global commercial services exports, but this was 5 percentage points less than in 2001. During same period, all economies of East Asia and the Pacific increased their share from 18 per cent to 23 per cent, while South Asia pushed up its share from 1 per cent to 3 per cent. Almost half of the South Asian services exports are accounted for by ICT services exports, compared with barely 9 per cent by the sector in OECD countries and even lower in other Asian economies;

(e) In recent years, and particularly in the aftermath of the Asian financial crisis of 1997-1998, key service sectors have been subjected to significant policy experimentation in regulatory reform with a view to stimulating competition, securing pro-poor outcomes and improving resilience to external shocks;

(f) In response to globalization and the spread of IT, a growing share of labour market adjustments are taking place in services. Such adjustments include vastly increased scope for remotely supplied services, including via outsourcing and the moving of jobs (particularly white-collar employment) off-shore, skills upgrading, life-long learning and the sharply increased participation of women in the labour force;

(g) The rise of the service economy, and the premium it places on the acquisition and deployment of skills, has greatly increased the importance of enhancing the supply and quality of human capital, contributing to rising investments – both public and private – in vocational and higher education. In turn, this has fuelled a strong increase in trade and investment in education services and, in some Asia-Pacific countries, to veritable industry policy and trade promotion activism in higher education. The above trends are, not surprisingly, also focusing needed attention on conditions of access to education, not least because of growing concerns over rising wage and income inequality and the dimmed prospects for upward social mobility that such gaps entail;
(h) Many service sectors place fewer strains on the global commons than do agriculture, extractive industries or manufacturing. They can also play a central role in enhancing environmental stewardship;

(i) Widening access to, and enhancing the efficiency of resource use of a number of key service sectors, such as health care, education, and distribution services, are increasingly seen as central to sustained improvements in human development, inclusive growth and poverty alleviation;

(j) The greater relative indifference of many service sectors to time, space and scale constraints implies that the service economy offers tangible means for smaller service providers in landlocked or geographically remote locations to insert themselves into national, regional or global production networks;

(k) Services are where attempts at structural reform typically raise some of the most complex policy challenges and often encounter the fiercest political resistance;

(l) Anchoring ongoing domestic service sector reforms in internationally negotiated agreements can offer a useful means of overcoming domestic resistance to change, import enhanced regulatory standards and other good governance-promoting reflexes (e.g., transparency in the making and administering of domestic legal and regulatory regimes), and secure valuable reciprocal access opportunities in the markets of key trading partners.

3. Are services different?

To what extent do services possess features that require the revisiting of traditional assumptions about the functioning of markets, measurement techniques and policy prescriptions, all of which have been shaped by greater and long-standing familiarity with how goods are produced and sold, both domestically and across borders?

Several contributions to this publication draw attention to important conceptual differences between goods and services that matter for the design and success of policy reforms in service markets. The need for factor mobility in services trade, both capital and labour, and the attendant definitional and measurement challenges that arise in both regards – the behind-the-border, regulatory nature of impediments to service sector activity and the difficulty of modelling the economic impact of non-price instruments of protection; the multiple sources and the high (and recurring) incidence of market failure in key service sectors; the fact that so many service sectors, whether finance, energy or telecommunications, are systemically important (i.e., too important to fail) – are all indicative of why reforms in service markets are typically laden with considerable precaution and proceed in a slow and incremental manner.

In various ways, several of the chapters test the notion of whether the service sector is somewhat exceptional in character, often calling for differentiated policy prescriptions
rooted in distinct sectoral particularities. These contributions recall what a complex mosaic the service economy represents and how difficult it is for governments (chiefly represented by “vertical” line ministries and regulatory agencies) as well as key stakeholders in the private sector and civil society to embrace a horizontal, multisectoral, perspective on reform design. At the same time, several of the chapters stitch together a tapestry of interconnected issues of data measurement, model design, access regimes and distributional effects to which reform efforts need to pay attention regardless of the sectors in which they are pursued. It is not surprising, therefore, that the tension between generic and sector-specific approaches to service sector reforms permeates this publication’s overall structure.

4. Structure of the volume and key findings

This publication is divided into three parts, each of which comprising three essays. Part I investigates the nexus between service sector reforms and development. Contributions explore some of the key policy lessons derived from two decades of service sector reforms and how these have been harnessed with a view to promoting inclusive growth. In addition, the hitherto largely uncharted links between the liberalization of trade in selected services and human development outcomes are further explored. Part I also tackles the poverty-alleviation effects stemming from the recent growth of outsourcing industries in a sample of Asian countries – the People’s Republic of China (PRC), India and the Philippines.

Part II takes on a number of measurement and modelling challenges in services trade. It recalls how this still relatively nascent field – negotiations on services trade have been ongoing for less than three decades, and the rule-making framework governing such trade remains a work in progress2 – continues to be confronted by a number of daunting empirical challenges. These include the conceptual and definitional complexities deriving from the broader scope and multiplicity of modes of service delivery as well as the paucity of disaggregated service sector data (including data on cross-border trade and investment activity). In turn, data shortcomings constrain the robustness and predictive credibility of modelling work in the sector.

Part II also features a first contribution on how to measure market access through market presence. It reveals significant discrepancies between traditional balance of payments estimates of investment-related trade in services and the reality emerging from firm-level surveys in Australia. Another chapter addresses a range of measurement issues arising with regard to the mode of supplying services – i.e., Mode 4 trade (or movement of service suppliers) that has garnered the least liberalizing traction to date under trade agreements, particularly at the multilateral level. Part II closes with a contribution on the centrally important yet still partly elusive quest of measuring the current level and sectoral incidence of barriers to trade and investment in services; particular focus is placed on trade costs and the identification of the metrics and data needs required for modelling work in services to generate more empirically robust and policy relevant outputs.

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Part III breaks new ground in the analysis of the impact of service sector reform by investigating a range of distributional challenges, using both a sector- and country-specific lens. It starts by exploring the issues of access to, and equity in private higher education in Malaysia, followed by a contribution on the impact of services liberalization on wage inequality in the Philippines. Part III concludes with a discussion on the impact of recent, post-WTO accession, banking reforms in Viet Nam.

5. Services and development

In the opening chapter, “Harnessing services trade reform for inclusive growth: Lessons from the 1980s vs. the 2000s”, Bernard Hoekman recalls the variety of mostly unilateral policy reforms that supported the rapid internationalization of production, consumption, trade and investment in services during the past three decades. Although often induced by borrowing from international financial institutions (which may explain the reluctance of some developing countries to bind such policies under trade agreements), governments undertook reforms with the increasing recognition that barriers to foreign entry and operations affected services performance in a manner that could hurt overall resource use and long-term development prospects.

Hoekman notes how today’s challenges of trade policy reform that confront governments are more complex than those traditionally associated with the reduction of border measures such as tariffs and the removal of quotas. Increasingly, the policy agenda revolves around regulation and regulatory regimes. In higher-income countries, where the service economy generates upwards of 70 per cent of output and employment, services markets are often less contestable than markets for goods. In part, this reflects the lesser tradability of services. However, of likely greater importance is the fact that services markets tend to be more regulated; such regulation frequently involves an element of restricting competition, often directed towards foreign suppliers. A key question for policymakers, the business community, consumers and the voting public is how best to proceed in putting in place regulatory regimes and competition policies that ensure that firms and households have access to a wide variety of competitively-priced services. Hoekman argues that this question is critical from an inclusive growth and competitiveness perspective, given that the efficiency and performance of services industries have a direct bearing on the attainment of both efficiency and equity objectives. A further dimension of this question is whether and how international cooperation can facilitate the adoption of reforms and regulatory regimes that support more inclusive growth and economic development.

Hoekman is not altogether sanguine on the desirability of anchoring regulatory reform efforts on trade agreements, noting that the mechanics of trade negotiations – which involve a process of bargaining on quid pro quo concessions – has, to date, proved highly ineffective in driving domestic reforms in services that improve national welfare. The mercantilist nature of such efforts can indeed create perverse incentives and have detrimental effects in making negotiating chips of desirable policies, so that governments make what would be welfare-enhancing policy changes conditional on actions by trading partners. More importantly, a process of negotiating regulatory reforms may never be successful or appropriate, given
the large differences in country circumstances and social preferences that exist across countries and regions.

Greater efforts are needed, in Hoekman's view, to build a more robust understanding at the national level of the effects of prevailing policies and the likely impacts of alternative types of reforms. This cannot, in his view, be generated through negotiations. Other forms of international cooperation are needed to inform the process of identifying and implementing policy reforms that enhance domestic welfare. Most needed reforms neither require nor should be made contingent on the actions of other governments. Such a view need not be equated with a rejection of engagement in trade diplomacy. Also, it does not imply that international cooperation cannot help countries identify beneficial reforms.

Trade agreements still have a central role to play in defining the rules of the game including, for example, needed disciplines on non-discriminatory (but still possibly trade- and investment-restrictive) regulatory conduct as well as in prying open markets, which even unilateral magnanimity cannot hope to redress. On the contrary, a key message from Hoekman's contribution to this publication is that international cooperation can do much to harness the potential for greater services trade and investment to support more inclusive growth. However, this requires moving away from a focus on negotiations towards a process that centres attention more on the potential gains from unilateral (autonomous) action by governments.

Few would disagree with the argument that globalization offers significant opportunities for countries, firms and citizens to leverage global demand for goods and services. Integration in world markets and production networks allows economic agents to benefit from the knowledge and technologies that have been developed anywhere in the world, whether they are embodied in machinery, intermediates, foreign direct investment or people. However, greater openness also increases the vulnerability of countries to global shocks, with potentially adverse consequences for the poorest households that do not have the savings needed to survive a period of unemployment or sharp falls in the prices of their outputs (and thus incomes) resulting from global competition. The recent financial crisis demonstrated the importance of complementing greater openness with domestic policies and mechanisms to help poor households. In chapter 2, entitled “Trade in services and human development: A first look at the links”, Ben Shepherd and Gloria Pasadilla break conceptual and empirical ground by exploring the various channels through which service sector reforms can lead to sustained improvements in social and economic outcomes that are likely to enhance human development.

Shepherd and Pasadilla recall the tension that permeates the human development literature between the economic case for liberalizing services markets and the perceived social case for maintaining stricter regulations (and restrictions to competition) in order to promote human development objectives. Their work tests whether or not incompatibilities exist between openness to services trade and the provision of human development-related services. From an intuitive economic viewpoint, one may question the very rationale for the above tension. There are indeed robust reasons to believe that services liberalization might
be positively – not negatively – associated with the betterment of key human development outcomes. The more efficient provision of public and private services that are important for development can lead to lower prices for consumers, and more widespread availability of human development-related goods and services. A case in point is distribution services, typically among the most contentious service sectors when it comes to trade and investment liberalization — but in which the links between openness to services trade and human development outcomes appear very strong, given the central role the sector plays in reducing the cost of moving vital goods such as basic foodstuffs, medicines or mosquito nets to the hinterland of poor countries. Shepherd and Pasadilla usefully recall that only with a relatively well-developed and efficient distribution sector is it possible to ensure that the above types of products reach those who need them most, and at the lowest possible private and public cost.

The authors examine the association between human development and services trade using simple non-parametric and parametric regression techniques. Using an indicator of human development as the dependent variable, and (at least) per capita income and a measure of services sector policy restrictions as the independent variables, they focus on the links between openness in education, distribution, engineering, telecommunications, health services (as well as pooled results across all sectors) and human development outcomes. Their empirical findings generally show that a more restrictive services trade policy environment is correlated with worse human development outcomes. Such a finding is consistent with the notion that more restrictive services policies result in higher prices of basic goods and services for consumers. While it has long been argued that trade policy in services sectors can lead to higher national incomes, which, in turn, can promote human development, the work of Shepherd and Pasadilla goes one step further in identifying a direct connection between service sector restrictiveness and development that acts independently of the income channel.

Facing, as all pioneers do, daunting data constraints (which the authors fully acknowledge), these results must be seen as offering only a first indication of important correlations in the data. The authors are cautious in pointing out that such findings should not be viewed as indicative that trade policy is a – or the – major driver of human development performance in the sectors under review. Rather, trade is one influence among many, but one where the impact has tended to be both understudied and looked upon with (negative) suspicion in the existing literature. An important corollary implication of the work is that the tension noted above between service sector openness and human development outcomes has perhaps been overstated. At the very least, the findings of Shepherd and Pasadilla suggest that there is no systematic association between greater policy restrictiveness and improved human development outcomes. On the contrary, there appears to be significant scope for open and efficient service sectors to help promote human development. Reducing the restrictiveness of service sector policies through well-designed liberalization programmes can thus be one element of a successful approach to promoting both economic and human development.

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3 This can be seen, for example, in the current outcry in India following the Government’s decision to proceed with further (unilateral) liberalization of the country’s retail distribution sector. See Lamont, 2011.
The links between industrial policy reforms in services (and more specifically in IT industries linked to outsourcing activities), poverty alleviation and income distribution are explored by F. Ted Tschang in chapter 3, “A comparison of the industrialization paths for Asian services outsourcing industries and implications for poverty alleviation”. Looking at the different developmental experiences of PRC, India and the Philippines in software and services outsourcing, the author addresses two main research questions. First, he explores the differences and similarities between three countries’ services development models. Such a comparison yields subtle but important differences in policy design, particularly with regard to latecomer countries. The case of PRC shows that it is possible to be a successful latecomer in the software industry, a field in which India has built a commanding lead in both technical and process capability at the firm level. However, Chinese firms have prospered by cooperating closely from the outset with large foreign firms, with a view to servicing a large and fast-growing internal market and, leveraging on its cultural similarities with Japan, by servicing this proximate market.

For its part, the experience of the Philippines shows that a latecomer can flourish by relying on foreign multinationals service providers that seek to exploit labour arbitrage, i.e., the relative abundance of a large pool of lower-wage but technically skilled labour. Success in the Philippines also owes much to the local workforce’s widespread command of English. Under such a model, one option for smaller domestic firms looking to enter the industry is to emphasize lower-skilled work at lower wages than that of their competitors. Success in incubating such smaller suppliers in more commoditized market segments holds the potential for significant income gains and, eventually, incremental skills upgrading for workers.

The second core objective of the chapter is to document the broader implications of the growth of the IT services industry. In the case of India, the sector’s contribution to GDP and exports has been considerable. The industry’s effects on employment, however, have been less significant than its effects on growth, despite the fact that the industry’s high value-added and concomitant higher wages (on average) imply non-trivial impacts on the growth of Indian per capita incomes in recent years. The Indian case study further suggests that while the direct employment benefits stemming from the growth of IT will tend to be reaped by the highly educated, the industry can still sustain the emergence of a vibrant middle class in the clusters of cities where the industry is spatially concentrated. The Indian case study further suggests that targeted policy measures can help spread the spatial reach of the above benefits, a trend that recent research on intra-Indian trade in services has also begun to document (Shingal, 2010).4

Tschang’s work further draws attention to the growth-inducing economy-wide spillover effects that the IT sector can generate in manufacturing and other service industries (via a rise in total factor productivity levels), allowing firms to operate at higher levels of technological sophistication. However, as the case of India demonstrates, the ability of the IT industry alone to pull an entire economy along, particularly the more backward rural sector, still has some way to go. Expectations regarding the overall impact of IT growth on development thus need to be kept rational, all the more so as the industry’s growth may, in

some instances, fuel skills-based (and rural-urban) income disparities within countries (and regions within them) even as it creates wealth overall. Tschang’s work offers a cautionary tale: countries should not look to IT as some magic bullet solution to poverty alleviation. The experience of three of the most successful Asian countries in the sector, indeed, reveals the limited reach of IT outsourcing activities in meaningfully tackling poverty (through job creation and skills upgrading) among the rural poor and the lesser educated urban segments of society.\(^5\)

6. Measurement challenges

Part II of this publication focuses on a number of complex data measurement and modeling issues that have long bedeviled the academic and policy communities. The lack of services sector data is a major stumbling block to the design, pursuit and assessment of both service sector reform and trade liberalization paths. As the three chapters that form Part II of this volume attest, data constraints retain considerable salience despite the laudable efforts – and the equally encouraging progress – that have been registered in academic and policy circles (including within the world’s leading statistical agencies) in addressing such data gaps as well as in refining modelling techniques in services with a view to better informing public policy design. However, Herculean efforts still need to be undertaken.

In chapter 4, entitled “Access through presence: Australian perspectives on measuring Mode 3 trade”, Jane Drake Brockman tackles a host of measurement challenges in contemporary services trade and documents the innovative efforts that the Australian Bureau of Statistics (ABS) has been carrying out via firm-level surveys. Improving the measurement of Mode 3 trade in services matters because it represents the important means of contesting service markets, accounting for an estimated 60 per cent of total services trade, the predominant share of services commitments in trade agreements and an equally predominant share of investment restrictive measures.\(^6\)

The surveys depicted in Brockman’s chapter aim to improve the collection of services statistics, particularly those related to the operations of foreign established enterprises (outward foreign affiliates trade), so-called Mode 3 trade (also called “commercial presence” in GATS terminology). Brockman reports that a survey conducted in 2004 (but unfortunately never repeated due to costs) revealed that official Australian data on services exports measured by traditional (and highly aggregated) balance of payments accounting had likely been computing less than a third of the country’s actual offshore supply of services. One interesting finding from such survey results is that, within Asia, Australian foreign investment in services is primarily directed towards property and business (including legal) services, as opposed to banking and insurance services (as in the European market). In addition, the survey results suggest that Australia’s outward FDI activity in services is primarily market-seeking, with close to 90 per cent of sales taking place within host countries.

\(^5\) This is not to say that IT products, particularly mobile phones, cannot exert significant pro-poor effects even among highly resource-constrained (and functionally illiterate) population segments, as much recent empirical work has shown. See *The Economist*, 2011.

Brockman also documents other more recent initiatives aimed at remedying the persistent lacunae (and systematic underestimation) of official data as well as offering a more accurate reading of the true extent of Australian service industries in cross-border trade and investment. She devotes particular attention to a ground-breaking report undertaken by the International Legal Services Advisory Council (ILSAC). This project was conceived in direct response to concerns that the global market for Australian legal services was being underestimated in the official data, given that ABS does not identify earnings of overseas branch offices of Australian law firms as legal services “exports,” but rather, in accordance with international standards, as “returns on investment.” Again, such survey work revealed a stunningly large underestimation of service exports, amounting to 142 per cent, when compared with official ABS figures for 2004-2005.

Such work, which usefully led ABS to adjust its measurement framework in collaboration with ILSAC, resulted in a 60 per cent increase in reported legal service exports in 2008-2009. Documenting the trends that emerged between the two ILSAC surveys (2004-2005 and 2006-2007), Brockman notes that Asia has grown the fastest (more than twice the rate of the rest of the world) as a destination for Australia’s international legal services work, with commercial presence playing a particularly important role in the delivery of Australian legal services, notably in the Chinese market (i.e., the PRC and Hong Kong, China).

The innovative survey work described by Brockman bears important implications for strategic business and public policymaking. Such work provides invaluable insights into the process of globalizing the Australian services industry. Beyond helping ABS refine its data collection methodologies in service industries, notably with regard to foreign affiliates’ trade, the surveys have supplied rich qualitative and anecdotal material that is vital to gaining a better understanding of how legal services trade actually takes place and how it is classified, recorded and valued by firms. The detail that now exists on the geographic distribution of particular types of legal work has allowed ILSAC (and thus Australian negotiators) to identify priority markets with high potential returns to documenting and, subsequently, lifting barriers to legal services trade and investment.

Brockman further highlights a similar survey-driven initiative in financial services related to measuring cross-border activity in funds management, with equally stark evidence of official underestimation (as much as 178 per cent higher than officially-reported trade, but using conceptually different measurement approaches) and hackneyed classification approaches. Once again, the analysis on offer draws the appropriate policy conclusion: better numbers make for better and more informed policy design that targets the true sources of a country’s comparative advantage. Currently not equipped with the quality information they

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7 Comprising commercial legal services and barrister services, patent and trademark attorney services, commercial dispute resolution services (including arbitration and mediation) and other services.

8 The ILSAC survey was able to deliver a wealth of additional information. For example, it showed that international work was highly concentrated, with 10 firms accounting for almost 80 per cent of earnings in 2006-2007. The survey further provides a more detailed breakdown by geographic market than is normally available from ABS export data, together with related insights into the relative importance of individual modes of delivery to different geographic locations.
need, Brockman rightfully asserts that Australian negotiators may not be in a position to maximize the service sector's full potential for growth.

The scale of the survey findings depicted by Brockman is far from unique to Australia. Indeed, such work has evident potential application in other countries and sectors such as professional and technical services, particularly architecture, engineering, ICT, media and entertainment, and services related to mining and agriculture. Anecdotal business evidence collected through the Australian Services Roundtable suggests that the scale of underestimation of Mode 3 delivery of these services is likely to be similar to that of legal services, and that the problems of inadequacy of the frame for measuring Modes 1, 2, and 4 exports are also present. A major challenge to improving service sector data, notably through survey-based work, relates to costs. In many developing countries where the need to diversify their economies and embrace the ongoing services revolution is most acute, the dearth of reliable data with which to formulate forward-looking domestic reform as well as international trade and investment strategies will likely continue to hold back policy experimentation, and fuel potentially excessive policy precaution. Unless such gaps can be filled, notably through strengthened international cooperation among statistical agencies, Brockman is right in concluding that “the formulation of services sector policy, public understanding and support for that policy, and business focus on exploiting opportunities, cannot be properly achieved”.

In their chapter, entitled “Measuring trade in services in Mode 4”, Andreas Maurer and Joscelyn Magdeleine take up a range of measurement issues related to trade in services through the presence of persons (so-called Mode 4 trade), in particular how to analyse its relative importance (i.e., value) compared to other modes of supply (i.e., Modes 1 [cross-border supply], 2 [consumption abroad] and 3 [commercial presence]).

Mode 4 service trade, particularly attempts to free up the movement of service sector workers in the context of services trade agreements, has always been politically sensitive; the current environment of slow growth and global economic uncertainty is of little help in abating such sensitivities in most destination countries. Gaining a better sense of actual Mode 4 flows, disentangling the conceptual and measurement confusion that surrounds the murky frontier between migration and trade policy, and helping developing countries negotiate what for most of them – including in the Asia-Pacific region – is a top export priority in services trade is of paramount importance if trade diplomacy, and most notably the Doha Round, is to deliver on its development promise.

Maurer and Magdeleine state the obvious in recalling that reliable and internationally comparable information on short-term labour mobility and trade in services (Mode 4) is woefully lacking. A crucial issue in this regard is how to draw a boundary between employment and services contracts, particularly for self-employed and for labour services provided via employment agencies. For the latter, an additional difficulty may be establishing the type of services provided (e.g., agricultural, mining and accountancy services). In countries where international labour movement is important (many of which are in developing Asia), the distinction between the two concepts transcends negotiating imperatives as it may
exert significant influence on macroeconomic aggregates. For example, labour productivity measures (and, hence, overall growth) could be influenced as a consequence of whether transactions in relation to international labour movement are classified as labour inputs or trade in services. Such considerations can only gain in importance with the further opening of services and labour markets; hence the critical need for the policymaking community to gain greater analytical clarity.

The use of inappropriate indicators for measuring Mode 4 trade in services (i.e., personal transfers, worker’s remittances or compensation of employees data drawn from the balance of payments) is an illustration of definitional confusion, be it from a legal perspective or in terms of how it is translated into statistical concepts. Maurer and Magdeleine point out that trade in services through the presence of natural persons (Mode 4) and labour mobility can be distinguished by the type of contracts underpinning specific transactions. Employment contracts are related to labour mobility, and Mode 4 is characterized by a service contract agreed upon between the supplier and consumer of a service.

Realistic estimates of Mode 4 trade are virtually non-existent, and the little information available appears to indicate that, at the global level, it is the least important (and most policy-restricted) mode of transacting services in value terms. There is surprisingly little literature that focuses specifically on the numerical analysis of Mode 4. Rather, various studies aim (incorrectly) at documenting the putative benefits of Mode 4 by analysing the likely returns to labour migration. One major problem is that such literature analyses existing data of migration that does not correspond to the population covered under Mode 4. Simply put, the numbers used in such studies cover the wrong aggregates (migrant workers as opposed to Mode 4 service suppliers). While academic economists produce tantalizing numbers on the potential returns of a grand bargain on labor mobility, statisticians struggle with the adequate translation of GATS Mode 4 legal provisions into statistical concepts for appropriate measurement of the true size of such trade flows and for gauging their importance relative to other modes of supplying services. Measuring such flows with greater accuracy would seem indispensable for better managing expectations on the benefits that WTO or preferential trade agreements can be expected to yield by way of enhanced temporary labour movement.

In seeking a more accurate assessment of trade in services by modes, a key question is how to allocate in balance of payments services transactions the parts that are relevant to different modes. Services are typically delivered through a combination of modes, more often than not involving some temporary labour movement. Therefore, the key is to identify those service sectors where Mode 4 is likely to be an important component. Maurer and Magdeleine suggest that such a sample should be seen as comprising construction, computer services, other business services (miscellaneous business and professional services such as lawyers, architects, services incidental to agriculture, mining etc.) as well as personal, cultural and recreational services (excluding audio-visual services).

The economic significance of the above sectors, all of which feature the important labour component, should not be lost on anyone – in many countries they represent a non-
trivial share of the service economy. Maurer and Magdeleine estimate the evolution of world exports in the above service sectors since 2000. While Mode 4 trade may represent only a small portion of such trade flows, they are an integral part of a cluster of service exports that have exhibited a higher average growth rate than exports of total commercial services (essentially covering modes 1, 2 and 4), with the exception of other personal, cultural and recreational services. The trade and development policy implications derivable from such findings should be clear – i.e., finding ways of enhancing the development-promoting properties of Mode 4 trade in selected service sectors deserves greater and renewed attention despite the innate sensitivities that such negotiations typically conjure, especially at a time of global economic uncertainty and contracting developed country labour markets.

In her chapter entitled “Measuring barriers to trade and investment in services”, Hildegunn Nordås focuses the attention of readers on the need to assign a central role to service sector reforms and trade in services negotiations in bringing down the various trade costs that hamper the meaningful participation of developing countries in global and regional value chains. For the most part, this trade facilitation agenda centres on a number of key services sectors linked to transportation, logistics and customs processing services. As is too often the case, however, reliable numbers and modelling limitations stand in the way of informed policy formulation. Nordås states emphatically that progress in such talks is held back by the fact that services trade negotiators do not know with sufficient precision the level of the trade costs they are seeking to bring down. In the absence of such metrics, negotiations may run the risk of focusing on more peripheral concerns.

The chapter by Nordås contributes to the debate on measuring barriers to trade in services in two distinct ways. First, it uses information on trade and FDI to estimate trade costs, using insights from economic models. Second, she uses information on policy measures that are believed to directly or indirectly create barriers to trade and investment in services. The chapter usefully recalls the conceptual difficulties of relying on traditional gravity models in services. To begin with, unlike in goods trade, services trade costs are typically entry barriers that are not proportional to trade volumes. Larger and more productive firms can typically absorb entry costs more readily than small and less productive businesses. Consequently, service firms will often enter only a limited number of markets; most such firms, in fact, solely service their home market. This means that some country pairs do not trade much with each other in some services. A second problem is that providing services (typically) often requires a commercial presence – whether by law, technical limitations or business model imperatives. This then requires that trade and FDI, and their interaction, be analysed simultaneously. Third, data constraints limit the use of more sophisticated econometric techniques that take into account fixed costs as well as the relationship between trade and FDI, which are commonplace in goods trade analysis.

The above caveats aside, the Nordås chapter presents estimates of the gravity model for services trade in a sample of 29 reporting countries, mainly OECD members, and 137 trading partner countries during 2000-2008. The results broadly match theoretical expectations. Large countries tend to trade more services with each other. Nevertheless, a 1 per cent increase in relative GDP is associated with 0.51 per cent more trade. This
reflects the fact that large countries tend to have lower trade to GDP ratios. A second, somewhat counter-intuitive result – in an age of increasing real-time remote supply of services via IT networks – is that services trade is almost as sensitive to distance as is trade in goods. Sharing a common border and a language also facilitates trade, as expected.

The Nordås chapter then turns to deriving trade costs from its earlier gravity estimates. However, the results are far from satisfactory. As the author aptly notes: “Using the most commonly applied techniques for estimating trade costs from observed trade flows did not make us much wiser as far as (the measurement of) cross-border services trade costs is concerned.” Nevertheless, when combined, the various available methodologies discussed in the chapter are seen as providing a potentially useful starting point for analysing trade and transaction costs, and barriers to entry by local and foreign services providers, provided that data coverage and quality improve.

As noted above, because commercial presence is essential to servicing foreign markets, measuring barriers to services trade from observed trade data alone fails to adequately capture what may be driving trade costs. It is therefore necessary to analyse the relationship between trade costs and the choice of mode of supply as well as the relationship between trade costs and total services trade. In earlier work, the author found that cross-border services trade and FDI for most services sectors were gross complements. This implies that restrictions on FDI have a negative effect on both cross-border trade and FDI (Kox and Nordås, 2008). However, the two modes are not perfect complements, since indices of domestic regulation have been found to affect the relative importance of these two modes of service supply. For most sectors, a higher level of behind-the-border regulation was found to have a stronger negative effect on FDI than on cross-border trade.

Finally, the Nordås paper discusses an alternative means of measuring trade costs based on information on trade policy. Such a methodology aims to transform qualitative information on policy into quantitative indices of trade costs. For this purpose, a set of policy measures are identified, and information on each country’s policy stance is gathered and assigned a score that reflects how restrictive the country’s policy stance is. The latter approach is seen by Nordås as offering a potentially promising avenue for further research. Existing OECD FDI and product market restrictiveness indices perform well when entered into gravity regressions, and are found to yield statistically significant results with expected negative impacts on FDI stocks. Still, the Nordås chapter recalls that research on measuring trade costs in services remains in its infancy. Given the rising importance of services to development and growth, it is unfortunate that, unlike goods trade, most countries provide information on trade and barriers to trade in services only at a high level of aggregation. To make tangible progress on measuring trade costs in services, data on trade flows by mode of supply at a disaggregated sector level will be needed. As the author readily acknowledges, the problem with improvements in data coverage is that they take a long time to materialize and can be costly to effect, particularly in developing country settings where such metrics are arguably most in need.
7. Country- and sector-specific challenges in services reforms and liberalization

Part III considers impact assessment and explores a number of country- and sector-specific challenges in service sector reforms, and addressing the question of whether and how sector reforms and market opening in services trade may lead to equitable outcomes that are able to sustain public and/or industry support for their pursuit. The three chapters forming Part III tackle issues of central importance to policy design in services markets. They do so by exploring the question of equity and access in private tertiary education in Malaysia, the impact of services trade liberalization on wage inequality in the Philippines – a central challenge in reform design that has received surprisingly little attention in the services literature to date – as well as the economy-wide impacts of banking sector liberalization in post-WTO accession Viet Nam.

Tham Siew Yean’s chapter, entitled “Exploring access and equity in private higher education: Insights from Malaysia”, chronicles the recent spectacular rise in the private supply of tertiary education services in a country long characterized for its rather lukewarm attitude towards trade liberalizing reforms in services markets, but which has markedly changed gear in recent years. In the education field, such policy evolution is due, in no small measure, to the country’s stated desire to reach developed country status by 2020 as well as the commensurate improvement in human capital that a sustained commitment to building a knowledge-based economy entails for higher education provision. The rise of neighbouring Singapore as the undisputed educational hub of South-East Asia has doubtless also prompted Malaysia to quicken the pace of educational reforms and deploy greater policy activism in the sector. Moreover, as Tham argues, the recent ascent of private tertiary education in Malaysia must also be seen in the somewhat less lofty context of budgetary constraints weighing on the Malaysian public purse. Whatever the mix of contributing forces, the recent rise of private provision of higher education services raises important questions of access and equity, which the chapter explores. Included are the questions concerning the socio-economic profile of those who attend private higher education institutions, and whether the increasing private supply of tertiary education services has meaningfully enlarged the circle of opportunity by extending access to student cohorts who might otherwise not have been able to enter university or college.

As in many countries, both developed and developing, the impact of private provision of higher education services is hotly debated. This is because some of these institutions, particularly those operating as profit-making enterprises (which is not the case of all private institutions of higher education in Malaysia), are often looked at with suspicion and challenged on the quality of the education they provide. This is quite apart from the deeper philosophical debate on the (impure) public-good nature of higher education and the appropriateness of private provision. That said, it must be remembered that private providers of tertiary education emerged in response to excess demand in the country, a trend that the recent political commitments noted above can only exacerbate in the coming years. Likewise, the Government of Malaysia’s stated goal of replicating the Singaporean model of establishing the country as an educational hub also requires the private sector to play an active role, especially in the recruitment of international students. This is particularly
important, as the majority of international students at the undergraduate level are studying at private rather than public universities due to the 5 per cent quota that is imposed on admission to the latter.

Tham’s chapter shows that, true to its interventionist bent, the Malaysian Government has provided considerable financial support for the development of private universities and colleges. The Government’s commitment towards education, including higher education, can be seen in the sector’s share of total government expenditure of 20 per cent-25 per cent from 1996 to 2010. With the exception of Thailand, Malaysia spends more on education, relative to total expenditure, than all other South-East Asian nations (including Singapore) and more than the average of all upper-middle income countries. Beyond direct budgetary outlays, Tham’s work shows that the Government has provided a range of fiscal incentives to encourage the development of private educational supply. It has also greatly increased the supply of subsidized loans and scholarships for eligible students. Of further note is the fact that the country’s quality assurance standards have played a prominent role in enhancing the development of private provision insofar as student loans and scholarships are only provided for accredited programmes. Interestingly, the availability of quality assurance in the form of accreditation has enabled local private universities to sell their own homegrown programmes to international students.

Tham considers that the growth of private higher education supply has undoubtedly widened access and contributed to greater equity in Malaysia with the help of government support. Gross enrollment in higher education grew from 2 per cent in 1965 to 38 per cent in 2009, with private institutions accounting for almost half of total enrollment in higher education. The rise in private supply has afforded a wider range of students from diverse backgrounds alternative pathways to tertiary education via a multiplicity of learning modes. Of particular note has been the rise of transnational programmes delivered in partnership with foreign academic institutions.

Despite such favourable advances, Tham believes that important question marks remain with regard to the sustainability of promoting enlarged access and equity through private provision. This is due to:

(a) The relatively poor repayment record of student loans by the National Higher Education Fund Corporation, which was established to disburse student aid (recovery rates are estimated at 25 per cent of outstanding loans);

(b) The need to adopt more stringent income criteria in the granting of loans in particular as well as scholarships, with a view to reducing the share of student aid packages awarded to applicants from relatively affluent families; and

(c) The growing (generic) pressures for fiscal retrenchment in the face of slower overall economic growth.

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9 Such incentives include investment tax allowances, pioneer status with 100 per cent tax exemption for 10 years, duty-free imports of multimedia equipment, tax exemptions for export of higher education, double deduction for expenses incurred in export promotion, industrial building allowances, accelerated capital allowances and deductions for training.
Malaysia’s use of private supply to absorb excess demand for higher education has important lessons for other developing countries in the Asia-Pacific region and beyond, as the Government plays a key role in the development of private higher education in the country, in terms of the provisions of a regulatory framework as well as quality assurance. Given the financial constraints encountered in most developing countries in terms of public provision, the need to harness the private sector as a partner in the supply of higher education services is unlikely to abate. However, this needs to be done with care in order to ensure that it does not worsen equity in access.

The chapter by Glenita Amoranto, Douglas H. Brooks and Nathalie Chun, entitled “Services liberalization and wage inequality in the Philippines”, tries to make sense of the coincidence of declining overall trade protection and a marked rise in income inequality in the Philippines from 1994 to 2000, a time during which the structure of the Filipino economy shifted noticeably towards greater services output and employment. While market liberalization is generally expected to lead to efficiency gains, its impact on income distribution is more ambiguous. The distributional consequences of service sector reforms have received very limited attention in academic or policy circles to date. This chapter thus usefully breaks new conceptual and policy ground in exploring key linkages and distributional impacts that need to be factored into the design of policy reforms and trade commitments in services.

Services liberalization holds the potential for substantial improvements in economic efficiency and the productivity of firms. The question of whether workers actually obtain a fair share of these benefits remains, however, an open and empirical, one. Amoranto, Brooks and Chun usefully recall that while liberalization may indeed result in efficiency gains and market expansion, there is no guarantee this will result in the greater profitability of firms that is then shared with workers in the form of higher wages. This is because service sector liberalization typically leads to greater market contestability, which can erode firm profits. Moreover, liberalization can introduce technological innovations that reduce the need for labour and alter the type of unskilled or skilled labour in demand.

The chapter investigates whether liberalization has helped Filipino workers to find better employment opportunities in full-time stable wage jobs and the impact it has had on wages. The authors first estimate the level of restrictions in selected service sectors (telecommunications, finance and distribution) according to those affecting entry and those affecting ongoing operations, and then computes their impacts on employment and wages.\footnote{In the absence of tariff equivalent metrics of protection for services that correspond to those existing for agriculture and manufacturing, the authors first construct indices of restrictiveness: (a) by service sector (focusing on banking, distribution and telecommunications, which provide important inputs to other industries); and (b) by mode of supply services (cross-border trade, consumption abroad, commercial presence and movement of natural persons). The indices are calculated separately for pre- and post-liberalization periods, and then aggregated into a single service reform index, using technical coefficients from a national input-output matrix as weights to account for the contribution of services to that industry. Real wages are then regressed on the relevant service reform index, period (pre- or post-liberalization) dummy variable, a dummy for broad industry of employment, educational attainment and age as well as other individual characteristics.}
Once barriers have been identified and classified, the effect of changes in these barriers is estimated econometrically, controlling for factors affecting performance in the relevant sectors. The modelling work explores whether employment expanded or contracted in the target sectors with greater liberalization as well as the effects of resulting greater competition on workers' income levels.

The results presented in the chapter suggest that services liberalization in the Philippines has generated both positive and negative consequences for various labour market segments. While potentially expanding job market opportunities in stable wage employment, especially for females, services liberalization can also lead to significant decreases in the average wages of workers, again notably for females. It also potentially opens up greater gender disparities in earnings along educational lines. The authors are unable to determine whether such trends arise due to gender bias or because of differences in the allocation of tasks between different gender groups. However, these are important empirical issues to which further analytical scrutiny needs to be directed.

In policy terms, the increasing returns to skills due to greater service liberalization and increasing wage inequality highlight the critical importance of education and life-long learning for workers (especially women) in maintaining or raising real wages in the face of increasing competition. Such results point to the importance both of strengthening vocational training and of providing broader support to education as the economic fabric of nations shifts from primary and secondary activities towards greater tertiary (i.e., service) sector employment, with its corresponding demand for higher skill levels.

Huong Dinh's chapter, entitled "Economy-wide impacts of trade liberalization in the Vietnamese banking sector", explores recent post-WTO accession reform efforts in a sector that is of fundamental importance to overall resource use. Viet Nam's banking sector has in recent years undergone far-reaching changes as a result of the relaxation of domestic regulations and international commitments to market entry. Yet, as in many other countries in the wake of the financial crisis that engulfed the world in 2008-2009 and the perceived heavy cost the country paid for securing entry into WTO, skepticism towards further trade reforms in the banking sector run rampant in Viet Nam. Many voices in Vietnamese society, including within government circles, consider that the country has already opened up its banking market to foreign competition too much, relative to other Asian countries.

Dinh reports that the general perception is that there is little room for, and likely few gains from, further trade reforms in the sector. Concerns have also arisen among policymakers about the crowding-out effects of foreign banks on domestic operators saddled with the legacy burdens of state ownership and high levels of non-performing loans made to state-owned enterprises. Under the above circumstances, conducting an empirical investigation on the economy-wide effects of a continued (and deepened) commitment to market opening in banking can provide useful information for the ongoing public policy debate in Viet Nam on the pros and cons of trade liberalization and WTO membership.

The chapter focuses attention on what the author regards as two recent episodes of policy backsliding. The first concerns the decision by the State Bank of Vietnam (SBV) in
2006 (ahead of WTO accession) to increase the minimum charter capital requirement of D3,000 billion applicable to banks as a way to restructure the banking system. While this requirement had a justifiable prudential motivation in cushioning bank capital against the effects of a financial crisis, it can also be seen as a way for the Vietnamese authorities to consolidate control over banking sector assets, thus imposing a potential barrier to trade in banking services. Such a regulation stands out as a textbook case for sought-after (but not yet agreed) disciplines on proportionality and necessity embedded in the GATS Article VI: 4 negotiating mandate on (non-discriminatory) domestic regulation.

The second de-liberalizing measure to which the paper devotes analytical attention is SBV’s actions, made in the wake of the global financial crisis of 2008-2009, to impose several new regulations on the banking sector. The first came in August 2008, when SBV announced that it would temporarily stop licensing new joint-stock commercial banks. In an attempt to cope with the inflationary pressure caused by the global financial crisis, SBV also reintroduced interest rate ceilings. Although the above regulations have been much criticized, their possible dampening or even damaging effects on economy-wide performance have yet to be quantitatively evaluated.

Dinh argues that, given the banking sector’s central contribution to the overall health of the Vietnamese economy, the Government hopes that heightened control of the sector will correct recent macro-economic imbalances. He argues that while such policies might have been tolerated when Viet Nam first started to open its markets, resorting to such practices today could result in inefficient and damaging prudential regulation in the banking sector as well as run counter to the country’s commitments under WTO. Seen this way, internationally binding commitments (subject to dispute settlement) under WTO or in PTAs appear as important constraints on policy reversal.

Dinh’s chapter explores whether further trade reforms are worth undertaking in Viet Nam’s banking sector. Its chief value-added resides in the author’s ability to estimate the potential benefits of further trade reforms in the light of recent (generally adverse) regulatory developments. The analytical framework for the current study is a multi-sectoral computable general FDI – the so-called FTAP-VN model. This model not only covers most features of the Global Trade Analysis Project (GTAP) model, but also provides additional features that facilitate the impact assessment of services trade liberalization. Such modifications include the incorporation of trade barriers in banking services and a separation of firms’ activities by domestic and foreign ownership.

Dinh’s results suggest rather unambiguously that potential trade reforms are worth pursuing because they expand the operation of several key export sectors in addition to the financial sector, and thereby improve real GDP and economic welfare. Importantly, with the exception of the removal of the foreign ownership cap, which is directly aimed at improving the lot of foreign operators, trade reforms are found to expand the output of both domestic and foreign financial institutions. The fact that trade reforms benefit both types of institutions runs counter to the Government of Viet Nam’s sceptical perception of the crowding-out effect of foreign banks on their domestic counterparts.
Dinh’s work offers interesting evidence of growth spillovers beyond finance resulting from banking sector reforms. In any reform scenario under study, and regardless of ownership, the expanded sectors are: (a) coal, oil and gas mining; (b) petroleum and coal products; and (c) air and land transport. The author posits that the expansion of these sectors flows from their relatively close linkages with the financial sector. The first two sectors rank among Viet Nam’s main exported products, and thus are constantly in need of international settlement and various other foreign exchange-related banking services.

Among alternative reform scenarios investigated, Dinh argues that the removal of restrictions on banking operations will create the highest positive impacts on real incomes. Such a reform not only encourages existing resources to be reallocated more efficiently, but more importantly also improves productivity. Accordingly, Dinh argues, banks should be given more autonomy in selecting their customers, allowed greater flexibility in their foreign exchange transactions and afforded heightened greater freedom in their bank-branching decisions.

Turning his attention to the impacts of the de-liberalizing measures noted above, Dinh concludes that for all the criticism that has been levelled at it, the increased minimum capital requirement enacted in 2006 causes insignificant downside effects on the economy as a whole. Such a measure is thus likely to be kept and justified on prudential grounds. On the other hand, the interest rate ceiling, while non-discriminatory in design and thus not straightforwardly amenable to trade litigation, causes a significant welfare loss and should thus be reconsidered in his view.

8. Looking ahead

Despite the major data limitations repeatedly pointed out throughout this book, services are likely to remain a priority area for policy research in the coming years in the Asia-Pacific region, given unfolding structural changes in all economies of the region that tend towards more service-centric development paths. As the sectoral and country studies as well as other empirical investigations in this volume attest, useful policy and empirical insights can still be derived from the imperfect services data that are currently available. Relative to where things stood when services first made their way onto the global trade policy agenda in the mid-1980s, quite remarkable strides have indeed been made in gaining a better understanding of the main drivers of service sector growth as well as the benefits and costs of trade and investment liberalization in services. However, as the contributions to this publication make also abundantly clear, much remains to be done.

Despite the rich menu of issues taken up in the following chapters, it by no means exhausts the full range of important policy challenges that governments and the policy research community (in Asia-Pacific and beyond) need to address, both in helping citizens reap the full benefits of properly designed service sector reforms and in mitigating inevitable distributional downsides. More often than not, such reforms will entail a greater commitment towards market contestability and pro-competitive regulatory reform.
Several of this publication’s contributions will likely lead to more detailed investigation and questioning. Some will see their methodologies and conceptual insights subjected to critical scrutiny. Some will see their modelling approaches tested in different sectors. All of this is to be welcomed, for there is a real need to develop a sounder knowledge base on services and the various ways they create wealth, contribute to innovation, affect international trade and investment, reduce trade costs, help firms integrate in supply chains, and sustain productivity and hence income levels.

This publication concludes with a listing of issues to which the academic and policy research communities could usefully seek more robust answers. While this publication can be seen as offering a form of “down-payment” on some of these topics, other issues have yet to be tackled adequately from either an Asia-Pacific or international perspective including:

(a) What do we know and what do we need to know? Identifying those elements of the services economy and services regulatory policies most in need of enhanced statistical monitoring and measurement should include a survey of available information on regulatory environments and regulatory reforms in the service sector;

(b) Measuring the economy-wide effects of service sector reforms. This includes: (i) assessing how service sector policies affect sector and overall economic performance; and (ii) the impact of such policies on prices, labour and total factor productivity, employment, exports, imports and FDI (such as patterns of intra-industry trade and investment as well as innovation and the intensity, nature and organization of R&D activities in services);

(c) What works best in regulatory reform? What have we learnt in 25 years of practice in services industries? This includes: (i) distilling the elements of best practices in regulatory reform, both in terms of horizontal policy design (e.g., competition policy) and in key sectors (e.g., finance, telecommunications, energy, transportation, distribution, education and health); and (ii) critically appraising earlier mistakes in policy design that led to reform failures;

(d) How does external liberalization contribute to domestic reform? This covers developing credible, sector-specific, impact assessment methodologies related to services trade and investment commitments scheduled under WTO and PTAs;

(e) How do labour markets adjust to heightened competition in services markets? Does the path of labour market adjustment in services differ from what is observed in manufacturing (in time, space, educational, skill-level, age and gender profiles of affected workers)? What can be done to facilitate orderly labour market adjustments in services industries?

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11 This section draws on Sauvé, 2006.
(f) Services and the global commons – assessing the environmental impact of the services economy;

(g) How will demographic change and population-ageing affect the nature and pace of service sector reforms in health and social services, pension reforms, and labour market regulation?

(h) What scope exists for pursuing pro-competitive reforms in sectors characterized by public good characteristics such as education, health care, energy or environmental services?

(i) How can service sector reforms be made more politically viable? What is the packaging (and sequencing) of product and labour market, and social safety net reforms that will meet the least resistance from adversely affected interest groups? What policy mix is most likely to stimulate social consensus in favour of continued reform efforts and engagement in international trade negotiations?

(j) What public goods (data, regulatory dialogues and policy research networks), best able to support better service sector policies, need to be supplied or strengthened through regional and international cooperation efforts?
References


Part I
SERVICES AND DEVELOPMENT
Chapter 1
Harnessing services trade reform for inclusive growth: Lessons from the 1980s vs. the 2000s

Bernard Hoekman¹

1. Introduction

Many developing economies maintained high barriers to trade for much of the post-Second World War period, reflecting infant industry and import substitution objectives. Global average import tariffs in 1950 were in the 20 per cent-30 per cent range (World Trade Organization, 2007). Numerous non-tariff barriers complemented the effects of tariffs. The plethora of trade policy barriers was augmented by multiple exchange rate regimes, capital controls and overvalued real exchange rates. The result was that global trade was highly distorted during 1950-1980. Starting in the mid-1980s, however, the average levels of protection in both industrialized and developing countries were gradually lowered. As of 2010, the average level of import protection had dropped to some 10 per cent or less in many developing countries, and the average uniform tariff equivalent of merchandise trade policies in the Organisation for Economic Co-operation and Development (OECD) countries had fallen to less than 4 per cent (Kee, Nicita and Olarreaga, 2009). Imports of many manufactures are now duty-free. High rates of protection continue to prevail for many agricultural products – especially in a number of OECD member countries – but for the majority of goods, trade policies around the world are dramatically less restrictive than they were in 1980.

Trade policy reforms during the past three decades were complemented by technological changes in service sectors that greatly reduced trade costs further. Examples include telecommunications, air and maritime transport (the spread of containerization), and distribution services (the express industry, and logistics). These developments were, to some extent, related; policy reforms to make product markets more contestable helped stimulate managerial innovations and technological change, while technological changes helped drive reforms in trade and investment policies.

¹ This paper draws on presentations given at the 2010 ADBI/ARTNeT conference on “Reforming services for inclusive and sustainable development of Asia and the Pacific,” in Bali, Indonesia and a special session at the American Society of International Law conference on “International economic law in a time of change,” University of Minnesota Law School, Minneapolis, 18-20 November 2010 on the occasion of the launch of the re-issue of Robert Hudec’s seminal book, Developing Countries in the GATT Legal System. It is a contribution to the United Kingdom-funded Global Trade and Financial Architecture project. The views expressed are those of the author and should not be attributed to the World Bank.
The trade response to the mix of technological and policy changes was spectacular. The value of global trade in goods and services passed the US$ 15 trillion mark in 2006, up from around US$ 1 trillion in the late 1970s (measured in current United States dollars). The global value of the stock of foreign direct investment (FDI) rose more than six-fold between 1990 and 2008, substantially faster than the growth in trade, which increased “only” 3.5 times during the same period. Much of this FDI was associated with services and was driven, in part, by decisions by many governments around the world to privatize state-owned utilities (such as telecommunications) and open access to foreign provision of services (Hoekman and Kostecki, 2009).

Developing countries are increasingly producers and traders of manufactures. The share of manufactures in total exports of developing countries increased from just 30 per cent in 1980 to more than 70 per cent today – almost as high as in high-income countries. A substantial proportion of this global trade in manufactures comprises intra-industry trade – the two-way exchange of similar differentiated products. Intra-industry trade ratios are frequently above 60 per cent for OECD countries. Since the 1990s, they have risen to similar levels for dynamic developing and transition economies. This increase was driven by changes in the organization of global production that stimulated a dramatic increase in “vertical” specialization, with firms (plants) in different countries concentrating on (specializing in) different parts of the value chain for a product.

In addition to the rise in international trade in manufactured intermediates a rapidly growing number of countries saw their exports of value-added services increase, initially led by countries such as Ireland, and with the case of India and business processing outsourcing being the best known and most dramatic among developing nations. There is, of course, substantial cross-country variation in export performance and in observed changes in the composition and pattern of trade. Sub-Saharan African countries, in particular, remain heavily dependent on (specialized in) natural resources and agricultural products. However, one of the stylized facts of trade development over the past three decades has been both a massive rise in the value of trade and greater diversification of the export bundle of most countries.

The trade policy reform challenges confronting governments today are more complex than those that were or are still associated with the reduction of tariffs and removal of quotas. As such policies have become less prevalent, increasingly the policy agenda revolves around regulation and regulatory regimes. In higher-income countries, upwards of 70 per cent of gross domestic product is generated in service sectors, where competition/contestability is often less than in markets for goods. In part, this is because services continue to be less tradable than goods; however, of greater importance is the fact that service markets tend to be more regulated and such regulation often involves an element of restricting competition, especially by foreign providers.

A key question for policymakers, the business community and consumers/voters is how best to proceed in putting in place regulatory regimes and competition policies that ensure that firms and households have access to a wide variety of competitively-priced services. From an inclusive growth and competitiveness perspective this is critical, as the
efficiency and performance of services industries have a direct bearing on the attainment of both efficiency and equity objectives. A specific dimension of this question that is of increasing relevance is whether and how international cooperation can facilitate adoption of reforms and regulatory regimes that support more inclusive growth and economic development.

In the past three decades, a variety of policy reforms have supported the rapid internationalization of production, consumption, trade and investment in services, reflecting increasing recognition that barriers to foreign entry and operations affect services performance. Given the relative labour abundance in many developing countries, modern information technologies allow ever more cross-border, "disembodied" trade in services to occur. Yet barriers to trade and investment remain prevalent. A recent World Bank research project documented the fact that services barriers in both high-income and developing countries were higher than those for trade in goods, and that emerging markets had barriers that were on average substantially higher than OECD countries (Borchert, Gootiiz and Mattoo, 2010).

Developing country liberalization of trade in goods was largely implemented unilaterally, supported by the international financial organizations. The significance of the trading system for developing countries only began to rise after the creation of the World Trade Organization (WTO) in 1995, largely as a result of the unilateral changes in trade and other policies that were implemented in the 1980s and 1990s and the export growth that this helped generate. Exports mattered because they mobilized domestic interest groups to take more of an interest in using WTO as a mechanism to improve and safeguard access to foreign markets. While developing country participation in WTO today differs substantially from that during the General Agreement on Tariffs and Trade (GATT) years – reflected, for example, in active engagement in dispute settlement processes – most countries resist making services liberalization commitments in WTO. The lack of progress in the Doha Development Agenda to date raises the question of whether the political economy dynamics that generated large-scale merchandise trade liberalization carry over to the “new(er)” agenda of “behind-the-border” pro-competitive regulatory reforms. In the 1980s and 1990s, domestic policy reform was primarily a function of autonomous decisions by developing country governments, reflecting domestic political economy forces. Multilateral trade negotiations were primarily used as a vehicle to lock in national trade reforms.

A key policy question when it comes to services is whether a similar dynamic will prevail. In contrast to the pre-WTO period, governments today are much more engaged in trade negotiations and efforts to agree on “rules of the game” for services, investment and related regulatory policies that affect competition on national markets. To date, it does not appear that the mechanics of trade negotiations – which involve a process of bargaining on quid pro quo “concessions” – has been very effective in driving domestic reforms that improve national welfare. Indeed, a case can be made that the mercantilist nature of such efforts create perverse incentives and have detrimental effects in making policies negotiating chips, so that governments make what would be welfare-enhancing policy changes conditional on actions by trading partners. Even if agreement can eventually be reached, the
history of the Doha Round illustrates that such an approach will take much time and thus can give rise to potentially large opportunity costs of delay. More importantly, and more fundamentally, a process of negotiating regulatory reforms may never be successful or appropriate, given the large differences in country circumstances and social preferences that exist.²

A precondition for WTO to play an effective role as a commitment device is a good understanding of to what the commitments should pertain. An implication is that much greater effort is needed to build an understanding at the national level of the effects of prevailing policies, and the likely impacts of alternative types of reform. This cannot be generated by negotiations. Other forms of international cooperation are needed that help inform the process of identifying and implementing national policy reforms that enhance national welfare. Most such reforms do not require – and should therefore not be made conditional on – actions by other governments (trading partners). This does not mean that there are no gains from multilateral agreements on the rules of the game or that negotiations cannot be used as a mechanism to improve access to foreign markets. Nor does it imply that international cooperation cannot help countries identify beneficial reforms. A premise of this paper is that international cooperation can do much to harness the potential for greater services trade and investment to support more inclusive growth. However, this requires a shift away from a focus on negotiations towards a process that centres attention much more on the potential gains from unilateral (autonomous) action by governments.

Section 1 of this paper briefly characterizes the engagement by developing countries in GATT/WTO over time. It also describes the shift that occurred in the second half of the 1980s in the trade policies of many developing countries as well as the drivers of the reforms that were pursued in the 1980s and 1990s. Section 2 discusses the economics of the use of import protection to attain industrial development objectives, and the gradual “internalization” of the arguments against the use of trade policy by policymakers. Section 3 outlines the elements of a possible approach that could be pursued in reducing national or regional transactions as well as operating costs for firms; to a great extent, this is a services reform agenda – developing both national and international mechanisms for putting in place policies that will help improve the performance of the services sector, and thereby support higher rates of economic growth and the realization of social development objectives. Section 4 provides the conclusion.

2. Changing engagement by developing countries

Engagement by developing countries in the multilateral trading system since the 1950s has oscillated between reciprocity and disengagement. Four stages can be identified (Hudec, 1987; and Hoekman and Kostecki, 2009):

2 This may also apply to many regional trade agreements. Bosworth and Trewin (2011), for example, argued that in the case of Australia regional trade agreements had generated very little in the way of concrete policy reforms. (See also Hoekman and Winters, 2010)
(a) Limited membership of low-income countries in GATT (12 of the original 23 signatories were developing economies), based on a formal parity of obligations (1947-1964);

(b) Substantial expansion of developing country membership, based on the concept of more favourable and differential treatment (1965-1986);

(c) Deepening integration of developing countries into the GATT-WTO system, with a return to greater reciprocity (1987-1997); and

(d) A shift back to an emphasis on special and differential treatment (S&DT), especially for the least developed countries (LDCs), increasing de facto differentiation and heterogeneity of approaches (1998-present).

The Uruguay Round marked a (temporary) break with the pattern of non-reciprocity, insistence on SDT etc. analysed by Hudec (1987). Developing countries participated actively in the new round. All developing country, GATT-contracting parties joined WTO, adopting the results of the Uruguay Round as a Single Undertaking. Following the creation of WTO, the demarcation between the poorest countries – the LDCs – and the more dynamic, higher growth developing economies became more distinct. This bifurcation reflected differences in economic performance and economic size. Although all countries participated more actively in WTO deliberations, the poorest countries have continued to focus on S&DT, complementing the traditional push for freedom to use trade policy for industrial policy purposes with an effort to mobilize more development assistance funding to improve supply capacity. Milestones that resulted from this effort included: the Integrated Framework for Trade-related Assistance for Least Developed Countries; improvements in preferential access (such as the European Union's Everything but Arms programme and the United States' African Growth and Opportunity Act); and movement on the part of some of the major high-income markets to adopt more liberal rules of origin – most recently by the European Union in new and more liberal rules that entered into effect in 2011.

2.1. Special and differential treatment in the 1960s and 1970s

As noted by Hudec (1987 and 2010), the underlying justification for the emphasis put on S&DT in GATT reflected development thinking in the 1950s and 1960s. This was based on the argument that developing countries needed to foster industrial capacity, both to reduce import dependence and to diversify away from traditional commodities. Diversification was needed in part because commodities were held to be subject to long-term declining terms of trade (due to low income elasticity of demand) as well as short-term price volatility. The fear was that if developing countries relied on exports for growth, their supply of commodities would exceed what could be absorbed by the world. The resulting excess supply and consequent decline in world prices justified trade restrictions by developing countries – in effect, they should impose tariffs to improve their terms of trade as well as protect infant/import-substitution industries. Developing countries needed protection to achieve industrialization and generate demand at home.
It was also argued that developing countries suffered from foreign exchange shortages, and that protectionist policies were needed to protect their balance of payments. At the same time, it was recognized that exports were important as a source of foreign exchange and that the national market might be too small for a protected domestic industry to be able to realize economies of scale. This resulted in calls for preferential access to export markets – a general system of preferences that would give developing countries better than most-favored nation (MFN) treatment in industrialized countries.

2.2. Increasing pursuit of economic self-interest in the late 1980s

Developing country stances towards trade policy changed in the early 1980s. Drivers for this change were varied but to some extent related:

(a) One important driver was the global recession of the early 1980s following the second Organization of Petroleum Exporting Countries’ oil price shock and the debt crisis that emerged around the same time. The associated need to generate more foreign exchange and improve economic performance – whether to service debt, cover import bills or to compensate for the reduced access to capital/credit and rise in global real interest rates – required an increase in net exports. The fiscal costs and burden of non-performing loans associated with financial support for infant industries was a contributing factor to the macroeconomic adjustment problems confronting many governments;

(b) Another, more structural, driver of reform was the demonstration effect of the success of many countries in South-East Asia in pursuing an export-oriented development strategy. Not only did the Asian “tigers” sustain high trade and economic growth rates, most also avoided the debt service problems that affected many other developing nations – as a result of their economic development strategies;

(c) A third driver was the gradual collapse of central planning. The dissolution of the Council for Mutual Economic Assistance (Comecon) and the former Union of Soviet Socialist Republics in the late 1980s forced a number of developing countries to re-think their economic policies. Disillusionment with the failures of managed trade (e.g., ineffective international commodity agreements and domestic marketing boards) created additional incentives for countries to move towards greater reliance on market mechanisms to allocate resources;

(d) A fourth factor was the “demonstration effect” of deregulation programmes launched in a number of OECD countries and the privatization of state-owned enterprises. Although in practice financial considerations often dominated decisions in developing countries to undertake privatization, a conviction that state ownership or control was part of the problem also played an important role in decisions to privatize firms and open industries to (foreign) competition;

(e) Finally, mention should be made of the analysis of import substitution by academics – including major projects in the late 1970s led by leading scholars (Bhagwati, 1978; and Krueger, 1978) – and the advocacy by the World Bank
and the International Monetary Fund (IMF) in support of outward-oriented development strategies.

Compared to GATT, the international financial institutions (IFIs) played a significant role in supporting trade reforms in developing countries. As stressed in J. Michael Finger’s introduction to the 2010 re-issue of Hudec (1987), the emphasis in GATT on SDT implied that there was little scope for GATT to engage in what constituted good (or better) trade policies. GATT did not have the mandate to provide advice on, or analysis of the design of trade policies or the sequencing of trade-related reforms. Nor did it have the ability to identify the need for complementary reforms and investments or to engage in a policy dialogue on areas not subject to GATT disciplines, such as the level of the (real) exchange rate, the exchange rate regime, capital controls or macroeconomic policies (monetary, tax, public expenditures, etc.). In addition, GATT did not have any capacity to provide its members with financial assistance. In contrast, IFIs could, and did, provide technical analysis and advice on the design and sequencing of policy reforms, and engage in policy dialogue with governments on these matters. They also had the capacity to provide financial resources to assist countries to meet the costs of policy reforms and improve supply capacity, i.e., transport infrastructure, energy, training and technical assistance etc.

Between 1987 and 2004, for example, the World Bank allocated some 8 per cent of its total loans and credits to programmes and projects aimed at trade policy reforms, strengthening trade-related institutions and infrastructure (e.g., product standards and Customs) (World Bank, 2006). The total amount of resources committed was some US$ 38 billion. Trade accounted for some 40 per cent-50 per cent of the total conditionality in those World Bank structural adjustment loans in the 1980s and early 1990s that focused on improving economic management (World Bank, 2001). The World Bank generated a large volume of analysis and research on trade issues, ranging from the design of reforms to assessments of the impacts and results of different types of trade policies. Several influential multi-country case studies of prevailing trade policy regimes and economic performance played a role in identifying priorities for reform in the mid- to late 1980s (e.g., Bhagwati, 1978; Krueger, 1978; Choksi, Michaely and Papageorgiou, 1991; and Thomas and others, 1991).

The focus of IMF and World Bank activities was to reduce disincentives to engage in export production, boost export performance and improve resource allocation, thereby making economies more robust to changes in the world economy – be they technological in nature or short-term exogenous shocks. The objective was to increase incentives for investments in new activities and products so as to diversify the economy and generate new sources of foreign exchange. A key part of many programmes was to enable firms to gain access to the inputs they needed at world market prices – thereby allowing them to compete on a level playing field with foreign competitors – and confront firms with competition from imports – thereby ensuring that resources went to sectors in which a country had a comparative advantage. Creating an incentive framework that would generate a more efficient allocation of domestic resources (labour and capital) was seen as a precondition for sustaining higher economic growth over time.
Trade reforms generally had common features: (a) a removal of quantitative restrictions (QRs) on imports and exports, with QRs often being replaced with a less restrictive tariff; a reform of the structure of the tariff, generally moving towards a simpler and more transparent system of a limited number of tariff bands; (b) the removal of tariff exemptions of various kinds; (c) reduction of net taxation of agriculture; and (d) lowering the average level of the tariff. Frequently, the tariff structure that was recommended involved higher tariffs on final products than on inputs, the idea being to afford industries a continued positive rate of effective protection against imports.\(^3\) The experience of many countries that implemented such trade reform packages was that tariff revenues – a major concern for many low-income countries – often did not decline (because the removal of tariff exemptions and the tariffication of QRs generated offsetting revenue). Over time, as economic activity increased and trade expanded, tariff revenues could also increase as a result of import growth.

Reforms generally went beyond narrow trade policy (tariffs and quotas). In many cases, reform programmes included an extensive focus on macroeconomic management, driven by the need to move countries towards a more sustainable fiscal situation; controlling inflation etc. The successful export-led growth strategies of developing countries have often been associated with policies aimed at ensuring a “competitive” exchange rate (Aizenman and Lee, 2008). In many instances trade reforms included a devaluation of the real exchange rate. Depreciation created incentives to switch expenditures away from imports, thus helping to move the balance of payments towards surplus. Devaluation also played an important political economy role in helping to implement and sustain trade liberalization; by making imports more costly, some of the protection that was lost through lower trade barriers was offset. Conversely, devaluation made it easier for export-oriented firms to expand output and generate employment opportunities for workers in import substituting sectors that were negatively affected by liberalization. Complementary measures that were often pursued included: the introduction of indirect tax systems (excise and value-added taxation)\(^4\) and projects to bolster the supply side of the economy; efforts to restructure firms/industries with a view to improving efficiency; and investments in infrastructure and education.

Many assessments have been made of the trade reform programmes and the assistance provided by IFIs (see, for example, Dean, Desai and Riedel, 1994; Sharer, 1998; and World Bank, 1992, 2001 and 2006). While reform programmes did not always have the desired effects, and many were not sustained, there is increasing evidence that reforms increased growth rates by generating additional investment into the tradable sectors – see, for example, Wacziarg and Welch, 2008, for a careful analysis of the performance of a large number of countries before and after trade reform.\(^5\) Whatever the relative importance of the

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3. The best tariff structure was often argued to be a uniform, low rate, but this was generally a bridge too far for most countries – Chile being one of the few outliers (see Tarr, 2002).

4. At some point, tariff revenues will fall as a result of tariff reductions – the deeper the trade reform and the lower the average tariff, the less revenue would be collected. This called for the creation of alternative tax bases, an area in which IMF was active.

5. See also Greenaway, Morgan and Wright, 2002. Krueger (2003) discussed the importance of the interplay between politics and the nature of governments across countries, and the effectiveness of economic policies and policy reform.
different drivers of reform, the result was a significant reduction in anti-export bias, greater 
neutrality in the incidence of policies across sectors – including a reduction in the relative 
taxation of agriculture compared with other sectors (Anderson, 2009) – and increases in 
investment, output and trade.

Trade growth led to a change in the internal political balance of power in many 
developing countries. Export interests became more significant – their success generated 
a stronger constituency for further reform of policies affecting the investment climate. Baldwin 
(2010) argued that an important driver of unilateral trade reforms was the emergence of the 
international supply chain and the end of what Cooper (1988) called the “ship and forget” 
type of trade (i.e., goods are produced, put on a ship, and that is the end of it). As the stages 
of production of a final good increasingly came to be distributed across a number of countries 
– driven in part by FDI into developing countries, in turn facilitated by the information and 
communications technology revolution, and the associated reduction in communications and 
coordination costs – the incentives to maintain high tariffs on imports fell.

Increasing exports helped generate greater interest in supporting efforts by 
governments to gain better access to export markets, both in WTO and through preferential 
trade agreements. Foreign investors that responded to privatization opportunities and had 
taken equity stakes in local firms or engaged in greenfield investments were another source 
of pressure for better policy and actions by governments to lower the costs of doing business, 
including measures to reduce the costs of imported intermediate inputs they needed to 
produce their goods and services. The growth in the size and power of private sector interest 
groups seeking a more open trading regime, in turn, helped to change the terms of 
developing country participation in the multilateral trading system, as well as stimulate a 
renewed focus on deeper preferential trade agreements, both North-South and South-South.

3. Demise of the case for trade policy to 
protect infant industries

Industrialization is generally regarded as an integral dimension of the process of 
economic development. Accordingly, many developing countries historically have provided 
a variety of support programmes for the industrial sector, including protection against import 
competition, special tax concessions, low tariff rates for imports of machinery and equipment, 
subsidized credit, guarantees. The intellectual foundation for providing temporary support for 
infant industries is based on the existence of some type of market failure (e.g., credit market 
imperfections) as well as dynamic positive externalities such as worker learning-by-doing. It 
has long been recognized in the economic literature that one must distinguish between 
learning processes that are internal to the firm and those that are external. As the former are 
appropriable by the firm, only the latter warrant government intervention and then only if the 
reductions in cost over time compensate for the higher costs incurred during the period of 
assistance. Moreover, this argument does not provide justification for blanket assistance to 
all firms in an industry; the existence of an externality and the required cost saving must be 
demonstrated on a case-by-case basis (Pack and Saggi, 2006).
Hausmann and Rodrik (2003), for example, emphasized a specific type of learning externality. They argued that the private payoffs to successful investments in new activities might be much lower than the social benefit because the private gains might be eroded quickly if investments were successful as a result of entry by other entrepreneurs into what has been revealed to be profitable businesses. This suggests a role for government to increase the incentive to undertake “exploratory” investments in new (non-traditional) activities, in addition to providing standard public goods such as property rights, security etc., in dealing with the non-appropriability problem. At the same time, policies to foster investment (self-discovery) must be complemented by measures to ensure the exit of firms that pursued new activities in which it is revealed that a country does not have a comparative advantage. What is needed, therefore, is a balance of government promotion of new activities and discipline.

Achieving such a balance in practice is a major challenge. Identifying and employing instruments that are effective in addressing the externality is of particular importance. A key insight of analyses of the infant industry argument is that a tariff provides no incentive for a firm to acquire more knowledge (Baldwin, 1969; and Bhagwati, 1971). Because tariffs are output-based (that is, they provide incentives for greater production), a firm will increase output by the least costly method, not necessarily by acquiring more technology. In order to capture the learning-related spillovers of production, a subsidy related to knowledge creation is called for – e.g., a subsidy to those workers/firms who learn by doing. As most knowledge or skill acquisition is process-, job- or product-specific, any subsidy should be targeted at the process, job or product. The implication is that trade policy (protection) will not be an effective instrument for dealing with the market failure. Indeed, firms entering into new activities will need to have access to inputs from the rest of the world, including technologies. Moreover, the economy-wide effects of trade intervention in one industry also need to be borne in mind as a tariff on an input will cause the effective protection of downstream users to decline.

The various theoretical arguments against the use of trade policy to protect infant industries did not resonate much with policymakers in the 1970s. What proved more powerful was disillusionment with restrictive trade policies; the effects of protectionism proved disappointing. In addition to often not generating viable (competitive) industries, trade barriers led to lobbying for the right to import (to capture the rents created by the difference between world and domestic prices) and to lobbying by industries for exemptions for inputs they needed from abroad. The result often was a very complex and non-transparent trade regime. The inefficacy of restrictive trade policies and the associated rent-seeking led to a re-thinking of policy. As noted above, the rapid rise of East Asian countries which relied on systems that ensured that firms had access to inputs at world prices, and which were oriented towards producing for the world market, helped to shift the focus of industrialization policies away from trade protection.

The dynamics of trade policy were also affected by technological changes, especially the rapid decline in transport and communications costs in the 1990s. As “frictional” trade costs fell, the political economy of protection of producers of intermediates changed – downstream industries in developing countries had less incentive to accept (support)
protection of domestic upstream suppliers (Baldwin, 2010). The process of vertical specialization and fragmentation of production, in conjunction with extensive flows of FDI into developing countries, has greatly attenuated the incentives to use trade policy to protect specific industries. It now makes little sense for governments to use trade policy for infant industry purposes as this will hurt, not help. International exchanges today are increasingly about trading in tasks. Being able to compete in a specific niche or activity requires firms to be able to integrate into the relevant value or production chains. Significant levels of import protection would impede their ability to do so. This does not imply that there is no role for government policy and measures to address market failures of the type that have long been identified in the economic literature. However, traditional import protection generally will have little useful role to play.

The 2008 financial crisis and subsequent global recession illustrated the change in the incentives to use traditional import protection instruments. There was very little recourse to such measures, in stark contrast to what happened during the global recession of the early 1980s when there was widespread resorting to “voluntary” export restraints and quantitative restrictions for products such as cars, textiles and steel. However, governments did intervene in an effort to support demand and improve the competitiveness of firms located in their territories. Calls on surplus countries to allow exchange rates to appreciate, together with fears of beggar-thy-neighbour policies to depreciate exchange rates, are where the pressure points lie today.

Thus, although trade policy is likely to feature much less prominently in the toolbox of governments, other instruments such as the exchange rate or specific types of industrial (sectoral) policy continue to have an important role to play. These are appropriate instruments for governments to use in the pursuit of growth and development goals, but they can also have beggar-thy-neighbour features and can generate international tensions. Addressing these tensions – which are, in part, the consequence of successful pursuit of export led growth – in a cooperative manner is important both to preventing recourse to unilateral “retaliation” by trading partners and to allowing those countries that are most in need of effective pro-active policies to use them without fear of negative reactions from the rest of the world (Haddad and Hoekman, 2010).

There are no disciplines on exchange rate policies in WTO, even though it is an instrument that can be used to achieve the same effect as a combination of import barriers and export subsidies. While this was recognized by the drafters of GATT/WTO, it is left to IMF to address exchange rate misalignments (under Article XV, GATT). If a country’s

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6 Rodrik (2008), for example, argued that real undervaluation could promote economic growth by increasing the profitability of the tradable sector, which is often confronted with a bad investment climate and high operating costs as a result of a variety of domestic distortions.

7 GATT Article XV calls for WTO to cooperate and consult with IMF on matters relating to monetary reserves, the balance of payments and/or foreign exchange rate arrangements; it requires that Members “shall not, by exchange action, frustrate the intent of the provisions of the GATT nor, by trade action, the intent of the provisions of the Articles of Agreement of the IMF”. It also allows Members to apply exchange controls and restrictions if consistent with the Articles of Agreement of IMF. Article XV has never been formally interpreted by WTO Members nor has it been the subject of a dispute settlement proceeding.
exchange arrangements or exchange rate level is such as to help generate a large trade surplus, there are no legal ramifications under GATT. Dealing with the conflicts that are generated by sustained use of policies – including the exchange rate – that generates large-scale surpluses is a matter that is now squarely on the international policy agenda. However, the forum for such cooperation revolves around IMF and the G20, not WTO.

4. Reducing real trade costs and promoting greater inclusion: The services agenda

The ability of firms to benefit from trade opportunities depends on their ability to produce goods that can compete in world markets. Domestic supply constraints are the main reason for the lack of trade growth and diversification in many of the poorest developing countries. Without action to improve supply capacity, reduce transport costs from remote areas, increase farm productivity through extension services and improve the investment climate more generally, trade opportunities cannot be fully exploited and the potential gains from trade will not be maximized.8

Globalization creates immense opportunities for countries to leverage global demand for goods and services. It allows countries to benefit from the knowledge and technologies that have been developed anywhere in the world, whether embodied in machinery, intermediates, FDI or people. However, to ensure that citizens are able to benefit from these opportunities, workers must be able to acquire the needed skills, while firms need to be able to access credit to finance profitable investment opportunities and farmers need to be connected to markets (Porto and Hoekman, 2010). Greater openness also increases the vulnerability of countries to global shocks, with potentially major adverse consequences for the poorest households that do not have the savings needed to survive a period of unemployment or sharp falls in the prices of their outputs (and thus incomes) resulting from global competition. The recent financial crisis demonstrated the importance of complementing greater openness with domestic policies and mechanisms to help poor households (Haddad and Shepherd, eds., 2011).

Poor roads and ports, poorly performing customs, weaknesses in border management, inadequate regulatory capacity, and limited access to finance for poor

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8 For example, Balat, Brambilla and Porto (2007) explored the role of marketing costs that needed to be met when the commercialization of export crops required intermediaries. Such costs can lead to lower participation in export cropping and thus higher poverty. Using data from the Uganda National Household Survey, they showed that: (a) farmers living in villages with fewer outlets for sales of agricultural produce for export were likely to be poorer than farmers located villages with markets; (b) “market availability” increased household participation in export crops (coffee, tea, cotton and fruit); and (c) households engaged in export cropping were less likely to be poor than household that were subsistence-based. The authors concluded that policies for enhancing access to local markets and reducing marketing costs were necessary to enhancing the gains from export opportunities for the poor. Similarly, Negri and Porto (2008) analysed the role played by burley “tobacco clubs” in enabling small producers in Malawi to increase tobacco farming productivity by providing services related to accessing markets, improving quality and reaping economies of scale. Tobacco club membership is estimated to increase output per acre by 40 per cent-70 per cent.
business services are all factors that undermine trade performance and reduce the inclusiveness of growth. For example, enterprises in Tanzania report that on average it takes about 12 days for exports and 19 days for imports to clear customs. In comparison, it takes only two and three days for exports and imports, respectively, to clear customs in the Philippines. It takes 116 days to move an export container from the factory in Bangui (Central African Republic) to the nearest port and fulfill all the customs, administrative and port requirements to load the cargo onto a ship. It takes 71 days to do so from Ouagadougou (Burkina Faso). In contrast, it takes only 20 days in the People’s Republic of China (PRC), Malaysia and Chile. On average, it takes three times as many days, nearly twice as many documents and six times as many signatures to trade in a poor country as it does in rich countries.

From a competitiveness and economic development perspective it is the “trade cost agenda” that is the priority today for many low-income countries. Various aspects of the underlying policy reform agenda are on the WTO table, including in the trade facilitation and services negotiations in the Doha Round. To a significant extent, the “trade cost policy agenda” revolves around services; reducing the costs of service inputs, and increasing the variety and quality of such inputs, are important determinants of (a) the ability of firms and farmers to produce and sell their products in local, national and global markets, and (b) the rate of return they will obtain. The urgency of reducing trade and production costs has increased as a result of the rapid growth of PRC and other emerging markets. To compete with firms in PRC requires that producers are not shackled with high-cost structures. Wages in much of Africa are no higher than in PRC and, as PRC continues to grow, real wages will increase there. While the growth of PRC and other large developing countries is a challenge for other countries, it also offers opportunities (Canuto and Giugale, 2010).

Realizing those opportunities requires trade and operating costs to come down. Doing so is a complex, multi-dimensional challenge. Trade liberalization has a role to play, but much of the agenda revolves around other policies. One example is border management – enhancing the efficiency of enforcing regulatory and fiscal policies (McLinden and others, 2010). Another example is regional integration, which can create larger markets and lower the costs of transit transport – a key factor for land-locked countries in particular (Arvis, Raballand and Marteau, 2010). Regional cooperation on measures to facilitate trade between neighbouring countries can stimulate the type of intra-industry specialization that characterizes much of the exchanges that take place in East Asia, Europe and North American Free Trade Agreement members. The importance of reducing the costs of accessing and transiting neighbouring markets, and attaining scale and agglomeration economies through convergence of administrative procedures and trade-related regulatory regimes, helps to explain the increasing participation in regional trade agreements by developing countries. However, much of the agenda – as in the past – will involve autonomous, unilateral reforms.

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9 This paragraph draws on material in Hoekman and Kostecki, 2009. All data are from the World Bank’s Doing Business report.
That said, WTO arguably can play a more constructive role today in helping countries deal with the “real trade costs” agenda. The trade facilitation negotiations in the Doha Round illustrate how WTO can be used by developing countries to make a difference on the ground for traders and producers. While the trade facilitation agenda spans much more than the three GATT articles (Articles V, VIII and X) that are the focus of negotiations, the way the process has been structured suggests a model for moving forward on other parts of the trade cost and competitiveness agenda. A key feature of the trade facilitation talks was a decision by developing countries to introduce a formal link between the implementation of any agreement and the provision of financial and technical assistance. Another feature of the negotiations was to engage the specialized agencies with expertise in the area – such as the World Customs Organization, the World Bank, UNCTAD and IMF – in the process. These agencies, together with WTO, undertook country-level assessments of the trade facilitation situation, gaps and priorities.

Although the conclusion of a trade facilitation agreement is tied to the overall fate of the Doha Round, the process raised national awareness of the importance of trade facilitation. This awareness raising affected the development (donor) community as well. A plethora of research on the net benefits of facilitating trade induced by the launch of the negotiations identified the high rate of return of investments in this area (and the high opportunity cost of not dealing with the issue). As a result, the number of projects and level of resources allocated to this area increased significantly relative to the late 1990s and early 2000s. Even if the Doha Round never comes to a successful conclusion, this is a positive outcome that is due in part to the launch of the negotiations and the focal point they provided.

Emulating this approach in other areas of trade-related regulation could help make WTO a more effective mechanism to assist countries to reduce trade costs/improve competitiveness. Perhaps the most obvious and important area is services. As argued at greater length in Hoekman and Mattoo (2010) and Hoekman, Mattoo and Sapir (2007), efforts to negotiate an expansion in market access commitments for service sectors have not proven to be very fruitful in the Doha round. An approach that goes beyond a narrow focus on market access, and which takes regulatory concerns and constraints seriously, may increase the prospects of moving forward on services policy reform.

Moving forward on services

The efficiency of services industries has a powerful influence on economic growth. The productivity and competitiveness of goods and services firms increasingly depends on access to low-cost and high-quality producer services such as telecommunications, transport, finance and distribution. Telecommunications are crucial to the dissemination and diffusion of knowledge. Transportation services affect the cost of shipping goods and the movement of workers within and between countries. Financial services influence the transformation of savings into investment as well as their allocation to the most productive uses. Professional services, such as accounting, legal, engineering and consulting services, reduce transaction costs associated with the operation of financial markets and the enforcement of contracts, and are channels through which process innovations are transmitted across firms. Retail and wholesale distribution services connect producers and consumers. Health and education
services are key inputs into – and determinants of – the quality of human capital (Francois and Hoekman, 2010; and Mattoo, Stern and Zannini, 2008). Recent studies such as those by Arnold, Mattoo and Narcisco (2008), Arnold, Javorcik and Mattoo (2011), Arnold and others (2010), and Fernandes and Paunov (2011) analyse the effects of allowing foreign providers greater access to services industries, both in services markets and the productivity of manufacturing industries relying on services inputs. The results show a positive relationship between FDI in services and the performance of domestic firms in services and manufacturing.

Significant movement in the direction of liberalization of services policies is constrained by the great diversity in regulation and regulatory capacity. In practice, the process of identifying, designing and implementing policies that address market failures and ensure wider access to services may take years. Mechanisms that bring together sectoral regulators, trade officials and stakeholders to assess current policies and identify beneficial reforms are needed. Implementation of the priority reforms that are identified could be assisted by the development community under the “aid for trade” initiative. The financial and technical support for strengthening the relevant implementing institutions will require the engagement of a variety of bodies and institutions (national, regional and international) that deal with specific services, including regulators, and the development community.

Governments have an important role to play in putting in place the preconditions for an efficient set of service industries, bolstering the case for focusing on key inputs such as education and (institutional) infrastructure. Also important is the design of reform programmes. For example, if privatization of state monopolies is conducted without concern for creating conditions of competition, the result may be merely transfers of monopoly rents to private owners (possibly foreigners). Similarly, if policies to ensure wider access to services are not put in place, liberalization need not improve access to essential services for the poor. Managing reforms of services markets therefore requires integrating trade opening with a careful combination of competition and regulation.

Regulation in services arises essentially from market failure attributable to three kinds of problems: natural monopoly; inadequate consumer information; and considerations of equity and protecting the poor. In each case, however, the design and implementation of regulation poses serious challenges. For example, natural monopoly or oligopoly is often a feature of specific types of infrastructure services such as roads and rail, telecommunication cables and satellites, and pipelines for sewage and energy distribution. Many countries have put in place independent regulators to ensure, inter alia, that monopolistic suppliers do not undermine market access by charging prohibitive rates for interconnection to their network infrastructure. However, also ensuring that competition law applies to such activities can generate significant positive externalities.

Openness by itself will not necessarily lead to improved access to services for all households, especially those that are poor. Efficient policies to widen access to services can

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10 What follows draws on Hoekman and Mattoo, 2010.

11 See, for example, Fink, Mattoo and Neagu, 2001, and Hoekman and Saggi, 2007.
help improve access. Such policies can seek to harness markets to improve access; one such example is to use universal access funds that are competitively allocated. This involves private providers competing (bidding) for performance-based subsidies that are conditional on providing services to specific (targeted) groups. This has been done by a number of countries in telecommunications (Kenny and Keremane, 2007). Equally important is ensuring that regulation does not effectively shut out small enterprises and poor households by imposing standards that result in the fixed costs of services provision becoming prohibitively high for these groups.

Poor policies in many countries often reflect standard political economy forces – those who gain from current policies are more economically and politically powerful than those who lose. For example, in Zambia high transportation costs are partly due to restrictions that the Government imposes on air and road transport. While detrimental to exporters, the restrictions benefit import competing interests and domestic transport service providers (Mattoo and Payton, 2007). In India, professional services such as accountancy, legal and other services sectors (e.g., retail distribution, postal and rail transport services) are formally closed to foreign participation. FDI is not allowed in the accountancy and legal sectors or in retail distribution services (Hoekman, Mattoo and Sapir, 2007). The closed sectors are characterized by domestic firms that are sub-optimal in size, and handicapped by an inhibiting and weak regulatory environment. Adjustment and employment concerns are the dominant factor impeding liberalization. Many Indian services in closed sectors are highly fragmented by international standards. Identifying the magnitude and incidence of the costs and benefits of prevailing policies that inhibit competition from foreign providers, and developing mechanisms to assist losers is, therefore, an important dimension of efforts to pursue reforms in the services sectors.

The focus in services trade negotiations is on market access, not domestic regulation. Governments are free to regulate as long as this does not discriminate against foreign suppliers. Although it makes sense to limit trade agreements to the removal of discriminatory policies, the “benign neglect” of domestic regulation implies that there are no assurances that liberalization will increase national welfare or address the political economy forces underpinning prevailing policies that are detrimental from an economy-wide perspective. WTO does nothing to help governments determine whether they have adequate national regulation in place and whether there is a downside risk associated with liberalization. In general, improved prudential and pro-competitive regulation will be necessary to the delivery of the full benefits of liberalization in sectors such as financial services; basic telecommunications and other network-based services.

Feketekuty (2010) suggested that the negotiating process needed to be complemented by other approaches. Creating mechanisms that address the regulatory dimensions of enhancing the performance of services industries could be a useful element of such approaches. Many developing countries need to strengthen regulatory institutions, and identify, design and implement policies that address market failures and ensure wider access to services. Hoekman and Mattoo (2010) proposed creating “knowledge platforms” – forums aimed at fostering a substantive, evidence/analysis-based discussion of the impacts of sector-specific regulatory policies, with a view to helping build a common understanding
of where there are large potential gains from opening markets to greater competition, the preconditions for realizing such gains, and options for addressing possible negative distributional consequences of policy reforms. More specifically, they suggested such a forum could fulfill the following roles:

(a) First, a mechanism through which information is generated on current services activity, prices and trade flows, and prevailing regulatory policies. Better information on services policies and performance would help to facilitate broad-based discussion on what priority sectors are and where the key regulatory problems lie;

(b) Enhancement of the knowledge of regulatory experiences and impacts in other countries, the process of which could identify: (a) alternative options/good practices through the collection and sharing of information on the factors underlying successful efforts to expand trade in services; and (b) the complementary policies that can be used to address market failures and distributional concerns. Information and experiences from a range of countries can help ensure that the regulations and standards that are adopted reflect local conditions and capacities for effective implementation;

(c) By bringing together representatives of a range of countries (officials, regulators and private services suppliers) governments could discuss and learn about alternative approaches that have been pursued in practice to address the political economy constraints that may impede regulatory reform and constrain efforts to reduce barriers against foreign providers of services.

Many organizations have expertise and experience that could contribute to a process of “learning to learn” from country experiences. For example, the World Bank Group has substantial sectoral expertise in a number of services (e.g., transport, telecoms, finance, health and education) and has regular country-level policy dialogue on regulatory issues with line ministries and agencies through its wide network of country offices and field-based staff. There are organizations and networks that have already established processes and mechanisms through which trade and other government officials may interact with regulators – prominent examples include OECD, the Asia-Pacific Economic Cooperation and the United Nations Economic Commissions.

A knowledge platform to identify good practices in regulation and services policies must be broad-based. In practice, a consortium approach will be needed, in which a number of policy institutes, international organizations and networks of regulators from around the world combine to provide the needed knowledge resources, working with or through a central hub entity. Specific modalities of operation of a knowledge platform on services policies will need to be identified on a case-by-case basis. In order to be effective and relevant, a platform must be country-focused, demand-driven and action-oriented. At the same time, the basic premise is that there is much to be learned from the experiences of countries around the world. In practice, services knowledge platforms may best be designed on a regional basis, linked to regional integration initiatives and regional institutions (such as regional development banks).
The first steps could be to undertake a “mapping exercise” to identify existing international networks of regulators (regional or global) and related epistemic communities, and to develop pilot programmes to test the concept. The focus could be either on a just a few priority sectors or on clusters for a given region, and on tools that can be used to assess regulatory needs and the status quo. Examples of the latter include regulatory audits and impact assessments. The various regional forums and platforms could be linked to each other – through websites, the sharing of tools and databases etc. – and be brought together annually to exchange information and results.

This type of international cooperation could do much to help enable progress on services trade liberalization, and to create more fertile ground for countries to make services commitments in WTO. A basic premise is that all countries would participate more meaningfully in trade agreements if they had greater certainty regarding the payoffs from making binding policy commitments as well as assurance that the regulatory preconditions for benefiting from such commitments were in place.

5. Conclusion

Since the mid-1980s much has changed in terms of the relative economic weight of developing countries in the world economy. Economic growth rates in much of the developing world have been such that developing countries as a group are expected to account for more than half of the world gross domestic product by 2015 (Canuto and Giugale, 2010). The growth has largely been the result of autonomous reforms pursued by the governments of those countries. GATT/WTO has played only a limited direct role in the “rise of rest,” although the principles of openness, predictability and transparency that underpin the trading system have obviously been very beneficial in supporting the growth in global trade that has occurred.

The changes that have occurred in the structure of the world economy as a result of mostly unilateral trade policy reforms and technological advances – reflected in production fragmentation and geographic splintering of value chains – have resulted in strong incentives for countries to lower trade costs and much-reduced incentives to protect domestic manufacturing industries. Many of the costs that determine the competitiveness of firms concern services, i.e., the availability, reliability and cost of telecommunications, transportation, finance, insurance, accounting, marketing etc. If the (quality-adjusted) costs of such services are high, domestic industries will be at a disadvantage. Services also matter for households and social equity; access and cost/quality of education, health, communications, transportation and other services have an important bearing on the extent to which different groups in society can benefit from economic growth and are able to withstand exogenous shocks.

Given that services account for a major share of total input costs for most firms and are critical from a poverty-reduction/human development perspective, it is not surprising that many governments have undertaken substantial policy reforms that are aimed at improving the performance of major services sectors. However, the available evidence clearly indicates
that services markets are subject to higher trade and investment barriers than markets for
most manufactures, and that the extent to which poor households have access to key
services such as health, education and transport often leaves much to be desired. Greater
competition can be a powerful instrument to give firms and households access to better,
cheaper and a greater variety of services. Better regulation will often be needed to
accompany measures to foster greater competition, both to ensure that markets are indeed
contestable and that the benefits of reforms also accrue to disadvantaged groups in society.

Negotiating the liberalization of services is complicated, as adequate national
regulation will often be a precondition for the benefits of reform to be both widespread and
sustained. The effort in WTO and in the context of regional agreements to negotiate the
removal of barriers to trade in services has, in most instances, not generated much traction.
Indeed, a good case can be made that governments have put too much emphasis on trade
negotiations and, in the process, incurred significant opportunity costs in terms of welfare
improving reforms forgone/delayed. Much of the regulatory reform agenda in many countries
can and should be pursued unilaterally. Further progress in making domestic services
markets more competitive while ensuring that the benefits of reform accrue to disadvantaged
groups as well as those that are better off requires action at the national level. Regional and
multilateral cooperation can certainly help but this requires greater effort to put in place
mechanisms that help stakeholders identify Pareto-improving reforms.
References


Chapter 2

Trade in services and human development:
A first look at the links

Ben Shepherd and Gloria Pasadilla

1. Introduction

Existing work on services trade largely focuses on two questions that do not directly relate to human development. The first concerns the determinants of international trade flows. Using methodologies such as the gravity model, researchers have investigated the range of factors that can promote or inhibit trade in services. In general, they find that many of the factors known to impact goods trade – geographical distance, market size and cultural/historical factors – also exert a strong influence on services trade (Kimura and Lee, 2006).

The second strand of research on services trade examines its implications for economic efficiency. These studies tend to show that a more restrictive services environment is associated with less efficient and lower quality service provision, inefficient resource allocation and slower economic growth (Arvis and others, 2010; Eschenbach and Hoekman, 2006; and Findlay and Warren, 2000). Because services are often important inputs in the production of manufactured goods, an inefficient services sector can have economy-wide implications, including a loss of competitiveness for manufacturers and exporters (Arnold, Mattoo and Narcisco, 2008).

It has long been recognized that services trade can influence economic and social outcomes through a variety of channels. On the one hand, the economic gains from reform are significant (Organisation for Economic Co-operation and Development, 2003; and World Bank, 2002), and thus have the potential to promote human development by increasing per capita incomes. This paper refers to this linkage as the income channel. However, there has been considerable controversy as to possible incompatibilities between openness to services trade and the provision of human development-related services such as electricity, water, and telecommunications (see Adlung, 2006, for a review). More broadly, tension has emerged in the human development literature between the economic case for liberalizing services markets, and a perceived social case for maintaining stricter regulations in order to promote human development objectives (UNCTAD, 2005; and UNDP, 2006).

1 The authors are grateful to Bernard Hoekman, Mia Mikic, Deunden Nikomborirak, Pierre Sauvé, and participants in the ADBI-ARTNeT conference on “Regulatory Reforms and Liberalization in Services: Examining Impacts on Inclusive and Sustainable Development” held on 11-12 October 2010 in Bali, Indonesia for helpful inputs and discussions.

2 That per capita income is an important determinant of overall human development outcomes is reflected in the fact that the Human Development Index includes income as one of its components.
This paper brings some of the first empirical evidence to bear on the direct links between service sector regulation and human development, going beyond the income channel. From an economic point of view, there are good reasons to believe that services liberalization might be positively – not negatively – associated with at least some human development outcomes. The reason is that more efficient provision of public and private services that are important for development can lead to lower prices for consumers as well as more widespread availability of human development-related goods and services. For example, Chile’s liberalization and privatization of its telecommunications sector, together with its use of “smart” subsidies, led to a strong increase in availability of telecommunications services, and thus an increase in the population’s ability to access information and participate actively in political and social life (Wellenius, 2002).

A second example of the links between openness to services trade and human development outcomes is the role that the distribution sector plays in reducing the cost of moving vital goods to the hinterland of poor countries (Sarley, Allain and Akkihal, 2005). Examples include basic foodstuffs, medicines, and mosquito nets. Only with a relatively well-developed and efficient distribution sector is it possible to ensure that these types of products reach those who need them most and at the lowest possible private and public cost. For example, Sarley, Allain and Akkihal (2005) found that the logistics cost of moving bed nets from port to hinterland in Liberia amounted to nearly half the cost of the product. Reducing the logistics cost wedge clearly has great potential to help bring more bed nets to those who need them.

This paper examines the association between human development and services trade using simple non-parametric and parametric regression techniques. The authors’ approach was to use an indicator of human development as the dependent variable, and (at least) per capita income and a measure of services sector policy restrictions as the independent variables. The measures of policy restrictiveness vary at the sector level, so separate regressions were run using sector-specific measures of human development. By controlling for gross domestic product (GDP) per capita means that the authors have taken into account the fact that it is an important determinant of human development, and that it tends to be strongly inversely correlated with service sector restrictiveness. However, formidable data constraints were faced, and the authors have generally been unable to include a wide range of other control variables due to the small sample size. The best that could be done was to pool observations from three sectors, and use country- and sector-fixed effects to control for other influences. The results given in this paper should therefore be interpreted as providing a first indication of some important correlations in the data. In particular, they should be interpreted in terms of associations between variables rather than as evidence of causal links. In addition, the results should not be taken as suggesting that trade policy is the major driver of human development performance in the areas examined. It is just one influence among many, and the aim here is simply to expand the current discourse on the links between trade and human development by highlighting a previously under-researched set of mechanisms.

In section 2, the methodology and data used is discussed in more detail. Section 3 presents and discusses the results, covering education, distribution, engineering,
telecommunications services as well as pooled results across all sectors. Health services are considered to be important for human development outcomes; however, because no existing quantitative measure of restrictions was found in this sector, only a descriptive analysis is included, as an annex, of linkages of health services with access and equity. Section 4 concludes with some policy implications and suggestions for further research.

2. Methodology and data

The objective of this paper is to provide some initial evidence of the direct links between services trade policies and human development. By “direct”, the authors mean independent of income effects. For example, a less restrictive policy environment in the distribution sector is expected to lead to more efficient and less costly service provision, and thus to improved availability of important human development products such as vaccines. Admittedly, there are other variables that can correlate with the human development outcomes in which the authors are interested. For example, the percentage of the labour force with high school or college diplomas has a stronger correlation with the Human Development Index (HDI) than education services restrictions. Likewise, government health expenditure will also correlate with vaccination prevalence, in addition to the efficiency of distribution services. However, this paper’s objective is to provide a preliminary assessment of linkages, if any, of the policy restrictions in services with human development outcomes. Whether these linkages exist and are weak or strong is what the authors aimed to find out.

More generally, the following hypotheses were tested, using non-parametric and parametric regression techniques:3

(a) Is openness to trade in education services correlated with human development performance, as measured by indicators such as the: (i) human development index; (ii) poverty rates; (iii) life satisfaction index; (iv) democracy and (v) other similar human development indicators?

(b) Is openness to trade in distribution services correlated with human development performance in the form of improved immunization rates?

(c) Is openness to trade in engineering services correlated with human development performance, as measured by indicators such as road network density and the availability of basic telecommunication services?

(d) Is openness to trade in telecommunications services correlated with human development performance, as measured by indicators such as: (i) the HDI knowledge and Education Index; (ii) a political voice and accountability indicator; and (iii) the availability of basic telecommunication services?

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3 Ideally, the authors would also liked to have included health services in the list. However, data constraints mean that it is currently impossible to do so. Instead, the human development dilemma involved in health services is discussed in the annex – a somewhat more descriptive analysis of possible correlation of health services with human development outcomes such as equity and access.
For each of these hypotheses, the dependent variable is a specific measure of human development performance. Most data are sourced from the World Development Indicators and the Human Development Report. Data on democracy, and political voice and accountability are from Freedom House and the World Governance Indicators, respectively. Sector-specific measures of policy restrictiveness sourced from the Australian Productivity Commission have been used as the main independent variable. These data are currently available for a single year only (2000), which the authors have taken as the base year for all empirical work. The database includes two main measures per sector, each of which is a numerical summary of a wide range of underlying policy information. The first (“domestic”) index represents the entry barriers and ongoing cost burdens to which domestic firms in a particular sector are subject. The second (“foreign”) index contains the same information with regard to foreign firms. The difference between the two represents the extent to which trade policy is discriminatory vis-à-vis overseas operators.

The methodology used in this paper proceeds in two steps. First, a common non-parametric technique, the multivariate Locally Weighted Scatterplot Smoother (Lowess), is used to examine graphically the correlations among the variables of interest. The advantage of this method is that it allows the relationship between the dependent and independent variables to be analysed without imposing any particular functional form. It proceeds by running an OLS regression separately for each data point, using a centred 80 per cent sample of the original data as an estimating window. But because Lowess is primarily intended for exploratory graphics rather than model fitting, in the second step of the methodology, standard OLS regressions are run, using the same independent and dependent variables to confirm the impressions given by the non-parametric regressions.

3. Results and discussion

This section discusses the individual sector results for education, distribution, engineering and telecommunications services using the methodology cited above.

3.1. Education services

Education services have an obvious link with human development. More open policies towards education can increase availability of education services and improve student access to these services. Improved access helps in adult literacy and enrolment rates. As more people have access to education, this can also indirectly improve life expectancy, not only as a result of better knowledge of hygiene but also, possibly, because of greater life satisfaction and empowerment derived from being able to harness individual talents and capacities. Education also helps increase income. As increased human capital leads to growth in productivity (Benhabib and Spiegel, 1994), income growth follows. Education is also seen as a great “equalizer” because it makes social and income mobility possible. Schooling also has an impact on the quality of public governance and democracy because it enables people to become more informed about society, and enables them to

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4 The Restrictions on Trade in Services Database is available online at www.pc.gov.au/research/researchmemorandum/servicesrestriction.
better understand and assess potential risks and opportunities. Education is, therefore, an important foundation for democratic societies.

The importance of education for development explains the public provision of education, particularly elementary and secondary, in most countries. Although not many countries have free public tertiary education, large amounts of government subsidies, nevertheless, flow into the private acquisition of post-secondary degrees through subsidized student loans, tuition grants and other similar public programmes. However, by the same token, because of education’s crucial role the education services sector is also among the most heavily regulated. Government regulations range from restrictions of entry of education providers, form of establishment or partnership requirements, restrictions on outward movement of domestic students and recognition of diplomas for education acquired abroad or via distance learning, and currency controls for students moving abroad to study, to cite but a few.5

In trying to correlate restrictions of education services with different human development outcomes, the authors’ hypothesis is that relaxation in some of these government regulations will help improve human development. For example, more open policies towards education shown in allowing foreign and domestic, or public and private, provision of domestic education services, or facilitating mobility of students abroad can increase availability of education services and improve student access to these services. Improved access helps in adult literacy and gross enrolment rates. As more people gain access to education, this can, in theory, correlate with human development outcomes such as higher life satisfaction in society as a whole, higher incomes, longer life expectancies, more vibrant democracy or reduction of poverty.

The links between various human development outcomes and education services are tested by regressing an index of actual restrictions in education services, specifically in tertiary education services, against various human development indicators,6 using HDI, the HDI Education Index, per capita GDP and a democracy index. The authors’ hypothesis is that, as discussed above, more open trade in education services will help improve the overall HDI and the HDI Education Index. Since education helps people find jobs and earn their living, it should also contribute to overall development and increase per capita income. Finally, because education increases social and political awareness, it should help develop a more robust democracy or an expansion of civil and political rights. The converse of the above is that restrictions in education services trade, for example, places limits on the

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5 Nguyen-Hong and Wells (2003) provided more details of various trade restrictions on education services by mode of supply. They constructed an index of restrictions in education services based on collected actual regulatory restrictions.

6 The reason for this choice is that the collected restrictions on tertiary education across countries in the study by the Australian Productivity Commission (APC) are more comprehensive, while those for elementary and secondary education services are incomplete. The sample consists, unfortunately, of only 20 Asian, South American and Anglophone countries, but this is the only education restriction index that is publicly available to date. Furthermore, the APC study made use of actual regulatory restrictions in education in various countries, not commitments in trade agreements, compiled through a commissioned (unpublished) study by the Australian Department of Education.
establishment of foreign branch campuses or on-line degree programmes. In addition, such restrictions can constrain exposure to new ideas and may restrict pursuit of greater democracy, restrain individual income growth because of lower quality of university education, and dampen the overall achievement of better human development.

Unlike the other service sectors used in the rest of this paper, the Australian Productivity Commission (APC) study provides a breakdown of restrictions in education services trade by mode of supply. This additional information is exploited by regressing each of the modal restrictions on the different human development outcomes. The results help us understand which of the mode of supply restrictions exercise greater influence on human development. The authors also use a simple average of the different modal restriction indices to come up with a foreign restriction index to provide results for education services that are comparable to those of other service sectors regressions that are discussed below. However, unlike the rest of the paper, the domestic restriction index’s effect on human development outcomes is not examined because of extensive gaps in the data on domestic modal restrictions in the original APC study on education services, thus making that data much less reliable than the foreign restriction indices.

The results show strong links between selected human development indicators and restrictions in education services. Significantly, of the four modes of supply, restrictions on commercial presence appear to have greater influence on human development outcomes than do restrictions in cross-border trade, consumption abroad or movements of natural persons.

Non-parametric estimates using the HDI Education Index as the dependent variable show that foreign restrictions on commercial presence (Mode 3) have a more pronounced negative effect than restrictions on other modes of supply. Figure 1 shows that while restriction indices on consumption abroad (Mode 2), cross-border supply (Mode 1) or movement of natural persons (Mode 4) have ambiguous relationships with education outcomes, the relationship in the case of restrictions on commercial presence appears to be negative. Using the overall HDI index yields results similar to those shown in figure 1.

Table 1 corroborates the statistically significant negative correlation between foreign restrictions on commercial presence and HDI. Per capita GDP (in log form) strongly and positively correlates with the HDI indices, while restrictions on the commercial presence mode of supplying education services correlate negatively. The correlation with HDI and the

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7 The limitation with taking the simple average of the modes of supply restrictions is that each of the modes is assumed to have equal weight or importance in the overall restrictions to trade in education services. Nonetheless, the authors tried this simple method in order to be consistent with the rest of the paper, which uses overall foreign restriction indices.

8 For details of the restriction index construction for education services, see Nguyen-Hong and Wells, 2003.

9 The HDI education index comprises literacy rates and school enrolment rates.

10 In the APC study, restrictions on commercial presence reflect various regulations, such as the number or form of education service providers, quotas of domestic students in international schools, joint venture and domestic partnership requirements, lack of autonomy in curriculum planning and faculty management etc.
Figure 1. Non-parametric regressions of HDI education index variable on indices of education services restrictiveness

![Graphs showing non-parametric regressions of HDI education index variable on indices of education services restrictiveness.](image)

Table 1. Regressions on human development indicators

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>(1) HDI</th>
<th>(2) HDI</th>
<th>(3) HDI Education Index</th>
<th>(4) HDI Education Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log (GDP per capita)</td>
<td>0.81***</td>
<td>0.087***</td>
<td>0.048***</td>
<td>0.056**</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.012)</td>
<td>(0.15)</td>
<td>(0.022)</td>
</tr>
<tr>
<td>Commercial presence</td>
<td>-0.012*</td>
<td>-0.024**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.011)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign index (combined)</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.027</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.02)</td>
<td>(0.02)</td>
<td>(0.026)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>0.113</td>
<td>0.045</td>
<td>0.495***</td>
<td>0.402*</td>
</tr>
<tr>
<td></td>
<td>(0.088)</td>
<td>(0.13)</td>
<td>(0.149)</td>
<td>(0.228)</td>
</tr>
<tr>
<td>Observations</td>
<td>19</td>
<td>19</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.92</td>
<td>0.91</td>
<td>0.69</td>
<td>0.64</td>
</tr>
</tbody>
</table>

Sources: UNDP (2005) for HDI and HDI Education Index; WDI online database of the World Bank for GDP per capita; and Nguyen-Hong and Wells (2003) for foreign restrictiveness indices in higher education.

Notes: All regressions are estimated using OLS. Standard errors are reported in parentheses. Separate regressions using other modes of supply yielded no significant results. Statistical significance is indicated by: * (10%), ** (5%) and *** (1%).
HDI Education Index is statistically insignificant for the other modes of supply restrictions. The simple average of the modal restrictions, the foreign restriction index, are regressed on the HDI and the HDI Education Index, but this yields similarly statistically insignificant results.

The results suggest that easing restrictions on foreign commercial presence, for example, by removing restrictions on entry or forms of establishment or by allowing freedom in curriculum planning, can have a more significant impact on human development than easing restrictions in other modes. Since HDI is composed of literacy rates, enrolment, life expectancy and income indicators, it is highly plausible that allowing more competition in the provision of education services domestically can help improve access to education, and thus to the other indicators that comprise the human development index. Admittedly, Mode 2 or allowing access to better education abroad, or Mode 1 (e.g., allowing access to distance education) can substitute for Mode 3 education services trade, especially for tertiary education; however, the regression results show that, thus far, these other modes have an insignificant impact.11

Next, other human development indicators such as per capita income and a democracy index are used as dependent variables. Non-parametric estimates with the democracy index and log per capita GDP as dependent variables yield a different result from that of the HDI indices. In these non-parametric regressions, all modes of supply restrictions show a significantly negative correlation with per capita income (figure 2) and a positive correlation with the democracy index, defined as “high” for less democratic societies and “low” for more democratic ones.12 This suggests that more open policies in education, be it on allowing students to study abroad or easing restrictions in education provision, help to broaden minds and make people better informed about governance and society, thus leading to greater political and civil freedoms (figure 3).

Table 2 validates the results from the non-parametric estimates.13 Least squares regression results show that all modes of supply restrictiveness indices have the correct sign and strong statistical significance. Regressions with the democracy index as the dependent variable yield statistically significant positive correlations with modal restrictiveness indices. The result shows that greater restriction on education services, in all modes of supply, is correlated with a worsening of democracy, where the democracy index is constructed with high ratings for countries with few or no political or civil liberties and low ratings for those with a wide range of political and civil rights.

---

11 A valid question is how commercial presence restrictions on tertiary education can be important for the components of the HDI Education Index, such as literacy and enrolment rates. Our response is that with the former, there might indeed be little direct relationship, but that with enrolment rates, education services restrictions can come into play.

12 See www.freedomhouse.org for the definition of the democracy index.

13 The authors are aware that the per capita GDP regressions exclude a number of variables usually included in income and growth regressions. The reason for this exclusion is the very small sample size. These results should only be taken as indicative.
Figure 2. Non-parametric regressions of GDP per capita on indices of education services restrictiveness

Figure 3. Non-parametric regressions of democracy index on indices of education services restrictiveness
Table 2. Regressions on income and democracy

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Log of GDP per capita</th>
<th>Democracy index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Population growth</td>
<td>-0.768***</td>
<td>-0.382*</td>
</tr>
<tr>
<td></td>
<td>(0.16)</td>
<td>(0.206)</td>
</tr>
<tr>
<td>Log (GDP per capita)</td>
<td>-0.244</td>
<td>-0.457</td>
</tr>
<tr>
<td>Consumption abroad</td>
<td>-0.749***</td>
<td>1.4921***</td>
</tr>
<tr>
<td>Commercial presence</td>
<td>-0.461***</td>
<td>0.5891*</td>
</tr>
<tr>
<td>Cross-border supply</td>
<td>-1.22***</td>
<td>2.0013***</td>
</tr>
<tr>
<td>Presence of natural persons</td>
<td>-0.846***</td>
<td>1.2669***</td>
</tr>
<tr>
<td>Foreign index (combined)</td>
<td>-0.985***</td>
<td>1.2669***</td>
</tr>
<tr>
<td>Constant</td>
<td>10.75***</td>
<td>10.54***</td>
</tr>
<tr>
<td></td>
<td>(0.23)</td>
<td>(0.31)</td>
</tr>
<tr>
<td>Observations</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>R²</td>
<td>0.65</td>
<td>0.54</td>
</tr>
</tbody>
</table>

Sources: Freedom House (www.freedomhouse.org/) for the democracy index; WDI online database of the World Bank for GDP per capita and population growth; and Nguyen-Hong and Wells (2003) for the foreign restrictiveness indices in higher education.

Notes: All regressions are estimated using OLS. Standard errors are reported in parentheses. Statistical significance is indicated by: * (10 per cent), ** (5 per cent) and *** (1 per cent).
The authors also tried regressing poverty rates, the Gini index and the cost of tertiary education on the restriction indices. The poverty rates regressions yielded no statistically significant correlation with any of the modal restriction indices. This is surprising, as one would immediately associate greater provision and efficiency of education services with opening opportunities, especially to a wider population, and thus reducing poverty; however, the result provides no evidence in support of this expectation. One reason might be that restrictions in the tertiary education sector were used due to unavailability of data for the more poverty-relevant primary and secondary sectors. Using the Gini coefficient as the dependent variable yields a statistically significant result for restrictions in commercial presence, but with a negative sign. This means that instead of education supplied via commercial presence being a factor that reduces inequality, it appears to be correlated with worsening inequality. On the other hand, the result may also reflect the higher returns to knowledge and unequal access to education, especially higher education, where such education may entail high expenditures. Mode 3 trade in education (international schools or branch campuses of foreign universities, for example) is very likely to be correlated with high tuition fees, so access is likely to be skewed. Such polarity matches what we see more broadly from globalization: those countries that are connected to supply chains do well, others that are not, or have bad geography, do not. Finally, using the life satisfaction index as the dependent variable shows negative correlations with education restrictions, which implies that decreasing life satisfaction goes together with large restrictions in education. This result is compatible with other studies that find human capital and socio-political factors as important correlates of life satisfaction (see, for example, Abdallah, Thompson and Marks, 2008.)

In summary, the results show that restrictions on education services are not only associated with poorer human development results, but also that some restrictions on modes of supply have a greater impact than others. In particular, it appears that restrictions on commercial presence take on greater importance for human development than restrictions on other modes of supply. In the case of democracy and per capita income, all modes of supply restrictions are significantly associated with these outcomes. The life satisfaction index is negatively correlated with restrictions on all modes of supply except commercial presence, while the Gini coefficient regression appears to suggest that openness in commercial presence, surprisingly, correlates with worsening inequality.

3.2. Distribution services

There are many potential links between distribution services and human development. A variety of human development outcomes rely on the ability to move important goods efficiently and cost-effectively from one point to another. Sarley, Allain and Akkhial

14 This excellent insight was provided by Pierre Sauvâ.

15 The life satisfaction index is constructed from various surveys of subjective well-being. For example, the Pew global attitudes survey, asks: “Suppose the top of the ladder represents the best possible life for you and the bottom of the ladder the worst possible life. Where on this ladder do you feel you personally stand at the present time?” (Abdallah, Thompson and Marks, 2008). High values of the index represent high life satisfaction.

16 Specifically, with consumption abroad (mode 2), cross-border supply (mode 1) and movement of natural persons (mode 4).
(2009), for example, analysed the cost of upgrading supply chains as part of meeting the increased movements of certain goods inherent in achieving the Millennium Development Goals. One example is agricultural staples; an effective distribution network enables poor households to access markets for basic produce, either as buyers or sellers. Economic and nutritional wellbeing are therefore both linked to the quality of distribution services.

Vaccines are another important example. Most developing countries lack the means to manufacture basic vaccines locally. Even in those with domestic capacity, economies of scale mean that production is usually concentrated in just a few central locations. To maximize the human development impact of the availability of vaccines, it is vital that they be distributed to those in need. An efficient, high quality and cost-effective distribution network represents a necessary intermediate link in the chain between vaccine producers and consumers.\(^1\) To the extent that regulation of the sector influences prices, costs, and quality and service provision, it is therefore possible that trade and regulatory policies in distribution directly affect human development outcomes such as vaccine availability. Although data are available on policy restrictiveness in the distribution sector, they do not cover all factors that might impinge on the emergence of efficient distribution networks. For that reason, the authors have used both a pure policy index covering the distribution sector as usually defined for trade purposes as well as broader data on logistics performance that are more likely to capture sectoral efficiency as a whole.

Non-parametric regression analysis provides some initial support for this hypothesis of a link between distribution sector regulation and vaccine availability. Figure 4 shows that even after controlling for GDP per capita, there is a noticeable negative association between the restrictiveness of domestic regulation in the distribution sector, and the rate of the diphtheria, pertussis and tetanus (DPT) vaccination. A very similar relationship is observed using the measles immunization rate as the dependent variable (figure 5).

Evidence from standard OLS regressions confirms these insights (table 3).\(^1\) Of course, results need to be interpreted cautiously given the simplicity of the model and the very small number of observations. However, the first indications are that a more restrictive set of distribution sector regulations is associated with lower immunization rates; both regressions using the domestic restrictiveness index show negative and statistically significant coefficients. This result is robust to the inclusion of per capita GDP as a control variable. This last point is important because of the strong role played by income in determining human development outcomes such as vaccination rates. The results of the current analysis show that even after controlling for income, more liberal distribution sector regulations are linked to stronger immunization outcomes. For examples of the types of policy reforms that could be envisaged as part of a broad-based approach to liberalization of the distribution sector, see Dihel and Shepherd (2007).

\(^1\) Public procurement policies are also likely to matter for the vaccination outcomes analysed. However, the authors do not have data with which to measure such policies in the same way as restrictions on trade in distribution services can be measured.

\(^1\) Results are qualitatively identical if a fractional logit model is used to take account of the fact that the dependent variable is bound between zero and unity (Papke and Wooldridge, 1996).
Figure 4. Non-parametric regression of the DPT immunization rate on per capita GDP and an index of distribution services restrictiveness (one outlier excluded)

Figure 5. Non-parametric regression of the measles immunization rate on per capita GDP and an index of distribution services restrictiveness (one outlier excluded)
Although examining particular policies in detail is outside the scope of this paper, measures that are likely to be particularly important include restrictions on foreign investment, import licensing for wholesalers and limitations on the promotion of retail products.

Interestingly, it is only the regressions using the domestic restrictiveness index that produce significant results (columns 1 and 3). Neither regression using the foreign restrictiveness index has a statistically significant coefficient (columns 2 and 4). This result suggests that it is the overall quality of regulation that matters for distribution sector performance, not just the degree of discrimination against foreign service providers. It is consistent with the observation that the sector is subject more to market entry restrictions than it is to discriminatory measures based on national origin.

For this sector, an alternative empirical strategy can also be adopted that allows the number of observations in the sample to be greatly increased. To do so, one component of the World Bank’s Logistics Performance Index (LPI 2007) is used as a measure of sectoral performance in place of the Australian Productivity Commission regulatory indicators. The LPI is based on a survey administered to around 1,000 logistics professionals around the world. By asking them to rate performance in a number of countries with which they trade, the overall sample size is increased to around 5,000 observations. The LPI itself is a composite of six indices based on average responses to survey questions. The component used here requested respondents to rate on a scale of one to five the quality and competence of logistics services in a given country.

Table 3. Regression results using distribution restrictiveness indices

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Immunization rate (DPT)</th>
<th>Immunization rate (measles)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Log (GDP per capita)</td>
<td>6.697***</td>
<td>6.981***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.001)</td>
</tr>
<tr>
<td>Domestic restrictiveness</td>
<td>-40.677*</td>
<td>-59.944**</td>
</tr>
<tr>
<td>index</td>
<td>(0.082)</td>
<td>(0.049)</td>
</tr>
<tr>
<td>Foreign restrictiveness</td>
<td>10.509</td>
<td>10.358</td>
</tr>
<tr>
<td>index</td>
<td>(0.425)</td>
<td>(0.495)</td>
</tr>
<tr>
<td>Constant</td>
<td>27.800*</td>
<td>19.971</td>
</tr>
<tr>
<td></td>
<td>(0.086)</td>
<td>(0.287)</td>
</tr>
<tr>
<td>Observations</td>
<td>36</td>
<td>37</td>
</tr>
<tr>
<td>R²</td>
<td>0.46</td>
<td>0.42</td>
</tr>
</tbody>
</table>

Sources: WDI online database of the World Bank for immunization rates and GDP per capita; and the Australian Productivity Commission database of restrictions to services trade for the restrictiveness indices.

Notes: All regressions are estimated using OLS with robust standard errors. Prob. values are reported in parentheses. Statistical significance is indicated by: * (10 per cent), ** (5 per cent) and *** (1 per cent). One outlier is excluded in each regression.
Although a valid measure of the performance of service providers in this area, the LPI data clearly differ from the policy restrictiveness measures used elsewhere in this paper, in that they measure private sector development rather than public sector regulation. Nonetheless, using the LPI data makes it possible to greatly expand the sample, and thus to include additional explanatory variables that help demonstrate the robustness of the results. In particular, controls for the total level of spending on health in GDP are included in order to account for the fact that a higher level of health spending should produce higher vaccination rates as well as the overall level of government effectiveness – i.e., the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government’s commitment to such policies. An interaction term between the LPI services component and per capita GDP is also included to account for the possibility that logistics affects vaccination rates differently in developed countries versus developing countries.

The results using OLS are given in table 4. The signs of all control variables are as expected: countries at higher income levels, those that spend more on health and those with more effective governments tend to have higher levels of immunization for DPT and measles. All control variables have coefficients that are statistically significant at the 1 per cent level.

Table 4. Regression results using the Logistics Performance Index)

<table>
<thead>
<tr>
<th></th>
<th>(1) Immunization rate (DPT)</th>
<th>(2) Immunization rate (measles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPI (services)</td>
<td>0.475***</td>
<td>0.448***</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.004)</td>
</tr>
<tr>
<td>LPI*Log (GDP per capita)</td>
<td>-0.056***</td>
<td>-0.054***</td>
</tr>
<tr>
<td></td>
<td>(0.002)</td>
<td>(0.001)</td>
</tr>
<tr>
<td>Log (GDP per capita)</td>
<td>0.171***</td>
<td>0.166***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Total health spending (% of GDP)</td>
<td>1.156***</td>
<td>0.842*</td>
</tr>
<tr>
<td></td>
<td>(0.006)</td>
<td>(0.062)</td>
</tr>
<tr>
<td>Government effectiveness index</td>
<td>0.072***</td>
<td>0.071**</td>
</tr>
<tr>
<td></td>
<td>(0.007)</td>
<td>(0.014)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.611</td>
<td>-0.546</td>
</tr>
<tr>
<td></td>
<td>(0.139)</td>
<td>(0.146)</td>
</tr>
<tr>
<td>Observations</td>
<td>142</td>
<td>142</td>
</tr>
<tr>
<td>R²</td>
<td>0.355</td>
<td>0.305</td>
</tr>
</tbody>
</table>

Sources: WDI online database of the World Bank for immunization rates, GDP per capita, and total spending on health as a percentage of GDP; the World Governance Indicators for the index of government effectiveness; and the World Bank’s Logistics Performance Index for the LPI services component.

Notes: All regressions are estimated using OLS with robust standard errors. Prob. values are reported in parentheses. Statistical significance is indicated by: * (10 per cent), ** (5 per cent) and *** (1 per cent).

19 Again, qualitatively identical results were obtained using the fractional logit model.
In addition, the LPI services component has a positive and 1 per cent significant coefficient; in line with the smaller sample results presented above, better logistics performance is associated with higher immunization rates. Interestingly, the interaction term is negative and 1 per cent statistically significant, which indicates that the link between performance in logistics services and vaccination rates becomes weaker as countries get richer. This result highlights the main argument of this paper, i.e., getting service delivery right is particularly important for poor people in developing countries.

3.3. Engineering services

Regulation in the engineering services sector is also expected to be correlated with a number of important human development outcomes. Engineering services are an important input in many development areas. Construction projects that improve the quality of life in rural areas are an example. So, too, is the extension of basic services such as telephony. To the extent that engineering services are available on a high-quality and cost-effective basis, these types of projects become easier and less expensive to implement. Therefore the authors expect that a regulatory stance that tends to reduce cost in the sector to be associated with improved development outcomes in these areas.

In this case, the data provide only mixed evidence in relation to this hypothesis. Non-parametric regressions using telecommunications outcomes as the dependent variables tend to support it. This is true for the number of telephone users and internet users per 100 head of the population (figures 6 and 7); in both cases, there is an apparent negative relationship between engineering sector restrictiveness and development outcomes after controlling for per capita income.

Surprisingly, the same result does not hold for road density; there is no obvious relationship between this outcome variable and engineering sector restrictiveness (figure 8). This issue is dealt with below in the context of the fully-specified regression model. In any case, the likely reason for the weakness of these results is that the policy data essentially only capture the professional services aspect of engineering and not, for example, restrictions affecting trade in construction services. It is likely that if data were available for additional related sectors such as construction and government procurement, the results would be stronger.

Results from OLS regressions are similar to those from the non-parametric exercise (table 5). It is found that after controlling for per capita income, the restrictiveness of regulation in the engineering sector is associated with weaker outcomes in terms of telephone users (foreign index, column 4) and Internet users (domestic index, column 1). The same is true for road network density using the foreign index (column 6). Whereas in distribution services it is only the domestic index that matters for performance, evidence is found here that domestic regulation and the degree of discrimination vis-à-vis foreign service providers are both important.
Figure 6. Non-parametric regression of the number of telephone users per 100 head of population on per capita GDP and an index of engineering services restrictiveness

Figure 7. Non-parametric regression of the number of internet users per 100 head of population on per capita GDP and an index of engineering services restrictiveness
Figure 8. Non-parametric regression of road density on per capita GDP and index of engineering services restrictiveness

Table 5. Regression results using engineering restrictiveness indices

<table>
<thead>
<tr>
<th></th>
<th>Internet users per 100 population</th>
<th>Phone users per 100 population</th>
<th>Road density</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>Log (per capita GDP)</td>
<td>15.347***</td>
<td>13.889***</td>
<td>23.644***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Domestic restrictiveness index</td>
<td>-47.962**</td>
<td>-15.535</td>
<td>-0.870</td>
</tr>
<tr>
<td></td>
<td>(0.047)</td>
<td>(0.442)</td>
<td>(0.817)</td>
</tr>
<tr>
<td>Foreign restrictiveness index</td>
<td>-22.015</td>
<td>-26.271*</td>
<td>-3.952*</td>
</tr>
<tr>
<td></td>
<td>(0.177)</td>
<td>(0.074)</td>
<td>(0.096)</td>
</tr>
<tr>
<td>Constant</td>
<td>-121.343***</td>
<td>-106.656***</td>
<td>-185.161***</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Observations</td>
<td>34</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>R²</td>
<td>0.619</td>
<td>0.602</td>
<td>0.840</td>
</tr>
</tbody>
</table>

Sources: WDI online database of the World Bank for Internet and phone users per 100 head of population, road density, and GDP per capita; and the APC database of restrictions to services trade for the restrictiveness indices.

Notes: All regressions are estimated using OLS with robust standard errors. Prob. values are reported in parentheses. Statistical significance is indicated by: * (10 per cent), ** (5 per cent) and *** (1 per cent).
Examine in detail the particular policies that could be reformed to improve sectoral performance and associated human development outcomes is outside the scope of this paper. However, the analysis by Dihel and Shepherd (2007) identified measures such as licensing and accreditation restrictions, restrictions on foreign investment, and legal limitations on the types of services that could be provided, or their pricing, as notable examples of policies that tend to restrict competition in the sector.

3.4. Telecommunication services

In the information age, access to basic telecommunication services is an important part of civic life. It enables citizens to participate actively in economic, social and political life. It enables them to access basic information and to communicate actively with others. Extension of basic telecommunication services to the hinterland has long been an important development objective. Regulation has traditionally played a strong role in shaping the sector. In recent decades, however, there has been a strong move towards liberalization, which has been accompanied by a general extension of the availability of basic services.

Indeed, the telecommunication sector provides some of the strongest evidence in favour of the authors’ core hypothesis that less restrictive regulation is linked to improved human development outcomes. In terms of access to basic services, non-parametric regressions strongly suggest an inverse relationship between regulatory restrictiveness and access to internet and telephony (figures 9 to 12). The same is true for the HDI education index and the WGI voice and accountability indicator. In line with the discussion in the previous paragraph, these results suggest that less restrictive regulation not only increases access to basic services, but can help improve a country’s general development and governance environment by improving internal communication links. Dihel and Shepherd (2007) identified a range of policies that could potentially act to restrict trade and competition in the sector, including limitations on network access, restrictions on foreign investment and licensing restrictions.

Parametric OLS regressions confirm these insights (table 6). As in table 4 (LPI regressions), the expanded sample size available with the telecommunications data makes it possible to include some additional control variables – i.e., overall government effectiveness (as defined by the World Governance Indicators) as well as total government spending as a percentage of GDP – as an indicator of the extent to which the State is involved in service provision. The control variables generally have the expected signs, but they are not always statistically significant. In all eight regressions, however, the indices of regulatory restrictiveness are negative and 1 per cent statistically significantly associated with the various development outcome measures, i.e., access to internet and telephony, education, and voice and accountability in government. Together, these results provide strong evidence in favour of the core hypothesis given in this paper.
Figure 9. Non-parametric regression of the number of internet users per 100 head of population on per capita GDP and index of telecommunication services restrictiveness

Figure 10. Non-parametric regression of the number of telephone users per 100 head of population on per capita GDP and index of telecommunication services restrictiveness
Figure 11. Non-parametric regression of the HDI education index on per capita GDP and index of telecommunication services restrictiveness

Figure 12. Non-parametric regression of the WGI voice and accountability index on per capita GDP and an index of telecommunication services restrictiveness
Table 6. Regression results using telecommunications restrictiveness indices

<table>
<thead>
<tr>
<th></th>
<th>Internet users per 100 population</th>
<th>Phone users per 100 population</th>
<th>HDI education index</th>
<th>WGI voice and accountability index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>Log (per capita GDP)</td>
<td>0.004</td>
<td>0.003</td>
<td>0.056***</td>
<td>0.055***</td>
</tr>
<tr>
<td></td>
<td>(0.545)</td>
<td>(0.666)</td>
<td>(0.000)</td>
<td>(0.000)</td>
</tr>
<tr>
<td>Domestic restrictiveness index</td>
<td>-0.231***</td>
<td>-0.220***</td>
<td>-0.383***</td>
<td>-0.918*</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.005)</td>
<td>(0.001)</td>
<td>(0.065)</td>
</tr>
<tr>
<td>Foreign restrictiveness index</td>
<td>-0.126***</td>
<td>-0.120***</td>
<td>-0.187***</td>
<td>-0.623**</td>
</tr>
<tr>
<td></td>
<td>(0.022)</td>
<td>(0.000)</td>
<td>(0.005)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Government effectiveness index</td>
<td>0.093***</td>
<td>0.092***</td>
<td>0.108***</td>
<td>-0.056**</td>
</tr>
<tr>
<td></td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.000)</td>
<td>(0.037)</td>
</tr>
<tr>
<td>Government spending (% GDP)</td>
<td>-0.038</td>
<td>-0.037</td>
<td>0.105</td>
<td>0.278</td>
</tr>
<tr>
<td></td>
<td>(0.747)</td>
<td>(0.749)</td>
<td>(0.504)</td>
<td>(0.326)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.123**</td>
<td>0.131**</td>
<td>-0.228**</td>
<td>-0.153</td>
</tr>
<tr>
<td></td>
<td>(0.029)</td>
<td>(0.021)</td>
<td>(0.012)</td>
<td>(0.375)</td>
</tr>
<tr>
<td>Observations</td>
<td>132</td>
<td>132</td>
<td>133</td>
<td>113</td>
</tr>
<tr>
<td>R²</td>
<td>0.768</td>
<td>0.768</td>
<td>0.838</td>
<td>0.595</td>
</tr>
</tbody>
</table>

Sources: WDI online database of the World Bank for Internet and phone users per 100 head of population, GDP per capita and total government spending as a percentage of GDP; the HDI website for the education index; the World Governance Indicators for the voice and accountability, and government effectiveness indices; and the APC database of restrictions to services trade for the restrictiveness indices.

Notes: All regressions are estimated using OLS with robust standard errors. Prob. values are reported in parentheses. Statistical significance is indicated by: * (10 per cent), ** (5 per cent) and *** (1 per cent).
3.5. **Pooled estimation results**

The most obvious shortcoming of the above sectoral results is that they only control for per capita income. There are many other factors that could also potentially influence human development outcomes, in addition to income and sector-level regulation. Examples include the general level of development of governance institutions and the overall efficiency of regulation. However, small sample sizes make it impractical to account directly for these influences through the inclusion of additional control variables.

In an attempt to deal with this problem, the authors also estimated models that pool data across all sectors. This approach allowed the inclusion of fixed effects by country and by sector. The fixed effects clean out all external influences that vary in the country or sector dimensions, thereby relieving, to a large extent, the omitted variable bias that might be suspected in the previous results. For example, the fixed effects control for influences such as government effectiveness or the composition of government spending. In terms of the data, the authors selected one human development indicator per sector: (a) the DPT immunization rate for distribution; (a) Internet users per 100 population for engineering; and (c) phone users per 100 head of population for telecommunications. At this stage, education is not included in the panel estimates because of the different structure of the regulatory indicators, which measure restrictiveness by mode of supply rather than on an aggregate domestic or foreign basis, as in the other sectors.

The first two columns of table 7 present estimation results for the pooled model, using data for all three sectors. Results strongly support the authors’ contention that the domestic and foreign restrictiveness indices both have negative and statistically significant coefficients (1 per cent and 5 per cent, respectively). The difference in magnitude between the two coefficients suggests, as noted above, that it is usually the restrictiveness of domestic regulation that makes the greatest difference in terms of human development outcomes. This result probably reflects the fact that it is barriers to market entry and restrictions on firm operations that apply to all potential market players, both foreign and domestic, that entail the biggest economic costs. Discrimination against foreign service providers, although important in a trade policy context, is only a symptom of broader discrimination in favour of incumbents against potential entrants. Larger economic distortions, with their accompanying efficiency costs, are associated with a more significant impact on human development outcomes.

In the last two columns of table 7, the telecommunications sector is excluded from the dataset. The reason for doing so is that it strongly dominates the other sectors in terms of the number of data points available. Although the domestic and foreign restrictiveness indices both have the expected negative coefficients, they are no longer statistically significant once the telecommunications sector is included. The results in columns 1-2 are therefore being driven, to a significant degree, by a close link between regulation and human development outcomes in that sector. In part, this is a consequence of data limitations; the human development data are much more closely related to sectoral economic performance in telecommunications than in the other sectors. The greatly reduced sample size is also
a constraint; the regressions in columns 3 and 4 have only 71 observations but a total of 39 dummy variables to account for country- and sector-level influences. The last two regressions therefore push the data to their limit, and it is perhaps not surprising that the results lose precision.

### Table 7. Regression results using pooled data

<table>
<thead>
<tr>
<th></th>
<th>All sectors</th>
<th>All except telecom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Domestic restrictiveness index</td>
<td>-48.676***</td>
<td>-15.732</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.586)</td>
</tr>
<tr>
<td>Foreign restrictiveness index</td>
<td>-26.702**</td>
<td>-4.951</td>
</tr>
<tr>
<td></td>
<td>(0.007)</td>
<td>(0.816)</td>
</tr>
<tr>
<td>Observations</td>
<td>207</td>
<td>207</td>
</tr>
<tr>
<td>R²</td>
<td>0.968</td>
<td>0.967</td>
</tr>
<tr>
<td>Country fixed effects</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Sector fixed effects</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Sources: WDI online database of the World Bank for phone users per 100 head of population, Internet users per 100 head of population, and the rate of DPT immunization; and the APC database of restrictions to services trade for the restrictiveness indices.

Notes: All regressions are estimated using OLS with robust standard errors. Prob. values are reported in parentheses. Statistical significance is indicated by: * (10 per cent), ** (5 per cent) and *** (1 per cent).

### 4. Conclusion

This paper presents some preliminary and very tentative empirical evidence on the links between services trade and human development. The data generally show that a more restrictive services trade policy environment is correlated with worse human development outcomes. This finding is consistent with the notion that more restrictive services policies result in higher prices of basic goods and services for consumers.

It has long been argued that trade policy in service sectors can lead to higher national income that, in turn can promote human development. The results presented here go one step further in isolating a direct connection between service sector restrictiveness and development, which acts independently of the income channel. Of course, it is necessary to keep the findings in context; although we control for a range of other factors in our regressions, trade policy is only one factor among many that go together to give rise to particular human development outcomes.

One implication of the results is that the tension between service sector openness and human development outcomes, which is apparent in some of the development policy literature, has perhaps been overstated. At the very least, the results suggest that there is no systematic association between greater policy restrictiveness and improved outcomes.
Rather, there is considerable scope for open and efficient service sectors to help promote human development. Reducing the restrictiveness of service sector policies through well-designed liberalization programmes can be one element of a successful approach to promoting both economic and human development together.

There is considerable scope for future research to expand on the approach and results presented in this paper. The main difficulty that the authors have confronted relates to the availability of data on applied policy settings in service sectors. As data for more countries and years become available, it will be possible to expand the sample size used here, and perhaps even move to a genuine panel data framework. Both steps are important in ensuring that the authors’ results are robust to the exclusion of additional country- and sector-specific factors from the regressions.
Annex

Trade in health services and human development

Liberalizing trade in health services will have both potentially negative and positive results. For example, by liberalizing cross-border trade, telemedicine can help in upgrading knowledge of local medical professionals, and make expert medical advice available even in remote areas. Increased foreign investment in hospitals and clinic facilities can improve supply of medical services, both in terms of quality and quantity. Greater access to state-of-the-art medical technology becomes possible. Improving facilities can help attract more foreign health consumers who are shopping around for cheaper services for simple medical procedures, and can help increase foreign exchange receipts from medical tourists.

However, these positive outcomes have to be balanced with the potential downside. For example, in telemedicine, how does one control for potential medical malpractice? Who is supposed to shoulder the liabilities? Increased foreign-funded hospital facilities can generate an internal brain drain effect whereby medical professionals move from the public hospitals/clinics to higher paying private facilities. Its effect on quality medical access for the broader population has a serious offset effect on the potential benefits from improved access to advanced medical services that those in middle- to high-income groups enjoy. Freer movements of medical professionals could also lead to an international brain drain situation, at the expense of a huge public subsidy for educating medical professionals.

Because data in health services is difficult to obtain, it is hard to make correlations between liberalization of health services and development outcomes, particularly with regard to equity and access to medical services. On the one hand, as in education services, there are not many commitments in health services, if we go by the number of GATS commitments in the sector – only about 32 out of 134 members have made commitments in health services. On the other hand, some of the potential adverse effects have taken place with or without liberalization; for example, the outward migration of medical professionals have been observed in developing countries with or without accompanying liberalization or GATS commitments in developed economies. Likewise, the increase in cross-border trade in medical transcription services has taken place without Mode 1 commitments in many outsourcing destination countries.

As with other service sectors, it is expedient for government to fix the national regulatory framework, and to understand its national policies and priorities before opening up an important sector such as health services, where many public services and subsidies may be affected and in which the objective goes far beyond mere economics. For many countries, the first priority is extensive quality health care coverage at affordable cost. Equity and access considerations are important considerations that should be balanced against the potential increase in foreign exchange receipts through health services exports.
References


Chapter 3

A comparison of the industrialization paths for Asian services outsourcing industries, and implications for poverty alleviation

F. Ted Tschang

1. Introduction

This paper introduces the different developmental experiences of the People’s Republic of China (PRC), the Philippines, and India in software and services outsourcing, and will provide a discussion of their implications for economic growth and poverty reduction in these countries. The software industry has been considered in many quarters to be the vanguard of a global trend toward the outsourcing of services by developed regions and the development of new service sectors conducting that outsourcing work within developing regions. In this paper, software and information technology (IT)-enabled services (ITES) outsourcing industries will be referred to as IT services industries.

1.1. Beginnings of software outsourcing

In a way, services outsourcing has been going on for decades. The outsourcing of services started domestically in the United States of America with software, particularly when information systems were “outsourced” from large enterprises to “providers”. Developing countries such as India only became involved in this type of work in the 1980s, initially only augmenting the labour forces of United States-based companies. Eventually, this “on-site” work was transferred off-site (or “offshored”) to India, as information technologies and infrastructure enabled the work to be done at a distance, and in lower-cost, remote locations.

In addition to India, a number of other countries show promise in being offshoring or outsourcing locations. While outsourcing usually denotes moving work from the firm to outside its boundaries, but not necessarily offshore, from this point on, outsourcing and offshoring will be used interchangeably to denote work that is moved offshore, if the outsourcing is clearly contextualized as being to offshore locations. These include the PRC, the Philippines, and, to some extent, Viet Nam and Sri Lanka as well as Brazil and the Russian Federation. The two Asian countries that have recently seen some successful developments in outsourcing are the PRC and the Philippines. However, as this paper shows, for the PRC the outsourcing generally follows the original United States model – outsourcing of work from domestic (PRC) companies (called “clients”) to other locally-based

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1 This paper has benefitted from conversations with Raja Mitra, M.G. Quibria, S. Sadagopan and Nirvikar Singh. Any remaining errors are the responsibility of the author. The views expressed are those of the author and should not be attributed to the Singapore Management University.
(foreign and domestic) enterprises (called “providers”). Typically, outsourcing locations are developing countries with large surplus low-wage and high-quality labour pools. However, pockets of outsourcing do exist even in higher wage countries such as Malaysia and Singapore.

In Section 2, the cases of the PRC, India and the Philippines are examined. Given India’s seeming dominance in IT, one issue of interest is how the other two countries “emerged” as well as how their paths varied from one another. The factors that caused this “emergence” of industry (as opposed to those factors that affect the growth and scaling of the industry) are also identified. The experiences of the Philippines and the PRC are compared to that of India where possible, in order to draw policy implications. Section 3 examines the economic and equity implications of the ITES industries in these three countries, and discusses, among other elements, employment, linkages within the economy and the implications for poverty reduction.

1.2. Major dimensions of industry

Table 1 illustrates the nature and relative strengths of all three selected countries’ industries. While India’s industry dwarfs those of both the PRC and the Philippines, the industry has a place in each country’s development strategy, be it overweighted (as in the India) or part of a balanced portfolio of industries (as in the PRC). In 2006, the PRC’s IT services’ share of total exports was just 3.3 per cent, compared with India’s 26.3 per cent and the Philippines’ 2.5 per cent (Deutsche Bank Research, 2009). According to the National Association of Software and Service Companies (NASSCOM) (2009), the Philippines’ business services (which includes IT services) share of gross domestic product (GDP) rose from 1.5 per cent in 2004 to 2.1 per cent in 2008, while the Indian IT services equivalent went from 1.2 per cent of GDP in 1998 to 5.8 per cent in 2009 – an almost 500 per cent increase in 11 years.\(^2\) Table 1 also highlights the three dimensions that characterize an industrial model of development: ownership (of firms); sectoral orientation; and market focus.

1.2.1. Ownership

The first dimension, the ownership of firms, conveys information about the competitive advantages and strategies of firms. A more important finding of this study is the observation that multinational enterprises (MNEs) play substantial but different roles in different countries’ industries, as will be shown in the cases of the PRC and the Philippines. In the case of the PRC, while domestic firms are ostensibly trying to develop along the lines of India, MNEs also play a role in supporting the growth of domestic firms. In the case of the Philippines, it is primarily MNEs that are creating outsourcing facilities, while domestic firms have tended to be much more limited in number and capability.

\(^2\) PRC’s export of IT services was reported to account for about 1.2 per cent-1.4 per cent of GDP in 2006; however, the data for both India and PRC were reported to be unconfirmed (Organisation for Economic Co-operation and Development, 2006).
1.2.2. Sectoral orientation

The second dimension is the nature of the industry’s client sectors; for example, software services or ITES that include: (a) business process outsourcing (BPO) (which may involve work from an array of other sectors); (b) call centres; and (c) research and development (R&D) or engineering services. India started out primarily in software but has broadened its scope to include all manner of outsourcing, while the Philippines started out mainly in call centres, but is gradually broadening its capacity to encompass a somewhat more balanced industrial structure containing other ITES sectors and software. As with India, the PRC also started out in software outsourcing and is expanding its business process work; however, the PRC is doing so in a more limited way. Invariably, each country has broadened its sectoral composition to include outsourcing in multiple sectors.

1.2.3. Market focus

The third dimension has to do with market focus. India and the Philippines have focused primarily on exports. India is gradually developing its growing domestic sector, while the Philippines has had to contend with being a late mover. Understanding these differences will help create an understanding of how other countries such as the PRC and the Philippines can still succeed in these sectors.
1.3. Factors explaining why and where outsourcing occurs

From a developmental policy perspective as well as from the viewpoint of individual firms, the important issues are which factors dictate the formation of an outsourcing industry, and whether these factors and the “outsourcing model” they comprise vary from country to country. There is already a broad literature on MNE location behaviour that contains studies on the software industry. The breadth of possible explanatory factors and conditions include factor-based comparative advantages (or “factor advantages”), such as labour at the national and regional levels as well as other firm-level sources of competitiveness and capability. The actions of government and foreign and domestic firms as well as the relations between them have also helped the growth of these industries.

Three main factors can be defined that influence the outsourcing industry’s pattern of development (including the location of the work and the emergence of domestic firms): (a) factor advantages; (b) firm capabilities; and (c) the business environment (including the role of government policy and business opportunities). These, respectively, equate approximately to the key elements behind various software industries’ development, as suggested by Arora and Gambardella (2006): (a) comparative advantage (or what we term factor advantages); (b) firm competencies; and (c) opportunities.

1.3.1. Factor advantages

This first type of factor, the advantage of labour supply conditions, has been clearly identified in studies of investment patterns as well as of industrial export competitiveness, including those that relate to software outsourcing investments (Arora and others, 2001; Arora and Gambardella, 2006; Dossani and Kenney, 2003; and McKinsey Global Institute, 2003). Together, many of these studies support the common hypothesis that resources, such as labour costs and supply, are critical to the choice of location to where the work is to be outsourced. This rationale for foreign investment could be termed “resource-seeking” behaviour in the conventional international business vernacular, resulting in many MNEs entering lower-wage countries such as the PRC, countries in South-East Asia such as Malaysia, the Philippines and Singapore, and India. The outsourcing done by foreign MNEs’ shared services facilities amounts to some 10 per cent of the Indian industry’s total, but is a much larger contributor to the Philippine IT industry’s growth.3

1.3.2. Firms’ capabilities

The second set of factors involves firms’ competencies and strategies. Using this as a lens, industrial development can be understood to be the result of how individual firms develop their capabilities. In India, the accounts of how early firms succeeded through the creation of dynamic capabilities are by now a part of the industry’s history (Athreye 2005). In fact, most studies on outsourcing tend to define the upgrading process as a simpler form of strategy that relates to how the process and knowledge capabilities of firms are increased.

3 The author’s estimate is based on interviews and statistics from India’s National Association of Software Services Companies, available online at www.nasscom.com.
Many firms use the Software Engineering Institute’s Capability Maturity Model as a proxy for capability (see for example, Krishnan and others, 2000).

1.3.4. Business environment

The third type of factor is the business environment (specifically, the business opportunities presented to firms). It is worth pointing out that India’s early start gave its firms an unparalleled “blue sky” (i.e., virgin and unrestricted) opportunity for developing their capabilities and therefore, India’s ITES industry as a whole. While outsourcing opportunities continue to grow, India’s advantages are by now, according to some observers, “locked in” by virtue of its firms’ scale and depth of capability. The author illustrates later in this paper how more countries are taking advantage of opportunities.

A second aspect of the business environment that may have an impact on outsourcing patterns is the Government of India (although it is known more for fostering new heavy industries and the electronics industry). The literature that has a bearing on this factor is what might be termed the literature on political economy. There has historically been a very rich literature on the East Asian electronics sector (see, for example, Amsden, 1989, and Hobday, 1995). The Government’s impact on the pattern of industrialization in software was shown in early studies of India by Heeks (1996), and studies of India and Brazil by Evans (1995). The conventional wisdom, highlighted by studies of the Indian software industry, is that the Government had less of a direct role to play. While the role of government is significant in infrastructure and education, it is not perhaps as integral to the formation of firms for services outsourcing as it was in the electronics sectors of newly industrialized economies such as the PRC and Singapore.

A third aspect of the business environment could be the industry level, in terms of what a lead MNE firm or cluster might provide to other “follower” MNEs looking to enter a particular country. The account of how Texas Instruments opened the door to direct MNE software sector investment in India suggests that this type of leadership or demonstration effect exists (Patibandla and Peterson, 2002). This is further illustrated by what recent firms such as General Electric, did for R&D services (Tschang, Amsden and Sadagopan, 2003). This is not always the case where strong domestic firms exist. For example, more recently domestic firms did much to promote the BPO sector (Dossani and Kenney, 2003). This paper does not focus on clusters or government; however, as the cases are explored it will be useful to examine whether these three sets of factors help to frame the factors highlighted in the following sections as being responsible for industrial success.

2. Outsourcing in the PRC and the Philippines, and a comparison to India

This section focuses on the process by which new industries emerge. The question of how countries other than India are succeeding in developing outsourcing industries is addressed. In focusing on the firm level, a more complete explanation of how industrialization occurs can be provided than by looking only at what happens at the national or industry level. Individual firms’ experiences might actually be highly differentiated from one another, even
when they seemingly enter the same sectors, since they may focus on different parts of the value chain within a given sector (Athreye, 2006). Yet, there is some convergence among the firms.

Furthermore, identifying ownership patterns illustrates how countries take different paths to development. In the case of countries with sectors disadvantaged by limited resources and size, the composition of their industries tends to be more MNE-led (as is the case in the Philippines). In the case of India and, to some extent, the PRC the focus has been on domestic firms, although MNEs have played a role separate from domestic firms in India as well as a formative role as clients for the PRC’s domestic firms. Thus, MNEs can shape different countries’ outsourcing industries in at least two different ways.4

2.1. Why examine the PRC and the Philippines?

While many countries by now possess at least a few companies that perform software or BPO outsourcing, the PRC and the Philippines are often mentioned as potential contenders to India in this arena; both countries have the human resources, number of firms and growth rates to potentially contend with India, at least in certain IT industry sectors. What is examined in this paper is to what degree each country’s model of service industry development has varied from that of India’s, both in terms of how the industries have developed, and the nature of their ownership and other structures (e.g., the relationships between the different types of firms).

The PRC represents a different aspect of industrial development from India’s, shaped largely by its domestic market-focused industry. By virtue of its huge domestic market and skills base, the PRC has the greatest chance of developing a software industry that has the two legs – domestic and foreign – proposed by Schware (1992) as a possible balanced strategy. The Government of the PRC has a strong technology policy, which includes software industry development. the PRC is known as an opportunity for its software expertise in terms of individual skills and abundance of manpower, and its domestic market for IT “substitutes” for exports. the PRC has designs on exports as well. The Philippines is developing strengths in both BPO and call centres. Most of these centres are MNE-owned, and there is seemingly little government intervention. Even early on, the Philippines ranked sixth out of 25 countries in a study of its attractiveness as an offshoring location (A.T. Kearney, 2004).

The PRC’s college workforce is large by almost any measure, with plans for 200,000 software graduates alone each year, according to reports in 2005. A news report noted that the outsourcing industry recruited 690,000 employees in 2009 (People’s Daily, 2010). The Philippines, one of the largest English-speaking countries in the world, had 387,000 university graduates in 2003/04, of whom 86,000 were IT, math and engineering related

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4 While it will be challenging to integrate the diversity of factors outlined above into a single integrated theory, common factors can be highlighted in an effort to create an “eclectic-type” framework not unlike Dunning’s (1988) ownership, location and internalization (or better known as OLI) framework for international business strategy.
graduates, and 101,000 were business and commerce related graduates (International Labour Organization, 2009). In this broad sense, the PRC is unlike most other countries due to its huge domestic demand and Chinese-language orientation, while the Philippines is similar to many other countries besides India in its initially possessing pockets of strength in BPO and call centres.

2.1.1. Patterns of growth in the PRC and Philippines outsourcing industries

Industry emergence revolves around those factors that drive industry location behaviour and growth. In the case of the PRC, the firms studied were largely domestic businesses, so the focus was somewhat on the origins of the firms and how they had upgraded themselves technologically through their work with MNEs. In the case of the Philippines, because the MNEs themselves have been directly setting up shared services facilities, the focus was on the decision-making processes involved in choosing the facility location (and the factors influencing them).

2.1.2. Approach

This section of the paper focuses primarily on software services firms in the PRC, and BPO and other ITES firms in the Philippines. The annex shows a broad outline of the sample of firms from both countries (pseudonyms have been used in place of the actual names of firms). In the remainder of this paper, a combination of observations is reported, based on personal interviews conducted with companies in the PRC, India and the Philippines as well as secondary data. Given that the goal is to outline a model that can be compared to that of India, the following section begins with a summary of the Indian case.

2.2. India

The Indian software industry now commands a large proportion of the world’s attention, and many Fortune 500 companies are clients of Indian software firms. India’s head start, and in particular its firms’ strengths and scale, place it far ahead of most other countries’ firms in terms of their ability to perform outsourced tasks on everything from software and BPO (including accounting and financial functions) to call centre work. India is by now the undisputed leader in both the software services and ITES sectors (which include call centres and BPO). While the growth of software services took place first, it was the BPO and call centre work that broadly cemented India’s place in the newly industrializing world. While the R&D services sector has existed for a much longer period, it has been slower to take off and has only become significant in recent years.

As the primary beneficiaries of the global software-related outsourcing trend, India’s software and ITES sectors have been growing rapidly. In 2005, the growth rate was 32 per cent, which reflects not only a scaling up of capability, but also a deepening of capability and increased value-added. Software and services grew by 27 per cent in 2005, reflecting the maturing (i.e., filling out of work opportunities) of the sector, while “ITES-BPO” grew by 49 per cent (reflecting the enormous opportunities in the sector) and the domestic market grew by 25 per cent. Software services exports were US$ 12 billion in 2005, and in the same
year ITES-BPO exports reached US$ 5.2 billion while the domestic market was worth US$ 4.8 billion. At the same time, India's software firms and their processes continue to mature. By the mid-2000s, well over 50 firms had attained Capability Maturity Model level five, the highest level of process certification. The total ITES-BPO industry was estimated to have reached US$ 71.7 billion in 2008, and was estimated to have accounted for 5.8 per cent of India's GDP. Software and services export revenues accounted for about US$ 47 billion of this amount, and have grown at about 16 per cent-17 per cent during 2008 (NASSCOM, 2009). As noted in table 1, nearly 2.23 million workers were directly employed in the industry in 2008.

The growth of outsourcing in India is said to be the result of the three factors identified by Arora and Gambardella (2006): (a) the availability of a skilled labour force (as is well known now); (b) the origin and growth of domestic firms and their capabilities (Athreye, 2006); and (c) the ever growing need for outsourcing, including dealing with the problems that clients encountered with the transition in computing dates (known as the “Y2K” problem) in 2000. In particular, it has been noted that the story of “the software industry (in several emerging markets)...is far more the story of successful firms than of successful regions” (Arora and Gambardella, 2006). Other factors also play a smaller but not necessarily less important role. For example, members of the “Indian diaspora” working for potential client firms in the United States helped to create reputational effects with those potential clients as well as helped Indian firms to secure work with those clients (Kapur and McHale, 2006).

The debate concerning the software and services sectors is ongoing about, for example, whether the rise of call centres is as sustainable as the “technical” work that accompanies software, and social issues with regard to having young people work night shifts in effectively lower-skilled (below their qualifications) jobs. However, based on the limited number of countries that have large English-speaking populations, it appears that a large proportion of the work is in India to stay.

2.3. The PRC's software and software outsourcing industry

The PRC's current software industry must be considered as two separate sets of firms, each with its own history. The first came into existence earlier and involved domestic software firms directly servicing foreign MNE clients that were themselves providers of products and systems integration services for the domestic market. The second involved a new breed of outsourcing firms that specialized in outsourcing provisions for the foreign software MNEs that were themselves operating in the PRC's domestic market. As shown in table 1, the overall software industry in the PRC is small compared with Indian software exports. While the statistics on the PRC's software activity vary, one consulting firm's recent report showed the amount of software exporting activity to be relatively small, with software outsourcing exports valued at US$ 600 million in 2004. This was projected to increase to US$ 4.7 billion by 2009, representing a compounded annual growth rate of 51 per cent (Niosi

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5 This is measured using NASSCOM's definition of ITES-BPO, which is narrower than the one used by the Government of the Philippines, as the former's definition of ITES excludes software services and the latter's definition of ITES includes it.
and Tschang, 2009). Software exports as a proportion of total exports are also very small in comparison with India. Nevertheless, the differences between the PRC model and that of India—in particular, the PRC’s focus on the domestic economy—make it worthwhile highlighting.

The PRC’s software industry was, in the early 2000s, considered by the Government to be so critical to industrial development that it, together with semiconductors, was promoted as one of two new lead sectors (Tschang and Xue, 2005). Many software firms first attempted to work on either a product model involving some customized services, or on a systems integration model. However, for many companies, both models by now appear to have low margins and prospects for growth. The road for product companies has generally been hard, due to a variety of reasons including: (a) a lack of customer IT maturity, fragmented markets: and (b) intense competition at the low end from low-cost domestic imitators as well at the high end from well-funded foreign MNEs with advanced technology (Tschang and Xue, 2005). It was partly because of these reasons that the PRC’s firms started to see outsourcing as a solution. According to an official from the Beijing Software Industry Productivity Centre (BSIPC), the margins from outsourcing were in the 30 per cent range for the better Chinese firms (which mirrors margins from India), as opposed to companies in the less than 10 per cent range for product and systems integration. Thus, the outsourcers have ostensibly avoided trying to make products or undertake systems integration work.

2.3.1. **Emergence of software and services (and emergence factors)**

2.3.1.1. A Japanese stimulus for the export sector

Outsourcing in the form of exports of software services was already well underway in the PRC by 2001; however, initially, firms mainly focused on the Japanese market, which continues to be a strong market (Niosi and Tschang, 2009). With the rise in the Government’s interest in outsourcing during the early 2000s, further efforts were made to improve the capability of the workforce and firms. At that time, Beijing, Dalian, Shanghai, Shenyang and

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6 Some product companies have become strong enough to compete with foreign firms in the middle or near the high end of the domestic market, but these companies typically compete only in the domestic market, and some were able to survive because of government contracts. For certain types of software, such as enterprise software, the best firms in PRC tend to service only small and medium enterprises, while for other types of software, such as personal computer-based software, the best firms from PRC can compete with MNEs to some degree. However, other weaknesses in the firms or market can affect firms’ performance (Tschang and Xue, 2005). Piracy is one of the problems that afflict product firms. One well-known product company that was interviewed in the course of this study (both in 2001 and 2006) noted recently that their well-known product was so heavily pirated that it became a money loser, and that it was only the Government stepping in to require that their software be used in procurement contracts that helped to save this line of business for them.

7 Another problem facing the systems integration model relates to it generally involving lower-skilled work, including installation of hardware and packaged software (made by other companies) and networking. One of the largest systems integrators interviewed earlier admitted that its profits were quite low. There have also been recent reports of other systems integrators suffering low margins (Tschang and Xue, 2005). According to one interviewee, these companies may also have difficulty in trying to upgrade themselves along the value chain.
Xi'an were among the cities attempting to outsource to the markets in Japan and United States. In 2001, one strategy of the regional governments in Xi'an and other cities was to provide Japanese language training, a skill that many Chinese were able to pick up due to compatibilities in the written language scripts. At that time, many firms were seeking to imitate the success of Neusoft, a Shenyang-based firm that had the strongest export performance between 2001 and 2005, achieved almost entirely by servicing the Japanese market. More recently, many software companies have begun focusing on BPO, specifically in the markets of Japan and the Republic of Korea.

The Japanese market is of special importance to the PRC as an offshoring market. By 2006, the Japanese market accounted for 61 per cent of the PRC’s outsourcing revenue versus 22 per cent of the United States’ market (Niosi and Tschang, 2009). Thus, while the bulk of the cases examined in this paper concern firms that service the United States’ MNEs in the domestic PRC market, the size of the Japanese market – and its attraction for the PRC’s firms that want to service foreign markets directly – make it worthwhile describing the Japanese offshoring model, at least in brief.

At least two large firms (Sinocom and Neusoft) have a very significant presence in the Japanese software outsourcing market. Sinocom was originally a conventional systems integrator (together with many large firms that originally comprised the PRC’s software industry); however, according to BSIPC, the company chose to cut all its business in the PRC in order to specialize in outsourcing to Japan. It had become the largest outsourcing company in Beijing by 2005, with Japan comprising 90 per cent of its market. However, while companies such as Sinocom are considered to be doing offshore work, they do not service the end users directly, but instead contract their work from Japanese systems integrators such as Fujitsu or Hitachi who, in turn, service Japanese end user clients (Hitachi is also a strategic investor in Neusoft).

2.3.1.2. Western MNEs and “domestic market outsourcing” in the PRC

Since 2001, and especially in recent years, another outsourcing trend has emerged in the PRC. In order to discuss this trend, it is necessary to understand the role of MNEs, particularly Western package software and software services MNEs, and the PRC’s domestic market. This follows from the drive for MNEs to enter the booming market in the PRC. MNEs have already dominated the software sector in the PRC, including firms such as Microsoft, Oracle, and BEA, and software services and systems integration companies such as IBM. According to the interviewee at BSIPC, many of these foreign MNEs suffer from a locational

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8 The Government of PRC has been quite strategic in its support of software enterprises (Tschang and Xue, 2005), but much of this followed an R&D investment approach. With the growing success of exports, the Government has also focused its efforts on promoting outsourcing. Together with its historical investments in research and education through its universities and the Chinese Academy of Sciences research institutes (both of which are sources of spin-off companies), the Government announced plans in 2001 to designate 35 universities as centres for software engineering programs. This was expected to introduce as many as 17,500 additional graduates into the labour force each year.

9 Author’s interview with BSIPC in 2005.
disadvantage (e.g., in sourcing labour and accessing clients) when trying to service the PRC market, especially as it becomes fragmented when viewed across cities and sectors. Relationships are vital to conducting business in the PRC (Saxenian, 2003).

The difficulty of entering the PRC’s market may be due to differences in standards, administrative rules and programmes that exist across regions and cities. In this environment, MNEs need to localize products and content. On the other hand, many product and systems integration companies in the PRC do not have the capability to offer higher-end services such as systems consulting and design, but do have lower-level capabilities. Thus, a convenient marriage was created between MNEs and selected domestic firms that enabled the former to outsource some of their basic work to the latter.

2.3.1.3. Emergence of new PRC outsourcing firms

In order to compare the PRC case with that of the Philippines, the factors that caused the emergence of the PRC’s software sourcing industry is first examined. The origins of the (recently rapidly growing) domestic firms that service MNEs in the domestic economy are largely private, and none appear to have been government-owned or to have involved government investments. As noted earlier, a key aspect of the recent outsourcing pattern in the PRC has been the way in which firms are connecting closely with foreign MNEs operating in the PRC. Most, if not all, of these Chinese firms also aspire to get involved in the offshore services market to varying degrees.

Like many of the PRC’s outsourcing companies, the new breed of private software services firms, such as Beyondsoft, Worksoft and ISoftStone in Beijing, started by carrying out localization and testing work for larger MNEs such as Microsoft that were trying to enter the PRC. These three Chinese companies are now among the largest firms serving the United States MNEs in the PRC.

One central feature in this model is the knowledge that the Chinese firms gain from working with MNE clients. This is similar to the experience of Indian firms earlier in their development, and indeed of any outsourcer, be it in hardware or software. Such learning eventually helps the firms to advance up the value chain. Firms also note that MNEs can help them to build their management and technical capabilities, provide training and transfer knowledge. Indian firms with a presence in the PRC, such as Tata Consultancy Services and the educational provider, National Institute of Information Technology, also bring management

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10 There are at least three markets: corporate, government, and private. However, the governmental market is strongly bound by policy and regulations, and many software and systems contracts in the past supported domestic firms. Furthermore, it has been difficult to sell services, at least in the past, to some corporate customers in PRC. According to one software firm interviewed in 2001, many customers did not have strong IT capabilities, and could not see the value in IT, let alone understand how to integrate IT into their business functions.

11 In contrast, Tschang and Xue (2005) estimated that as many as a third of the largest systems integrators, and a number of other firms with stronger capabilities (e.g., firms engaged in product development), appeared to have government roots.
and educational approaches and know-how to the PRC, especially in the form of software process management skills and capabilities.

2.3.2. Factors influencing scaling up and upgrading

The rapidly growing Chinese firms have had to engage in simultaneously upgrading their capability (to increase their value-added proposition) as well as scaling up by way of expanding their workforces and business coverage. This has been achieved by various means. One strategy has been to use acquisitions to increase their capability and value proposition to clients – a strategy that is common to firms in both India and the PRC (Niosi and Tschang, 2009) as well as to firms in other countries. The factors that appear to impinge upon this upgrading can be loosely classified into three types: (a) internal organization factors, such as management and organization; (b) soft skill factors; and (c) geographic skill management factors.

It is worth noting that the emphasis on organizational capability varies somewhat from that seen in the conventional development pattern of East Asian manufacturing. In the latter, the upgrading is primarily technological, whereas in the case of software and other services, it involves technical as well as organizational capability. Not only do software firms have to develop internal training systems to help transfer knowledge from experienced people to new employees, they also have to develop systems to capture knowledge (i.e., knowledge management systems) as well as systems for collaboration and handling globally distributed work. In contrast, smaller and even medium-sized companies face another problem in that they do not have the scale to compete for larger clients and, as a result, cannot grow.

Software skills and cultural issues appear to be a factor of concern for a number of firms, especially when dealing with Western clients. Chinese language skills might not be suited to BPO in other languages; even in software, where technical languages may be shared, there are cultural issues that come into play when attempting to integrate the work cultures of Chinese and American firms. It is notable that even Microsoft encountered problems with its operation in the PRC when it tried to merge its United States culture with the local culture, and the company had to make multiple attempts before they managed to work through the differences in culture.

The third factor involves growing by managing the growth of facilities located in multiple labour markets – in this case, across cities. Many Beijing firms have built secondary outsourcing facilities outside Beijing to tap into the local labour markets, which often have lower labour rates and turnover.

Government policy

With the exception of educational programmes and incentive schemes to influence where firms choose to locate, government policy has not been a major factor at the firm level, either in terms of strategy or the ability of firms to upgrade and/or increase their value added. The firms may have benefited from local government policies to improve software talent and
language capability (e.g., Japanese), but the better firms did not gain from the Government’s policies of targeting selected firms for benefits.

2.4. Philippine IT services industry

2.4.1. Philippine outsourcing industry: Role of the Government

The Government of the Philippines, and specifically the Board of Investments (which plays a key role in foreign investments), has focused on promoting five ITES sectors: BPO (including engineering design); software; call centres; animation; and medical transcription. By the mid-2000s, there were already a number of hallmark foreign MNEs in each of the sectors, including: Accenture for software services; Sykes, Convergys and PeopleSupport for call centres; and Texaco and American International Group (AIG), which had shared services facilities for their internal BPO work. By 2008, the ITES sectors had an estimated output of US$ 6.2 billion and employed 430,000 people (Congressional Planning and Budget Department of the Philippines, 2009). Most of the ITES sectors have registered healthy, if not rapid, growth rates, with BPO as a whole growing 227 per cent between 2004 and 2007. Call centres have been growing especially rapidly, with employment at many of them (including foreign MNEs such as Sykes, Convergys and PeopleSupport) growing by rates of 100 per cent or more between the early and mid-2000s. The MNE impact is seen across all ITES sectors, but it is in call centres and, to an increasing extent, the BPO sector that it is most keenly felt. The BPO sector will be examined later in this study.

To give an idea of the Philippine “presence” in the ITES sectors, a list of 35 providers worldwide (these being ones that the Gartner Group had fielded the most enquiries on from 10,000 of their clients) was examined. Ten of the 13 call centres on the list had operations in the Philippines, while three of the 14 BPO providers (some of which had integrated IT and BPO operations) had operations in the country. The smaller number of BPO providers operating in the Philippines might have something to do with a large number of them being Indian IT firms, which tend to be India-facing in their growth paths. This also suggests that the type of work that the Philippines is known for is mainly related to call centres, and possibly, that BPO providers’ operations (besides the Indian IT firms’ operations) are more spread out worldwide (Bloomberg Businessweek, 2006).

Of the five ITES sectors in the Philippines, most of the significant firms are the foreign MNEs. This is particularly true in the BPO, software and animation outsourcing sectors (with the exception of some local firms that have established call centres and BPO providers, such as Ayala, SPI, the Philippines Long Distance Telephone Company – which acquired SPI –

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12. Call centres are often set up and operated by international MNEs that specialize in the industry, and that have codified procedures for training and operations. The firms tend to focus more on the language skills and customer-facing skills of their employees, although some degree of domain knowledge is often involved (especially for technical support). As one interviewee pointed out, the view of Filipino skill advantages tends to be that of language and customer-facing mannerisms, versus Indian software process skills. However, the Filipinos do not have a complete advantage in language over India, since the Philippines is also suffering a shortage of language-skill qualified people, and since Indian call centre operators can be trained for American accent in order to service American clients.
and SVI (Software Ventures International) Connect). A foreign MNE’s typical mode of operation is to operate a “shared services” facility that centralizes its (typically) back-office work in lower-cost countries. For example, the Danish shipping firm Maersk has located some of its shared services operations in Manila in addition to other shared services operations in Costa Rica, Mumbai, and Guangzhou.

2.4.2. Emergence of the BPO sector: Factors that influence location behaviour of MNEs

MNEs have moved BPO-related services to the Philippines that span a variety of corporate functions, including accounting and finance (as well as IT) – some of which were unique to the industry the firm was in, but which also involved the specific general corporate functions of finance and accounting. The Philippines had been observed to have a fairly broad educational system that not only catered to the vocational fields, but also to areas such as the liberal arts and business. This educational spectrum does not appear to have been a disadvantage in meeting the ITES needs of MNEs and outsourcing providers.

Whereas the PRC’s software services industry has largely been focused on its own domestic market, the Philippines has had to compete with various countries – not the least of which is India – to host MNEs seeking a location for shared services BPO facilities. The factors contributing to an MNE’s decision have been classified as follows:

2.4.2.1. Cost and skill factors

A variety of factors appear to influence outsourcing decisions; however, while the initial decision to outsource is often made for cost reasons, the actual decision to locate in the Philippines is affected by a range of location-based factors, typically including costs, language capability, availability of skills and infrastructure. Very often, and especially recently, firms conduct an internal feasibility study. The way in which the factors are related (e.g., by ranking) and the manner in which they are considered to interact vary from firm to firm, but they tend to revolve around a desire to concentrate back-office services in a small number of cheaper locations. For example, Procter and Gamble’s human resources group in Manila is one of three shared service centres worldwide (the other two being in Costa Rica and Newcastle, United Kingdom).13

A large part of the Philippines’ attractiveness to MNEs is the country’s past investments in higher education and the resulting surplus pool of labour. This is particularly true in the case of business higher education, which is attractive to BPO firms. However, firms can also hire human resources from a variety of other fields, including IT and the arts, and retrain them for lower-level work. Having said this, the Government’s ability to continue this type of investment has been severely limited by its low resources as well as the generally insufficient manpower in the government agencies overseeing the industry.

13 However, in 2004, Procter and Gamble took the even more extreme step of selling off these units. The Philippine unit comprising much of the staff that provided employee services support (i.e., human resources services) was sold to IBM (with the other units being sold to other firms).
2.4.2.2. Importance of history

In looking at the early MNEs that located in the Philippines, one common factor that emerges is that an early familiarity with the country helped in making the decision. An example is the case of an MNE with one of the first shared services facilities in the Philippines. The facility manager compared the Philippines with several other Asian countries in terms of a variety of factors; in the end, a combination of English-speaking skills and trained university graduates in the business disciplines mattered the most. However, the MNE itself had a long tenure in the Philippines, which helped to make the country familiar and accessible to the MNE. In contrast, a highly competitive country was ruled out because the MNE had had a bad experience with the previous government policies there.

2.4.2.3. Soft skills

Another important factor in which the Philippines is typically considered to have a strong advantage is that of the softer skills, i.e., the cultural orientation of the human resources. MNE chiefs have pointed out that national culture and the "service mentality" (as reflected in how employees deal with clients) is a positive aspect of the country. Another beneficial aspect of the Philippines is that its cultural orientation is similar to that of the United States. In fact, one software outsourcing head noted that even in software, some clients would like to see customer orientation addressed first, and only later would focus on other areas. A number of Filipino call centre heads noted that they needed their employees to provide more customer-friendly service, and that the "Western" attitude that Filipinos possess can be an advantage in attracting work. Finally, commonalities in language can help attract MNEs doing BPO and call centre work.

It is important to note that the success of the Philippines in these dimensions was due as much to other candidate locations being less competitive in one or more factors (e.g., costs, hospitality or service culture, and infrastructure) as it was to the Philippines succeeding on these same factors. Furthermore, extenuating circumstances related to a particular factor, or an unquantifiable factor such as country risk, usually determines the location selection outcome.

2.4.2.4. Hedging risk

Finally, officials from other MNEs interviewed during this study and elsewhere noted that part of their strategy was to hedge their political and country risks by locating facilities in both India and the Philippines.

2.4.3. Comparing factors dictating industrial emergence in the Philippines to those in the PRC

What is interesting is the comparison of this set of factors to the ones seen in the case of the PRC. In the PRC, the industry emerged through MNEs already active in that country’s market (or ones looking to enter) and interested in working with local providers for their own needs. In the case of the Philippines, the MNE is the central decision-maker in
choosing a location from among several or more options and, as such, is much more concerned with a variety of country level factors, including the MNE’s past experience with the country and/or potential location, and the pool of skills. The usual issues of knowledge transfer and even acquisition (which are more of an issue if the services provider is a local firm, as is the case in the PRC) are less central. This is because MNEs already possess the knowledge and ability to transfer work and organizational capability worldwide – something that they do on a regular basis as part of their business.

2.4.4. Domestic firms in the BPO and software sectors

It is worth emphasizing the experience of domestic providers in the Philippines for the contrast that it provides to that of the MNE providers. An examination of the Philippine software sector and its relative weakness illustrates a contrast with that of India. A combination of a lack of skills, strong firms and India’s head start makes it difficult for latecomer firms to succeed. There are a number of software firms in the Philippines (even hundreds by one estimate), but most are small and only a handful are of reasonable size (i.e., above 100 employees). The absence of large, capable IT firms in the Philippines may be due to a variety of factors, not the least of which is a problem of financing. According to interviews with the president of one larger software services provider, the ability of the firm to grow has been limited by a lack of financing as well as its lack of competitiveness against already strong competition (i.e., Indian firms).

2.5. Comparing the three cases

As table 2 shows, the two cases illustrate two very different paths of growth; for example, in the case of the PRC, from India’s path.

The experience of the PRC illustrates how domestic firms can leverage the needs of United States MNEs to service their own market or, in the case of firms focusing on the Japanese market, to pursue another market that appears more open to firms from countries that share common linguistic characteristics. The key issue is learning, as firms appear bent on upgrading themselves technologically as well as on increasing their scale and complexity of work through their interactions with clients. There also appear to be significant variations in individual Chinese firms’ strategies. Each firm appears to be developing a specific niche based on the resources available to it and its unique collaborative strategy. This suggests that specialization may provide a greater advantage over time.

The case of the Philippines illustrates an MNE-led model that is different from the PRC’s approach, but is similar to the model of MNEs that have located in India. In particular, it appears that the type of work and shared services facilities among MNEs that are locating in the Philippines are not much different from the BPO carried out in India. However, the decision to locate in the Philippines is quite a complex one and is not always straightforward, as it involves not only locational factors such as labour and infrastructure, but also past “history.” Once the decision to locate in a particular country is made, the ability to follow through does not appear to be a problem for MNEs as they are apparently very capable of transferring entire areas of work across borders, even from dispersed locations to a new,
central facility. The ability of a BPO facility to grow is limited only by the scale of the resources available within the country. While the facilities themselves tend to grow independently of one another, the arrival of even a single firm appears to provide a signalling effect to other competitors. The fact that the Philippines is already becoming known as a site for secondary outsourcing, or even primary outsourcing in the case of certain “verticals,” is promising for the country.

In the final analysis, it appears that there are multiple types of models, or at least circumstances, which can be considered in the development of an outsourcing industry. In both cases examined in this paper, the two models utilized the needs and objectives of the foreign MNE, so the development of the outsourcing industry does follow some previous models of industrialization. While this paper still reinforces the notion that locational or factor advantages are a necessary condition for outsourcing, these are not sufficient in and of themselves for explaining location decisions. Complex decision-making, involving specific

<table>
<thead>
<tr>
<th>Dimension</th>
<th>PRC</th>
<th>Philippines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus of industry</td>
<td>Domestic firms engaged in software outsourcing.</td>
<td>MNE call centres and MNE BPO shared services facilities, some local firms’ call centres and BPO providers.</td>
</tr>
<tr>
<td>Market focus</td>
<td>Initially focused on servicing United States MNEs in the PRC’s domestic market (and Japanese clients).</td>
<td>Focus on global shared services (some regional markets, such as North America or Australia, and some global).</td>
</tr>
<tr>
<td>Origins of industry</td>
<td>Domestic firms started independently and were needed by MNEs to service the domestic market.</td>
<td>MNEs’ initial decision to outsource for cost reasons. MNEs’ location decisions complex and not straightforward, e.g., some MNEs had prior history with the country, which aided decision-making.</td>
</tr>
<tr>
<td>Firm-level or industrial growth</td>
<td>Domestic firms essentially learn from MNEs as they grow, and service increasing MNE needs. They aspire to leverage this learning in order to do work for clients in the MNE’s foreign markets.</td>
<td>MNEs appear to follow one another once a model is “tested.”</td>
</tr>
<tr>
<td>What growth entails</td>
<td>Scaling by creating facilities in other cities in the PRC to absorb labour, and expanding the type of work, scale and scope (increased verticals).</td>
<td>Widening the scope of work, i.e., adding to the business functions encompassed (e.g., accounting and finance).</td>
</tr>
<tr>
<td>Role of the Government</td>
<td>Government policy did not correctly identify the new outsourcing firms so as to support them.</td>
<td>Traditionally weak government may have helped at the margin.</td>
</tr>
<tr>
<td>Differences from India</td>
<td>The outsourcing and/or upgrading path started with the domestic or Japanese markets.</td>
<td>Some MNEs seek to use the Philippines as a “second source” while others “prefer” it to India for various reasons.</td>
</tr>
</tbody>
</table>
extenuating circumstances (in the case of the Philippines) and specific firm strategies (in the case of the PRC), are also critical to the success or growth of outsourcing industries. Both cases provide some hope that outsourcing may be a trend that can benefit other latecomer countries.

Finally, another aspect that can be addressed is the role of policy. This role appears more basic, being restricted to education and infrastructure, rather than affecting industrial stimulation (unlike what is said to have occurred during certain countries’ experiences in the “East Asian Miracle” period of growth. In the software and BPO industries, the governments appear weaker, either in terms of initial conditions (i.e., resource holding) (in the case of the Philippines), or in terms of ability to improve the industry (in the case of the PRC). Strong private sector forces and MNE involvement appear to be the common factors in the emerging models of outsourcing industry development.

From most industry participants’ perspectives, it appears that the PRC’s software firms will continue to lag behind Indian firms on scale, processes and experience for some time to come. Philippine software firms have been doing no better, suggesting that the only way for them to “catch up” with India in the near term is through call centres, BPO and the other ITES sectors. Some of this will entail less sophisticated work, and may require the involvement of MNEs. In both the Philippines and the PRC, it appears the knowledge that MNEs possess has been an important factor in the BPO sectors’ success, suggesting that collaboration with MNEs, however managed, at the national or firm level, is an important factor for success.

3. Growth and equity implications of IT services outsourcing

This section addresses the economic implications of the services outsourcing industry. The focus is on India, with some collaborating evidence from the Philippines. This is, in part, because data collection and studies have been carried out more widely in India, including some by India’s NASSCOM. (It should be noted that NASSCOM has a strong advocacy role, so it may have a dual purpose in providing these studies.) India’s industry also has a relatively longer history, allowing the various economic implications to be better discerned. In effect, despite the presence of a manufacturing sector, India’s model has been termed a services-led industrialization path (Singh, 2006). Nevertheless, the trends can be expected to be similar across countries with a significant outsourcing presence.

3.1. IT services industry, economic growth, and linkages within the economy

In the 1990s, the Indian IT services industry was already registering a major impact on the economy, contributing to an average annual growth of services exports of 15 per cent compared with 9 per cent per year in the 1980s (Gordon and Gupta, 2004). NASSCOM (2010) pointed out that the sector’s share of GDP had risen from 1.2 per cent in 1998 to about 6.1 per cent in 2010, and that the share of total exports had increased from less than

14 Author’s own interviews (2005).
4 per cent in 1998 to almost 26 per cent in 2010. Given the sheer size of its recent annual revenues, the economic implications of the IT services industry in India are profound. Even so, both in the past and, in certain quarters, even now the Indian IT services industry has been criticized for being an “island” unto itself, both in terms of job creation (localized to the sector) and in its (perceived lack of) linkages with the rest of the economy. The industry created 280,000 jobs in 2000 (NASSCOM, 2008); although this figure was expected to increase to 2.23 million in 2008, it is still considered small in comparison with India’s total population (NASSCOM, 2009).

While the PRC’s total employment in outsourcing was reported to be 1.42 million in 2009, the data may be misleading, as it possibly includes both the outsourcing of “local” work and the offshoring work done both by MNEs and by domestic providers. At the same time, this is spread across 8,060 enterprises (People’s Daily, 2010). This gives a very small average size of about 176 employees per firm. Other data on firms’ market shares show the same pattern, with the firms accounting for the largest shares of the export market – Neusoft (3.1 per cent), HSoft (2.8 per cent) and Sinocom (2.6 per cent) – also being on the small side (Organisation for Economic Co-operation and Development, 2006).

One study of India’s services sectors suggests that, as a whole, they have a higher proportion of both forward and backward linkages with a “greater than average” linkage effect (or stimuli on upstream and downstream production, respectively) than either the manufacturing or agriculture sectors (Singh 2006). A study of the Philippine BPO sector shows a contrasting picture. Input-output tables show that its forward, backward and total-linkage indices ranked 138, 178 and 177, respectively, out of 240 sectors, suggesting that the sector is neither a significant buyer of inputs nor a significant supplier of outputs within the economy (Magtibay-Ramos, Estrada, and Felipe, 2008). Specifically, the study found that the BPO sector is a greater consumer of inputs than outputs, taking in 40 sectors’ inputs (with banking, electricity and telecommunications services being the most important suppliers), while providing services to only three sectors: tourism, known as tour and travel agencies; wholesale and retail trade; and banking. The two studies on the Philippine BPO and Indian IT services sectors should not be compared side by side, given that they are based on different measures and are measuring industries composed of very different sectoral emphases and even stages of growth.

NASSCOM also estimated that the Indian IT services industry had an output multiplier of nearly two, by way of its non-wage operating expenses, capital expenditure and consumption spending by its employees, which is on a par with most other sectors. In contrast, the simple output multiplier of the Philippines’ BPO sector was 1.63 (Magtibay-Ramos, Estrada and Felipe 2008), indicating that a United States dollar’s worth of final

15 Specifically, using 1998-1999 data, Singh (2006) showed that in the case of India’s backward linkages, nine of 13 services activities, versus six of 22 agricultural activities and 28 of 80 industrial activities, had relative backward index values above one (and eight of the nine services’ activities exceeded this considerably). He also showed that in the case of India’s forward linkages, nine of 13 services activities, versus five of 22 agricultural activities and five of 80 industrial activities, had relative forward linkage index values above one.
demand in the BPO sector would create US$ 1.63 of additional output across the economy.\textsuperscript{16} This may be related to the limited number of sectors that the BPO sector affects downstream. Again, the different multipliers say as much about the differences across both countries’ IT services industries as they do, for example, about the percentage of the Philippines’ IT services workforce in call centres being higher than in India.

The same Philippine study also showed a compensation coefficient for the BPO sector of 0.31, meaning that 31 per cent of the sector’s inputs goes to wages. Coupled with the higher than average compensation in the sector,\textsuperscript{17} this can be expected to translate into a reasonably high impact on the economy by way of disposable income and spending. In fact, it appears obvious that while the Indian software sector is high-paying, its 2 million-strong workforce is not a chief contributor to the country’s 50 million-strong middle class, although it has certainly contributed to certain cities’ fortunes.

When placed in this broader perspective, it does not appear that the IT services sector has any more impact than other sectors in terms of linkages, multipliers or (as is shown later in this paper) employment. However, the sector has a greater-than-average (and increasing) impact on growth.

\section*{3.1.1. IT services industry’s linkages with manufacturing}

IT has perhaps some of the greatest remaining potentials for unlocking productivity gains, including that for developing countries, and for manufacturing. That IT can benefit many manufacturing sectors should not come as a surprise, given that many MNE manufacturers of products, including General Motors, Huawei, Samsung and Sanyo, have software arms in India. Indian manufacturing firms should be able to reap similar benefits, particularly once they have developed a strong internationalization focus. Among the Indian manufacturing sectors, the automobile components sector recorded sales worth US$ 15.6 billion in 2007, including US$ 2.8 billion from exports. Yet, despite having a thriving IT export sector, a study found that in comparison with other countries, India continued to lag behind in the domestic adoption of IT, especially for the small and medium-sized enterprise sectors (NASSCOM, 2007a). The study showed that multiple types of productivity gains could be realized from using IT, ranging from the improvement of manufacturing processes to the integration of firms with their suppliers and customers – foreign and domestic. Specific business processes – the most critical ones being order receipt and demand management, production planning and order processing – have not been addressed, and basic IT systems, such as enterprise resource planning, have not been adopted.

Among the factors that impede IT adoption, the most critical have been the difficulty of justifying IT investments internally and the alignment of those investments with business goals. In part, this is also due to the different levels of preparedness of businesses, with small and medium-sized businesses being the least prepared for technological advancements.

\textsuperscript{16} This was estimated using the input-output tables for 2000.

\textsuperscript{17} In 2005, the average monthly compensation for the BPO sector was US$ 386, versus the national average of US$ 165 (Magtibay-Ramos, Estrada and Felipe 2008).
A similar finding was observed among domestic Chinese firms in the early stages of IT-enabling work such as systems integration (Tschang and Xue, 2005). The key to successful IT usage in domestic firms is the recognition that different firms are at different stages of development, and that, as a consequence, they have a mix of IT capabilities. When IT firms do take the trouble to understand and customize their operations for their domestic clients, as when the Indian firm Infosys combined some services with its banking product, Finnacle (developed largely for its domestic clients), the results can be quite positive.

At the same time, IT can certainly benefit many organizations in the domestic sectors, including government and education. One of the challenges faced by Indian IT firms trying to link their expertise to domestic needs is the difficulty of reconciling the model most of them have adopted – a high-cost, high-profit model that focuses on developing advanced systems – with the domestic sectors' need for lower-cost, customized systems. This has led to difficulties in recent years, as when the larger, export-oriented firms tried to service local contracts. One of the problems faced is that the current export model is predicated on a higher cost of delivery and higher value-added, while the model that best suits local customers is one of higher customization and lower costs. The result is pressure for the firms engaged in both kinds of work to provide a lower-capability workforce or even a lower quality of work to domestic clients.

It should be pointed out that not only has the Indian economy yet to realize significant productivity gains from IT services, it has also been limited in its growth potential by certain other industrial and service sectors, with electricity and transportation being among the most significant (Singh, 2006). It has also been pointed out that growth in services can be held back by some of the same constraints (Srinivasan, 2005). In the case of India and the Philippines, the removal of constraints, such as the lowering of telecommunications costs, has certainly helped to unleash the potential of the IT services sector.

### 3.2. Effects on employment

The evidence suggests that the IT services sector's output employment multiplier is positive. NASSCOM estimates indirect job creation in India to have been about 6.5 million in 2007, on the basis of 1.6 million IT industry jobs, or a four-to-one ratio. This includes direct service providers, such as food catering and transport. The sector has contributed somewhat to India's rising middle class, at least in the cities with the strongest IT clusters. The problematic issue is whether services are contributing as much to employment as they are to GDP. Singh (2006) reviewed the evidence for employment, which showed that in India "while the share of services in employment increased from 20 per cent in 1970/71 to 23.5 per cent in 1999/2000, this was much less than the growth of the services sector's share of GDP, which increased from 32.1 per cent in 1970/71 to 48.5 per cent in 2000/01". Gordon

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18 Interestingly, the firm that was most effective at building large-scale systems in India in the past was the former CMC (once known as the Computer Maintenance Corporation), which, among other achievements, built the Indian Railways automated ticketing system. CMC attempted to get into the higher-value export model too late, and ended up being acquired by one of the major software firms.

19 Based on a conversation with Raja Mitra, independent consultant to the World Bank (4 August 2010).
and Gupta (2004) noted that, while services rose from 42 per cent to 48 per cent of GDP during 1990-2000, the share of services in employment actually went down by about one percentage point. This point suggests that while the services sectors do provide higher labour productivity, they generally do not have the concomitant benefits of high employment effects that labour-intensive sectors can provide for developing economies (this generally being the case with IT as it is with other higher-skilled services sectors).

On the other hand, in the case of the Philippines at least, it certainly seems that IT services, such as BPO and call centres, have provided a valid alternative for reducing unemployment and addressing the underemployment of the higher-skilled populace. In the Philippines, the BPO sector’s share of GDP increased from 0.075 per cent in 2000 to 2.4 per cent in 2005 (Magtibay-Ramos, Estrada and Felipe 2008). Employment more or less grew linearly from 99,300 in 2004, to 235,600 in 2006 and 435,000 in 2008 (Congressional Planning and Budget Department, 2009). An early forecast by the Business Processing Association of the Philippines showed that if employment in the sector reached 1 million workers in 2010, it would account for 27 per cent of all new jobs generated. In 2006, call centres accounted for 68 per cent of the BPO sector’s total employment, showing that job creation was highly skewed within the various IT services sectors (Congressional Planning and Budget Department, 2009); however, this was expected to correct itself over time as jobs in non-call centre BPO activities were increasing at a faster pace than call centre jobs (International Labour Organization, 2009).

3.3. Education, employability and equity

While there is some evidence that services such as IT services can be a compelling source of growth and exports, the evidence for employability is more mixed. There is also significant indication that, at least in the 1990s and just after, only a relatively small proportion of Indian higher education graduates, i.e., those with technical skills and English language ability, were able to take advantage of the opportunities in the then-burgeoning industry (Singh, 2006). At the same time, the Indian IT industry has faced a shortfall in labour supply. Some of this shortfall can be explained by the fact that the higher education system can only produce a limited number of graduates. However, with 10 per cent of Indian youth achieving a college education, a bigger issue is the employability of those graduates (the industry currently only finds one in four graduates employable).

In the mid-2000s, in the early stages of growth, Philippine call centre heads were only choosing the top 10 per cent of college graduates for their positions. This percentage likely went up over time as firms became less selective (and as supply failed to keep pace with demand), with a possible consequential deterioration in the quality of employees and their work. Another possible result is that the bias toward the “better” educated part of the populace will enhance the disparity between those with stronger or better-fitting educational backgrounds and those without. Only broader economic growth will help to ameliorate this diverging trend.
3.4. Implications for regional economic disparity

Historically, the Indian IT industry has been concentrated in a handful of urban locations – a feature shared by all other industries. The success of Bangalore, Hyderabad and other early IT industry location, has also contributed to inequality in incomes among cities. The trend, however, has also been for firms to open facilities in new locations; 72 per cent of respondents to a recent NASSCOM survey reported having opened offshoring centres in the so-called “second-tier” and “third-tier” cities (NASSCOM and Deloitte, 2008). As firms start to expand to second-tier cities in search of labour and space to grow, the next hubs will take shape. It appears that the industry started burgeoning first in Bangalore and then moved quickly into other “first-tier” cities such as Noida, Pune, Hyderabad and Chennai. However, judging from the entry dates of firms, which were between “prior to 1980” and 2001, the seven main centres reached their peak in terms of firm entry during the same period, 1992-1999 (Athreye, 2005).

While poverty is not directly affected by industrialization in the IT services, equity is affected. One major regional issue related to equity is that of the disparity among regions. As pointed out above, firms tend to locate in clusters, further advantaging those same clusters in the process of doing so. Certainly, early clusters mattered in the Indian pattern of development. By 2008, seven Indian cities accounted for 95 per cent of IT services exports (NASSCOM, 2009). Recently, an interesting case study was presented by NASSCOM on Orissa State, one of the poorest regions of India (NASSCOM and Deloitte, 2008). As reported by the Software Technology Parks of India authority, the growth rate of facilities (enterprises that reported exporting) in Orissa’s state capital of Bhubaneswar increased from 17 per cent in 1999-2000, to 54 per cent in 2005-2006 and 69 per cent in 2006-2007. As a result, Bhubaneswar’s demand for IT manpower was 117,000 in 2007, with 77 per cent of the demand being for bachelor degrees (including bachelor equivalents) and master degrees suited to IT. The supply at the time was 54,303. The companies locating in the region included some of the major Indian IT firms such as Infosys, Satyam, Tata Consultancy Services and Wipro, as well as foreign MNEs such as IBM and Aricent.

All this contributed to software exports from Orissa State totalling US$ 183 million in 2006-2007, a 60 per cent rise from 2005-2006. The growth rate of exports from the State was in sharp contrast to the national average of 28 per cent, reflecting the new and healthy rise of the IT services industry base of the State, particularly its capital. It should be noted that while the pattern is very encouraging, it also mirrors the tendency for industrialization in early periods to increase faster (or even to increase at accelerating rates) relative to later periods, as seen with industrial growth at the country level in India, the PRC and elsewhere.

Growth patterns in the cases of the Philippines and the PRC share similarities with India’s experience. In the Philippines, Manila developed first and, by the mid-2000s, Cebu was already considered a preferred second site for companies rapidly expanding their call centres. In 2008, together with the Government, the Business Processing Association of the Philippines listed 10 “next wave” cities out of 30 candidates that could be developed into hubs. Similarly, in the PRC, the first six export bases for IT services were Beijing, Shanghai,
Tianjin, Dalian, Shenzhen and Xi’an. The Governments of the PRC and the Philippines are attempting to broaden the opportunities to other regions, albeit with the addition of strategic growth policies.

3.5. Ancillary benefits of firms on infrastructure and services

IT companies in India and elsewhere tend to collaborate with the city and regional authorities to improve their educational base, and public and private infrastructure. For example, for many years traffic in Bangalore suffered from poor road infrastructure and was limited by the city’s older airport. IT industry officials worked with city officials to improve both these aspects, although it can be argued that road infrastructure has still not caught up with demand. On the education front, as Bangalore did not have a campus of the major engineering university system (the Indian Institutes of Technology), the IT industry got behind a privately-led effort (with some State support) to sponsor a new type of programme — the Indian Institute of Information Technology (IIIT) Bangalore. (A similar effort took place in Hyderabad.) While IIIT Bangalore’s enrollment and faculty size is modest, the institute plays a significant role in the ecosystem in terms of providing education both for foreign MNEs and for local firms, cooperative research with firms, and a contribution to the clusters’ renown through its educational and research strengths. A similar bridging effect occurred between industry and educational institutions with the establishment of IIIT-Hyderabad.

Investment in private infrastructure tends not to be an issue for IT firms and States, as foreign investors also get involved. For example, the government-linked corporations of Singapore have invested in, and operate software parks in Bangalore, Chennai and elsewhere. In the PRC, many software parks have been created across the country by private investors, including a few by the IT firms themselves. In addition, the same developmental phenomenon that has happened in Bangalore and other early clusters is also happening in Orissa. While there were few developers before the IT industry’s boom, nationally operating builders came in to build private infrastructure, e.g., IT parks and housing projects, during that period. One firm, Satyam, contributed to the setting up of street lighting and road development.

For the most part, IT firms and software parks tend to be isolated and self-contained entities. It is the IT sector’s multiplier effects on a variety of other services, i.e., retail, entertainment, education and medical care, that make the broader economic impacts of the IT sector more likely to be felt.

3.6. IT and broader-based development

Finally, it would be remiss to examine the effects of services without considering how the broader IT revolution, consisting of IT infrastructure and applications, might actually have affected productivity and the economy more broadly in the most rural of areas. The evidence has to be looked at on a project-by-project basis, and instances of best practices should be closely examined. Early studies pointed out the various models by which upgrading information systems could help the rural economy (e.g., Quibria, Tschang and Reyes-Macasaquit, 2002), and indeed certain businesses and the business models involved, such
as Grameen Telecom – based on microenterprise and the supply of basic functions, such as communications, to rural areas – appeared to work, while others, such as the telearchcentre approach to Internet-enabling populations and businesses, appeared to be less viable as far as providing a business-enabling function and value proposition (Telecentre Magazine, 2008). Some IT projects, such as the Internet kiosk programs TARAhat and Drishtee, faced various constraints (including financing and infrastructure) as well as broader challenges related to sustainability and scaling-up (Kaushik and Singh, 2004).

Other technology schemes that “customized” technology and its applications, such as various low-cost laptop or hand-held computer projects and proposals, often did not have sufficient business impact on the poorer populace to allow the latter to justify making these purchases. For example, Encore’s Simputer computer, an early effort to create a simple hand-held computer with limited functions, did not sell well. These products are effectively “technology solutions,” and while many attempts to reach the rural areas start with technology, many end with the failure of the technology to compete or be diffused. While this failure might be the result of factors influencing adoption – e.g., products ill-fitted to users’ actual needs – another possible cause is a factor at the economic level, which was identified by Quibria and others (2003) as IT usage being correlated with income.

In short, incomes may have to rise before IT usage can take hold in the economy. Related to “technological fit” is the interesting recent development of a host of technology entrepreneurs trying to supply not simply products, but IT services and solutions to rural areas. These cater to needs identified across a spectrum of areas, from applications such as telemedicine and transport scheduling to the need for mobile phones with local language functionality and customized interfaces. While the producers are learning the basics of the technology and its applicability to various situations, there is also possibly much earning to be done on the types of business models that are suited to these settings.

Other efforts have sought to enable rural employment schemes, such as former Chief Minister of Andhra Pradesh Chandrababu Naidu’s schemes at the beginning of India’s software industrialization, starting with IT-enabling of the rural areas. By many accounts, the city with the second most successful IT industry after Bangalore was Andhra Pradesh’s state capital, Hyderabad. The general thinking at the time was that some of the IT offshoring work could be done in rural areas, but such attempts in Andhra Pradesh failed. As one observation put it, the “diversity of Andhra Pradesh, with nearly two thirds of the population of the State depending on agriculture for its existence, excludes the possibility of diverse poor and rural social groups with different levels of skills, access and education being able to benefit equally from these…sectors” (Dabla, 2004).

Furthermore, the State’s focus on foreign investment and offshoring facilities (resulting in, for example, the attraction of Microsoft to Hyderabad) and a host of other reasons might also have dictated against the work moving to rural areas. First and foremost of the underlying reasons might have been the set-up cost for firms and the firms’ ability to govern their operations. Generally, large firms need to create centres of some critical mass, which, in turn, require infrastructure of some critical mass. Given the need for quality assurance, and increasing security concerns, these dictate against the earlier hopes of development advocates that the work could be done offshore in literally any location.
More recently, local IT entrepreneurs have turned their attention to determining what they can do to supply rural areas with technologies specifically customized to their needs. Dr. Sridhar Mittar, a former chief technology officer of Wipro, started such a programme, called NextWealth Entrepreneurs. This is a social entrepreneurship programme that tries to enable entrepreneurs and create jobs in the rural economy. The company plans to open 40 centres in three years to employ 10,000 graduates near their (rural) homes. In order to do this, it still has to select which rural cities to help. Typically, cities are selected for this programme based on the availability of graduates from established engineering colleges in those cities, as well as on the available infrastructure.

4. Conclusion

The author has sought to accomplish two objectives in this paper. The first is to highlight the differences and similarities between the services development models of the PRC, India and the Philippines. The contrast between the experiences in each of these countries highlights subtle and important differences, particularly with regard to latecomer countries. The case of the PRC shows that it is conceivable to have a successful latecomer in the software industry, a field in which India has built a commanding lead in both technical and process capability at the firm level. However, the PRC’s firms have done this both in cooperation with foreign MNEs to service the PRC’s domestic market, and independently by working in Japan, a culturally similar market. The Philippines’ case shows that a latecomer can flourish by bringing in MNEs as providers – following a pure labour arbitrage model of operation (i.e., based on large suppliers of lower-wage but skilled labour), and with the additional advantages of similarities between the workforce’s native language and the clients’ language of work. In this model, one option for domestic firms looking to enter the industry is to emphasize lower-skilled work at lower wages than those paid by competitors.

The second objective is to illustrate the broader implications of the IT services (i.e., outsourcing or offshoring) industry. As can be seen from combining the case level and higher-level evidence for India, the sector’s contribution to overall GDP and exports can be considerable over time. The multiplier effects on output and employment are not unlike those of other sectors. In a large, rapidly expanding economy such as India’s, the industry’s effects on employment may be less significant than its effects on growth. However, due to the high value-added and higher wages (on average), the effects on the economy are greater when considered on a per person basis. In addition, while the benefits of direct employment will tend to go to the highly educated, the industry can still benefit from the creation of a vibrant middle class, at least in selected cities where the IT industry has had a good start.

Through natural evolution and policy assistance, these benefits can also be brought to other, secondary cities. Finally, the IT sector has the potential (and indeed, may be necessary) for cultivating productivity increases in domestic sectors (such as manufacturing) and in technologically sophisticated firms. However, as the case of India demonstrates, the usage of IT to improve productivity in other sectors of the economy, such as manufacturing, as well as the rural parts of economies still has a long way to go.

20 Author’s interview with S. Mittar.
Annex

Research approach

Given the key elements of factor advantages, opportunities, and firm competencies, and given that the labor forces in both the PRC and the Philippines appear to have an advantage over other countries, the starting point for this study was to examine whether and how firms in these countries manage to strategize, or what MNE location behaviour is involved, with regard to opportunities, in developing strong outsourcing industries. Furthermore, given that the particular nature of the markets and business environments in each of the countries appear to have shaped their industries, the study also aimed to develop a view of macro-level factors. To some extent, secondary data and literature were relied on for providing this macro perspective.

The approach to studying competencies at the firm level was a longitudinal study based on multiple field visits to different firms in the PRC and the Philippines. In addition, comparisons were drawn with India, based on earlier fieldwork in that country. To understand the specific differences that enabled each industry's growth, each country's industry was examined in terms of the composition of its firms' origins and growth path. This approach involved the systematic collection of data using a set of semi-structured and open-ended questions about: (a) the origins of firms (particularly some of the earliest and most successful firms at the time of the interview); (b) the nature of the markets; (c) barriers to firms; (d) interactions with the market and clients; and (e) the upgrading path for the firm (i.e., the knowledge and capabilities acquired as the firm matured). Information on basic factors such as skills, policy and, in the case of the Philippines, infrastructure and language capabilities, were also sought.

Table 3 shows the dates of visits and the interviews conducted. Each interview was between one and two hours in length. The interviews in the PRC were conducted with either a head of the company (usually the chief executive officer) or a key person in management (e.g., a head of marketing or business development). Interviews in the Philippines were almost all conducted with the heads of the facilities. All of the interviews were transcribed on the spot, and all of the key BPO interviews were taped for later review and possible additions to the transcriptions. (Note that the names of the firms interviewed were changed to names that are partly descriptive of the industries they are in.)
Annex table. Interview samples for the PRC software and Philippine BPO cases

<table>
<thead>
<tr>
<th>Country</th>
<th>Interview dates (approximate)</th>
<th>Number and type of firms interviewed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRC</td>
<td>Early 2001</td>
<td>Twenty-nine domestic software firms (six in outsourcing – mostly smaller firms – all different from those approached on succeeding visits).</td>
</tr>
<tr>
<td></td>
<td>November 2004</td>
<td>Two domestic outsourcing firms (B-soft and United Innovation), subsumed into third interview sample.</td>
</tr>
<tr>
<td></td>
<td>May 2006</td>
<td>Three domestic outsourcing firms (B-soft, W-soft, I-soft).</td>
</tr>
<tr>
<td>Philippines</td>
<td>June 2004</td>
<td>Twelve firms (five domestic and seven MNE (mainly call centres and animation firms) as well as two software firms and one MNE BPO facility).</td>
</tr>
<tr>
<td></td>
<td>July 2005</td>
<td>Five firms (all MNE, BPO shared services facilities, different from first set of firms).</td>
</tr>
<tr>
<td>India&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1999, 2001 (updated in 2009)</td>
<td>Twenty-seven firms (all but one performing software outsourcing – 19 domestic and eight MNEs). Update in 2009 involved about six already interviewed firms and four new ones, all in software and R&amp;D services.</td>
</tr>
</tbody>
</table>

<sup>a</sup> Included here only for comparison purposes (first visits predated the other two cases).

<sup>b</sup> Additional interview material from a government interviewer was also made available on several PRC firms outsourcing to Japan.

Note: The interview list does not include representatives of governments and software bodies (e.g., associations), which were approached in each country.
References


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Part II
MEASUREMENT CHALLENGES IN SERVICES TRADE
Chapter 4
Access through presence: Australian perspectives on measuring Mode 3 trade

Jane Drake-Brockman

1. Defining services

“Services” encompass a very broad and diverse range of activities, but tend to be intangible and difficult to measure. In its broadest sense, the services sector has tended to be thought of negatively, that is, the sector includes all economic activity that is not mining, manufacturing, agriculture, forestry, and fishing. Services are generally poorly understood, therefore, as they involve activities that do not produce tangible “things” or “goods”.

This negative view of services is nonsensical in practice. Many service activities do, in fact, result in production of a “thing” — e.g., a restaurant meal, a film or a published consultancy report. Similarly, significant services sector activities are embedded within all goods-producing industries. A more positive and accurate definition of services is needed to focus attention directly on service activities in their own right; this is essential if progress is to be made in identifying the drivers of competition and innovation specifically in services and, hence, in defining a strategy to help meet the policy needs of actual and potential service providers.

In order to describe what services are, rather than what they are not, some definitions focus on their intangibility. However, while all goods are indeed tangible, not all services are intangible, such as repair, transportation or construction. Other definitions place an emphasis on ownership, noting that services provide temporary possession, rather than ownership, and that payments for services typically take the form of rental or access fees. Yet other definitions focus on the intellectual property content of services. Elements of each of these definitions are mirrored in the internationally agreed economic definition set out in the System of National Accounts (SNA 2008; Section 6.17) which states that services are “the result of a production activity that changes the conditions of the consuming units, or facilitates the exchange of products or financial assets.”

According to SNA 2008, there are two major types of services, i.e., change-effecting services (which can apply to goods or to people) and margin services (which can apply to goods and services). A feature of both margin and change-effecting services is that they are not separate entities over which ownership rights can be established — they cannot be traded separately from their production. By the time their production is completed, the services must

1 The author gratefully acknowledges the research and data support as well as helpful conversations with Philip Kelly and Andrew McCredie of the Australian Services Roundtable.
have been provided to consumers. In addition to change-effecting services and margin services, SNA 2008 defines services as involving a range of knowledge-capturing products, noting that they have many of the same characteristics as goods in that ownership rights over such products can be established and used repeatedly.

Figure 1 shows the various categories of economic activities defined as services in SNA 2008. It illustrates that neither tangibility nor ownership are sufficient to distinguish services from goods, and that while there are several unifying themes, the economic definition of services encompasses a range of complex and subtly different activities.

**Figure 1. Conceptual framework for defining services**

<table>
<thead>
<tr>
<th>More tangible</th>
<th>Changes to things</th>
<th>Changes to people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changes in the condition of the consumer’s goods: the producer works directly on goods owned by the consumer by transporting, cleaning, repairing or otherwise transforming them</td>
<td>Margin services result when one institutional unit facilitates the change of ownership of goods, knowledge-capturing products, some services or financial assets between two other institutional units. Margin services are provided by wholesalers, retailers and financial institutions.</td>
<td></td>
</tr>
<tr>
<td>Changes in the condition of the consumer’s intangible assets: the producer works directly on intangible assets owned by the consumer.</td>
<td>Changes in the physical condition of persons: the producer transports the persons, provides them with accommodation, provides them with medical or surgical treatments, improves their appearance, etc.</td>
<td></td>
</tr>
<tr>
<td>Knowledge-capturing products created and owned by the service producer. These include the creation, storage, communication and dissemination of information, advice and entertainment in such a way that the consuming unit can access the knowledge repeatedly. The industries that produce these products include the production of general or specialized information, news, consultancy report, computer programs, movies, music, etc.</td>
<td></td>
<td></td>
</tr>
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</table>

Sources: United Nations, the European Commission, the Organisation for Economic Co-operation and Development, the International Monetary Fund and the World Bank Group 2009, System of National Accounts, 2008; Section 6.17.

2. Measuring services

If defining services is conceptually complicated, devising appropriate methodologies for the collection of national services statistics has proved no easier. In practice, the lazy solution has been adopted; the services sector has simply been measured as a straightforward residual after allowing for agriculture, fisheries, forestry, mining and manufacturing. The evident result of this under-investment in the collection of services statistics is that the sector lacks a good statistical database.
The intangibility of many services, and the fact that services can change in quality and nature quite rapidly, are consistently cited as the chief reasons for the lack of progress in improving measurement methodologies in services. Constant improvements in technology add to the complexity of collecting data on services as new services are developed in areas such as finance and communications. It is only in the past decade, that these various factors have been recognized as signals of innovation and, hence, relevant to productivity measurement, thus justifying further public investment to improve the statistical database for services.

This paper focuses on some of the problems commonly experienced in relation to statistics regarding international trade in services. In doing so, it draws exclusively on Australian business case studies, and refers to the practices and collection methods of the Australian Bureau of Statistics (ABS).

It must be noted at the outset that trade statistics, even under the framework of the latest Balance of Payments Manual sixth edition (BPM6), are collected only for relatively aggregated sets of services activities. Australia was the first Organisation for Economic Co-operation and Development (OECD) country to implement BPM6 (OECD, 2002); ABS releases 7,000 disaggregated trade categories for goods (ABS, 2009) but still only 70 for services, the latter being more detailed than what is actually required by the international standards (i.e., the Extended Balance of Payments Services (EBOPS) Classification). The introduction of BPM6 saw significant improvements, mainly the more frequent release of more detailed data even though significant data gaps remain.

3. Defining and measuring international trade in services

A definition of services trade, encompassing four modes of supply, was incorporated into the General Agreement on Trade in Services (GATS) at the conclusion of the Uruguay Round of multilateral trade negotiations in the World Trade Organization (WTO). The four modes are:

**Mode 1 – Cross-border supply:** The services are delivered (for example electronically) to the territory of the non-resident client. This is really the only mode of delivery that most statistical collections cover. If delivery is direct to the non-resident client, ABS is likely to pick this up as an export via its sample survey of those Australian services providers known to export services. However, if the delivery (and invoicing and accounting) takes place via a local office in the territory of the non-resident, then depending on the nature of the office and the extent of bundling of different services together, it might be categorized as “services between affiliated enterprises” or, more likely, it will not be classified as an “export” (as explained under Mode 3).

**Mode 2 – Consumption abroad:** The non-resident client travels to the territory of the Australian services provider to obtain and pay for the services. Depending on corporate invoicing practices, ABS would not necessarily pick up all of these export transactions via its
International Trade in Services Survey. Special effort is made, however, to estimate travel services exports and imports (including education-related travel, business and other travel), because any business that provides goods or services to a non-resident travelling within Australia is providing a travel service. In order to capture this information, via a survey, all businesses – and many households (mainly those that rent holiday accommodation) – are potentially providing a service to a non-resident. Education services and tourism are Australia’s largest measured services exports.

**Mode 3 – Commercial presence:** The Australian services provider establishes a local presence in the territory of the foreign clientele; the local presence might be a representational office, a franchise or a registered subsidiary or branch. The local presence is considered a “foreign affiliate” when more than 50 per cent of the stock or voting rights are Australian-owned. The foreign client engages with the resident Australian-owned service provider via this office. While ABS does not measure earnings into that office in the trade in services collections, it measures the earnings of the office via the ABS International Investment Survey; those earnings are included in the balance of payments (BOP) current account income. The transactions are not considered to be exports because they are not between residents and non-residents, the foreign affiliate being considered a resident of the country in which it is located.

**Mode 4 – Movement of natural persons:** Service providers travel temporarily to the territory of the foreign client to supply the service. ABS would not necessarily pick this up via the International Trade in Services Survey unless it is specifically declared by the exporter.

Estimation of transactions under each of these modes is problematic. This paper reports a number of recent business efforts in Australia to improve the measurement of services exports via Modes 1, 2 and 4, but it focuses specifically on the information gains that can be achieved by efforts to measure Mode 3 (commercial presence).

Mode 3 differs fundamentally from the other modes in that it breaks the traditional pre-GATS convention as to what constitutes trade, the transactions involved being quite unlike the conventional concepts of imports or exports (imports by convention being services delivered by non-residents to residents, and exports by convention being services delivered by residents to non-residents).

The concept of Mode 3 delivery of services hence pushes awkwardly up against the statistical conventions of the BOP and the framework of the SNA and, as a result, in most countries, goes completely unmeasured, unlike Modes 1, 2 and 4, which are imperfectly measured, but measured nonetheless.

Upon conclusion of the GATS, six international economic organizations including WTO, the International Monetary Fund (IMF), OECD and the United Nations Conference on Trade and Development (UNCTAD) agreed on a set of recommendations for appropriate methodologies for measuring trade in services; these were set out in the Manual of Statistics on International Trade in Services (MSITS 02), first published in 2002.
MSITS 02 recommended that both inward and outward services transactions of foreign-affiliated companies should specifically be measured as part of national collections of trade data because services supplied through this mode are governed by the disciplines of the GATS (United Nations Statistical Commission, [UNSC] 2002). Few governments have implemented, or even made partial progress toward implementing, this recommendation. ABS does not regularly produce either inward or outward Foreign-Affiliates Trade Statistics (FATS) for Australia. This is a serious problem because recent estimates, based even on the limited empirical information available, suggest that Mode 3 (commercial presence), accounts for more than half of world trade in services.

There has been a tendency to dismiss this problem, on the assumption that the traditional collection of statistics on foreign direct investment (FDI) could serve as a proxy guide to what might be happening with respect to Mode 3 services trade. FDI statistics have been useful as a proxy because, given that they are based on 10 per cent ownership/voting stock, they cover a much broader stock of FDI than Mode 3. One flaw in this approach is that services are now coming to dominate the FDI statistics as well. According to the World Investment Report 2009 (UNCTAD, 2009), the services sector accounts for three fifths of the global stock of FDI. The data gaps in Mode 3 delivery of services are, meanwhile, prejudicing the associated international research agenda. The business case studies presented in this paper demonstrate that the traditional BOP data, even when supplemented by FDI statistics, are not up to the task of capturing global trends in international business.

A revised edition of the manual, MSITS 2010, was recently completed. It notes that “the development of statistics on international service supply has lagged behind the changing reality of the marketplace” (UNSC, 2010; Section 2.7) MSITS 2010 draws attention to the disconnect evident between data showing, on the one hand, that service industries are the largest recipients of global outflows of FDI, and yet comprise about one fifth of worldwide trade in BOP terms.

MSITS 2010 notes that “there are currently few reliable international comparisons of FATS, but according to information available for OECD economies, it is estimated [by UNCTAD] that the value of services delivered to markets through foreign affiliates is at least as high as the value of exports (or imports) of services recorded in the balance of payments” (see UNSC, 2010; Section 2.5).

Work by the WTO Secretariat staff likewise estimates that commercial presence accounts for 55 per cent-60 per cent of total global world trade in services (table 1).
4. Pilot survey of Australian-owned firms operating in other countries

At nearly 23 per cent of measured exports, Australia’s services exports are roughly on a par with manufactures exports and now clearly outdo Australia’s agricultural exports. However, there can be no doubt that the above percentage is a significant understatement.

In 2003, ABS (2005) conducted an experimental “Survey of Outward Foreign Affiliates Trade”. The conceptual framework was aligned as closely as possible to that articulated in MSITS 02. The survey frame was obtained by combining the frames of the “Survey of International Investment” and the “Survey of International Trade in Services”, which collects data quarterly on a wide range of services. The frame was supplemented by additional units considered to be within the definitional scope. Information was collected on the industry category, number of businesses, fixed capital formation, total assets, sales, value-added, gross operating surplus and employment. The scope of the survey was limited and the published results fell short of meeting the needs of potential users, partly as a result of constraints arising from confidentiality issues.

Despite its shortcomings, the survey results suggested that the official Australian data on services exports, as measured by BOP, had probably been measuring less than one third of Australia’s actual offshore supply of services.\(^2\) For confidentiality reasons, data for certain industry sub-sectors were suppressed. Based on the published data, the underestimation appeared to be particularly significant for financial services, including insurance, and for a range of professional services, including legal services.

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\(^2\) The results were released in October 2004.
Other key findings from the pilot survey include the following:

(a) In 2002-2003, Australian companies had approximately 4,000 foreign affiliates employing more than 300,000 staff. Interestingly, the bulk (86%) of Australian companies that have foreign affiliates are also Australian-owned;

(b) Australian foreign affiliates generated A$ 142 billion in sales, of which A$ 65 billion was sales of services (A$ 31 billion in the Americas, A$ 20 billion in Asia-Pacific, and A$ 14 billion in Europe);

(c) In Europe, sales of services appeared, to the extent that confidentiality of data enabled allocation to specific industry sub-sectors, to be dominated by finance and insurance; in Asia, sales also appeared to be strong in property and business services (including legal services);

(d) Initially, foreign affiliates were primarily established to service the markets where they were domiciled, with around 90 per cent of sales within the host country.

Unfortunately, despite persistent and vocal business support for further work, the pilot survey has never been repeated due to lack of government funding for this important work.3

5. Business case study experience

Given concerns about the evident and persistent lacunae in the official ABS data, a number of initiatives have been taken by other bodies during the past decade to try to get a better understanding of the extent of participation of Australian service industries in international trade. Some other government agencies and some service industry associations hoped that the implementation of industry-led sectoral surveys might assist in avoiding some of the confidentiality issues faced in the ABS survey (ABS, 2007).

5.1. International legal services

Groundbreaking survey work has been undertaken by Australia’s International Legal Services Advisory Council (ILSAC), which is chaired by the federal attorney-general and acts as the foremost public-private sector consultative and advisory forum for Australia’s international legal services sector. The statistical project was undertaken as a collaborative exercise by the Attorney-General’s Department, the Law Council of Australia, Austrade and eight leading Australian law firms, all of which contributed financially to the project. The survey itself was outsourced to FMRC Legal Pty Ltd.

3 The Australian Department of Foreign Affairs and Trade (DFAT) recently provided funding to ABS to carry out a survey of finance and insurance foreign affiliates trade statistics. The results are expected to be released in mid-2011.
This project was conceived in direct response to concerns that the global market for
Australian legal services was being underestimated in the official data, given that ABS does
not identify earnings of overseas branch offices of Australian law firms as legal services
“exports,” but rather, in accordance with international standards, as “returns on investment.”

5.1.1. **Definitional issues**

The ILSAC project aimed to measure income arising from Mode 3 and to obtain data
about different types of legal services and the ways in which they were traded. It is important
to note that the survey also deliberately measured legal services provided by Australian
resident legal practices to Australian companies where the work originated from an overseas-
based project.

These latter transactions cannot be considered, under any definition, to comprise
international trade in services. They are, however, highly relevant to studies, for example, of
how Australian firms become acquainted with the international marketplace, how Australian
services might add value to exports of other sectors and how Australian services compete in
the resident market vis-à-vis potential imports. Furthermore, such transactions are difficult to
separate in company records from genuine export transactions. Nevertheless, inclusion of
these transactions, as well as Mode 3 transactions in what ILSAC describes as “cross-border
income” can lead to potential confusion, and some care is consequently required in
interpreting the survey results.5

In particular, “fly-in, fly-out” is defined as work that is only undertaken by legal service
providers normally resident in Australia, either on a “fly in/fly-out” basis or from their “desk”
in Australia if it is not necessary to actually fly to undertake the work. This category could
presumably include Mode 1, 2 and 4 exports.

“Australian projects” covers residual exports that are neither “totally nor
predominantly” characterized as “fly-in, fly-out”, nor as commercial presence. They also
include international work performed for Australian residents. It is not possible from the
published survey results to obtain any specific breakdown in the “Australian projects” data
between genuine exports and resident-to-resident transactions.

It should also be noted that the ILSAC survey will have overestimated “legal services”
in the sense that it included not only professional legal fees but also “disbursements” (funds
billed to clients and spent as expenses on behalf of clients); ABS does not include
disbursements under “legal services.” Similarly, the ILSAC survey picked up some other
services that corporate accounting practices did not necessarily separate out as distinct from
legal services; ABS would categorize these under the appropriate service category.

4 Legal services comprise commercial legal services and barrister services, patent and trademark
attorney services, commercial dispute resolution services (including arbitration and mediation) and other
services.

5 ILSAC is working with ABS to more accurately align its surveys with the international definitions of
the four modes of delivery. Some of the definitional problems have arisen from the need to compile
a comprehensible and easy to complete survey that aligns with company records.
Nevertheless, flaws resulting from the above definitional issues aside, the ILSAC survey results are extremely interesting and allow for considerably more extensive and useful trade-related analysis than the export data provided by ABS.

5.1.2. Survey results

ILSAC (2005 and 2007) conducted two surveys – the first in financial year 2004/2005 and the second in 2006/2007 – and released the results of the latter in February 2009. The second survey was sent to 170 Australian law firms, legal practices, patent and trademark practices, international arbitrators and mediators, and other legal and related service providers. Of that number, 86 (51 per cent) returned the survey, with 61 (36 per cent) providing a completed response.

Both sets of survey results confirmed that there was major underestimation in the provision of Australian legal services offshore, including as a result of failure to measure Mode 3 transactions. Figure 2 illustrates the magnitude of the potential underestimation. Total combined legal services “export and cross-border income” was reported to be A$ 675 million (increasing from A$ 543 million in 2004-2005) or 142 per cent higher than the official ABS export figure reported at A$ 278 million at the time.

Figure 2. Exports and “cross-border income”
legal services, 2006-2007


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6 Since this paper was written, ILSAC has completed a third survey for 2008-2009, the results of which are available at www.ilsac.gov.au/www/ilsac/ilsac.nsf/Page/GlobalLegalServicesandMarketAccess_ILSACStatisticsSurvey_AnalysisofILSACsThirdStatisticsSurvey(2008-09)
It is interesting that even conventional exports of legal services, estimated by ILSAC to have contributed A$ 392 million to the above total, were some 41 per cent higher than the ABS figure, which was reported as A$ 278 million in 2006-2007 (ABS, 2007).

This significant discrepancy of A$ 114 million seems largely to have been caused by inadequacies in the ABS survey. These have now been addressed thanks to the effective working relationship with ILSAC. For 2008-2009 data, ABS adjusted its frame in line with the ILSAC surveys, the consequence being a reported 60 per cent jump in exports of legal services in 2008-2009 (whereas many legal services firms report anecdotally that 2008-2009 was a difficult year).

Backcasting\(^7\) of the data came on-stream on 4 November 2010 and the revised data confirm that enlargement of the ABS survey frame has largely fixed the survey discrepancies. (The ABS figure has now been revised to A$ 406 million, leaving a remaining discrepancy of only A$ 14 million.) The point to be made here is that without the ILSAC work, and the attention given to improving the data by Australia’s top legal services firms, the impetus to improve the ABS survey frame would not have developed so quickly, and the improvements in the ABS export data would not yet be on-stream.

Before explaining in any further detail the ILSAC survey results regarding conventionally defined exports, there is the question if A$ 392 million of the A$ 675 million is conventional exports, then what is the remaining A$ 283 million? Importantly for the purposes of this paper, commercial presence abroad (Mode 3) was estimated to contribute more than half of the remainder, i.e., A$ 149 million in 2006-2007 (compared with almost A$ 85.2 million in 2004-2005).\(^8\)

Comparing the survey results in 2006-2007 and 2004-2005, the contribution of commercial presence grew extremely rapidly – by 75 per cent during the two years to account for 22 per cent of “export and cross-border” earnings, compared with 16 per cent two years earlier. This evident growth in commercial presence is remarkable evidence of the globalization of Australian legal services and, without the ILSAC survey, may have gone unnoticed in the official statistical collections (figure 3).

The ILSAC survey was able to deliver a wealth of additional information. For example, the survey showed that international work is very concentrated, with 10 firms accounting for almost 80 per cent of earnings in 2006-2007. Importantly, the survey provides a more detailed breakdown by geographic market than is normally available from ABS export data, together with related insights into the relative importance of individual mode of delivery (figure 4) into different geographic locations.\(^9\)

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\(^7\) Backcasting, as distinct from forecasting, is the statistical process of adjusting previously published data trends, based on what is known today.

\(^8\) Net of disbursements, the figure was A$ 145.1 million (compared with A$ 79.50 million in 2004-2005).

\(^9\) Some detailed information on legal services by geography can be requested from ABS for a fee as a special data service.
Figure 3. Legal services “exports” – comparison of ABS/DFAT export data and ILSAC data on exports and “cross-border income”


Figure 4. Legal services exports and “cross-border income”, by mode of service delivery

5.1.3. Geographic location of international work, by mode of delivery

Together with accounting for 66 per cent of total “export and cross-border” sales, the ILSAC survey showed that the most important locations for international legal work for Australian lawyers were (figure 6):

(a) The United States/Canada – A$192 million in 2006-2007 (29 per cent) compared with A$134 million in 2004-2005;

(b) The Peoples Republic of China (PRC) and Hong Kong, China – A$ 105 million (16 per cent) in 2006-2007, up significantly from A$ 74 million in 2004-2005 and now displacing the United Kingdom for second place;

(c) The United Kingdom – A$ 82 million (12 per cent) compared with A$ 87 million in 2004-2005;

(d) Continental Europe – A$ 66 million (9 per cent).

**Figure 5. Legal services export destinations, 2006-2007 (export-only income by geographic market – ABS comparable) (A$ ’000)**

Although the United States and Canada remain overwhelmingly the largest single market location for Australian international projects, there is no longer any Australian law firm office established in North America. Commercial presence has been shifting towards Asia. The data for conventional legal services exports alone show North America accounting for just over one third of all transactions and Asia as a whole accounting for just under one third (figure 5). However, the combined data for “exports and cross-border” transactions, including Mode 3 (commercial presence), show Asia now in the ascendancy, accounting for more than one third of the total, and North America dropping below one third.
During the two-year period between the two ILSAC surveys, Asia as a whole has grown the fastest (more than twice as fast as the rest of the world) as a location for Australia’s international legal services work. Commercial presence plays a particularly important role in the delivery of Australian legal services into the PRC, now accounting for A$ 57 million or more than half of the total Australian legal services earnings from projects in the PRC and Hong Kong, China (see figures 7, 8 and 9).
The most important markets (by office location) for Mode 3 delivery are:

(a) PRC and Hong Kong, China (47.5 per cent of total Mode 3 transactions);
(b) New Zealand and Papua New Guinea (23 per cent);
(c) Singapore (15 per cent);
(d) United Kingdom (8 per cent).

Commercial presence in these four geographic destinations accounted for 93.4 per cent of the income derived by the overseas offices of Australian law firms, and patent and trademark attorney firms. Interestingly, the ILSAC study showed the geographic source of income into each of these offshore office locations to be quite diverse, unlike the ABS pilot study, which covered all services as a whole and which had concluded that 90 per cent of sales took place in the host country.

Figures 10, 11 and 12 show the source of income for Australian firms with a commercial presence in the PRC, Singapore and United Kingdom. Contrary to the ABS pilot survey results for all services, the data show that legal firms are establishing a presence in a convenient location to provide services to the surrounding regions.

Figure 10. Commercial presence in the PRC and Hong Kong, China – incomes by geographic market (A$ ’000)


For legal services, the ILSAC survey shows the diversity to be greatest in Singapore, where only 62 per cent of income derives from within Singapore, and the remaining 38 per cent from other regional markets. Australian foreign affiliates based in the United Kingdom earned 28 per cent of their earnings in markets other than the United Kingdom (figure 12) while firms based in the PRC and Hong Kong, China earned 22 per cent of their earnings from other geographic markets.

The ILSAC survey results allow for some valuable comparisons with the market orientation of other modes of delivery. Figure 13 shows that “fly-in, fly-out” exports are focused on the United States and Canada (26 per cent), Africa and the Middle East (12 per cent) as well as the United Kingdom (10 per cent) and Europe (9 per cent), which together account for more than half of the work, and with Asia accounting for the remainder.
Figure 11. Commercial presence in Singapore – income by geographic market (A$ '000)


Figure 12. Commercial presence in United Kingdom – income by geographic market (A$ '000)

5.2. Type of legal work by mode and market

The top areas of legal services work, globally, for Australia were (figure 14):

(a) Corporate legal services, including mergers and acquisitions (M&A) (32 per cent);

(b) Intellectual property, information technology and telecommunications (ICT) (23 per cent);

(c) Litigation (11 per cent);

(d) Banking and finance (10 per cent).

These four categories accounted for 76 per cent of all international work (figure 15).
For foreign affiliates abroad, services were focused on corporate and M&A, banking and finance, and litigation. Banking and finance was nearly twice as important a source of earnings for foreign affiliate offices than for total international earnings.

“Fly-in, fly-out” work was relatively more focused on intellectual property, ICT, mining resources, and other infrastructure (figure 16).
5.3. Implications for strategic business and policy decision-making

The ILSAC survey provides valuable potential insights into the process of globalization of the Australian legal services industry. It has served to assist ABS to correct gaps in the export frame and so to improve the conventional BOP data on legal services. It has also significantly extended the available data on Australian foreign affiliates’ trade in services.

The survey results have thereby enabled a significant further research agenda, which was simply inconceivable given the gaps in the official database. The detail that now exists on the geographic distribution of particular kinds of legal work has allowed ILSAC to move forward with its agenda of identifying priority markets with respect to which it makes sense to devote resources to documenting and then reforming the barriers to legal services trade and investment. Furthermore, the data enable this work to proceed with a measured understanding of the modes of delivery involved for every geographic market.

The surveys have elicited rich qualitative and anecdotal material in addition to the sheer statistical numbers. This material is vital to understanding how legal services trade actually takes place and how it is classified, recorded and valued by firms. The survey’s departure from the constraints of international statistical standards is therefore as much an asset as an imperfection. It certainly improves the quality of trade and investment policy formulation, and equips Australian negotiators to achieve more commercially meaningful outcomes – and perhaps to reconsider the structural design features of present intergovernmental negotiating vehicles to make them more directed to achieving commercially useful gains.
Most importantly, because the surveys have been conducted in the context of a high-level government-business partnership, they have allowed the major players in the legal services sector to get together to take stock, to assess Australia's competitiveness in the global market, and to consider the policy settings that might promote greater innovation and efficiency in the future.

5.4. International financial services (funds management)

Australia's financial services sector has become much more globally integrated over the past decade, bringing it into line with those of other developed countries. Despite current enthusiasm for policies that ensure that Australia continues to grow as an international financial centre, little is actually known about the extent to which Australia already exports, inter alia, its investment management expertise. In addition, exactly how the increased globalization of the financial services sector can best be captured in the trade statistics is relatively complex and far from fully resolved.

To help fill in the information gaps, the Investment and Financial Services Association (IFSA) commissioned a private sector survey-based study in 2008. In the funds management sector, determining the value of exports derives primarily from estimates of the value of overseas-sourced funds under management (FUM) because every transaction relevant to those funds incurs a financial services fee from non-residents.

The study focused on gathering market intelligence regarding the extent to which Australian investment managers source FUM from overseas clients, the countries these funds are sourced from, and from which types of clients. To put this in trade terminology, like the ILSAC study, this study's objective was to estimate the level of funds management exports, and identify the key geographic market destinations and the types of services sold.

As of the end of December 2007, the ABS estimate for overseas-sourced FUM was A$ 58 billion. For the same period, the IFSA/Rainmaker Information study estimated the value of overseas sourced FUM at A$ 161 billion, or 178 per cent higher than the official (and conceptually different) ABS figure. The IFSA/Rainmaker Information survey also found that overseas sourced FUM grew about one-third faster than Australian sourced FUM, which means exports (i.e., from non-resident clients) were growing faster than the domestic market (Rainmaker Information, 2008).

The study found no room for complacency, however. On the contrary, the study concluded that even on the basis of this much higher figure than the official figure that “Australia is playing way below its weight in this important global market for investment destinations” (Rainmaker Information, 2008). Argumentation based on the Rainmaker Information survey data suggests that with a bit of consistent effort, by 2017 Australian investment managers could be sourcing as much as A$ 740 billion from overseas clients.

Rainmaker Information Pty. Ltd. conducted the study.

Rainmaker Information, 2008, p. 5.
Despite the consultation process that took place, the IFSA/Rainmaker Information surveys and the relevant ABS survey were ultimately not comparable. The private sector survey professed to have adopted “radically different methodologies, definitions, sample sizes, scope and even different asset class categorizations” (Rainmaker Information, 2008). By way of example, IFSA/Rainmaker Information considered the ABS definitions of asset classes, based on international statistical standards, to be out of date and irrelevant to contemporary market realities. It noted that ‘for example, the ABS category of ‘equities and units in trust’ confuses underlying assets with the investment instrument used to package those asset holdings, while the single combined ‘overseas assets’ figure is also very vague”. Rainmaker Information measured investment at a different vertical point in the investment flow and required different classifications from those used by the ABS. Table 2 outlines the differences between the two data collection methods.

### Table 2. Key differences between IFSA/Rainmaker information and ABS data collection methods

<table>
<thead>
<tr>
<th>Rainmaker Information</th>
<th>ABS (based on Rainmaker Information understanding)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sample size and coverage</strong></td>
<td>Quarterly survey of 140 fund managers that manage externally sourced FUM on a fee-for-service basis.</td>
</tr>
<tr>
<td><strong>Inclusion of certain areas of industry</strong></td>
<td>Only count wholesale FUM as retail FUM is picked up in the public unit trust (managed fund) surveys. Rainmaker Information points out that not all retail FUM is managed funds.</td>
</tr>
</tbody>
</table>
| **Definitions** | Asset classes are defined by the contemporary market. Classes include:  
  - **Total local assets**  
    - Australian equity  
    - Australian fixed  
    - Property  
    - Cash  
    - Other  
  - **Assets overseas**  
    - International equity  
    - International fixed | Asset classes are defined by “international statistical standards.” Classes include:  
  - **Equities and units in trusts**  
  - **Australian fixed assets**  
    - Loans and placements  
    - Short-term securities  
    - Long-term securities  
  - **Total local assets**  
    - Land and buildings  
    - Cash and deposits  
    - Other  
  - **Assets overseas** |

In attempting to interpret these differences, IFSA/Rainmaker Information suggested that perhaps the Rainmaker Information figures could be considered as constituting an upper estimate and the ABS figure as constituting a lower estimate, resulting in a conservative mid-point estimate of A$ 110 billion. This is still very significant; as Rainmaker Information pointed out, “it is equivalent to almost one-third the entire Australian equities sector, two-thirds the entire Australian fixed interest sector, half the entire cash sector, or two thirds of the entire alternatives investment sector. Indeed, it also equivalent to the entire size of Australia’s biggest investment manager or nearly twice the size of the Future Fund” (Rainmaker Information, 2008).

The IFSA/Rainmaker Information study found that slightly more than one third of Australia’s funds managers are involved in the export of investment management services. Half the leading managers of overseas-sourced FUM are indigenous to Australia; of these managers, Australian-originated managers account for the top four places, with a 68 per cent market share (Rainmaker Information, 2008). Expressing this in trade terms, IFSA/Rainmaker Information unearthed the valuable information that as many as half of the Australian-based managers of overseas-sourced FUM are foreign affiliates of non-resident firms and that inward foreign affiliates have a market share of nearly one third.

The study also found that the overseas-sourced FUM market in Australia was more than twice as concentrated as the overall market. While the five biggest managers of Australian-sourced FUM control 30 per cent of the market, the five biggest managers of overseas-sourced FUM, one of which is an inward foreign affiliate, control 75 per cent of the market.

5.4.1 Geographic markets for funds management exports

As shown in figure 17, the United Kingdom provides 22 per cent of overseas-sourced FUM, followed by New Zealand (15 per cent), Japan (13 per cent), the United States (12 per cent), the PRC (11 per cent), the rest of Asia (11 per cent) and Europe (9 per cent). The Middle East and India accounted for only 0.3 per cent and 0.1 per cent, respectively, while the rest of the world accounted for 7 per cent.

It will come as no surprise that this detailed level of information is available from the official statistics collections. As the Rainmaker Information report described it:

“The top three countries – the United Kingdom, New Zealand and Japan – accounted for 50 per cent of the business. The new market of the PRC has exploded out of the blocks to already represent 11 per cent, almost matching the developed United States market as a source of FUM. But despite the much talked about potential of India and the Middle East it seems Australian investment managers are yet to develop a viable business model in these bustling marketplaces” (Rainmaker Information, 2008).

Clearly this is valuable information for strategic investment decision-making for the private sector; unfortunately, as in so many other services sectors, such assessments simply cannot be achieved from use of the ABS data alone.
5.5. Exports by type of work (clients)

The IFSA/Rainmaker Information pilot study revealed that from a sub-sample comprising A$ 61 billion from 11 investment managers, 36 per cent of overseas-sourced FUM was sourced from pension funds, 15 per cent from mutual funds, 13 per cent from sovereign funds, and 24 per cent was sourced from other institutional managers; 7 per cent was sourced from individuals, less than 1 per cent from insurers and 5 per cent from undefined other sources.

5.5.1. Exports of financial intermediation services indirectly measured

Having noted the underestimation of FUM in Australia’s statistical collections, it is important to look at how successfully Australia assesses its exports of financial intermediation services, based on the estimates of FUM. DFAT (2009) reported that in 2008-2009 the value of Australia’s financial services exports rose by more than 13 per cent to A$ 1.2 billion, with a rise in export volume of nearly 10 per cent. Such strong export growth in a period of a global financial downturn demands some explanation.

Figure 18 breaks down the financial services export data into both explicit charges and financial intermediation services indirectly measured (FISIM). In fact, explicit charges turn out to have fallen by 8.8 per cent (to A$ 456 million) – in line with expectations during the global financial crisis – but FISIM rose 32 per cent (to A$ 757 million). FISIM relates to the margins between interest paid to depositors and charged to borrowers and has only recently been included in the ABS’ calculation of financial services exports, following recent inclusion in the latest IMF guidelines for BOP accounts. During the recent financial crisis, there was a high risk of default on debt, and this may have given rise to an unanticipated increase in FISIM. When the risk of credit default is lower, FISIM exports may be expected to drop, with the counterintuitive outcome that measures of total financial services exports might likewise suffer.
5.6. Implications for strategic business and policy decision-making

It is essential for effective policy formulation that policymakers be equipped with excellent information. What is clear, however, is that policymakers are not currently equipped with the quality information they need. Having identified a major underestimate in Australian exports of funds management services, IFSA/Rainmaker Information simply concluded that “the real problem is that the ABS survey in its current form distorts official perceptions for how important our industry actually is for Australia’s economy” (Rainmaker Information Pty. Ltd., 2008). Obviously this cannot be quantified precisely, given the definitional differences involved. That sentiment does, unfortunately, tend to echo the thinking across most services sectors.

The IFSA/Rainmaker Information study is a key resource capable of being mined for further trade policy research and for trade negotiation purposes. It was entirely privately funded. In the case of funds management services, unlike legal services, no explicit work has yet been done on commercial presence although, as noted in the text, some information has emerged. This suggests there is a significant outstanding statistical agenda with regard to financial services.

6. Other services sectors

The ILSAC work has evident potential application to other professional and technical services particularly architecture, engineering, ICT, media and entertainment, and services related to mining and agriculture. Anecdotal business evidence collected through the Australian Services Roundtable suggests that the scale of underestimation of Mode 3 delivery of these services is likely to be similar to that of legal services, and that the problems of inadequacy of the frame for measuring Modes 1, 2 and 4 exports are also present.
The Victorian Department of Industry, Innovation and Regional Development has estimated ICT exports from the State of Victoria to be several times larger than the ABS figure. The Australian Capital Territory (ACT) Chamber of Commerce has claimed that ABS estimates of ACT’s ICT exports are a fraction of what the Chamber of Commerce considers to be the case. The Export Finance and Insurance Corporation’s Global Readiness Index survey for 2010 (EFIC, 2010) found that overseas expansion of services continues to outpace other sectors, with half the companies surveyed in the information, media and telecoms, professional services, and other services categories planning to expand their offshore operations during 2010-2011.

The Australian Institute of Architects reports anecdotally that approximately 25 per cent of revenue earned by large Australian architectural practices is generated from projects outside Australia – some, but not all, via commercial presence abroad. The Institute’s internal survey results suggest that current data on the export value of the design professions is disjointed, incomplete and unable to provide an indication of the economic benefit that the export of design services brings to Australia.

What globalization has done across all these professions is to bring many more companies into the services exporting business, and it is a costly task for the ABS services export surveys to remain up-to-date. In the case of legal services, ABS was able to fix the frame because ILSAC had done much of the preliminary work required, including providing compelling evidence of the need for change. It is vitally important that sufficient resources are devoted to undertaking regular updating of frames to measure service exports in other sectors.12

An article (Hartcher, 2007) in the April/May 2007 issue of Diplomat magazine commented on the ABS pilot survey results, noting that “corporate Australia’s 4,012 foreign affiliates were selling A$ 142 billion worth of goods and services directly into foreign markets in 2002/03, according to an ABS estimate. This means that Australian-invested subsidiaries, branches and majority-owned joint ventures abroad were selling 96 per cent as much directly into offshore markets as Australia was selling in conventionally-measured goods and services exports.” The same edition of the magazine drew on EFIC’s Global Readiness survey data for 2007 to list the Top 100 companies (figure 19), based on offshore revenues, as set out in figure 19. Almost half (47) of these firms were service businesses; on average, offshore revenue as a proportion of total revenue for these firms was 42 per cent, with financial services being slightly above the total average (58 per cent).

In a similar vein, data analysed by WTO has shown that Mode 3 comprises around 63 per cent of Australia’s international supply of services (figure 20) (Madeleine and Maurer, 2008).

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12 In Australia’s case, ABS has always shown a willingness to avoid duplication of effort and ensure efficient information usage by using information that private sector bodies have on businesses exporting services.
Taking all the official, semi-official and private sector evidence into account, it does appear that around two thirds of Australia’s outbound services trade takes place via Mode 3 supply, which is out of scope of the BOP statistics and not regularly measured by ABS.

Adding the missing 63 per cent of Australia’s international supply of services to the ABS trade data would mean that services comprise, conservatively, around 39 per cent of Australia’s international supply of goods and services. This figure is conservative because the ABS data on conventional exports are an underestimate, as the business case studies show.
7. Conclusions

World FDI growth has outpaced growth in world trade and world gross domestic product for the past three decades. In turn, Mode 3 – Commercial Presence via FDI – has enabled the bulk of recent growth in international services supply. Given the nature of services, i.e., that they tend to be rendered and consumed over the same period of time, the rise in importance of delivery via foreign affiliates is not unexpected.

More favourable policy in relation to FDI has also helped, as most countries are seeking to attract FDI including in the service sector. Many governments have unilaterally liberalized their investment rules, including some of those applicable to services. During the past decade, improvements in ICT, including the Internet, have also greatly lowered the cost and complexity of managing foreign affiliates, and enabled networking with a wider range of business process suppliers, including foreign suppliers.

Foreign affiliates of Australian companies employ mainly foreigners and pay mainly foreign taxes. On the face of it, this might seem to suggest that Mode 3 sales may not be worth as much to the Australian economy as Modes 1, 2 and 4 exports. This ignores the fact, however, that profits from foreign affiliate sales are either repatriated to Australia or build the value of foreign assets, and that Australian headquarter functions such as marketing, research and development, engineering, design, accounts and management benefit from productivity gains and scale economies made possible by foreign affiliate sales. Headquarter jobs also tend to be highly paid, and growth in these jobs is a significant source of services productivity growth across a wide range of business services.

Most of the value of exports to an economy lies in their contribution to profits and productivity, and in generating these outcomes the sales of foreign affiliates can make a contribution equal to or even greater than cross-border services sales.

The importance of the activities of Australian-based companies’ foreign affiliates has increased markedly over the past several decades, together with the global growth in the activities of multinationals, business services trade and international business process outsourcing.

The absence of an agreed economic framework to assess the value of foreign affiliate activities has impeded the ability of government agencies and departments to gain a fuller appreciation of the contribution of foreign affiliates, even though it is recognized that this is no longer appropriate.

The resources allocated to the measurement of services trade consequently remain a fraction of those for goods, long after the historical reasons for this have ceased to be relevant. The result is an incomplete understanding of both the importance of trade in services and the opportunities for future growth. This is an inhibiter to realizing the vision of Australia as a regional high value services centre and means that:

(a) Businesses lack an understanding of the opportunities;
(b) Economists lack data to demonstrate the benefits of further services regulatory reform and trade liberalization;
(c) Trade agencies lack data to support and improve their trade facilitation activities;
(d) Education institutions’ and related planning on future skill needs is constrained;
(e) The policy and regulatory reform needed to raise competitiveness lacks champions.

The purpose of measuring imports and exports is to understand the integration of the local economy with the global economy because this is such a crucial driver of economic growth. Traditionally, this integration took place mainly through the movement of goods and some services across borders. The terms “export” and “import” are strongly linked in the public mind with physical movements, which are easily seen and understood. However, increasingly, integration with the global economy is taking place in a variety of ways, including all four modes of services trade. Unless this can be carefully measured, as goods trade has been, the formulation of services sector policy, public understanding and support for that policy, and business focus on exploiting opportunities cannot be properly achieved.

As summed up in MSITS 2010:

5.1. The outcomes of trade negotiations depend on governments’ policy objectives and constraints as well as their negotiators’ skills and strategies. In this context, research and analysis are important factors in identifying issues of commercial importance to an economy. The parties involved need to identify their economies’ strengths and weaknesses, assess impacts of different policies and identify opportunities offered by their partners’ markets;

5.2. Statistics play an important information role in building strategies based on individual performances of domestic services industries and/or the existence of regulatory barriers. While available statistics allow the analysis of trade at the global level, it is much more difficult to analyse bilateral flows of individual service sectors by mode of supply, given the lack of adequate disaggregated data;

5.4. While governments need statistics on service sectors and modes of supply to negotiate commitments and assess economic impact, in many instances, available statistics do not allow for detailed analyses;

5.80. Additional information is also necessary for a more complete economic analysis and to evaluate market access opportunities” (UNSC, 2010; sections 5.1-5.80, pages 95-119)

The inescapable conclusion is that implementing the recommendations in the Revised Manual for Statistics for International Trade in Services matters and governments need to devote resources to achieving this objective.

Most particularly, the “official” data showing services as 20 per cent of Australia’s exports cannot be allowed to stand.
References


Chapter 5

Measuring trade in services in Mode 4

Andreas Maurer and Joselyn Magdeleine

1. Introduction

“...although we often deal in aggregates, trends and averages, it is notable how often people are convinced not by the data but by whether the analysis corresponds with what they have seen with their own eyes.” – M. Blastland and A. Dilnot, Significance, vol. 2, No. 2, June 2005.

Today, international labour movements across borders are an integral part of the global economic landscape. These movements can be for leisure, establishment (whether or not related to investment), employment or for supplying a service. Circumstances such as higher income prospects, employment opportunities, and reduced communication and transportation costs contribute to labour mobility as well as to temporary assignments in the context of services trade. To distinguish labour mobility from trade in services through Mode 4, and to measure the respective trade in services flows due to the movement of persons, is the subject of this chapter.

Examples of labour movements are numerous. In Europe, there is a clear trend of increased mobility from the recently acceding European Union members to the older ones. Indian information technology specialists emigrate (in particular to North America and Europe) or travel around the world for short-term assignments contracted between their employer located in India and clients abroad. The delivery of “turnkey projects”, in which the vendor delivers whole production facilities abroad (such as nuclear plants), also involve labour movements and the supply of construction services (Taskinen, Hatakka and Hamunen, 2010). For example, workers may be deployed around the world on construction sites, whether for projects conducted by host country companies or in the context of subcontracting to foreign suppliers. Contractual labour migration in southern Africa, which was initially developed to ensure a regular supply of workers to the mining centres of the region, was extended in some cases to other sectors such as agriculture, construction, and services.

1 The views expressed are those of the authors and should not be attributed to the WTO, its Members or the official opinion of any WTO staff member.

2 While the International Labour Organization defines labour mobility as the movement of persons within a domestic labour force, and labour migration as movement between countries with the objective of employment abroad, this chapter uses the terminology of labour mobility and/or migration interchangeably with regard to either short-term or long-term employment abroad, and analyses temporary labour mobility in contrast to trade in services through the movement of persons.
Labour movements can be short- or long-term. Often mentioned in various papers, publications and research work, there is no clear statistical translation of the different categories of temporary movement, and until recently there was no clear distinction between (temporary) labour mobility and trade in services (Mode 4). The confusion around what Mode 4 trade is as well as what are the commonalities and mainly the differences with the concepts of labour mobility (short-term and long-term) adds difficulty for using appropriate information when focusing on one aspect or the other. For example, labour migration is movement between developing rather than developing to developed countries, due to restrictive immigration policies of the latter. Low-skilled workers represent the bulk of this migration (M. Schiff, 2006). This migration for economic purposes is extensively analysed in the literature. However, it is distinct from trade in services through Mode 4. There is no role for the World Trade Organization in migration as Mode 4 deals only with the provision of services and not migration (Public Forum, 2008). Often, both subjects are entangled.

Notwithstanding this situation, analyses of Mode 4 is often done using labour migration/mobility instruments, which attempt to estimate the respective trade in services flows through income-related flows (personal transfers or compensation of employees). However, this entraps “turnover” variables with income variables. In addition, the coverage of the balance of payments indicators used does not correspond to the coverage of population required to measure trade in services (Mode 4). A parallel can be seen with the Mode 3 supply of services, where FATS were developed for measuring the sales of foreign affiliates while FDI statistics measure income-related flows. Some countries actually started to develop measures on Mode 4 trade flows (values) and looked into the issues of data collection.

The use of inappropriate indicators for measuring Mode 4 trade in services (i.e., personal transfers, workers’ remittances or compensation of employees data drawn from the balance of payments) is an illustration of confusion around definitions, be it legal or their translation into statistical concepts. In fact, trade in services through presence of natural persons (Mode 4) and labour mobility can be distinguished by the type of contracts underpinning the transactions. Employment contracts are related to labour mobility, and Mode 4 is characterized through a service contract that is agreed upon between the supplier and the consumer of the service.

Reliable and internationally comparable information for short-term labour mobility and trade in services (Mode 4) is lacking. A crucial issue is how to draw a boundary between employment and services contracts, particularly for self-employed and for labour services provided via employment agencies. For the latter, an additional difficulty may be the establishment of the type of services provided (e.g., agricultural services, mining services and accountancy). These considerations may, in particular, result in different measures of labour input and productivity, thus having an impact on the level of GDP as a value-added measure.

Following recent methodological work conducted within the Inter-agency Task Force on Statistics of International Trade in Services, the General Agreement on Trade in Services (GATS) legal definition of trade in services through the presence of natural persons (Mode 4) was translated into statistical concepts, leading to a “statistical” clarification of the scope of Mode 4.
The MSITS 2010 provides further clarification on the distinction between what constitutes provision of labour and what is the provision of a service. “It is often the payment of taxes or social security contributions that will determine the perception of individuals involved, along with the way accounting systems record their remuneration and, as a consequence, how the distinction is made in available sources for statistics (registration in the client economy of a transaction as compensation of employees or payment for a service).”

Although in some cases the impact will probably be minor, for some countries where the international labour movement is important, the distinction between them may significantly influence macroeconomic aggregates. Labour productivity measures could be influenced as a consequence of whether transactions in relation to international labour movements are classified as labour input or trade in services. (Such considerations will also depend on the way productivity is measured). This phenomenon will increase in importance with the opening of services markets and labour markets.

The example shown in table 1 a simple illustration of the influence that the classification of transactions may have on a single labour productivity value-added based measure. Take an economy with a single firm producing 1,000 of output. The first column shows that the intermediate consumption of this firm is 200, leading to a value-added of 800. The labour input (assume half of it is linked to short-term employment from abroad with an employer in the host country) corresponds to 20 hours worked, leading to a single labour productivity of 40 per hours worked. Now imagine that actually there was a misallocation, as what had been counted as employment with an employer in the host country is actually trade in services (i.e., service contract with a non-resident institutional unit). The value of the service contract of 100, leading to a reduction of value-added to 700 in the second column. The consideration of the service contract leads to a reduction of what was counted as employee work in the first column, to 10 hours in the second, leading to a much higher level of productivity of 70 per hours worked.

<table>
<thead>
<tr>
<th>Table 1. Influence of classification of transactions on labour productivity measure</th>
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<tr>
<td>Labour mobility</td>
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<tr>
<td>Output</td>
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<tr>
<td>Intermediate consumption</td>
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<tr>
<td>Value-added</td>
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<td>Employment (hours worked)</td>
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<td>Labour productivity</td>
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Of course, in reality these relations are not as clear and other factors tend to influence productivity measurement, in particular if we start looking into multifactor productivity, where intermediate inputs may have an important role to play, particularly with the above considerations.
Realistic estimates of Mode 4 trade are virtually non-existent, and the little information available appears to indicate that at the global level it is the least important mode in value terms (WTO, 2008). However, how can Mode 4 be measured reliably? The central question for measuring Mode 4 trade in services is how to get data on international contracting of services involving the movement of workers (workers sent by their foreign employers to the compiling economy in the context of services contracts including hired labour force via employment agencies), foreign self-employed persons as well as intra-corporate transfers.

This chapter describes the measurement issues related to trade in services through the presence of persons (Mode 4), and in particular how to analyse its relative importance (i.e., value) compared to other modes of supply (i.e., 1, 2 and 3). Section 2 describes how Mode 4 is analysed in statistical and economic literature. Section 3 describes the scope of Mode 4 in GATS while section 4 shows how it is translated into statistical concepts and provides selected examples. Section 5 concludes this chapter by identifying possible ways forward for improving knowledge of Mode 4.

2. Mode 4 in statistical and economical literature

Although the 2002 version of the Manual on Statistics of International Trade in Services (MSITS 2002) provided a number of guidelines to develop statistics on Mode 4, it is only in the recent revision of the Manual (MSITS 2010) that the coverage of Mode 4 could be clarified from a statistical point of view. The literature on Mode 4 currently available therefore focuses on the very preliminary discussion that took place when drafting the first version of the manual.

The International Organization for Migration (IOM) (2008) considers the movement of workers as labour migration, defining it as the “movement of persons from their home state to another state or within their own country of residence for the purpose of employment.” It admits that there is some “overlap and confusion as to how to differentiate between labour movements and the General Agreement on Trade in Services Mode 4 movements for services.” The Organisation for Economic Co-operation and Development (OECD) 2010 edition of the International Migration Outlook, SOPEMI, identifies a number of issues with regard to the coverage of statistics on temporary worker movements. It states that “some movements, for example, those involving cross-border service providers, may not be explicitly identified” and that “in still other cases, work assignments are short and the movements may escape recording entirely.” In addition, it shows that “in some countries, movements that appear [...] as temporary are classified as permanent because the migrants in question, for example, intra-corporate transfers, are granted a status that essentially places them on a permanent migration track.”

Given the number of issues met to appropriately measure Mode 4, both in value terms as well as counting the number of Mode 4 service providers, there is little literature specifically focusing on the numerical analysis of Mode 4. Rather, various papers and articles in the economic literature mainly aim at showing the benefits of Mode 4 by analysing labour migration (Mattoo, Stern and Zanini, 2007). Computable General Equilibrium (CGE) simulation studies state that restrictions on temporary labour migration are inducing costs to
developed and developing countries alike in the range of US$ 150 billion, which was approximately 1 per cent of world trade in 2006 (Walmsley and Winters, 2005). Other literature uses income measures such as compensation of employees or worker remittances to prove positive effects of temporary movements of natural persons on merchandise trade and services trade under modes 1 and 3 (Jansen and Piermartini, 2004). They argue that temporary movements, like permanent movements, would, for example, reduce transaction costs for merchandise trade and thus create additional trade (Jansen and Piermartini, 2006). Other studies analyse international labour migration highlighting the fact that Asia is the largest supplier of “emigrants to other regions of the world” (Hugo, 2009).

The beneficial effects mentioned above are mirrored in the developing and least-developed countries’ (LDCs) requests for liberalizing the movement of persons in the current Doha Development Agenda (DDA) negotiations, where they seek improved commitments on market access for their nationals.4 For example, the LDCs pointed out that GATS Mode 4 was “one of the most important means of supplying services internationally (WTO, 2003).” However, most of the literature analyses existing data of a “migration” population that does not correspond to the population covered under Mode 4. In other words, the statistics used in these studies generally do not cover Mode 4 persons, but look at migrant workers (see MSITS, 2010, box 5.6; available at http://unstats.un.org/unsd/statcom/doc10/BG-MSITS2010.pdf).

While the economic literature is attempting to explain the economic impact of liberalizing Mode 4, using tools applied in migration, statisticians in contrast struggle with the “adequate translation” of GATS Mode 4 legal texts into statistical concepts to appropriately measure the size of related trade flows, that is, to determine the relative importance of Mode 4 vis-à-vis other modes of supply. Measuring these trade flows would be important for a proper assessment of the international supply of services. The 2009 WTO background sectoral note on the Presence of Natural Persons (Mode 4) briefly presents the measurement challenges of this mode of supply, and also provides a summary of available literature on the potential economic implications of the liberalization of trade in services in Mode 4 (WTO, 2010).

3. Scope of GATS Mode 4 trade and differences with labour mobility5

This section is mostly drawn from section II of the WTO background sectoral note on the Presence of Natural Persons (Mode 4) S/C/W/301, which was presented to the WTO Council on Trade in Services for discussion during its October 2009 meeting. The scope of Mode 4 as described here is consistent with the contents of Chapter V, “Statistics on the international supply of services by mode” of MSITS 2010.


5 As this chapter focuses on the scope of Mode 4 trade in services as defined in GATS, it is important to note that a number of regional/bilateral agreements go beyond the scope of Mode 4 trade in services by covering certain aspects of labour mobility. (See, for example, J. P. Trachtman, 2009).
Temporary labour mobility and trade in services through the presence of natural persons (Mode 4) is not easy to distinguish. Article I.2(d) of GATS defines Mode 4 trade as “the supply of a service by a service supplier of one Member, through presence of natural persons of a Member in the territory of any other Member” (figure 1). Simply put, “Mode 4 occurs when a natural person of one WTO Member seeks to enter, or is present in, the territory of another Member in relation to the supply of a service. In other words, GATS covers the movement of people only to the extent that it is for the purpose of supplying a service” (WTO, 2010). Beyond this coverage, it is temporary international labour mobility or labour migration (if long term).

Mode 4 always involves a natural person, through whose presence services are being traded. However, that natural person is not necessarily the “service supplier”. Depending on the nature of the transaction, the service supplier may be another natural person or a juridical person (see figure 1). In each case it is vital to identify the service supplier, to whom the obligations in GATS are owed.

**Figure 1. Defining Mode 4 – GATS Article I and Article XXVIII**

Further elaboration on the scope of Mode 4 is provided in the GATS Annex on the Movement of Natural Persons Supplying Services under the Agreement (hereinafter: the Annex). The Annex specifies two types of natural persons that are covered: (a) those who are (themselves) service suppliers; and (b) those who are employed by a service supplier. The main definitional elements are outlined below.

**3.1. Type (1): Natural persons as service suppliers**

The first type, “natural persons who are service suppliers of a Member”, involves only one and the same person, who is present and supplies a service in the territory of another Member. This would cover a self-employed person who is remunerated directly for the supply of a service by customers in the host country. This case is illustrated in figure 2.

The natural person must be the national (or permanent resident) of a Member other than that in which he or she is present to supply the service, i.e., the natural person must be of foreign origin from the host Member’s perspective. For example, services supplied in the United Kingdom by an Indian national would fall under Mode 4, unlike the services supplied by a United Kingdom national (who is not a natural person of a Member in the territory of any other Member).
3.2. Type (2): Natural persons as employees of service suppliers

The second type covered, according to the Annex, are “natural persons of a Member who are employed by a service supplier of a Member”. In other words, a distinction is made between the natural person and the service supplier. The service supplier can be a natural person as well, but it will be that person’s employee who is present and delivers the service in the host Member. More commonly, however, the supplier will be a juridical person. Both the natural person and the service supplier need to be from a WTO Member, but not necessarily from the same Member.

According to Article I.2(d), the natural person must be in the territory of another Member, and, as discussed above, the service supplier must also be “of any other Member”. Therefore, they must be both of foreign origin. As nationally-owned service companies are not service suppliers “of another Member”, any foreign natural person they employ is not covered by Mode 4. Thus, host-country firms would not be entitled to claim GATS treatment from their own government regarding measures affecting foreign natural persons they employ or wish to employ. Only foreign juridical persons or foreign natural persons who are service suppliers would be entitled to this treatment with regard to foreign employees.

Figure 3 outlines how Mode 4 services are traded through natural persons employed by a service supplier of a Member.

By definition, the natural person is present in the territory where the service is being supplied, whereas the service supplier is not necessarily there. In any case, it needs to be determined that the service supplier is “of another Member” according to the definitions in Article XXVIII.

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6 These would be covered by the definition of labour mobility/migration. For additional views on this issue, see, for example: Self and Zutshi, 2003; Chaudhuri and others, 2003; OECD, 2004; and Peng, 2006.
### 3.2.1. Service supply vs. employment

It may not always be a straightforward task to determine if a person (self-employed or employee of the service supplier) is supplying a service or is employed by the host-country company. As mentioned above, Mode 4 covers foreigners who are themselves the service supplier and foreigners employed by a foreign service supplier, but not foreigners who are employees of a national service company or individual. As a result, a foreigner supplying services to a host-country company on a contractual basis as a self-employed person would be covered by Mode 4, whereas the same person would fall outside the scope of Mode 4 if they were an employee of that company.

GATS offers no guidance on how to differentiate between an employee and a service supplier. This distinction, however, is frequently drawn under national laws. It is often used to determine a person's entitlement to employment rights, social security and other benefits, and fiscal treatment. A description of how this distinction should be applied in economic statistics is provided below.\(^7\)

### 3.2.2. Self-employed or employee?

“Self-employed” and “independent” service suppliers are terms that are often used interchangeably. BPM6 recommendations describe these individuals (hereafter referred to as self-employed) as deemed to operate their own unincorporated enterprises, and sell output they produce.\(^8\) Self-employed persons, who may also employ others, are generally

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\(^7\) See also WTO, 2010 (S/C/W/301), box 1, which provides an example of the types of criteria that have been adopted in a jurisdiction.

\(^8\) BPM6 recommendations for the identification of self-employed and employees are consistent with those of 2008 SNA. These recommendations are also broadly consistent with those in the Resolution concerning the International Classification of Status in Employment (ICSE-93) adopted by the fifteenth International Conference of Labour Statisticians (ICLS) in January 1993 and with other resolutions of the ICLS concerning the definitions of the economically active population. For more information on ISCE see www.ilo.org/public/english/bureau/stat/class/icse.htm.
responsible for decisions on markets, scale of operations and finance, and are also likely to own or rent machinery or equipment on which they work.

An employer-employee relationship exists when there is an agreement, which may be formal or informal, between an entity and an individual, normally entered into voluntarily by both parties, whereby the individual works for the entity in return for remuneration in cash or in kind. The remuneration is normally based on either the time spent at work or some other objective indicator of the amount of work undertaken. If an individual is contracted to produce a given result, it suggests a service contract relationship between the entity and a self-employed person.

It may not always be clear whether an employer-employee relationship exists between the individual and the entity, or whether the individual is self-employed and supplying a service to the client entity. Provision of several types of services may pose such problems because entities may choose either to purchase a service from a self-employed worker or to hire an employee to perform the job. The status of the worker has important implications for the international accounts. If an employer-employee relationship exists between the worker and the entity for which the work is being done, the corresponding payment constitutes compensation of employees. If the individual is self-employed, then the payment constitutes a purchase of services.

Several factors may have to be considered in determining whether an employer-employee relationship exists. An important test is that of control. The right to control or to direct, both as to what will be done and how it will be done, is a strong indication of an employer-employee relationship. The method of measuring or arranging for the payment is not important as long as the employer has effective control both of the method and the result of the work undertaken by the individual. However, a certain measure of control of the work being undertaken may also exist for the purchase of a service. Therefore, other criteria should also be used to define more clearly the employer-employee relationship. If the individual is solely responsible for social contributions that would suggest that he/she is a self-employed service provider. In contrast, payment of social contributions by the employer is an indication of an employer-employee relationship. If the individual is entitled to the same kind of benefits (e.g., allowances, holidays, sick leave etc.) that the entity generally provides to its employees, this indicates an employer-employee relationship. Payment of taxes on the provision of services (such as sales taxes or value-added tax) by the individual is an indication that the individual is a self-employed service provider.

It is often the payment of taxes or social security contributions that will determine the perception of individuals involved, together with the way accounting systems record their remuneration and, as a consequence, how the distinction is made in available sources for statistics (registration in the client economy of a transaction as compensation of employees or payment for a service).
4. GATS Mode 4 in statistical frameworks

Mode 4 information can be analysed either in the context of regulatory trade barriers or for trade flows induced by Mode 4. Due to the lack of information on the latter, many economic papers concentrate on the first aspect. In contrast, this section develops concepts that allow the quantification of trade flows in relation to Mode 4, both for the value of trade and for the flow and stock of persons involved (number of persons).

The introduction of the Extended Balance of Payments (EBOPS) classification and the new statistical framework on Foreign Affiliates Statistics (FATS) in MSITS 2002 has allowed improved coverage and refine measurements of trade in services, particularly for approximating modes 1, 2 and 3. Currently, however, no reliable estimate exists on the value of Mode 4 trade, which renders any quantitative assessment difficult.

For appropriate indicators to measure GATS Mode 4, information needs to concentrate on two basic aspects: first, the value of the service provided for categories of people that fall under the Mode 4 regime; and second, the number of natural persons moving (flows) and temporarily present (stocks) in the context of the supply of a service. Figure 4 summarizes which types of statistics will fulfil information needs according to modes of supply.

The new MSITS 2010 includes a chapter that discusses the measurement of trade flows by mode of supply, in particular Mode 4, and provides new recommendations. It should be stressed, however, that MSITS 2010 guidelines on the compilation of statistics on the international supply of services are laid out for statistical purposes, and that they do not exactly correspond to trade in services as defined in GATS. For example, GATS defines the supply of services as including “the production, distribution, marketing, sale and delivery of services”, whereas international statistical guidelines mainly focus on the production and delivery aspects for valuing services trade. Although there are a number of such differences, the concepts and definitions in economic, tourism and migration statistics respond relatively well to GATS information needs. They would only necessitate minor adjustments in some cases.

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9 This part of the paper is based on recommendations in chapter 5 of MSITS 2010.
10 As is shown later in this chapter – although Mode 4 information is often included in these statistics – given the smaller size of this mode it is difficult to identify or estimate it separately from other modes of supply.
11 Ideally, this information has to be further broken down in terms of the type of service supplied, the countries of origin/destination of the trade, the relationship between the parties as well as by skill and occupation of the persons, and by length of stay. However, it is important to note that it may be difficult to obtain information at such a high level of detail.
12 BPM6 and MSITS 2010 refer to trade in services in the context of economic transactions which are “defined as an interaction between two institutional units by mutual agreement that reflects the creation, transformation, exchange, transfer or extinction of economic value, and involves changes in the volume, composition, or value of an institutional unit’s assets and liabilities. It involves purchases of goods or services, [...].”
4.1. Statistical conceptualization of Mode 4

For developing indicators that allow the identification of relevant Mode 4 trade in services flows, it is important to translate the GATS coverage as described in Section III into statistical guidelines. This requires the use of specific terminology to bridge the legal and statistical languages. From a statistical/economic point of view, persons falling within the scope of Mode 4 can be identified as falling into two main groups: (a) those directly involved in the rendering of services through a service contract (contractual service suppliers, either self-employed or employees of foreign service suppliers) and (b) those indirectly involved in the provision of services (e.g., intra-corporate transfers or sales negotiations). Based on this consideration, MSITS 2010 identifies four main groups of persons under Mode 4. If the service supplier is defined as being located in member B, and the service consumer is located in A, then Mode 4 in statistical terms may be considered as covering the following four major categories of natural persons:\(^{13}\)

(a) Contractual service suppliers – self-employed. A self-employed person of member B enters member A in the context of a service contract with a service consumer located within its territory of residence.

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\(^{13}\) These categories are the major groupings of persons moving abroad in the context of Mode 4 used in MSITS 2010. In trade negotiations, schedules may refer to these major groupings, but may also use different naming or refer to more specific categories of persons. To ensure the international comparability and transparency of the data, compilers are encouraged to use the categories identified and to break down information according to the more specific needs identified.
consumer in A. For example, legal advice is delivered to foreign consumers by a self-employed lawyer. However, determining if the specialist is a self-employed person or an employee of the “client” may not always be straightforward (see section 3.2.2.). If an employer-employee relationship exists then the individual would not be included in the statistical framework;

(b) Contractual service suppliers as employees of a juridical person. Employees of the service supplier in member B are sent to member A in order to supply a service in the context of a contract between their employer and a service consumer in A. For example, computer services are supplied to consumers of A by an employee of a foreign information technology services enterprise of B, who is sent to A to deliver this service;

(c) Intra-corporate transferees and foreign employees directly recruited by foreign established companies. The service supplier of member B has a commercial presence in member A and sends its employee to its affiliate in A, or the affiliate recruits directly foreign employees. The supply of the service to the consumer is, however, taking place through the affiliate (Mode 3). For example, a surgeon is transferred temporarily to work in a branch of his employing hospital in an economy abroad. The Mode 4 commitment guarantees the right of the supplier in B to send staff to A (or the affiliate to recruit foreign staff) in order to supply a service through its local affiliate. Intra-corporate transferees are a particularly relevant sub-group as many commitments are made and negotiations carried out with regard to this category of persons;

(d) Service sellers attempting to establish contractual relationships for a service contract and persons responsible for setting up commercial presence. Such persons enter member A in the context of the negotiation of a service contract or for setting up the establishment of an affiliate in member A. There is no international supply of services in economic terms and, consequently, no

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14 Trade negotiators often refer to this category as “independent professionals”. Some self-employed persons may also establish themselves in the host market and supply services from within this territory as per a relevant Mode 3 commitment. Although a Mode 4 commitment can guarantee the right of this person to be present in this territory, it is considered in MSITS 2010 that the supply of the service is carried out through a commercial presence.

15 For foreigners directly recruited by the foreign affiliate there may be ambiguity with regard to their coverage under Mode 4 because it could be considered, particularly for foreigners recruited from within the host economy, that these individuals are seeking to access the employment market of the host economy.

16 Note that the Mode 4 presence is not always necessary to supply a service via mode 3. This is just a possibility. Many services will be delivered by foreign affiliates without a Mode 4 component involved. In the GATS text the definitions of modes of supply are mutually exclusive, and it is through scheduling that these relationships are created.

17 Trade negotiators often refer to these categories as “business visitors”. Business visitors as defined in a GATS context are not the same as business visitors or travellers as defined in international statistical frameworks. These frameworks refer to travellers/visitors who enter in the territory of another economy for any business and professional reasons (i.e. covering, in addition to service sellers, many of those covered under the definition of contractual service suppliers).
accompanying transaction taking place, at least initially. Their movement, in order to conduct negotiations, is guaranteed by commitments of Mode 4. The negotiations will then eventually lead to the future supply of services through either of the modes.

GATS provides for the possibility that commitments, and therefore access conditions, be scheduled according to different categories of natural persons. Members’ commitments in Mode 4 have been undertaken largely on the basis of the above categories. However, a number of WTO Members refer to particular categories such as “installers and servicers”, artists, sportspersons or other suppliers of services taking part in public performances, graduate trainees etc. For statistical purposes, these categories may be seen as falling under one of the four above categories (e.g., “installers and servicers” may be considered as contractual service suppliers or intra-corporate transferees, artists as contractual service suppliers, graduate trainees as intra-corporate transferees etc.).

In their commitments, WTO Members have, in general, also indicated the length of stay of natural persons by the respective categories. For example, in the case of contractual services suppliers, whether self-employed or employees, the normal duration ranges between three months and one year, and rarely exceeds two years; for intra-corporate transferees it is generally limited to 2-5 years; for services sellers/persons responsible for setting up commercial presences, it is normally limited to three months.

All these issues make the task of estimating values of trade in services by modes of supply challenging. Accounting legislations, conventions and conveniences will also affect the way enterprises, banks and compilers report related payments by services items and modes, and may have implications on the recording (or not) of associated payments and receipts in the balance of payments or in FATS.

4.2. What would be an appropriate measure for GATS Mode 4 trade?

The balance of payments items compensation of employees and workers remittances/personal transfers are often used in economic literature as statistical indicators to estimate the size of GATS Mode 4 trade. However, compensation of employees and workers’ remittances are both labour income measures and cannot be used to measure Mode 4. Compensation of employees represents “remuneration in return for the labour input to the production process contributed by an individual in an employer-employee relationship with the enterprise”. It refers to the income of border, seasonal and other short-term workers who are in an employer-employee relationship in an economy where they are not resident, and of residents in an employer-employee relationship with a non-resident entity. Personal transfers consist of “all current transfers in cash or in kind, made or received, by resident households to or from non-resident households”. This includes all current transfers from

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18 In addition worker’s remittances often cover all remittances made by residents as in many cases data collection systems are unable to separately identify the amounts originating from labour income.

19 Residence is a basic concept of the balance of payments framework. It is notably defined in terms of interest and duration (or intention) of stay in the host economy on the basis of a one-year guideline.
resident to non-resident households, independent of: (a) the sources of income of the sender (be it income from labour, entrepreneurial or property income, social benefits and any other types of transfers; or disposable assets); (b) the relationship between the households (be it between related or unrelated persons); and (c) the purpose for which the transfer is made (be it inheritance, alimony, lottery winnings etc.). BPM6 recommends the recording of a supplementary item entitled “workers’ remittances” (current transfers made by employees to residents of another economy). Consequently, these indicators provide income flows originating from the movement of people or migration and, in the majority of cases, do not cover the Mode 4 population. As such, they cannot replace BOP indicators, which measure trade flows (transactions) that are specified and originating from service contracts between service suppliers and consumers.

Mode 4 trade was estimated to have reached US$ 200 billion in 2007 (based on trade in services exports data; see below), compared with US$ 250 billion for total compensation of employees and workers’ remittances (and an estimated US$ 385 billion for remittances received) (World Bank, 2010).

The value of trade in services as measured in the balance of payments refers to international transactions between residents and non-residents, with an underlying contract as the basis for such transactions. As shown in section 4.a, clarifying the coverage of Mode 4 in statistical terms shows that the value of services trade is relevant only in the case of contractual service suppliers. The information is not needed for intra-corporate transferees and foreign employees directly recruited by the foreign affiliate, or for services sellers/persons responsible for setting up commercial presence. For the former, the service transaction between the service supplier (i.e., the juridical person) and the consumer is taking place through Mode 3 (the Mode 4 commitment enables the presence of the person in order for the service supplier to supply the service via Mode 3), and for the latter there is no service transaction (the transaction takes place at a later stage).

In addition to the value of trade in services for Mode 4, information on the number of persons (flows and stocks) would be of interest for all categories of natural persons. Although once again this type of information is not separately available, recommendations of MSITS 2010 show that existing statistical frameworks, such as tourism or migration statistics, combined with some small adjustments in data sources (e.g., enterprise surveys, border or passenger surveys and administrative sources such as visa records) will help in assessing the size and monitoring of Mode 4 movement and presence.

4.3. Where and how can GATS Mode 4 trade-related transactions be found in an economy’s trade in services statistics?

Following MSITS 2002, a few national agencies attempted to assess the possibility of measuring their total trade in services according to the GATS modes of supply (e.g., Australia and Singapore). For example, FATS or other relevant indicators were used to estimate Mode 3, while balance of payments services transactions were split according to Mode 2 (travel and, if possible, supporting and auxiliary services provided in ports) and with all other services transactions grouped under a single heading referring to modes 1 and 4.
However, such exercises have not been conducted or refined since, probably as a consequence of the lack of statistics on commercial presence as well as the absence of clear guidelines for defining Mode 4.

Figure 5 shows that in conducting such a rough estimation for the supply of services to the United States, the relative sizes of modes would be 10.2 per cent (Mode 2), 66.7 per cent (Mode 3) and 23.1 per cent for grouped services transactions referring to Mode 1 and Mode 4 under a single heading.

Figure 5. International supply of services to the United States broken down by mode, 2007 (percentage)

![Pie chart showing mode distribution](image)


Again, this reveals that international transactions may actually be allocated to a single mode, or a single transaction may be composed of several modes of supply, including a Mode 4 component. For example, a single service contract between a foreign computer services supplier and his client in the United States may cover the offshore design of parts of specially-tailored software and an employee of the foreign computer services company who is sent to the United States to design other parts of the software and coordinate the project on-site (i.e., at the office of the client). In such a case, payments for this service contract involve indistinguishably Mode 1 and Mode 4 components.

For a statistical assessment of trade in services by modes, the question is how to allocate in balance of payments services transactions the respective parts that are relevant to different modes. As the above example shows, services are delivered through a combination of modes, often involving Mode 4. It is therefore important to identify service items where Mode 4 will most likely be an important component. These are construction, computer services, other business services (miscellaneous business and professional

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20 The comparison of BOP and FATS-sourced data of a country may result in double counting, as trade between the parent and affiliate is recorded in the BOP and sales of the affiliate are recorded in FATS. However, for the United States this possible overlap is reduced, as it is publishing a total of services products sold by affiliates.
services such as lawyers, architects, services incidental to agriculture, mining etc.) or personal, cultural or recreational services (excluding audio-visual).

Table 2 shows an estimation of the evolution of world exports in these services sectors since 2000. While Mode 4 trade in services may represent only a small portion of these trade flows, they are inevitably included. During 2000-2008 exports in all these sectors presented a higher average growth rate than exports of total commercial services (essentially covering modes 1, 2 and 4), with the exception of other personal, cultural and recreational services. However, it is important to note that for the latter, during a number of years such as in 2006 and 2007, the annual growth rate was much higher than for total commercial services.

Table 2. World exports of services sectors where Mode 4 is deemed to be an important component, 2008

<table>
<thead>
<tr>
<th></th>
<th>Value (US$ billion)</th>
<th>Share 2000</th>
<th>Share 2008</th>
<th>Annual percentage change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>90</td>
<td>1.9</td>
<td>2.4</td>
<td>16</td>
</tr>
<tr>
<td>Computer and information services</td>
<td>200</td>
<td>3.3</td>
<td>5.1</td>
<td>19</td>
</tr>
<tr>
<td>Other miscellaneous business, professional and technical services</td>
<td>620</td>
<td>15.2</td>
<td>16.2</td>
<td>14</td>
</tr>
<tr>
<td>Other personal, cultural and recreational services</td>
<td>10</td>
<td>0.3</td>
<td>0.3</td>
<td>12</td>
</tr>
<tr>
<td>Total commercial services*</td>
<td>3 830</td>
<td>100</td>
<td>100</td>
<td>13</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations based on WTO data.

Services sectors correspond to the balance of payments classification.

*As defined in the balance of payments, essentially covering modes 1, 2 and 4.

Ideally, each international service transaction as recorded in the balance of payments should be allocated among the different modes. However, it may be difficult for data compilers to identify a transaction’s full complexity. Building on the simplified approach presented in the 2002 version, the MSITS 2010 goes a step further in providing additional detail as to the allocation of FATS and balance of payments transactions to modes of supply. First, it states that FATS provide most of the information regarding Mode 3, and second that balance of payments services transactions broadly cover modes 1, 2 and 4. Second, it identifies balance of payments services transactions that largely correspond to one dominant mode. Examples are communications services (Mode 1) or travel (allocated to Mode 2).
Other examples are services incidental to agriculture and mining, which are deemed to be provided predominantly through Mode 4.\textsuperscript{21}

For other types of services, transactions (e.g., computer, legal, architectural and waste treatment services), the picture may be more complex, as individual transactions might involve significant elements of different modes. Mode 4 might be relevant to many of these transactions. Figure 6 summarizes the recommended allocation of statistics that can serve as a first guidance to estimate the value of the international supply of services broken down by modes. It identifies the dominant mode(s) of supply used for balance of payments services transactions, with the shaded ovals showing the balance of payments items where Mode 4 may represent an important proportion of transactions (although probably not dominant).\textsuperscript{22}

More information on the allocation of balance of payments services transactions to modes may be found in the 2010 edition of the Manual on Statistics of International Trade in Services.

Based on these assumptions it is possible to refine the above estimates for the United States.\textsuperscript{23} As shown, services supplied to United States residents through a combination of Mode 1 and Mode 4 represented 23.1 per cent of the total international supply of services to the United States in 2007 (figure 5). Figure 7 follows the new MSITS recommendations. It distinguishes transactions that are deemed to be provided predominantly through Mode 1 (such as parts of transportation, communication, financial and insurance etc.; 16.8 per cent), those that are deemed to be predominantly provided through Mode 4 (in United States statistics this refers to sports and performing arts, services incidental to mining, and installation, maintenance and repair services;\textsuperscript{24} 0.5 per cent), and those where 2 modes (including Mode 4) are deemed to be significant elements of the payments (computer services, miscellaneous business, technical and professional services, construction, and personal, cultural and recreational services etc.; 5.8 per cent).\textsuperscript{25} The issue would then be to identify within the latter group those items where a further breakdown for a specific identification of Mode 4 elements would be needed (in this example, probably computer services, management and consulting services or research and development, and testing services could be relevant candidates for further investigation).

\textsuperscript{21} The main source of information for mode 3 is FATS. This mode is generally not covered by balance of payments (BOP) statistics; commercial presence generally relates to transactions between residents of the same economy whereas BOP refers to transactions between residents and non-residents.

\textsuperscript{22} If, for a compiling economy, allocation does not necessitate the separate identification of modes, or if it has difficulties in implementing the allocation according to this figure (too burdensome or costly for compilers or reporters), the rules can be simplified by concentrating on the 12 most relevant BPM6 service transaction aggregates, FATS and, if possible, the estimated value for distribution services associated with cross-border goods trade.

\textsuperscript{23} Note that the United States classification of services items differs slightly from the EBOPS classification recommended in MSITS 2010.

\textsuperscript{24} MSITS 2010 recommends that although transactions referring to maintenance and repair services n.i.e., where the good to be repaired, is sent or is present in the country of the repairer, should be allocated to Mode 2, while those involving the cross-border movement of the repairer should be classified as Mode 4.

\textsuperscript{25} Representing 17.4 per cent of imports of services if FATS are not considered.
Once the balance of payments items where the presence of persons is deemed to be important have been identified, it is interesting to analyse how the value of the services trade is, in principle, recorded in the balance of payments, depending on the category of person:

(a) Contractual service suppliers as employees of the foreign-based service supplier. A service provider sends his employee to another country in order to supply the service. The transaction corresponding to the service contract remains between a resident and a non-resident, and will be recorded as an export or import in the respective type of services, regardless of whether that person stays abroad for a year or more or less than a year. In the majority of

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26 The allocation may vary from economy to economy (general needs of an economy as well as taking into consideration more specific needs of sectors, data collection systems in place, resources etc.). Items in italics are not separately available in BPM6/EBOPS.
cases, the presence of contractual service suppliers as employees will not imply substantial operations that can be identified separately from the overall operations of the service supplier. A group of persons, per se, cannot be considered to constitute a branch or representative office (if this were the case, the supply would fall under Mode 3, commercial presence);

(b) Self-employed service suppliers. A self-employed person moves abroad in order to supply a service. If the person stays less than a year, the corresponding transaction should be recorded as an export/import of services. If it is possible, and if the amounts are believed to be significant, information on self-employed persons under Mode 4 should be provided separately. However, if he/she stays one year or longer, then in principle he/she will qualify as a resident of the host economy, and the transaction corresponding to the service contract will not be recorded as a service transaction. This particular issue is discussed further below.

4.3.1. The case of self-employed, resident foreign individuals

Most transactions falling under Mode 4 are covered in balance of payments services components. Self-employed service suppliers staying (or intending to stay) one year or more in the host economy should, according to international statistical guidelines, become residents of this economy. The transactions corresponding to the services contracts will no longer be international transactions. The only transactions that should, in principle, be recorded in the balance of payments for these self-employed service suppliers will be (a) the amount they remit to their home economy (therefore recorded under personal transfers) and/or (b) an increase in assets in the home economy (if the person is saving in the home economy).
However, two categories of self-employed persons need to be distinguished here: (a) those who are present temporarily in the context of a service contract (Mode 4 supply of services); and (b) those who operate from a base in the host economy (as per a relevant Mode 3 commitment). In general, the former will represent a small proportion of the Mode 4 contractual service supplier population; therefore, unless deemed necessary, MSITS 2010 does not recommend the compilation of information for this specific group. Those who establish themselves in a host country to supply services from that base would, in many cases, represent a small proportion of the overall commercial presence in the host economy. These persons will not be captured by FATS, as the ultimate controlling institutional unit will be a resident of the host country. However, in compiling economies where the category of self-employed persons established in an economy other than their own (the compiling economy on the “inward” side or abroad for “outward”) is believed to be important, compilers may wish to estimate the value of their services sales/output.

4.3.2. How to develop practices to separately identify modes of supply information within balance of payments services transactions

To allocate transactions to modes, a number of compiling guidelines need to be elaborated, based on the rules of national legislation and/or accounting conventions. From a general point of view, the possibility of estimating Mode 4 flows within the balance of payments services account would help improve the estimations of the international supply of services by modes. To collect further information with regard to Mode 4, a clear list of questions needs be developed to help survey respondents and/or compilers to identify whether the payment for a service contract or a single payment could be classified as the supply in modes 1, 2, 3 or 4. The rules applied to compile these estimates by mode of supply, and the list of items where estimates of Mode 4 are necessary, should be established depending on each country’s interest. This list should not necessarily be strictly limited to the services items identified in this chapter.

There are various options that would help determine whether a transaction should be allocated to Mode 4 or not:

(a) Indicate if the supply of the service involved the physical presence of foreign individual(s), whether as self-employed or as employee(s), sent to the compiling economy by their non-resident company (this question appears appropriate to collecting this information for the first time). If it involved the presence of the(se) person(s), how was most of the value of the service supplied (e.g., time and/or resources involved)? That is, if most of the service was supplied by fax, email etc., with the supplier remaining in their own country and the person(s) just went to supervise a final stage, it would be mostly Mode 1; however, if the embodied knowledge went with the person(s) and was transmitted directly to the client, it would be mostly Mode 4. Such an option has been tested by the Census and Statistics Department of Hong Kong, China, by including in its annual survey of imports and exports of services a question on the payments and receipts corresponding to the supply of services through the presence of persons. This is applicable to a number of selected relevant services items;
Another option would be to define modes of supply in surveys and ask respondents to allocate transactions themselves. If it involves various modes of supply, the questionnaire should suggest allocating the transaction to the most important mode in terms of time and resources associated with it. While this option will be costly and very burdensome for respondents, it could be used for specific service sectors for which countries have a particular Mode 4 interest. The Reserve Bank of India developed this type of collection for information on its software and information technology services exports, but without suggesting any allocation to the most important mode (see table 3);

A third possibility would be to add a question related to the estimated share of the inputs for the related services trade.

Table 3. Extract of the Indian survey of computer software and information technology services exports, 2008-2009

<table>
<thead>
<tr>
<th>Exports – Modes of Supply</th>
<th>Amount (Rupees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Services provided/rendered to foreign entities/persons from Indian office (Cross border supply)</td>
<td></td>
</tr>
<tr>
<td>(ii) Services provided/rendered to foreign entities/persons while they are on visit to India</td>
<td></td>
</tr>
<tr>
<td>(iii) On-site services provided by deputing employees abroad</td>
<td>0</td>
</tr>
</tbody>
</table>


The choice of modes to be included in the questions for the two last options needs to be clearly determined according to the balance of payments services item for which information is being sought. For example, for construction it would be relevant to only refer to Modes 3 and 4, whereas for computer services Mode 1 and 4 would be more appropriate while for waste treatment and depollution, it would be Modes 2 and 4.

Given its interest in the international supply of computer and information technology-enabled services, the Reserve Bank of India has, since 2005, been collecting data on international supply of computer software and information technology-enabled services in accordance with the four modes. According to available figures, it is estimated that Mode 4 exports represent 26.8 per cent (approximately US$ 11.7 billion) of India's total international supply of computer and information technology-enabled services (table 4). However, for the companies that have international transactions with a value of at least US$ 22 million, the share is around 28.4 per cent. These results provide the Government of India with a first
approximation of the size of its Mode 4 computer and information technology-enabled services exports. It shows that Mode 4 represents almost one third of the total of Mode 1+4 computer services transactions of the balance of payments. Of course, this information should be interpreted with caution and should be improved through future surveys.

Table 4. Indian international supply of computer software and information technology enabled services by mode, 2008/09

<table>
<thead>
<tr>
<th>Size of transactions</th>
<th>Million United States dollars (and percentage in total)</th>
<th>Mode 1</th>
<th>Mode 2</th>
<th>Mode 3</th>
<th>Mode 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 0.2</td>
<td></td>
<td>37</td>
<td>0</td>
<td>6</td>
<td>1</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(83.2)</td>
<td>(0.0)</td>
<td>(13.9)</td>
<td>(3.0)</td>
<td>(100)</td>
</tr>
<tr>
<td>0.2-2.2</td>
<td></td>
<td>447</td>
<td>5</td>
<td>43</td>
<td>18</td>
<td>513</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(87.1)</td>
<td>(0.9)</td>
<td>(8.4)</td>
<td>(3.6)</td>
<td>(100)</td>
</tr>
<tr>
<td>2-22</td>
<td></td>
<td>1 930</td>
<td>0</td>
<td>225</td>
<td>111</td>
<td>2 266</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(85.2)</td>
<td>(0.0)</td>
<td>(9.9)</td>
<td>(4.9)</td>
<td>(100)</td>
</tr>
<tr>
<td>&gt; 22</td>
<td></td>
<td>22 194</td>
<td>28</td>
<td>7 051</td>
<td>11 592</td>
<td>40 865</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(54.3)</td>
<td>(0.1)</td>
<td>(17.3)</td>
<td>(28.4)</td>
<td>(100)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>24 607</td>
<td>32</td>
<td>7 326</td>
<td>11 723</td>
<td>43 688</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(56.3)</td>
<td>(0.1)</td>
<td>(16.8)</td>
<td>(26.8)</td>
<td>(100)</td>
</tr>
</tbody>
</table>

Source: Reserve Bank of India (2010), Survey on Computer Software & IT Services Exports: 2008-09. (Converted to United States dollars by the authors).

The simplifying assumptions for the allocation by mode of supply, as set out above, should be regarded as the first step in the estimation process and should be subject to periodic review and empirical testing of their validity and appropriateness. This allocation may vary from country to country and should be adapted to each compiling country’s specific situation and information needs. For particularly important service sectors, compilers may invest further to improve the estimation of these items by mode of supply; this is particularly true for Mode 4. The estimation by mode could also be initiated or improved over time according to the information obtained by compilers, notably on the way service sectors operate. For example, the use of partial or anecdotal information on a number of specific sectors could be used as a starting point. Such an example is provided by the Australian International Legal Services Advisory Council (ILSAC) in the field of the international supply of legal services. This agency in particular is sharing the information it obtains with the Australian Bureau of Statistics.

Although not entirely consistent with statistical guidelines and GATS definitions of modes of supply, ILSAC developed a Survey of the Australian Export Market for Legal Services for financial years 2004/05 and 2006/07. The latest results, which also cover the

27 At the time of writing, it was not clear whether this would only cover services provided by contractual service suppliers or whether intra-corporate transferees would also be covered.
revenues generated through commercial presence of Australian legal firms abroad, show that a bit less than one fifth (approximately US$ 93 million) of its international supply of services was supplied "Fly in-fly out", which could be considered as an approximation for Mode 4 trade. According to reports, ILSAC is aiming to re-conduct the Survey of Australian Export Market for Legal Services for 2008/09. ILSAC is planning to collaborate further with the Australian Bureau of Statistics in order to better align definitions used and to improve the quality of the data published for legal services (Australian Department of Foreign Affairs and Trade, 2009).

4.3.3. **GATS, tourism and migration statistical systems**

For a more global analysis of services industries or market opportunities a number of additional useful statistics exist that can be drawn from various statistical frameworks. With regard to Mode 4, information on the number of persons moving and already present abroad will be found in tourism or migration statistics. Information on flows and stocks of natural persons could be derived from the definitions used in these frameworks, i.e., the International Recommendations on Tourism Statistics (IRTS 2008), Tourism Satellite Accounts: Recommended Methodological Framework (TSA-RMF 2008) and the Recommendations on Statistics on International Migration, Revision 1 (RSIM, Rev. 1). While approximate aggregated Mode 4 information may be drawn from these statistical systems, a more complete picture will require additional breakdowns in relevant categories. Such statistics will not perfectly mirror the definitions of GATS, but such indicators could provide a reasonable indication of the number of Mode 4 persons crossing borders and present abroad in the context of trade in services.28


While IRTS 2008 is a comprehensive methodological framework for the collection and compilation of tourism statistics, an extension of IRTS 2008 is the tourism satellite account by which tourism statistics are linked with the mainstream of macroeconomic analysis (see TSA-RMF 2008). Statistics compiled according to these frameworks would mainly be a useful complement to an in-depth analysis of the tourism sector from a trade perspective, covering all modes of supply. However these frameworks also provide for the possibility to compile information on the flows of persons entering an economy other than their own for short periods in order to supply services.

Tourism statistics identify international visitors as being characterized by the fact that they are on a tourism trip, travelling in an economy other than in the one in which they usually reside and not in an employer-employee relationship with an entity resident in the visited economy. The number of international visitors can be broken down according to the main purpose of the trip: (a) personal (holidays, leisure and recreation, education and training,

28 Although not detailed in this paper, data on foreigners employed in foreign affiliated firms could also be compiled through the FATS framework.
health and medical care etc.); and (b) business and professional purposes. Although very aggregated, collecting data on the latter is useful to conduct an analysis of flows of Mode 4 persons. It includes the activities of self-employed persons and employees as long as they do not correspond to an employer-employee relationship with a resident producer in the economy visited, as well as those of investors, businessmen and any other type of professional purpose (participating in conferences etc.).

Table 5 shows the number of “Mode 4 arrivals” (i.e., inflows) for a selection of economies. This information could serve as an approximate estimation as this indicator may, on the one hand, underestimate the Mode 4 flows of persons by not including arrivals for the purpose of being employed within the economy visited (i.e., those in an employer-employee relation with a foreign affiliate established in the visited economy) and, on the other hand, overestimate these flows by including some persons on trips where the purpose is not covered by Mode 4. In addition, these figures should be accepted with caution, as many economies do not entirely follow international recommendations in terms of the coverage of visitors.

These figures show that European Union members tend to have a high number of visits for business and professional reasons, particularly when compared with economies such as the United States and the People’s Republic of China; this could be an indication of the degree of liberalization of the movement of such types of persons and the services market among European Union members. It is also interesting to note the high number of arrivals for business reasons in a number of developing economies such as Hong Kong, China and Macao, China, as well as Indonesia, Malaysia, Saudi Arabia, Thailand etc.

If relevant for the compiling economy, compilers could further disaggregate the category business and professional into: (a) contractual service supplies (of which self-employed); (b) intra-corporate transfers (only those for which the employer-employee relationship remains with the parent company) and other foreign staff; and (c) services salespersons and investors. However, unless supplementary information is considered, in principle those statistics resulting from this framework will not cover cases where there is a change of usual residence (from one economy to another), and intra-corporate transfer and direct recruitments by the foreign affiliate where the employer-employee relationship is with a producer resident in the host economy.

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29 Business visitors as defined in a GATS context are not the same as business visitors or travellers as defined in international statistical frameworks. The latter goes beyond the term generally used in a GATS context by including, in particular, contractual service suppliers.

30 The general definition currently used for visitors is that they are “any person travelling to a place other than that of his/her usual environment and whose main purpose of trip is other than the exercise of an activity remunerated from within the place visited”. This may raise a number of ambiguities with regard to the status of self-employed, the employee-employer relationship etc.
Table 5. Destinations for arrivals of international visitors for business and professional purposes, selected major economies, 2005-2008

(Unit: '000)

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available EU(27)a</td>
<td>48 712</td>
<td>50 358</td>
<td>51 595</td>
<td>52 470</td>
</tr>
<tr>
<td>of which:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>9 190</td>
<td>10 833</td>
<td>11 992</td>
<td>12 392</td>
</tr>
<tr>
<td>Franceb</td>
<td>11 010</td>
<td>10 565</td>
<td>10 566</td>
<td>11 479</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>8 773</td>
<td>9 717</td>
<td>9 496</td>
<td>8 683</td>
</tr>
<tr>
<td>Spain</td>
<td>5 940</td>
<td>4 915</td>
<td>5 275</td>
<td>5 271</td>
</tr>
<tr>
<td>Poland</td>
<td>4 240</td>
<td>4 240</td>
<td>4 085</td>
<td>3 590</td>
</tr>
<tr>
<td>United Statesc</td>
<td>5 637</td>
<td>5 569</td>
<td>6 785</td>
<td>6 893</td>
</tr>
<tr>
<td>The People's Republic of China d</td>
<td>4 598</td>
<td>5 548</td>
<td>6 961</td>
<td>5 678</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>3 226</td>
<td>3 233</td>
<td>3 270</td>
<td>4 112</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>1 951</td>
<td>1 603</td>
<td>2 659</td>
<td>3 660</td>
</tr>
<tr>
<td>Hong Kong, China</td>
<td>3 572</td>
<td>3 862</td>
<td>3 516</td>
<td>3 630</td>
</tr>
<tr>
<td>Singapore</td>
<td>2 549</td>
<td>2 886</td>
<td>3 168</td>
<td>3 166</td>
</tr>
<tr>
<td>Malaysia e</td>
<td>2 283</td>
<td>2 304</td>
<td>2 987</td>
<td>3 131</td>
</tr>
<tr>
<td>Canada f</td>
<td>2 622</td>
<td>2 651</td>
<td>2 587</td>
<td>2 666</td>
</tr>
<tr>
<td>Macao, China</td>
<td>2 994</td>
<td>2 860</td>
<td>2 969</td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>2 063</td>
<td>2 011</td>
<td>2 161</td>
<td>2 433</td>
</tr>
<tr>
<td>Turkey</td>
<td>1 972</td>
<td>2 316</td>
<td>2 228</td>
<td>2 291</td>
</tr>
<tr>
<td>Nigeria</td>
<td>1 527</td>
<td>1 872</td>
<td></td>
<td>2 131</td>
</tr>
<tr>
<td>Thailand g</td>
<td>1 545</td>
<td>1 976</td>
<td>1 817</td>
<td></td>
</tr>
<tr>
<td>India g</td>
<td></td>
<td></td>
<td>1 558</td>
<td></td>
</tr>
<tr>
<td>Japan g</td>
<td>1 477</td>
<td>1 523</td>
<td>1 576</td>
<td>1 455</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>893</td>
<td>1 023</td>
<td>1 260</td>
<td>1 300</td>
</tr>
<tr>
<td>Brazil</td>
<td>1 559</td>
<td>1 410</td>
<td>1 437</td>
<td>1 222</td>
</tr>
<tr>
<td>Norway</td>
<td>911</td>
<td>970</td>
<td>1 082</td>
<td>1 173</td>
</tr>
<tr>
<td>Ukraine</td>
<td>1 040</td>
<td>1 056</td>
<td>958</td>
<td>1 114</td>
</tr>
<tr>
<td>Viet Nam</td>
<td>493</td>
<td>976</td>
<td>652</td>
<td>845</td>
</tr>
</tbody>
</table>


a Excluding Austria, Bulgaria, Czech Rep., Estonia, Germany, Luxembourg, Portugal, Romania, Slovakia and Sweden.
b Business and pleasure.
c Overseas only, excluding arrivals from Mexico.
d Excluding arrivals from: Hong Kong, China; Chinese; Macao, China; as well as overseas Chinese.
e Peninsular Malaysia, only up to 2006; 2008 estimated.
f Including conventions.
g Excluding nationals residing abroad.
4.3.5. GATS and United Nations Recommendations on Statistics of International Migration, Revision 1

The statistical framework for the compilation of migration statistics (RSIM, Rev. 1) defines two main groups of internationally mobile persons: non-migrants, and international migrants, of which short-term migrants (more than three months and less than 12) and long-term migrants (a year or more). It also provides a framework for the compilation of statistics on inflows and outflows of these groups of persons.

Although some of these categories cover persons of interest in the context of trade in services, a one-to-one correspondence is not possible. Identifying persons falling under Mode 4 within categories proposed in the RSIM Rev.1 (foreign migrant workers, migrants for settlement, for free establishment etc.) is a difficult task. These definitions were not destined for trade in services purposes. However, similar to tourism statistical guidelines, recommendations on migration statistics could also be useful to compile statistics on Mode 4 flows and stocks of persons notably by looking at the non-migrant category corresponding to business travelers (refers to the category business and professional in tourism statistics).

By adopting a number of assumptions and simplifying rules it will be possible to derive more meaningful and detailed Mode 4 estimates from migration statistics, i.e., (a) the best source of information on Mode 4 persons is the category of non-migrants and (b) intra-corporate transferees and other foreign employees maintaining an employer-employee relationship with the affiliated entity in the host economy fall largely under the migrant categories. In other words:

(a) For non-migrants moving for less than one year, the category of business travellers (which should cover persons moving abroad for professional reasons, but for which no employer-employee relation with an enterprise resident in the host country exists), should be broken down as follows: (i) contractual service suppliers (further broken down into self-employed and employees); and (ii) services sales persons or persons responsible for the establishment of commercial presence and other business travellers. If necessary, supplementary statistics (i.e., beyond the RSIM Rev.1 guidelines) could be compiled to include, for the same categories already identified, persons who have changed their economy of usual residence (i.e., staying for one year or more), but for whom the employer-employee relationship remains with an enterprise located outside the host economy or who are self-employed (and not established in the host economy);

(b) For migrants, identify within the category of short-term and long-term migrants employed in the host economy those persons who have been transferred within

---

31 For those intra-corporate transferees where the employment contract remains with the home enterprise, it would correspond to intra-firm contractual service supply (i.e., intra-firm trade in services).

32 The category of “business travellers” as defined in RSIM, Rev. 1 does not refer explicitly to the employer/employee relationship, but states that the persons are on “short visits related to business or professional activities not remunerated from within the economy visited.”
the same company (i.e., the intra-corporate transferees who are remunerated from within the economy visited) and those foreign employees who are directly recruited by the foreign affiliate. Where a need is identified, supplementary statistics (beyond the RSIM guidelines) could be compiled by extending the length of stay to cover moves of less than three months (of which those involving intra-corporate transferees).

If possible, this information should be broken down according to the type of service supplied, the activity of the enterprise employing the person or the activity performed by the self-employed, the relationship between the employer and the client (i.e., intra-firm trade or not), the occupation/skills of the persons moving and their length of stay in the host economy. Information on the number of visits during previous months could also be collected as well as an indication of the value of services supplied and/or purchased.

Although considered to be the supply of services through commercial presence, it could be also interesting to collect information on self-employed persons established in a host economy who are intending to provide services from this base. These are covered indistinguishably in the category entrepreneurs and investors.

Table 6 summarizes links between the coverage of RSIM, Rev. 1 and IRTS 2008 in terms of the purpose of a trip or migration and duration of stay. It identifies, in bold, the purposes that are relevant for Mode 4. The list of purposes is derived from the categories of RSIM, Rev. 1 and the IRTS 2008 classification of tourism trips according to main purpose, and should not be considered as an exhaustive list reflecting accurately the categories as defined in both these frameworks. It has been built to show how these tourism and migration data sources can be used to collect and compile information on the number of persons crossing borders in the context of Mode 4 (flows and stocks).

Rows presented in italics are not separately available in RSIM, Rev. 1 and IRTS 2008, but are indicated in this table as a possible breakdown that would better serve information needs of GATS. All purposes of stay are covered by RSIM, Rev.1, as it deals with migrant as well as non-migrant categories. They are further broken down into non-migrant (white cells, the majority of purposes corresponding to stays of less than three months) and migrant categories (grey cells). In RSIM, Rev. 1, the migrant categories are further broken down into short-term migrant (stays between 3 and 12 months) and long-term migrant categories (12 months or more). Visitors as defined by IRTS 2008 are grouped in this table in the box with thick borders.

As table 6 shows, there are two overlapping items between these statistical systems. The first covers personal visits for less than 12 months but more than 3 for the purpose of education and training, and the second covers other personal reasons. ‘X’ indicates the minimum Mode 4 information requirements. The ‘X’ (in bold) shows that, in the absence of a further disaggregation, the category “business and professional stays” (corresponding to “business travellers” in RSIM, Rev.1) could be used as a first approximation for total flows and/or stocks of persons staying abroad in the context of Mode 4 supply of services (but excluding most of Mode 4 movements and presence related to the supply of services through Mode 3).
### Table 6. Links between RSIM Rev. 1, IRTS 2008 and GATS Mode 4: Classification of persons by purpose of trip or migration

<table>
<thead>
<tr>
<th>Purpose of trip or migration</th>
<th>Length of stay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Less than 3 months</td>
</tr>
<tr>
<td><strong>RSIM Rev. 1 categories</strong></td>
<td></td>
</tr>
<tr>
<td><strong>IRTS 2008 categories</strong></td>
<td></td>
</tr>
<tr>
<td>Visits/trips</td>
<td></td>
</tr>
<tr>
<td>Personal</td>
<td></td>
</tr>
<tr>
<td>Holiday, leisure and recreation</td>
<td></td>
</tr>
<tr>
<td>Visiting friends and relatives</td>
<td></td>
</tr>
<tr>
<td>Education and training</td>
<td></td>
</tr>
<tr>
<td>Health and medical care</td>
<td></td>
</tr>
<tr>
<td>Religion/pilgrimages</td>
<td></td>
</tr>
<tr>
<td>Shopping</td>
<td></td>
</tr>
<tr>
<td>Transit entering eco/legal territory</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
<tr>
<td>Business and professional</td>
<td></td>
</tr>
<tr>
<td>(No employer-employee relationship with an entity established in compiling economy)</td>
<td></td>
</tr>
<tr>
<td>• <strong>Contractual service supply:</strong></td>
<td></td>
</tr>
<tr>
<td>– By self-employed</td>
<td></td>
</tr>
<tr>
<td>– By employees</td>
<td></td>
</tr>
<tr>
<td>of which intra-corporate</td>
<td></td>
</tr>
<tr>
<td>• <strong>Service sales/ commercial presence negotiations</strong></td>
<td></td>
</tr>
<tr>
<td>– <strong>Service sales/ commercial presence of service producing company negotiations</strong></td>
<td></td>
</tr>
<tr>
<td>– Commercial presence of goods producing company negotiations</td>
<td></td>
</tr>
<tr>
<td>• <strong>Other (incl. attending meetings, conferences etc.)</strong></td>
<td></td>
</tr>
<tr>
<td>Migrant work and employment-based settlement</td>
<td></td>
</tr>
<tr>
<td>(Employer-employee relationship with an entity established in compiling economy)</td>
<td></td>
</tr>
<tr>
<td>• <strong>Intra corporate transfer:</strong></td>
<td></td>
</tr>
<tr>
<td>– <strong>In services producing company</strong></td>
<td></td>
</tr>
<tr>
<td>– Other</td>
<td></td>
</tr>
<tr>
<td>• <strong>Direct recruitment by a foreign established:</strong></td>
<td></td>
</tr>
<tr>
<td>– <strong>Services producing company</strong></td>
<td></td>
</tr>
<tr>
<td>– Other</td>
<td></td>
</tr>
<tr>
<td>• <strong>International civil service</strong></td>
<td></td>
</tr>
<tr>
<td>• <strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td></td>
</tr>
<tr>
<td>Family reunification/formation</td>
<td></td>
</tr>
<tr>
<td>Family-based settlement; ancestry-based settlement</td>
<td></td>
</tr>
<tr>
<td>Retiree settlement</td>
<td></td>
</tr>
<tr>
<td><strong>Entrepreneurship and investment settlement</strong></td>
<td></td>
</tr>
<tr>
<td>Humanitarian reasons (refugees etc.)</td>
<td></td>
</tr>
<tr>
<td>Border work; frequent border crossing; nomads</td>
<td></td>
</tr>
<tr>
<td>Transit not entering economic/legal territory</td>
<td></td>
</tr>
<tr>
<td>Diplomatic/consular; military</td>
<td></td>
</tr>
</tbody>
</table>

* Only in the services sector

**Non-migrant categories**

*Italics* = Not available in RSIM/IRTS; *X*’ = First rough approximation of Mode 4.

Non-migrant categories

Migrant categories

**BOLD** = Mode 4 purpose.
Various sources exist for collecting tourism and migration statistics on the number of persons, such as data obtained from migration authorities or other administrative sources (population registers, permit data and visas), census data (which could be used as a benchmark), household, enterprise, labour force surveys or border/passenger surveys. The United Nations World Tourism Organization has developed a model border survey that combines administrative data (entry/exit cards) and statistical data obtained from surveys when travellers leave the economy visited. In order to be operative, such a proposal – as for other types of data collection – would require clear cooperation between national tourism administrations and migration authorities.

Table 7 presents the number of intra-company transfers for 2000-2008 for a selection of OECD countries. Note that these transfers concern persons employed in both services and goods producing companies, the latter not being covered by the definition of Mode 4. Despite its overestimation, it provides an idea of the levels involved with respect to Mode 4 intra-corporate transferees. However, given the paucity of existing information, it is difficult to draw any conclusions or identify any clear patterns.

Table 7. Entries of intra-corporate transferees in selected OECD countries, 2000-2008

(Unit: '000)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td></td>
<td>0.16</td>
<td>0.15</td>
<td>0.15</td>
<td>0.17</td>
</tr>
<tr>
<td>Canada</td>
<td></td>
<td>3.90</td>
<td>8.20</td>
<td>10.22</td>
<td>7.15</td>
</tr>
<tr>
<td>France</td>
<td></td>
<td>2.16</td>
<td>1.06</td>
<td>1.03</td>
<td>1.26</td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td>1.30</td>
<td>5.42</td>
<td>5.66</td>
<td>3.98</td>
</tr>
<tr>
<td>Japan</td>
<td></td>
<td>3.88</td>
<td>7.17</td>
<td>7.31</td>
<td>5.20</td>
</tr>
<tr>
<td>Norway</td>
<td></td>
<td>0.17</td>
<td>0.64</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Spain</td>
<td></td>
<td>...</td>
<td>1.40</td>
<td>1.34</td>
<td>1.14</td>
</tr>
<tr>
<td>Switzerland</td>
<td></td>
<td>...</td>
<td>6.23</td>
<td>7.32</td>
<td>6.87</td>
</tr>
<tr>
<td>United States</td>
<td></td>
<td>54.96</td>
<td>84.53</td>
<td>84.08</td>
<td>71.10</td>
</tr>
</tbody>
</table>

Source: OECD, 2010.

5. The way forward

As outlined in this chapter, the lack of appropriate statistics is leading to confusion as to the importance of GATS Mode 4 trade flows. As a result, many papers analyse only measures that affect Mode 4 trade. Other studies use inappropriate indicators, i.e., labour income-related flows (compensation of employees or remittances), to provide a measure of the importance of Mode 4 trade.
An increasing number of services trade experts outline in international forums the fact that no proper statistics are available to assess trade in services, particularly with regard to the presence of natural persons. MSITS 2002 attempted to set out the ways in which some information could be drawn from existing statistical frameworks. However, it also recognized that further work was necessary to improve the understanding of Mode 4 and to develop appropriate statistics. This partially explains the reasons for currently not having appropriate data available to assess this mode of supply.

Further work was conducted during the revision process of the Manual on Statistics of International Trade in Services. A new chapter was included, which provides details as to how to analyze the international supply of services by modes of supply, with particular focus on Mode 4. This chapter aims at translating the GATS legal text regarding Mode 4 into statistical terms, and identifies which appropriate frameworks could be used and how they should be used to collect appropriate Mode 4 information.

What to expect in the (near) future?

Now that the revised statistical guidelines surrounding trade in services statistics have been approved, it is expected that compilers will start implementing the new recommendations according to a phased approach, particularly with regard to the identification of balance of payments services transactions where Mode 4 is believed to be an important component. Estimating trade broken down by modes of supply should be conducted according to an economy’s specific situation. This could be a starting point for the simplified allocation of FATS and balance of payments services data to modes of supply recommended in the manual (as illustrated in figure 6 of this chapter). This could, in particular, be established by focusing on particular service sectors as done by a number of economies in the Asian and Pacific region, and by either developing appropriate questions in existing surveys or developing specific surveys.

While it is important to build such studies across countries and individual service sectors, it is nevertheless interesting to identify the size of global Mode 4 trade flows. An approximation could be built on the basis of the new recommendations included in the revised manual. Applying, as a starting point, an approximate share of 25 per cent of Mode 4-related trade flows in relevant balance of payments transactions (based on available anecdotal data), combined with other balance of payments and Mode 3 estimates, this results in an approximation of the relative importance of modes of supply showing that, based on 2007 data, Mode 4 represents less than 5 per cent of total international supply of services (table 8).

In addition to the development of statistics reflecting the value of Mode 4 trade, a fuller picture of the movement of Mode 4 persons is needed. Developing statistics on the number of persons moving and already present in a host country will provide important additional data. Again, although some data are available on the movement of persons for business and professional reasons, there is a clear need to refine such measures by adapting existing data sources or developing new ones in order to identify the population of
interest. In order to comply with overriding statistical rules, and as a matter of consistency with other statistics, this should be developed according to the existing tourism and migration statistical frameworks by defining further breakdowns other than the ones currently identified in these guidelines.

Finally, governments and analysts have high political and economic interest in monitoring and studying the movement and presence of foreign persons from a more general perspective (i.e., beyond Mode 4). Therefore, statisticians in the UNECE-Eurostat-OECD Working Group on the Impact of Globalization in National Accounts have proposed a detailed presentation of data with extended classification of labour input, and with links between labour statistics and the national accounts at the industry level. The analytical framework often used for such a presentation is social accounting matrices. Such a presentation could be prepared in a satellite account or as a labour account integrated in the national accounts, and with added details to the core national accounts. However in order to be complete this proposal should be extended to cover Mode 4 aspects (i.e. by also covering trade in services). Such an exercise seems promising. It would enable a complete analysis of the economic and social impacts of labour mobility and trade in services through the movement of persons on countries, and enable comparisons between both aspects, in particular in terms of impact on productivity etc.

<table>
<thead>
<tr>
<th>Mode</th>
<th>(Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode 1. Cross-border supply</td>
<td>25-30</td>
</tr>
<tr>
<td>Mode 2. Consumption abroad</td>
<td>10-15</td>
</tr>
<tr>
<td>Mode 3. Commercial presence</td>
<td>55-60</td>
</tr>
<tr>
<td>Mode 4. Presence of natural persons</td>
<td>Less than 5</td>
</tr>
</tbody>
</table>
References


OECD (2010). OECD (2010), International Migration Database


WTO (2010). S/C/W/301, Presence of Natural Persons (Mode 4), Background Note by the Secretariat. Geneva.

Chapter 6
Measuring barriers to trade and investment in services

Hildegunn Kyvik Nordås

1. Introduction

Services have long been seen as a non-traded sector that is largely ignored in international trade agreements. Nevertheless, services have always been traded. Transport, insurance and other trade-related financial services are complementary to trade in goods and often provided by third-country firms. Greece, for example, has the second largest fleet of commercial ships in the world and has been among the world’s largest exporters of shipping services for decades. Likewise, London has been a centre for trade-related insurance and other financial services for centuries.

The value of services trade as a share of total cross-border trade in goods and services has fluctuated at around 20 per cent since the 1960s, revealing a very high co-variation between trade in goods and services. A closer look at the break-down of services trade suggests that services trade supports goods trade. First, transport and travel accounts for almost half of world trade in services. Second, about one quarter of cross-border trade in services is intra-firm, supporting multinational firms’ international production activities (Lanz and Miroudot, 2010). Third, about 75 per cent of services trade is in intermediate inputs (Miroudot, Lanz and Ragoussis, 2009), indicating that services trade is part and parcel of international value chains. Fourth, when analysed at the firm level, manufacturing and perhaps surprisingly, mining and oil companies rather than services companies are among the most active traders in services (Breinlich and Criscuolo, 2010).

Most services cannot be stored. They must therefore be produced and consumed at the same time and in the same space, which implies that for trade to take place, either the services provider must move to the premises of the customer or the other way around. Therefore, the lions’ share of services trade takes place through commercial presence; between 50 per cent and 60 per cent are commonly quoted figures (Francois and Hoekman, 2010).

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1 The paper is provided in the author’s personal capacity and does not represent the views of OECD or any of its Members.
3 The data on firm-level services trade are from the United Kingdom.
Among the first major trade agreements that included services was the North American Free Trade Agreement (NAFTA). Subsequently, the General Agreement on Trade in Services (GATS) constituted one of the major pillars of the World Trade Organization. However, GATS did not effectively reduce barriers to trade in services when it entered into force, and little progress has been made in subsequent offers during the Doha Round, even though new Members of the WTO have typically made deeper commitments than the signatory Members (Adlung, 2009). Significant progress has been made in regional trade agreements (RTAs) negotiated after GATS came into force (Roy, Marchetti and Lim, 2007; and Miroudot Sauvage and Sudreau, 2010) but even recent RTAs have rarely gone beyond applied policy measures at the time of signing the agreement (VanGrasstek, 2011). There are many reasons for this, including the novelty of the idea of negotiating services trade liberalization as well as technical and legal problems. However, probably the most important reason is the absence of a clear idea of what the major barriers to trade in services are as well as their scale, which policy reforms would be most effective in reducing them and what would be the welfare effect of such reforms. Negotiating trade liberalization from a position of uncertainty about existing trade barriers, let alone the gains from reducing them, naturally leads to great caution.

This chapter contributes to the debate on the way forward on measuring barriers to trade in services. There are two major approaches to this. The first approach uses information on trade and foreign investment to estimate trade costs using insights from economic models. The idea is that since trade is a function of trade costs, and foreign direct investment is a function of trade and establishment costs, among other things it should be possible to infer trade costs from observed trade and investment patterns. The second approach uses information on policy measures that are believed to directly or indirectly erect barriers to trade and investment in services. The strengths and limitations of each approach are discussed below, followed by suggestions for further research in this area.

2. Model-based measures

For goods, the f.o.b. prices in the exporting country as well as the c.i.f. price in the importing country can be observed and non-tariff trade costs inferred from the difference. Furthermore, tariffs and quota rents account for the difference between the c.i.f. price and the local price. Services, in contrast, do not pass through customs and, when traded cross-border, are often transmitted electronically. Export and import prices cannot therefore be observed directly. Furthermore, barriers to trade in services are seldom in the form of tariff equivalent costs related to crossing an international border. Rather, services trade costs

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4 The Australia-New Zealand Closer Economic Relations Agreement of 1986 and the Canada-United States FTA of 1987 also broke important new ground on services trade.

5 Many services, particularly the professional services, are either highly regulated or self-regulated through professional bodies. Such regulation shapes the way the market is organized in fundamental ways that can be difficult to tackle in international trade negotiations.

6 Trade and foreign direct investment (FDI) can be alternative ways of servicing foreign markets (substitutes). Alternatively, trade could support FDI through, for example, the provision of headquarter services to foreign affiliates.
typically relate to complying with host country regulation such as standards, qualification requirements and acquiring a licence to provide the service in question.

Obtaining the required qualifications and licences amounts to barriers to entry, some of which involve sunk costs and others recurring fixed costs. Licences, for example, are required in a number of services such as telecoms and professional services. Obtaining a licence involves an up-front investment and, subsequently, annual licence fees may apply. In either case, the costs are independent of trade volume. Finally, domestic regulation is typically non-discriminatory and applies equally to local services providers, although the costs of complying with qualification requirements, for example, may be higher for foreigners if foreign education is not recognized and must be complemented by more or less comprehensive and costly additional courses and examinations in the importing country.

The absence of observable services trade costs implies reliance on indirect ways of measuring them. A well-proven model, the gravity model, explains bilateral trade between two countries as a function of the size of the markets in the two countries and trade costs facing exporters and importers. When information on trade flows and market size is available, trade costs can be inferred by plugging this information into the model (see box 1 for technical details).

There are three difficulties in applying the gravity model to services, however. First, as noted above, services trade costs are typically entry barriers not proportional to trade volumes. Large and productive firms can typically absorb entry costs more easily than small and less productive firms. Therefore, firms will enter only a limited number of markets; in fact, most firms service their home market only (Breinlich and Criscuolo, 2010). As a result, some country pairs do not trade with each other at all in some services. Since country pairs that do not trade with each other probably have the highest trade cost, ignoring them in the empirical analysis would produce biased results. Fortunately, this problem can be avoided by first estimating the probability that a country pair will engage in bilateral trade and then estimating the gravity model as outlined in box 1, taking into account the estimated probability that they will trade in the first place (Helpman, Melitz and Rubinstein, 2008).

However, the model does not distinguish between sunk and recurring fixed costs, an aspect that may be important for policy outcomes. For example, during the wave of liberalization of telecommunications in the 1990s, there was a debate on whether the incumbent should be given a period of monopoly following privatization or if foreign (and local) entrants should be allowed at the same time. Since a large share of fixed costs is sunk in this sector, the effect of trade liberalization on foreign entry would depend on whether or not the local incumbent had already sunk the entry cost (Fink, Mattoo and Neagu, 2003).

A second problem with using the standard gravity model on services is that providing services often requires a commercial presence – by law, technical limitations or business model imperatives. Ideally, therefore, trade and FDI should be analysed simultaneously.\(^7\)

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\(^7\) See, for example, Egger and Pfaffermayr, 2004.
Box 1. The gravity model

The gravity model explains trade among two countries as a function of the relative size of the two countries' markets and relative bilateral trade costs. Anderson and van Wincoop (2003) specified the gravity equation as follows:

\[
X_{ij} = \frac{y_i y_j}{\bar{y}^w} \left( \frac{t_{ij}}{\Pi_i P_j} \right)^{1-\sigma}
\]  

where \(x_{ij}\) denotes nominal exports from \(i\) to \(j\), \(y_i\) is nominal income of country \(i\), \(\bar{y}^w\) is world income defined as the sum of national income over all \(j\)'s, \(\sigma > 1\) is the elasticity of substitution across services, and \(\Pi_i\) and \(P_j\) represent country \(i\)'s and country \(j\)'s price indices, respectively. Thus, the expression in parentheses depicts trade costs relative to the product of an aggregate measure of local and foreign price levels. The price indices increase for the prices of each individual service and decline with the number of services varieties.

In order to capture the fact that not all country pairs trade with each other, Helpman, Melitz and Rubinstein (2008) used a two-stage approach to econometric estimation of the gravity model, first estimating the probability that two countries trade with each other and, second, the determinants of bilateral trade, given that probability. Fixed costs of entering a new market and heterogeneous firms with different ability to absorb fixed costs play a crucial role in explaining why for some country pairs no firms will engage in trade and trade flows are zero.

There are two common ways of inferring trade costs from an estimation based on equation 1. The first is to normalize the estimated coefficients on the price indices in the last term of the equation. The second possibility is to estimate the equation, omitting the variables associated with policy-related trade costs, use the resulting coefficients to estimate expected trade flows in the absence of trade barriers, and then use the differences between observed and expected trade flows as a proxy for trade costs.

An alternative to estimating the gravity model econometrically is to calculate trade costs directly. By manipulating and combining the gravity equations for trade from country \(i\) to \(j\), from \(j\) to \(i\) and internal trade in countries \(i\) and \(j\), an expression is arrived at for bilateral trade costs as a function of local production for the local market, relative to cross-border trade (Novy, 2009). The equation below applies this procedure to the gravity model proposed by Chaney (2008), which incorporates both fixed and variable trade costs:

\[
\tau_{ijk} = \left( \frac{t_{ijk}}{t_{ijk}^*} \right)^{1-\gamma} \left( \frac{\bar{x}_{ijk}^*}{\bar{x}_{ijk}} \right)^{\frac{1}{\gamma}} = \left( \frac{y_{ijk} y_{jik}}{x_{ijk} x_{jik}} \right)^{\frac{1}{\gamma}}
\]

Subscript \(i, j\) and \(k\) represent exporting country, importing country and sector, respectively, \(t\) depicts variable trade costs, \(f\) fixed trade costs, \(x\) represents sales and \(\gamma\) symbolises the shape parameter of the Pareto distribution of firms' productivity in a model with heterogeneous firms (an example of a Pareto distribution is the 80-20 rule, which applies when 20 per cent of the firms generate 80 per cent of sales, exports or profits; see Melitz, 2003). All the right-hand side variables can be observed and a measure of average bilateral trade costs can be calculated on that basis.
Third, poor data coverage makes it difficult to use the more sophisticated econometric techniques that takes into account fixed costs and the relationship between trade and FDI. The two-stage estimation technique where the probability of trade taking place and then the determinants of trade flows are estimated – given that trade actually takes place – suffers from uncertainty about whether the empty cells in the bilateral trade statics reported by the United Nations or OECD represent the absence of bilateral trade or the absence of trade data. Poor data coverage also results in few observations, where information on both bilateral trade and bilateral FDI in a sector is available, making it difficult to analyse trade and FDI simultaneously.

2.1. Cross-border trade

This sub-section presents estimates of the gravity model for total services using the technique suggested by Helpman, Melitz and Rubinstein (2008). The data on services trade are drawn from OECD Stat and cover 29 reporting countries, mainly OECD members, and 137 partner countries during 2000-2008. The results are reported in table 1.

The results are in line with what would be expected from the predictions of the theory. Large countries tend to trade more with each other. Nevertheless, a 1 per cent increase in relative GDP is associated with 0.51 per cent more trade, which captures the fact that large countries tend to have a lower trade to GDP ratio than smaller countries. Second, it is worth noticing that services trade is almost as sensitive to distance as is trade in goods. Sharing a common border and a language also facilitates trade, as would be expected. All variables are significant at a 1 per cent level.

From the results reported in table 1, relative trade costs can be derived in several ways. One possibility is to use the estimated parameters on the price indices in the gravity equation as a basis for calculating trade cost indices (see box 1). Another commonly used methodology is to estimate the gravity equation, use the results to calculate the predicted bilateral trade flows and exploit the difference between predicted and actual trade flows to calculate trade costs. The larger the predicted trade flows are, relative to actual flows, the higher the trade barriers.

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8 See Lanz, Miroudot and Nordås, 2008, for an extensive discussion. This is a problem also when estimating the gravity model for goods, but the problems appear to be more severe for services as the data shows large and unexplained jumps in the number of trading partners from one year to the next.

9 The regression is run with country dummies, which pick up time-invariant unobserved country-specific factors that could affect trade in services. A bilateral income variable as given by the first ratio in equation (1) of box 1 is used in the regression in order to avoid the possibility that the country dummies mainly pick up the effect of market size.

10 The coefficient on the distance variable in Helpman, Melitz and Rubinstein (2008), using the same estimation technique, was -1.2.

11 The price indices are approximated by country dummies. Strictly speaking, the dummies need to be interacted with year dummies in order to capture time-varying price indices. This, however, creates such a large number of dummies that model convergence becomes a problem when using the non-linear approach suggested by Helpman, Melitz and Rubinstein (2008). In addition, during 2000-2008, prices were relatively stable.

12 The gravity equation in this case is run without country-fixed effects, since the country dummies pick up unobserved country-specific barriers to trade. This would leave only random error terms for explaining the difference between actual and predicted trade flows.
It should be noted that the two methods do not measure exactly the same thing. The price indices in the first method include local prices as well as import prices. When markets are competitive and a world market price can be observed, differences among countries as far as the price level is concerned reflect the level of protection. However, a world market price is rarely observed for services, and a country may feature a high price level also due to factors unrelated to trade protection – for example, relatively high unit labour costs and consumer preferences for high-quality services.

The price index rises when the price of an individual product increases and declines when new products providing consumers with additional choices are introduced. Small countries typically have fewer services providers and therefore a higher price index, everything else equal, than large countries. Therefore, estimated trade costs based on proxies for country-specific price indices may be upwardly biased for small countries. A trade cost index based on the difference between predicted and actual trade flows, in contrast, may be upwardly biased for large countries when cross-border trade is analysed without taking FDI into account.

Services suppliers may choose between entering a foreign market through trade or FDI; they are more likely to opt for FDI in large markets where the entry costs can be more easily recuperated. Thus, services suppliers may have a stronger preference for commercial

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Table 1. Results from two-stage (Heckman) regression on bilateral total services trade

<table>
<thead>
<tr>
<th>Second stage bilateral trade flows</th>
<th>Coef.</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In relative market size</td>
<td>0.510</td>
<td>0.044***</td>
</tr>
<tr>
<td>In distance</td>
<td>-1.024</td>
<td>0.016***</td>
</tr>
<tr>
<td>Common border</td>
<td>0.442</td>
<td>0.043***</td>
</tr>
<tr>
<td>Common language</td>
<td>0.818</td>
<td>0.032***</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>First stage probability of trade</th>
<th>Coef.</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>In relative market size</td>
<td>0.333</td>
<td>0.097***</td>
</tr>
<tr>
<td>In distance</td>
<td>-1.103</td>
<td>0.077***</td>
</tr>
<tr>
<td>Common border</td>
<td>-0.857</td>
<td>0.194***</td>
</tr>
<tr>
<td>Common language</td>
<td>0.917</td>
<td>0.087***</td>
</tr>
<tr>
<td>Common religion</td>
<td>0.627</td>
<td>0.132***</td>
</tr>
<tr>
<td>Lambda</td>
<td>-0.125</td>
<td>0.035***</td>
</tr>
<tr>
<td>N</td>
<td>20 933</td>
<td></td>
</tr>
<tr>
<td>ow sensored</td>
<td>6 020</td>
<td></td>
</tr>
<tr>
<td>Wald chi-squared (174)</td>
<td>63 905.73</td>
<td></td>
</tr>
<tr>
<td>Prob &gt; chi-squared</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

*** signifies statistical significance at the 1 per cent level. Lambda represents the inverse Mills ratio. Its significance implies that omitting zero trade flows would cause a selection bias.
presence in a larger and more dynamic market. Bearing these caveats in mind, figure 1 depicts the estimated trade cost indices. Panel A reports indices derived from the coefficients of the proxies for the price indices, while panel B reports indices based on the difference between actual and predicted trade flows. The latter is calculated for each reporting country, using the sum of all predicted bilateral imports relative to the sum of all actual bilateral trade imports for 2007.¹³

**Figure 1. Trade cost indices estimated from two stage Heckman gravity regressions**

Panel A. Trade cost indices based on price indices (country dummies)

Panel B. Trade costs indices based on difference between predicted and actual trade flows

¹³ The min-max methodology is used for normalization. The country in the sample with the lowest estimated trade costs will, by definition, take an index value of zero while the country with the highest trade cost will be assigned an index value of one.
The first point to notice is that the two charts depict quite different rankings as well as distributions of trade costs. As mentioned above, the first index appears to underestimate and the second index appears to overestimate relative trade costs for large countries. The United States has a highly diversified services sector and its productivity level is among the highest in the world, so it is not surprising that it has the lowest estimated price index in the sample. It is perhaps also not surprising that the United States imports fewer services than predicted by the model, as it is likely that foreign suppliers would establish a commercial presence there rather than rely on cross-border trade. It is more surprising that Japan is found to have low trade cost indices using both methodologies. Although a large market, Japan's services sectors are perceived as lagging behind other high-income countries as far as diversity and productivity is concerned. Apart from that, the countries with the highest index in Panel A are mainly former communist countries in which services historically were given a low priority. It is therefore not surprising that price indices are still relatively high in those countries.

Panel B depicts a skewed distribution with a few countries importing a lot less than predicted by the gravity model. These are mainly large markets, such as Canada, the United States, France and Germany. Belgium is also found at the high end of the distribution. This is because Belgium hosts the European Union institutions, which are likely to attract a broad range of services providers through commercial presence. At the other end of the spectrum are mainly small countries, but as already noted Japan is also found among the countries with the lowest trade costs in this ranking. Which of the two indices provide the most accurate measure of cross-border trade costs is difficult to tell, since the only study to which the results could be compared is Fontagné, Guillain and Mitaritonna (2010), who used the GTAP database, which is quite different from the data used here.14

A third methodology for estimating relative trade costs from trade data was developed by Novy (2009) (see box 1). Using this methodology, it is possible to calculate (as opposed to estimate econometrically) bilateral trade costs. Its greatest advantage is that trade costs can be calculated for each country pair and sector, based on information on bilateral trade and production in this country pair alone. There are also several problems with it, particularly when analysing developments of trade costs over time.

The first problem stems from the fact that what is being calculated here are international trade costs relative to domestic trade or transaction costs. As noted above, services trade costs are typically behind-the-border and related to domestic regulation. When policy reform brings such regulatory barriers down, local and foreign suppliers may face the same marginal reduction in transaction costs, and the cost of importing relative to that of sourcing locally will remain constant. Furthermore, countries with a high level of behind the border regulatory barriers may well feature a low value of trade costs as calculated by the Novy formula if such barriers are non-discriminatory, since both the nominator and

14 Bilateral services trade data was estimated based on the IMF balance of payment statistics until the most recent version, which uses OECD bilateral trade data when available supplemented by estimates where OECD data are not available (see https://www.gtap.agecon.purdue.edu/resources/download/4944.pdf).
denominator in the formula would be high in this case. The second problem is that the methodology does not distinguish between natural barriers to trade, such as distance, different languages and so on, and policy-determined trade costs.

Another problem with the Novy formula is that the results are very sensitive to the assumptions of how good the local and imported services of the same category are as substitutes. To what extent, for example, does a local enterprise consider a foreign bank’s financial services to be equivalent to those of a local bank, and how readily would the enterprise switch to the foreign bank if its fees were lower? A measure of this is the elasticity of substitution between different varieties of the same category of services. Econometric estimates of this elasticity are hard to come by; however, using firm-level data from the United Kingdom, Breinlich (2010) suggested that it hovered between one and two. Table 2 shows the descriptive statistics for the estimated trade costs using the Novy formula for different values of the elasticity of substitution.

<table>
<thead>
<tr>
<th>Elasticity</th>
<th>Mean</th>
<th>Std. dev</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>10 890.86</td>
<td>38 978.6</td>
<td>28.42</td>
<td>824 659.8</td>
</tr>
<tr>
<td>4</td>
<td>67.97</td>
<td>79.19</td>
<td>5.33</td>
<td>908.11</td>
</tr>
<tr>
<td>6</td>
<td>15.17</td>
<td>10.28</td>
<td>3.05</td>
<td>93.77</td>
</tr>
<tr>
<td>8</td>
<td>7.43</td>
<td>3.56</td>
<td>2.3</td>
<td>30.13</td>
</tr>
<tr>
<td>10</td>
<td>4.9</td>
<td>1.81</td>
<td>1.95</td>
<td>15.25</td>
</tr>
</tbody>
</table>

If the elasticity of substitution between services of different origin is as low as estimated by Breinlich, it appears that services trade costs on average are prohibitive. The average may, of course, conceal significant differences between services sectors. Thus, a high average does not preclude the fact that some services can be digitized and shipped electronically at low trade costs. Figure 2 depicts the average trade cost across trading partners for countries for which information was available for 2005, if the elasticity is 10. The elasticity is much higher than Breinlich’s estimate, but not so far from what is typically assumed in applied general equilibrium models. The estimated trade costs are between three and seven times higher than domestic transaction costs.

The lowest trade costs are observed in Germany, followed by Switzerland and the United Kingdom, while Indonesia, New Zealand and Mexico have the highest services trade costs. As already noted, the measure includes natural barriers to trade such as distance to trading partners. Remoteness could therefore explain the high trade costs for New Zealand,

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15 In the gravity equation the elasticity is represented by $\sigma$.

16 See Miroudot, Sauvage and Shepherd (2010; 2011) for further discussions on services trade costs by sector using this methodology. They also kindly provided the data for this analysis.
which has a relatively open trade regime both for goods and for services. Countries for which both the price index-based estimate and the Novy formula calculation yield low trade costs are the United States, Germany, Denmark and the Netherlands, whereas countries with high scores on both counts are Slovakia, Slovenia, Estonia, Poland and Finland. A high price index based and a low Novy-formula based estimate of trade costs would indicate high and largely non-discriminatory entry barriers. However, no country included in the analysis fits that description.

To conclude, using the most commonly applied techniques for estimating trade costs from observed trade flows did not improve the picture much as far as cross-border services trade costs are concerned. Nevertheless, the three methodologies combined could potentially provide a good basis for analysis of trade costs, transaction costs and barriers to entry for local as well as foreign services providers, provided that data coverage and quality improves. In the short term, significant improvements in sectoral trade data can probably not be expected, and firm level data could be explored instead.

2.2. Services trade through commercial presence

In some cases, commercial presence is essential for servicing a foreign market. In such instances, measuring barriers to services trade from observed trade data becomes much more difficult. Thus, it would be necessary to analyse the relationship between trade costs and choice of mode of supply as well as the relationship between trade costs and total services trade. Kox and Nordås (2008) made a first attempt at doing so and found that cross-border services trade and FDI for most services sectors were gross complements, which means that restrictions on FDI have a negative effect on both cross-border trade and FDI. However, the two modes are not perfect complements, since it is also found that indices of domestic regulation (see the next section) affect the relative importance of these two modes of supply. For most sectors a higher level of behind-the-border regulation was found to have a stronger negative effect on FDI than on cross-border trade. A likely explanation for this is
that when regulation imposes higher barriers to entry, multinational firms may prefer to limit their investment to the most essential functions and provide services to affiliates in such countries from the headquarters or affiliates in other less restrictive countries – through intra-firm cross-border trade.

In summary, when modes of supply are linked, trade costs shape both the choice of mode and the total volume of trade; thus, more research, including using firm-level data, is needed to find a methodology for measuring trade costs when modes of supply are strongly related.

3. Measures based on information on policy

Having identified the strengths and shortcomings of various methods for estimating trade costs using the gravity model, this section considers an alternative way of measuring trade costs based on information on trade policy. The essence of the methodology is to transform qualitative information on policy into quantitative indices of trade costs. For this purpose, a set of policy measures are identified, and information on each country's policy stance is gathered and assigned a score that reflects how restrictive a country's policy stance is. Finally, a weighted average of the scores is calculated for each country and sector. A host of policy-based indicators have been developed, starting with Hoekman (1996) who calculated services trade restrictiveness indices based on GATS commitments.

Another important contribution was made by the Australian Productivity Commission, which estimated indices for a large number of countries in the major services sectors in the mid- to late 1990s (Findlay and Warren, 2000). Finally, Dihel and Shepherd (2007) estimated tariff-equivalent trade costs by mode of supply for a number of countries and services sectors.17 Unfortunately, none of these indices have been regularly updated, and this author's is not aware of the existence of any comprehensive indices that cover the current policy stance, let alone time series of policy-determined services trade restrictions.

The closest data to regularly updated policy indices that capture services trade costs can be found in the OECD FDI restrictiveness index (FDI-RI), which captures policy restrictions facing foreign direct investors. The indices have been developed on the basis of the OECD Codes of Liberalization of Capital Movement and OECD National Treatment Instruments, and have been calculated for 1996, 2003 and 2009 (Golub, 2003; Koyama and Golub, 2006; and Kalinova, Palerm and Thomsen, 2010.). Table 3 depicts the OECD FDI-RI for 46 OECD and non-OECD countries.

Table 3 shows that barriers to investment are significantly higher in services than in manufacturing for almost all countries and that, on average, OECD countries have lower barriers than non-OECD ones. The lowest overall index is found in the Netherlands, closely followed by Portugal and Romania, while the highest is observed in the People’s Republic of China. The most restricted sectors are transport, media and communications, but distribution services and business services (accounting, architecture, engineering and legal services) also exhibit high barriers, particularly in non-OECD countries.

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17 See Francois and Hoekman, 2010, for a comprehensive survey.
### Table 3. FDI restrictiveness indices, 2010

<table>
<thead>
<tr>
<th></th>
<th>AUS</th>
<th>AUT</th>
<th>BEL</th>
<th>CAN</th>
<th>CHL</th>
<th>CZE</th>
<th>DNK</th>
<th>FIN</th>
<th>FRA</th>
<th>DEU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>0.075</td>
<td>0.000</td>
<td>0.023</td>
<td>0.100</td>
<td>0.000</td>
<td>0.000</td>
<td>0.023</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Construction</td>
<td>0.075</td>
<td>0.000</td>
<td>0.023</td>
<td>0.100</td>
<td>0.000</td>
<td>0.000</td>
<td>0.023</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Distribution</td>
<td>0.075</td>
<td>0.000</td>
<td>0.023</td>
<td>0.100</td>
<td>0.000</td>
<td>0.000</td>
<td>0.023</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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<tr>
<td>Transport</td>
<td>0.225</td>
<td>0.182</td>
<td>0.114</td>
<td>0.267</td>
<td>0.413</td>
<td>0.075</td>
<td>0.083</td>
<td>0.105</td>
<td>0.150</td>
<td>0.200</td>
</tr>
<tr>
<td>Hotels &amp; restaurants</td>
<td>0.075</td>
<td>0.033</td>
<td>0.038</td>
<td>0.100</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.023</td>
<td>0.000</td>
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<td>Media</td>
<td>0.200</td>
<td>0.000</td>
<td>0.023</td>
<td>0.700</td>
<td>0.225</td>
<td>0.000</td>
<td>0.023</td>
<td>0.048</td>
<td>0.025</td>
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<td>Communications</td>
<td>0.400</td>
<td>0.000</td>
<td>0.023</td>
<td>0.600</td>
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<td>Financial services</td>
<td>0.133</td>
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<td>Business services</td>
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<td>0.322</td>
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<td>Real estate investment</td>
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<td>0.023</td>
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<td>0.900</td>
<td>0.000</td>
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</tr>
<tr>
<td>FDI INDEX TOTAL</td>
<td>0.127</td>
<td>0.106</td>
<td>0.164</td>
<td>0.059</td>
<td>0.055</td>
<td>0.072</td>
<td>0.032</td>
<td>0.038</td>
<td>0.023</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
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<th>IRL</th>
<th>ITA</th>
<th>JPN</th>
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<th>MEX</th>
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<tr>
<td>Manufacturing</td>
<td>0.015</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.077</td>
<td>0.000</td>
<td>0.103</td>
<td>0.000</td>
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<tr>
<td>Construction</td>
<td>0.015</td>
<td>0.000</td>
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<td>0.100</td>
<td>0.000</td>
<td>0.200</td>
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<tr>
<td>Distribution</td>
<td>0.015</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.150</td>
<td>0.000</td>
<td>0.200</td>
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<tr>
<td>Transport</td>
<td>0.165</td>
<td>0.167</td>
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<td>0.150</td>
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</tr>
<tr>
<td>Hotels &amp; restaurants</td>
<td>0.030</td>
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<td>0.120</td>
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<td>0.350</td>
<td>0.085</td>
<td>0.114</td>
<td>0.091</td>
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Sources: OECD; and Kalinova, Palerm and Thomsen, 2010.

Note: 0 denotes fully open, and 1 denotes fully closed.

The FDI restrictiveness index is broken down on equity restrictions, screening and approval of foreign investments as well as restrictions on nationality or residency of managers and board members. Whereas non-OECD countries score higher on equity restrictions and restrictions on key personnel, they score lower on screening. The restrictiveness of screening depends on its implementation, particularly with regard to the extent to which clear criteria for approval and a fair and effective procedure exist. If there is considerable uncertainty related to the timing and outcome of the screening process, that alone is a serious barrier to foreign entry. The measures covered by the FDI restrictiveness index are the major entry barriers facing foreign services providers. However, there are many behind-the-border regulations that also affect the ease with which services can be provided to foreign customers. Relevant regulations are, for example: licences; qualification
requirements and related procedures in regulated professional services; zoning regulation; opening hours and regulation of the size of supermarkets and hypermarkets in the retail sector; access and interconnection regulation (or lack thereof) for telecommunications; and entry barriers in the transport sectors.

The potential trade restrictiveness of licensing procedures, qualification requirements and standards is recognized in GATS Article VI, which mandates negotiations on disciplines on such domestic regulation. These are not included in the FDI restrictiveness indicators reported above, but are captured in the OECD Product Market Regulation Index (PMR). This index has been calculated for 1996, 2000 and 2007/08, and it contains information on domestic regulation on market entry, competition, administrative procedures etc. The PMR is calculated for the economy as a whole (i.e., horizontal regulations) and for some specific sectors, i.e., professional services (accounting, architecture, engineering and legal services), retail and wholesale trade, transport, telecommunications and energy.\(^\text{18}\) The example of accounting services clearly illustrates the difference between the two indicators that are depicted in figure 3.

**Figure 3. PMR 2008, FDI restrictiveness index 2010, accounting services**

![Graph showing PMR and FDI restrictiveness index for accounting services](image)

*Source:* OECD.

*Note:* PMR ranks between 0 and 6, and FDI restrictiveness between 0 and 1.

More than half of the countries in the sample have no restrictions on FDI in accounting, but licensing, lack of recognition of equivalent foreign qualifications and lengthy procedures (captured by the PMR) are prominent. It should be underscored that licensing and education requirements, per se, are not necessarily barriers to trade and investment. However, if countries have similar levels of qualification requirements but do not recognize each other’s qualifications, entry is much more difficult for a foreign services provider who

\(^\text{18}\) See Wölfl and others, 2009, for further discussion.
may have to duplicate qualifications in each market he seeks to enter. Ireland is the most liberal country on both indices, but otherwise there appears to be little correlation between the two indices in this sample.  

4. Can the OECD policy indices explain variation in services FDI?

As shown by Baltagi, Egger and Pfaffermayr (2007), the gravity model can be applied to sales of foreign affiliates and foreign direct investment. They proposed a relatively complex model that captures vertical versus horizontal FDI as well as third-country effects. Their model is somewhat simplified here as the main interest is to what extent the policy indices discussed in section 3 capture the essence of trade costs related to services supply through commercial presence. Availability of data also limits the number of variables that can be included.

The regression equation depicted in box 2 is estimated on bilateral OECD FDI data for 22 member countries for 1995-2005. Data on output by sector is from OECD.Stat and the FDI restrictiveness indices, and the PMR indices are from OECD as described in the

Box 2. The gravity equation applied to FDI

The simplified regression equation based on Baltagi et al. (2007) reads:

\[ FDI_{ijk} = \beta_0 + \beta_1 G_{ijk} + \beta_2 S_{ijk} + \beta_3 d_{ij} + \beta_4 d_{ij}^T + \beta_5 d_{ij}^T + \gamma_i + \lambda_j + x_k + \epsilon \]

where subscripts \( i, j \) and \( k \) represent reporter country, partner country and sector, respectively. The variables are: \( G_{ijk} \) is the log of combined output for the country pair, \( S_{ijk} \) denotes the index of country pair similarity in output value, \( S_{ijk} = 1 - s_i^j - s_j^i \) where lower case \( s \) is the share of country \( i \) in country pair output and \( d_{ij} \) is the log of distance between the two countries. The indices of investment barriers are country-specific and are entered both as a separate variable, which is captured by the country dummies, and interacted with distance. The rationale for the interaction term is that FDI liberalization is likely to trigger more inward flows from source countries closer to home at the margin. For example, if Mexico lifts barriers to FDI in services, United States or Brazilian firms are more likely to respond than firms from, for example, the Republic of Korea or France.

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19 The correlation coefficient is only 0.15. Although there are two years between the data for the two indices, the time lag between them is unlikely to explain much of the difference.

20 Third-country effects refer to the fact that potential investors take into account investment opportunities in a number of countries before they make their investment decisions. Bilateral investment flows are therefore not only determined by conditions in the two countries in question, but also by conditions in third countries.

21 Total bilateral stocks and flows of FDI, and stocks and flows by country and sector, are available from OECD.Stat. Based on this information, bilateral FDI stocks and flows have been estimated by OECD staff using an optimization technique.
The relationship is first estimated for bilateral FDI stocks, using pooled data for nine sectors, 22 countries and the years during the period 1995-2005 for which the FDI-RI and the PMR are available. The results are reported in Table 4.

### Table 4. Regression result, inward FDI stocks

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<th>Core model</th>
<th>With FDI-RI</th>
<th>With PMR</th>
<th>With both</th>
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<td>In combined output</td>
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<td>-0.834</td>
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<tr>
<td>In dist* FDI restr. Host</td>
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<td>-0.091</td>
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<td>In dist* FDI restr. Source</td>
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<td>0.061***</td>
<td>-0.028</td>
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<tr>
<td>In dist*PMR host</td>
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<td>0.003**</td>
<td>-0.026</td>
<td>0.008**</td>
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<tr>
<td>In dist*PMR source</td>
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<td>0.003**</td>
<td>0.027</td>
<td>0.401</td>
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</tbody>
</table>

**Note:** The FDI restrictiveness index and the PMR index are not logged. 
***, ** and * indicate statistical significance at 1 per cent, 5 per cent and 10 per cent level, respectively.

The FDI restrictiveness index is explicitly designed to capture barriers to the establishment and operations of foreign affiliates while the PMR is designed to capture more general barriers to establishing and operating a business, whether local or foreign. The FDI-RI is only available for two years during this period while the PMR is available for two periods for business services and retail services, and for all 10 years for postal and telecommunications services and transport. This explains the sharp drop in the number of observations when the two indices are included in the regressions.

The PMR is more statistically significant than the FDI-RI. When both indices are included in the same regression, only the PMR is statistically significant. Behind-the-border regulation thus appears to be more important than border measures as a deterrent to FDI in this sample. Note, however, that the sample includes 22 OECD countries for which FDI barriers are already quite low to start with. A larger and more diversified sample might be expected to yield a different result, but unfortunately neither bilateral services FDI data nor regulatory indices are available for a larger sample. Another interesting observation is that FDI restrictions and regulatory barriers both appear to deter outward as well as inward investment flows. A possible explanation for the latter finding is that regulatory barriers and protection may combine to lessen the competitiveness of home country service sectors and

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22 The PMR for air transport includes information on open skies agreements, and the PMR for professional services includes information on screening and economic needs tests, which are removed from the indices before using them in the regressions. The adjusted PMR indices are calculated by taking the simple average of the scores for the remaining measures after the border measures are taken out.
thus dampen their inclination or ability to venture abroad. Such a result is similar to the anti-export bias of tariff protection reported in the literature.\textsuperscript{23}

The results show that bilateral FDI falls off more sharply with distance the higher the policy indices. FDI restrictions therefore have a stronger negative impact on FDI inflows in remote countries than in countries located closer to major investors. The FDI restrictiveness index takes values between 0 and 1, and a change of one unit value therefore reflects a shift from a closed to a free FDI flow environment. The PMR takes values between 0 and 6 and thus a change of one unit value reflects a partial change in policy. A higher coefficient on the FDI-RI term therefore does not mean that the FDI liberalization has a stronger effect on FDI than behind-the-border regulation as reflected in the PMR. To the contrary, the impact of a one standard deviation change from the mean is larger for the PMR. On summarize, the FDI-RI and the PMR indices capture the essence of relative barriers to FDI in services. For the OECD countries, behind-the-border domestic regulation appears to constitute the most important remaining barriers.

5. Conclusion

This chapter argues that a precondition for effective trade policy-making is a good sense of the current levels and incidence of barriers to trade and investment. Only when such knowledge is available can the necessary tools for informed policy-making be developed. This point has clearly not been reached yet for services. Barriers to services trade largely take the form of entry barriers, both at and behind the border. Such barriers are much harder to measure than tariff equivalent trade costs since (a) the gravity model yields ambiguous results and (b) usually reliance cannot be placed on comparisons between domestic and international prices. Recently-released firm-level data provide new avenues for understanding what drives and hinders trade in services. Such data could provide a basis for more accurate estimates of trade costs for services by sector.

A potentially promising avenue for further research lies in the development of restrictiveness indices that summarize a country’s trade policy environment. Existing OECD indices perform well when entered into gravity regressions, and are found to yield statistically significant results with expected negative impacts on FDI stocks. Although admittedly painting with a broad brush, it should be possible to analyse the likely impact on FDI performance of policy reforms using this technique.

Research on measuring trade costs in services is still in its infancy. Given the importance of services for income, welfare, trade and cross-border investment activity, it is disconcerting that while information on tariffs, quotas and other barriers to trade in goods is widely available, most countries provide information on trade and barriers to trade in services only at a very aggregate level. In order to make progress on measuring trade costs in services, data on trade flows by mode of supply at a disaggregated sector level is needed. Improvements in data coverage take a long time to materialize. In the meantime, analysing

\textsuperscript{23} Balassa and Associates (1971) provides an early analysis of the export bias associated with import protection.
the relation between policy measures and firm performance could provide policy makers with useful tools in supporting services trade policy formulation and the conduct of trade negotiations under the auspices of both GATS and the proliferating web of preferential trade agreements.
References


Part III

SECTORAL AND NATIONAL LIBERALIZATION AND DEREGULATION: PROGRESS AND UNRESOLVED ISSUES
Chapter 7

Exploring access and equity in private higher education institutions: Insights from Malaysia

Tham Siew Yean

1. Introduction

Globally, there is increasing demand for higher education, especially from the youth population of developing countries, as it is viewed as an important pathway to greater social mobility (Devesh, 2008). According to the World Trade Organization (WTO) (2010), private returns from higher education are high, both for developed and for developing countries. The wage differential between a secondary school leaver and a university graduate is estimated to be as high as 200 per cent. In addition to the wage premium, rapidly changing technology in a globalized world is also demanding new and changing competencies that require lifelong learning skills, for which mature students often have to go back to college for re-training and re-skilling.

On the supply side, education (including higher education) is considered by many as a public good and a citizen's basic right. The United Nations Educational, Scientific and Cultural Organization (UNESCO), for example, views education as a fundamental human right and essential for the exercise of all other human rights. Unfortunately, the reality in many developing countries is that governments cannot afford to meet the increasing demand for higher education, leaving the excess demand to be met by private higher education institutions (PrHEIs). The increasing importance of private supply can be seen in the large number of countries in which more than 50 per cent of student enrolment is in PrHEIs (Devesh, 2008). These include developing countries such as Indonesia and the Philippines as well as developed countries such as Japan, the Republic of Korea, and the United Kingdom.

The impact of private provision is hotly debated as some of these for-profit enterprises are often challenged on the quality and substance of the education they provide, quite apart from the philosophical debate on the public-good nature of higher education and the appropriateness of private provision.

Increasing private provision has raised interesting questions as to who gets educated at these PrHEIs. Is the increasing private supply enlarging the circle of opportunity to include

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1 The views expressed are those of the author and should not be attributed to the Institute of Malaysian and International Studies.


3 Note: Private provision includes some providers who operate under not-for-profit charters.
those who might otherwise have been unable to enter university or college? In other words, has the explosion in private supply translated into greater inclusion or enhanced exclusion? Widened access promotes equity if the enhanced opportunities provide a fair chance for all (James, 2007). “Equity groups” can, however, be defined in different ways; for example, the phrase may refer to those who have the ability to go to university and are unable to do so, or in terms of selection for university places based on merit. The access and equity issues are therefore interrelated, as the pathways opened up by private provision will show what type of access is provided as well as the types of students that PrHEIs cater to (including their demographic characteristics) (Levy, 2008; and Kinser, 2009). The cost of access also provides further information as to the types of equity groups that are addressed by these alternative pathways.

This chapter explores how the growth of private higher education in Malaysia has affected access and equity in higher education in the country. Malaysia is an interesting case study, as private provision has been proactively supported by the Government as a means of increasing access. Available secondary data are used for the analysis.

2. Development of private higher education in Malaysia

At the time of independence in 1957, opportunities for higher education in Malaysia were limited, as there were no public universities in the country. PrHEIs, however, were already present as tutorial centres for transnational programmes that were geared toward selected skills and professional qualifications. After independence, PrHEIs in the country continued to grow in response to market forces from within and outside the country (Tham, 2010). In particular, the shift from a government-led to a private sector-led strategy for development in the country in the mid-1980s led to domestic liberalization in the manufacturing and service sectors, including education. Consequently, the Government gave permission for twinning arrangements between local private educational establishments and international universities (Sivalingam, undated).

The number of private providers has increased steadily. Table 1 shows that there are five types of PrHEIs currently operating in Malaysia. As of 2010, there were 45 with university status. Slightly fewer than half are private universities, while slightly more than half are university or private colleges that have been upgraded to the status of universities, based on criteria determined by the Ministry of Higher Education (MOHE)4.

In addition, the Government of Malaysia has also invited a few foreign universities to set up branch campuses in Malaysia. There are five operating in the country: (a) Monash University, Curtin University of Technology and Swinburne University of Technology, from Australia; and (b) Nottingham University and the latest addition, in 2009, the Medical Faculty of the University of Newcastle, which is operating in the Iskandar Corridor in Johor.

4 It should be noted that some of these university colleges have also been upgraded to full-fledged private universities, such as Limkokwing University.
The bulk of private providers are, however, in the form of private colleges that do not confer degrees on their own but conduct transnational or locally established programmes from public universities. Of the 440 PrHEIs, only 200 are allowed to recruit international students, and permission is given only for specific programmes within each institution (Tham and Kam, 2007). In 2010, the private sector accounted for 50 per cent of total student enrolment in the country.

The large supply of private providers in a country of just 27 million people has increased access for citizens as well as international students – especially from other developing countries – through cross-border flows.

3. Government policies and regulations

3.1. Government policies

Although no formal policy was laid out in the 1980s, private providers emerged to meet excess demand in the country, the extent of which is shown in table 2.

<table>
<thead>
<tr>
<th>Year</th>
<th>Applicants</th>
<th>Intake</th>
<th>Accepted (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981/82</td>
<td>16,698</td>
<td>5,847</td>
<td>35.0</td>
</tr>
<tr>
<td>1982/83</td>
<td>19,522</td>
<td>6,127</td>
<td>31.4</td>
</tr>
<tr>
<td>1983/84</td>
<td>28,858</td>
<td>6,890</td>
<td>23.9</td>
</tr>
<tr>
<td>1984/85</td>
<td>32,168</td>
<td>7,192</td>
<td>22.4</td>
</tr>
<tr>
<td>1985/86</td>
<td>32,209</td>
<td>8,213</td>
<td>25.5</td>
</tr>
<tr>
<td>1986/87</td>
<td>28,755</td>
<td>9,289</td>
<td>33.6</td>
</tr>
<tr>
<td>1988/89</td>
<td>24,155</td>
<td>8,599</td>
<td>35.6</td>
</tr>
<tr>
<td>1989/90</td>
<td>23,331</td>
<td>8,757</td>
<td>37.5</td>
</tr>
<tr>
<td>1991/92</td>
<td>25,730</td>
<td>10,668</td>
<td>41.5</td>
</tr>
</tbody>
</table>

The greater role accorded to the private sector in the economic development of the country, after the first economic recession in 1985/86, also led to a more utilitarian stand on educational policy, whereby the private sector was harnessed to meet the increasing demand for more qualified human capital in the context of Malaysia’s industrialization. Moreover, there were also political reasons for widening access, as the New Economic Policy (NEP)\(^5\) instituted in 1969 led to affirmative action for Bumiputera (the Malays and other natives) enrolment in public universities. This deprived non-Bumiputeras of places in such institutions, resulting in their great discontentment with the government (Tan and Santhiram, 2009). Widening access for non-Bumiputeras through private provision was, therefore, used as a means to address their grievances.

Subsequently, former Prime Minister of Malaysia Mahathir Mohamad introduced his Vision 2020 plan, which envisaged Malaysia achieving a developed economy and society by 2020. This required increasing access to higher education and, consequently, an increased role for private providers, leading to the envisioning of Malaysia as a regional hub for higher education. This vision would also help to reduce loss of funds associated with student outflows and, concurrently, increase export revenue through inflows of international students. In line with this vision, the Private Higher Education Institutional (PHEI) Act entered into force in 1996, allowing private providers to award degrees instead of conducting twinning and franchise programmes alone. This Act was subsequently amended in 2003, to provide for the establishment and upgrade of private universities, university colleges and branch campuses in Malaysia (Morshidi, 2006).

The vision of a higher education hub has been sustained during in subsequent years, as witnessed by its reiteration in the seventh, eighth and ninth Malaysia Plans (MP) (1996-2000, 2001-2005 and 2006-2010, respectively). More importantly, a separate Ministry of Higher Education was established in 2004 to raise standards in higher education by producing graduates that met the human capital needs of the country, and making Malaysia a regional and international hub of educational excellence. Furthermore, the ninth Malaysia Plan set a target for the enrolment of 100,000 international students in local higher education institutions by 2010 (Ministry of Higher Education, 2006). According to the Ministry of Higher Education (MOHE), in 2010 there were 86,923 international students.\(^6\)

Similarly, in 2006, when the Third Industrial Master Plan was launched, education and training services were targeted as one of the eight new sources of growth for the economy. Obviously, this was tied to the hub vision, as the targeted number of international students in the ninth MP implied an additional source of export revenue. The hub vision was further reiterated in the National Higher Education Action Plan, 2007-2010, which was launched in 2008 as a short-term blueprint that would lay the foundations of the National Education Strategic Plan (NESP). Higher education as a generator of export revenues is also set out in

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\(^5\) The twin NEP goals were the eradication of poverty and the identification of race with the economic functions of the country. This led to an ethnic quota system that was imposed to advance the economic status of the Bumiputeras, by enhancing their educational mobility at the higher education level, at that time dominated by the non-Bumiputeras.

the New Economic Model and the tenth Malaysia Plan, 2011-2015, both of which were launched in 2010.

In 2007, the launch of NESP listed seven strategic thrusts:

(a) Widening access and increasing equity;
(b) Improving the quality of teaching and learning;
(c) Enhancing research and innovation;
(d) Strengthening higher education institutions;
(e) Intensifying internationalization;
(f) Inculcating life-long learning;
(g) Reinforcing the delivery systems of the Ministry of Higher Education (MOHE).

In terms of access, NESP acknowledged the significant role played by private higher education in providing opportunities for post-secondary tertiary education (MOHE, 2007). Enrolment at tertiary level for the 17-23 age cohort was projected by NESP to increase from 29 per cent in 2003 to 40 per cent in 2010 and to 50 per cent by 2020. In 2010, enrolment at the tertiary level for the 18-23 age cohort was reported to be 44 per cent. The objective is to increase the percentage of workforce with tertiary qualifications in the country from 20 per cent in 2005 to 27 per cent in 2010 and to 33 per cent by 2020, thereby increasing the skill level of the workforce. In 2010, Malaysia’s workforce with tertiary education was 24 per cent.7

The objectives of the efforts to widen access and equity include ensuring access for students from diverse backgrounds through (a) the provision of various programmes and financial assistance, and (b) the improvement in infrastructure and expansion of information and communication technology use. These goals clearly call for private providers to be partners in the process, as these institutions provide alternative pathways and admission approaches that complement the pathways of public universities in the country. Likewise, the goal of being an educational hub also requires the private sector to play an active role – especially in the recruitment of international students – since the majority of international students at the undergraduate level are studying at PrHEIs rather than public universities due to the 5 per cent quota that is imposed on admission to the latter.

Thus, at the policy level, PrHEIs are called on to play an important complementary role in widening access and equity as well as in the development of the education hub that is desired by the Government.

3.2. Regulations overseeing the private higher education sector

The PHEI Act of 1996 is the main legislation governing the establishment of PrHEIs in Malaysia, including degree and non-degree granting institutions as well as branch campuses (Middlehurst and Woodfield, 2004). It also allows the Minister of Education to grant permission to these institutions to conduct their programmes in English. This is an important difference from Public Higher Education Institutions (PuHEIs), as their programmes are

conducted in the national language, *Bahasa Melayu*. Furthermore, the Act does not limit foreign equity participation in the country. This implies that 100 per cent foreign equity may be allowed, subject to approval by the Minister of Higher Education. The employment of expatriates to teach in PrHEIs is also covered by the Act.

Two other pieces of legislation that affect PrHEIs are the National Higher Education Funding Board Act, 1997 and the Malaysian Qualifications Act, 2007. The former establishes a higher education funding council that provides loans for students who have obtained a place in accredited programmes, be it in PrHEIs or PuHEIs. The latter regulates the accreditation of all academic programmes at all levels offered by both PrHEIs and PuHEIs.

In terms of governance, both PrHEIs and PuHEIs are regulated by MOHE which was established in 2004 while, subsequently, the Malaysian Qualifications Agency (MQA) was established on 1 November 2007. The latter, formed from the merger of the former National Accreditation Board and the Quality Assurance Division of the Ministry of Higher Education, is responsible for quality assurance of higher education in both the public and the private sectors.

### 4. Access and equity

#### 4.1. Literature review

Although the term “access” is commonly used in association with development in higher education, it does not have a common meaning. In fact, the definition of access has changed over time; it may vary across countries due to different social realities and agendas, even among developing countries. According to Clancy and Goastellec (2007), historically three different principles have been used to frame access policies: (a) inherited merit; (b) equality of rights; and (c) equity, defined as equality of opportunity. Inherited merit is dependent on circumstances such as one's social group at birth. However, it became untenable over time as demographic, economic, political and ideological pressures forced a reconsideration of the idea of access towards a more inclusive concept, which accommodated larger numbers, regardless of social origin. Thus, inherited merit was replaced by equality of rights.

Subsequently, equality of opportunity became the accepted norm for defining access, as the nature of higher education is thought to provide privilege to those with superior economic, social and cultural resources. Consequently, the notion of equality has to take into account differences in the opportunity structure, with merit redefined as the distance between the academic levels reached by students and the diverse handicaps that they face, be it in terms of personal characteristics, family, community or schooling experiences. The different social groups that are taken into account under equality of opportunity are usually based on an individual country’s social diversity. It may include those who are not academically able to gain admission into limited public institutions of higher learning, students from different socio-economic backgrounds and gender, as well as working and other non-traditional students (Levy, 2008).
“Access” defined in terms of equality of opportunity has embedded within it notions of equity in a broad and inclusive sense. It embraces a sense of justice and fairness as it seeks to provide opportunities for under-represented groups in society, such as those with low socio-economic status, women and girls, ethnic and other minorities, people with disabilities and others denied previous opportunity to enter higher education (Skilbeck, 2000).

The main factors that can affect access and equity include cultural and social norms, financial resources and policies as well as mechanisms within and beyond schools (Knight, 2009). In particular, governments grapple with various policies that can widen participation and improve access for disadvantaged groups, with varying degrees of success as documented in the country studies in Knight (2009). Some commonly used policies include diversification of financial resources, cost-sharing initiatives, expansion of private education providers, variable tuition fees and government-funded grants and scholarships for students.

Measures of access and equity range from broad macro data on participation in higher education by different social groups (including entry, enrolment and output measures), to cohort analysis based on the socio-economic and educational background of parents (Clancy and Goastellec, 2007). Another approach is to measure and analyse affordability issues, such as costs of tertiary education, living costs and financial aid (Murkami and Blom, 2008). Kinser (2009) measured it in terms of the types of institutions available and programmes offered as well as the number of students and their demographic characteristics, revenue and expenses of higher education institutions and the financing mechanisms for students. Thus, there are numerous ways of measuring access and equity, depending on the availability of data. For example, in her study on access and equity in higher education in Malaysia, Mukherjee (2010) focused on measuring access and equity in terms of gender and ethnic groups alone.

4.2. Outcomes in Malaysia

Although there are many different ways to measure access and equity, data constraints in Malaysia imply that many of these measures are not readily available. In particular, there are no published data on the socio-economic profile of students in higher education institutions. Nor are there any data on the access provided for physically impaired students. There are even less data available on PrHEIs, which is the focus of this study, unlike Mukherjee (2010). Based on the availability of data, access and equity in Malaysian PrHEIs will be evaluated according to overall participation, the different pathways to education provided by the variety of programmes available in the country, access by gender, costs of programmes, government and non-government support in the form of loans and scholarships as well as incentives provided for the development of PrHEIs. In particular, the costs of programmes and their affordability have not been examined before.

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8 Based on queries raised with the Ministry of Higher Education, this type of data is not collected at the ministry level.
4.2.1. Increasing participation

The PrHEIs shown in table 1 provide about half of the total enrolment of students in Malaysia (table 3). The other half is enrolled at public higher education institutions. This indicates the importance of the PrHEIs’ contribution to increased student participation in higher education in the country. The gross enrolment ratio in higher education has grown from a mere 2 per cent in 1965 to 32 per cent in 2005, and further to 44 per cent in 2010, thereby surpassing the limit set by Trow (1973; cited in Altbach, undated) for mass higher education and moving toward universal access. It has also surpassed the 40 per cent target set by the Government for 2010.

Table 3. Total enrolment of students in public and private higher educational institutions, 2002-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>PuHEIs</th>
<th>PrHEIs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>281 839 (48.9)*</td>
<td>294 600 (51.1)</td>
<td>576 439 (100)</td>
</tr>
<tr>
<td>2003</td>
<td>294 359 (48.4)</td>
<td>314 344 (51.6)</td>
<td>608 703 (100)</td>
</tr>
<tr>
<td>2004</td>
<td>293 978 (47.7)</td>
<td>322 891 (52.3)</td>
<td>616 869 (100)</td>
</tr>
<tr>
<td>2005</td>
<td>307 121 (54.3)</td>
<td>258 825 (45.7)</td>
<td>565 946 (100)</td>
</tr>
<tr>
<td>2006</td>
<td>331 025 (50.6)</td>
<td>323 787 (49.4)</td>
<td>654 812 (100)</td>
</tr>
<tr>
<td>2007</td>
<td>382 997 (51.1)</td>
<td>365 800 (48.9)</td>
<td>748 797 (100)</td>
</tr>
<tr>
<td>2008</td>
<td>419 334 (51.2)</td>
<td>399 897 (48.8)</td>
<td>819 231 (100)</td>
</tr>
<tr>
<td>2009</td>
<td>437 420 (47.5)</td>
<td>484 377 (52.5)</td>
<td>921 797 (100)</td>
</tr>
</tbody>
</table>


* Figures in parentheses are percentages.

4.2.2. Different pathways through different programmes

The increase in participation is made possible as the five types of PrHEIs in Malaysia provide a variety of alternative pathways to higher education. According to Lee (2004), two different types of programmes are offered by PrHEIs in Malaysia, i.e., internal programmes and transnational programmes, leading to qualifications awarded by external universities or bodies. Internal programmes are home-grown programmes, whereby students are conferred a certificate or diploma by the PrHEIs. Although these PrHEIs were not allowed to confer degrees in the earlier years of their development, this changed with the enactment of the PHEI Act in 1996. Internal programmes also include programmes that are linked with local public universities.

On the other hand, transnational programmes are programmes that are linked with foreign universities, whereby the degree is awarded by the foreign university. A large variety of transnational programmes is available (table 4). These include external degree programmes, split degree programmes, and distance learning arrangements. External
degree programmes include “3+0” programmes whereby the entire programme is conducted locally in Malaysia. There are also professional programmes with qualifications awarded by external bodies, e.g., in accountancy. Split degree programmes offer different twinning arrangements such as “2+1” or “2+2” programmes, whereby the students complete two years of the programme in Malaysia and either one or two years at the overseas twinning university.

Table 4. Types of transnational programmes conducted by private higher educational institutions in Malaysia

<table>
<thead>
<tr>
<th>Programme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3+0 foreign university degree programmes completed in Malaysia</td>
<td>PrHEIs are permitted by the foreign university partner to conduct the entire degree programme in Malaysia for the international university partner. The degree is awarded by the foreign university partner.</td>
</tr>
<tr>
<td>Foreign university external degree programme leading to degree qualifications</td>
<td>Students register as “external students” with a foreign university and study through the tutorials conducted by the local private college. The syllabi, entry requirements, and examinations are determined by the foreign university. The degree awarded is no different from the degree awarded to the “internal” students.</td>
</tr>
</tbody>
</table>
| Split degree programmes | This allows the partial completion of the degree programme in local private colleges but the final part has to be completed at the twinning partner overseas. A degree is awarded by the twinning partner overseas. There are several options:  
  - Twinning degree option: The student attends part of the course locally and the balance at the twinning university;  
  - United States degree transfer/credit degree transfer: The student collects sufficient credit through a local private college and then completes the remaining credits in the international university;  
  - Advanced standing entry option: The courses offered by local private colleges are validated and moderated with “advanced standing” entry status by a group of overseas universities for advanced entry into the final part of their degree programmes. |
| Distance learning programme arrangement | This is similar to the external degree programme with the students admitted directly into the university, with local private college providing the tuition classes and administrative support. Self-study materials are provided and electronic media such as the Internet, video conferencing, satellite, video cassettes and audio-visual teaching aids are used for teaching. Private colleges provide face-to-face meetings with tutors in a classroom setting. Evaluation may include a local component, unlike the external degree programmes. |

These programmes provide alternative pathways for students as entry requirements are different (table 5). The different pathways also include lifelong and distance-learning opportunities that are geared to providing a second chance for students who were unable to enter university immediately after high school. Students have a choice of entering post-secondary education after they have finished their technical or upper-secondary education at 17 years of age, based on their post secondary qualifications such as Sijil Pelajaran Malaysia Vokasional (SPMV or Malaysian Certificate of Vocational Education), their Sijil Pelajaran Malaysia (SPM or Malaysian Certificate of Education) or their Sijil Tinggi Agama Malaysia (STAM or Malaysian Religious Certificate of Education). Entry into university requires one year or 18 months of post-secondary education after they have obtained their Sijil Tinggi Pelajaran Malaysia (STPM or the Malaysian Certificate of Higher Education), or be based on a one-year matriculation qualification, or two years of A-level or other foundation programmes. The requirements for entry into degree-level programmes are the same for PuHEIs or PrHEIs.

Table 5. Summary of entry requirements by level

<table>
<thead>
<tr>
<th>Level</th>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-university (e.g., colleges)</td>
<td>SPMV, SPM, STAM and Matriculation.</td>
</tr>
<tr>
<td>University</td>
<td>STPM (credits in at least four subjects: Bahasa Melayu, and three other subjects) or the equivalent, such as A-level passes; and foundation programmes.</td>
</tr>
</tbody>
</table>


4.2.3. Improving gender imbalance in the public universities

Higher education in Malaysia is skewed towards female enrolment, as female students tend to perform better than males in school and because the dropout rate for male students is higher at the secondary school level. In turn, the better academic performance of female students at the pre-university level has led to higher female enrolment in PuHEIs, where limited places are available due to the highly subsidized fees (table 6). However, the male-female ratio is higher in PrHEIs. This ratio narrowed between 2007 and 2009, with the

Table 6. Gender enrolment in undergraduate programmes, 2007-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Public higher education institutions</th>
<th>Private higher education institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>University</td>
<td>Non-university</td>
</tr>
<tr>
<td></td>
<td>Male (M) Female (F) Ratio M/F</td>
<td>Male (M) Female (F) Ratio M/F</td>
</tr>
<tr>
<td>2007</td>
<td>94 337 153 544 0.614</td>
<td>57 830 64 248 0.900</td>
</tr>
<tr>
<td>2008</td>
<td>101 715 168 441 0.604</td>
<td>63 293 70 699 0.895</td>
</tr>
<tr>
<td>2009</td>
<td>102 119 169 893 0.601</td>
<td>87 621 88 954 0.985</td>
</tr>
</tbody>
</table>

Source: Ministry of Higher Education.
latest ratio close to equal for both university and non-university institutions, compared to that in PuHEIs. Male enrolment in PrHEIs is increasing faster than in PuHEIs, especially at the university level, although the reason for this increase is not known.

4.2.4. Costs of programmes

The different types of programmes have different costs, even when they are in the same discipline. The range in the annual tuition fees charged for two popular programmes in Malaysia, i.e., the Bachelor of Business Administration and the Bachelor of Engineering, are shown in table 7.

<table>
<thead>
<tr>
<th>Educational institution</th>
<th>Cost per year (RM)</th>
<th>Cost per year (% of annual income)</th>
<th>Cost per year (RM)</th>
<th>Cost per year (% of annual income)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Branch campuses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>16 200-30 500</td>
<td>33.5-63.1</td>
<td>21 600-37 000</td>
<td>44.7-76.6</td>
</tr>
<tr>
<td><strong>Universities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>4 087-16 000</td>
<td>8.5-33.1</td>
<td>8 558-20 000</td>
<td>17.7-41.4</td>
</tr>
<tr>
<td><strong>University colleges</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>2 910-25 333</td>
<td>6.0-52.4</td>
<td>7 000-58 750</td>
<td>14.5-121.6</td>
</tr>
<tr>
<td><strong>Colleges</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>6 940-27 105</td>
<td>14.4-56.1</td>
<td>11 000-26 551</td>
<td>22.8-55.0</td>
</tr>
</tbody>
</table>

Source: Author’s computation based on conversations with Private Higher Educational Institutions.

Overall, tuition fees of branch campuses are more expensive, as would be expected. Both types of degree programme at branch campuses are more expensive compared with the same programme conducted in other institutions of higher learning (table 6). Private universities are among the least expensive for both programmes, as some of these universities are not-for-profit such as Universiti Tunku Abdul Rahman, the Asian Institute of Medicine, Science and Technology University and the Wawasan Open University, because they are supported by the respective education foundations of the political parties that established them. Open universities that offer opportunities for adult learners to pursue tertiary level qualifications while working also charge relatively low tuition fees. Private universities that are owned by government-linked companies in the telecommunication, energy, and oil and gas sectors also charge less, as they run home-grown programmes and

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9 It is important to note that tuition fees account for only a portion of the total cost of studying in Malaysia and living and travelling expenses are not included in this section, due to a lack of data on the total cost of living. The *Study in Malaysia Handbook* has estimated the living costs to vary between RM 12,000 to RM 20,000 per year per student (Challenger 2008). However, this appears to be overstated, based on conversations with students.
are therefore not subject to high franchise charges. There are also state-owned universities within this category as well as universities that have been established between the Malaysia and other governments, such as those of the United Kingdom, France and Spain. As of 2010, only two former private college-universities had been upgraded to university status, and they charge higher tuition fees than the older private universities.

In contrast, the range in tuition fees applied by university colleges and colleges is quite large, since most of them carry transnational courses that are expensive because awarding foreign universities charge substantial royalties on their programmes (Lee, 2001, cited in Middlehurst and Woodfield, 2004). In fact, some of these transnational programmes can be more expensive than similar programmes conducted by the branch campuses in Malaysia, due in part to differences in the cost of living in Malaysia as opposed to the United States or United Kingdom.

Given the wide range in tuition fees, it is important to assess the affordability of these programmes. For that purpose, annual tuition fees are calculated as a percentage of the mean household income of Malaysia.\(^{10}\) The affordability ranges from 34 per cent to 77 per cent of the annual mean household income for an undergraduate programme in business and engineering in branch campuses, to as low as 6 per cent for an undergraduate programme in business that is conducted in university colleges. Given this extremely broad range in affordability, it is not necessarily true that private higher education in Malaysia caters for affluent families only. In the next sub-section, it can be seen that there is substantial government support to facilitate access by students of different economic backgrounds to higher education in the country via the private route.

### 4.2.5. Government support

There are two main student support mechanisms in the country, i.e., student loans and scholarships funded by the Government. In the case of the former, the Government created the National Higher Education Fund Corporation (NHEFC) in 1997 as a semi-autonomous body under the authority of MOHE, for the purpose of offering subsidized loans to help students finance their higher education at PrHEIs (World Bank, 2006). To ensure efficient loan financing, NHEFC is tasked with administering, supervising and collecting loan settlements. The main subsidy lies in the concessional annual interest rate of 3 per cent for the repayment of these loans, which is calculated on the balance of the monthly balance. Moreover, students who obtain first-class honors are exempted from their loan repayment. Overall, the number of loans approved for 2000-2009 was more than 1 million (table 8).

Although this fund was initially established to provide financing assistance to PrHEIs, it was subsequently extended to PuHEIs. It can be seen that a smaller percentage of the total approved amount is allocated to the students in PrHEIs (30 per cent) relative to PuHEIs (70 per cent), despite the heavily subsidized tuition fees at the latter institutions.

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\(^{10}\) In the tenth Malaysia Plan (Ministry of Higher Education, 2010), the mean monthly household income was estimated at RM 4,025.
The largest financier of NHEFC is the Employee Provident Fund (EPF) of the country (Ministry of Higher Education, 2007). Since there is a difference between the loan rate imposed by NHEFC and the rate offered by EPF, the Government has to subsidize the difference. The subsidies provided by the Government for the period of the ninth, tenth and eleventh Malaysia Plans are shown in Table 9.

### Table 8. Total number of loans approved by the National Higher Education Fund Corporation, 2000-2009

<table>
<thead>
<tr>
<th>Year of approval</th>
<th>Public higher education institutions</th>
<th>Private higher education institutions</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>79,416</td>
<td>8,956</td>
<td>88,372</td>
</tr>
<tr>
<td>2001</td>
<td>82,754</td>
<td>26,263</td>
<td>109,017</td>
</tr>
<tr>
<td>2002</td>
<td>85,016</td>
<td>18,919</td>
<td>103,935</td>
</tr>
<tr>
<td>2003</td>
<td>87,482</td>
<td>26,775</td>
<td>114,257</td>
</tr>
<tr>
<td>2004</td>
<td>89,218</td>
<td>30,994</td>
<td>120,212</td>
</tr>
<tr>
<td>2005</td>
<td>98,656</td>
<td>45,662</td>
<td>144,318</td>
</tr>
<tr>
<td>2006</td>
<td>103,067</td>
<td>46,404</td>
<td>149,471</td>
</tr>
<tr>
<td>2007</td>
<td>94,936</td>
<td>65,628</td>
<td>160,564</td>
</tr>
<tr>
<td>2008</td>
<td>100,280</td>
<td>56,573</td>
<td>156,853</td>
</tr>
<tr>
<td>2009</td>
<td>116,725</td>
<td>76,454</td>
<td>193,179</td>
</tr>
<tr>
<td><strong>Overall for the period</strong></td>
<td><strong>937,550</strong></td>
<td><strong>402,628</strong></td>
<td><strong>1,340,178</strong></td>
</tr>
<tr>
<td></td>
<td>(70%)</td>
<td>(30%)</td>
<td>(100%)</td>
</tr>
</tbody>
</table>

Source: NHEFC.

The provision of subsidized loans, however, does not imply that access has been widened to the economically underprivileged or those who come from poorer States, as there are no family income conditions for eligibility or regional considerations in the allocation of these loans (World Bank, 2006; private communication with NHEFC officer). The eligibility

### Table 9. National Higher Education Fund Corporation allocation and government subsidy for student loans

<table>
<thead>
<tr>
<th>NHEFC allocation for higher education</th>
<th>Ninth Malaysia Plan (RM billion)</th>
<th>Tenth Malaysia Plan (RM billion)</th>
<th>Eleventh Malaysia Plan (RM billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHEFC allocation for higher education</td>
<td>19.83</td>
<td>38.85</td>
<td>71.40</td>
</tr>
</tbody>
</table>

criteria are based on the family’s net income, i.e., the gross income minus provisions for each dependent in the family. Prior to 2010, students with parental net income of less than RM 3,000 were eligible for the full loan, which covers tuition as well as subsidence, while students with parental net income of between RM 3,001 and RM 5,000 were eligible for partial loans, covering fees and partial subsidence, while students with parental net income of more than RM 5,000 were eligible to loans covering only their fees (The Star, 2010).\textsuperscript{11}

Loans are provided only for Malaysian citizens who have been accepted into full-time accredited programmes in either PuHEIs or PrHEIs. Applicants must achieve a certain minimum standard at their year 11 examinations in Malaysia.\textsuperscript{12} The amount approved ranges from RM 8,500 to RM 20,000 for science programmes, and from RM 8,000 to RM 16,000 for arts programmes.

The lack of a maximum income criteria for loans approved has resulted in some students from wealthy families accessing these loans (see tables 10 and 11). First, there is a large range in the reported net parental income. Second, 60 per cent-67 per cent of the loans are approved for students in business programmes, with reported net parental income that is below the mean. In the case of engineering programmes, meanwhile, 58 per cent-62 per cent of loans are approved for reported parental income that is below the mean. Third, the reported net parental income of students in distance-learning programmes is much lower than that reported for students at other types of higher education institutions. It should be noted, however, that the verification procedure of parental net monthly income is not stringent, as students can ask their respective school authorities to verify the reported income.

\begin{table}[h]
\centering
\caption{Net monthly income of parents of students in undergraduate business programmes, 2009}
\begin{tabular}{lllll}
\hline
\textbf{Category of private institution} & \textbf{Range (RM)} & & \textbf{Mean (RM)} & \textbf{Proportion (\%)} \\
 & \textbf{Minimum} & \textbf{Maximum} & & \\
\hline
Private universities & 0.00 & 17 000.00 & 1 114.61 & 62 \\
University colleges & 0.00 & 27 833.00 & 1 180.81 & 62 \\
International university branch campuses & 0.00 & 36 688.00 & 1 715.10 & 62 \\
Colleges & 0.00 & 76 076.00 & 1 077.59 & 67 \\
Distance learning & 0.00 & 3 548.25 & 636.40 & 60 \\
\hline
\end{tabular}
\label{table10}
\end{table}

\textbf{Source:} National Higher Education Fund Corporation.

\textsuperscript{11} The net parental income for a full loan was raised to RM 4,000 as of 2010.

\textsuperscript{12} The minimum standard is three credits at the Malaysian Certificate of Examination in year 11 or the \textit{Sijil Pelajaran Malaysia}.
In addition to NHEFC, the Government also provides annual scholarships for studies in local institutions of higher learning at both PuHEIs and PrHEIs, via the Public Services Sponsorship Programmes administered by the Public Services Department (PSD). Although the bulk of these scholarships are allocated to overseas studies, local scholarships are also provided (Foong, 2008). Overseas scholarships grew from 1,249 in 2002 to 1,643 in 2003 before falling progressively to 1,300 in 2005, while the number of local scholarships awarded was kept at 500 each year throughout the same period. According to Foong, the main criteria used for PSD scholarships are: (a) academic performance (65 per cent of the award decision); (b) interview performance (15 per cent); (c) extra-curricular activities (10 per cent); and (d) family background (10 per cent). Although most of the local scholarships are awarded to PuHEIs, students studying at three private universities are also provided with local scholarships by PSD. They are University Teknologi Petronas, Universiti Tenaga Nasional and the Multimedia University of Malaysia. All three are private universities established by the respective government-linked companies in the petroleum, electricity and telecommunication sectors.

However, the bulk of the scholarships are awarded to public universities, with the percentage of total scholarships awarded to PrHEIs amounting to only 4.5 per cent during 2001-2009 (table 12).

PrHEIs are also provided with various tax incentives to foster their development and growth. These include investment tax allowances, pioneer status with 100 per cent tax exemption for a period of 10 years, duty-free importation of multimedia equipment, tax exemption for export of higher education, double deduction for expenses incurred in export promotion, industrial building allowances, accelerated capital allowances and deductions for training (see Annexes 1 and 2).

At the same time, the Government provides quality assurance, as student loans and scholarships are provided only for accredited programmes. Students' interests are safeguarded with the imposition of quality assurance measures such as the provision of basic standards and quality that are developed by MQA. These prudential regulations cannot be

<table>
<thead>
<tr>
<th>Category of private institution</th>
<th>Range (RM)</th>
<th>Mean (RM)</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
<td>Source:</td>
</tr>
<tr>
<td>Private universities</td>
<td>0.00</td>
<td>37,081.00</td>
<td>National Higher Education Fund Corporation.</td>
</tr>
<tr>
<td>University colleges</td>
<td>0.00</td>
<td>16,000.00</td>
<td></td>
</tr>
<tr>
<td>International university</td>
<td>0.00</td>
<td>18,000.00</td>
<td></td>
</tr>
<tr>
<td>branch campuses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleges</td>
<td>0.00</td>
<td>9,888.25</td>
<td></td>
</tr>
</tbody>
</table>

Table 11. Net monthly income of parents in undergraduate engineering programmes, 2009

<table>
<thead>
<tr>
<th>Category of private institution</th>
<th>Range (RM)</th>
<th>Mean (RM)</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Maximum</td>
<td>Source:</td>
</tr>
<tr>
<td>Private universities</td>
<td>0.00</td>
<td>37,081.00</td>
<td>National Higher Education Fund Corporation.</td>
</tr>
<tr>
<td>University colleges</td>
<td>0.00</td>
<td>16,000.00</td>
<td></td>
</tr>
<tr>
<td>International university</td>
<td>0.00</td>
<td>18,000.00</td>
<td></td>
</tr>
<tr>
<td>branch campuses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleges</td>
<td>0.00</td>
<td>9,888.25</td>
<td></td>
</tr>
</tbody>
</table>
construed as barriers to entry, as they protect the interests of the consumers, be they local or international. In fact, the availability of quality assurance in the form of accreditation has enabled local private universities to sell their own homegrown programmes to international students. For example, the Multimedia University, which is selling its own homegrown programmes, had a student population of 21,000 in 2007, of whom 3,800 were international (Tham and Andrew Kam Jia Yi, 2007). Professional bodies, such as those for the legal, accountancy and architectural professions, also assist the Government to monitor and guide the development of their respective professions through joint technical accreditation committees.

4.2.6  Private support

Non-governmental support comes mainly in the form of scholarships, as well as loans. The Malaysian Association of Private Colleges and Universities, in conjunction with a local daily newspaper, provides scholarships for academically excellent students. In principle, the economic status of applicants, together with their extracurricular activities and their attitudes towards learning, are also taken into consideration in assessing their applications. In practice, however, PrHEIs that are co-partners of this programme inevitably end up choosing students who excel academically, as they hope that this will enhance the quality of the their respective institutions. Consequently, the uptake of the scholarships is around 50 per cent-60 per cent each year, as academically excellent students may apply and receive multiple offers of scholarships. In 2007, 50 scholarships were awarded by

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The current partner is the Sun, while the previous partner was the New Straits Times. To date, the partnering newspaper does not contribute toward funding the scholarships, providing publicity instead.

Private communication with MAPCU, 26 October 2010 and 4 November 2010.

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<table>
<thead>
<tr>
<th>Year</th>
<th>Public higher education institutions (No.)</th>
<th>Private higher education institutions (No.)</th>
<th>Total (No.)</th>
<th>Amount (RM million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>9 265</td>
<td>427</td>
<td>9 692</td>
<td>121.4</td>
</tr>
<tr>
<td>2002</td>
<td>6 854</td>
<td>412</td>
<td>7 266</td>
<td>108.1</td>
</tr>
<tr>
<td>2003</td>
<td>4 542</td>
<td>205</td>
<td>4 747</td>
<td>187.0</td>
</tr>
<tr>
<td>2004</td>
<td>4 328</td>
<td>96</td>
<td>4 424</td>
<td>176.1</td>
</tr>
<tr>
<td>2005</td>
<td>5 096</td>
<td>190</td>
<td>5 286</td>
<td>148.4</td>
</tr>
<tr>
<td>2006</td>
<td>5 634</td>
<td>119</td>
<td>5 753</td>
<td>144.7</td>
</tr>
<tr>
<td>2007</td>
<td>7 461</td>
<td>114</td>
<td>7 575</td>
<td>156.2</td>
</tr>
<tr>
<td>2008</td>
<td>9 854</td>
<td>146</td>
<td>10 000</td>
<td>323.7</td>
</tr>
<tr>
<td>2009</td>
<td>8 823</td>
<td>1 177</td>
<td>10 000</td>
<td>306.3</td>
</tr>
<tr>
<td>Overall</td>
<td>61 857</td>
<td>2 886</td>
<td>64 743</td>
<td>1 167.9</td>
</tr>
</tbody>
</table>

Source: Public Services Department.
8 participating institutions, with a total value of RM 1.74 million. In 2010, 49 scholarships were awarded, amounting to a total value of RM 1.5 million. These scholarships are essentially tuition waivers, and do not cover overall living expenses.\(^{15}\)

Foong (2008) noted that low-income students may also secure access to loans or scholarships from various charity organizations and foundations. These foundations are established by wealthy Malaysians, and include the Lee Rubber Foundation, Kuok Foundation, Lee Loy Seng Foundation, Syed Kechik Foundation, Yayasan Albukahry, Malaysian Community and Education Fund, Harapan Nusantara Fund, Yu Cai Foundation, Yayasan Pok Rafeah, Yayasan Haji Zainuddin and Hope Foundation. Unfortunately, there are no data on the extent to which these foundations have benefitted the needy in terms of increasing their access to study at private higher education institutions. PrHEIs have also indicated that they are willing to help financially needy students who are recommended by community leaders, although this is an ad hoc effort.\(^{16}\)

There are also corporate scholarships and loans, such as those from the Star Education Fund, the Nanyang Education Fund, the Sin Chew Education Fund, Astro Scholarship Awards, UEM Group Scholarships and Petronas Education Scholarships as well as other regional and international scholarships. While the academically brilliant will be able to access these scholarships, it is doubtful if average but financially needy students will be able to receive any of these scholarships, since academic excellence is the principal criteria used for selection. A purely merit-based support may further disadvantage students from low socio-economic backgrounds who may not have the same financial resources as the wealthier students, such as better schools that may, in turn, affect educational achievements.

5. **Conclusion: Lessons for other developing countries**

Malaysia's use of private supply to absorb excess demand has important lessons for other countries as the Government plays a key role in the development of private higher education in the country, in terms of the provisions of a regulatory framework as well as quality assurance. Given the financial constraints encountered in most developing countries in terms of public provision, it is important to harness the private sector as a partner in the supply of higher education; however, this must be done with care to ensure that it does not worsen equity in access.

The significant increase in access is made possible through considerable government subsidies in the form of cheap student loans as well as scholarships. The Government's commitment towards education, including higher education, can be seen in the share of education in total government development expenditure of around 20 per cent-25 per cent from 1996 to 2010 (Foong, 2008, based on the seventh to tenth MP). Nelson (2008) noted

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\(^{15}\) Private communication with the Malaysian Association of Private Colleges and Universities, 4 November 2010.

\(^{16}\) Private communication with the Malaysian Association of Private Colleges and Universities, 26 October 2010.
that Malaysia had spent considerably more public funds, relative to total expenditure, on
education than most other South-East Asian nations, with the exception of Thailand, and
more than the average of all upper-middle income countries. The provision of various fiscal
incentives was also used to encourage the development of PrHEIs.\textsuperscript{17} At the same time,
quality assurance efforts by the Government serves to preserve the integrity of the
programmes offered, especially since loans and scholarships are only provided for accredited
programmes.

Nevertheless, there are also cautionary lessons from the Malaysian experience that
need to be taken into consideration when planning for financial support in other countries.
First, it is crucial to ensure the sustainability of the financing support mechanism. As noted
by the World Bank (2006), payment compliance is rather low, as only 25 per cent of the total
amount is recovered even if all graduates who are repaying their loans were to do so
according to schedule. The issue of sustainability is also raised in the National Higher
Education Strategic Plan, whereby the Government is urged to adopt best practices in the
repayment scheme to ensure full loan recovery by 2015 and for NHEFC to be financially
independent by 2020.

Second, it is equally critical to factor in equity considerations in the disbursement of
loans and scholarships. Given the increasingly restrictive budgetary constraints that the
Government faces, due to its need to reduce the fiscal deficit, there is an urgent need to
consider a more stringent income criterion in the disbursements of loans and scholarships.

Finally, while the current efforts to assure the quality of the programmes are
commendable, the effectiveness of the monitoring mechanism is hindered by the small
number of officers available to oversee the process relative to the large number of PrHEIs in
the country. Moreover, while programmes are accredited, that does not imply recognition, as
this would require international quality assurance agencies to recognize the accreditation
efforts of MQA. While MQA is a member of several quality assurance networks, greater
efforts need to be made to improve the recognition of MQA’s accreditation procedures.

Nevertheless, the Malaysian case study shows that a successful partnership can be
attained with the private sector in the provision of higher education in a developing country.

\textsuperscript{17} Private communication with the Malaysian Association of Private Colleges and Universities
(4 November 2010) indicated that the larger members of this association were able to access the
incentives when they applied.
## Annex 1. Tax incentives for private higher education institutions

<table>
<thead>
<tr>
<th>ELIGIBILITY</th>
<th>TAX INCENTIVES</th>
<th>AGENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PrHEIs that provide technical or vocational courses and also science courses in selected fields: Biotechnology Medical and health sciences Molecular biology Material sciences and technology Food sciences and technology.</td>
<td>Investment Tax Allowance of 100 per cent for 10 years offset against 70 per cent of statutory income for each year of assessment.</td>
<td>Malaysian Industrial Development Authority</td>
</tr>
<tr>
<td>Existing PrHEIs providing the above courses that undertake new investments to upgrade their training equipment or expand their training capacities also qualify for this incentive.</td>
<td>先锋计划,10年100%税额减免,或投资税优惠,100%首付,针对前10年,每个评估年度减免70%的法定收入。</td>
<td>Multimedia Development Corporation</td>
</tr>
<tr>
<td>Multimedia faculties in institutions of higher learning: Tax incentives accorded to Multimedia Super Corridor status companies extended to multimedia faculties that provide courses in media, computer, information technology, telecommunications, communications and contents related to data, voice, graphics and images.</td>
<td>Pioneer status with 100 per cent tax exemption for a period of 10 years or investment tax allowances of 100 per cent for per cent years offset against 100 per cent of statutory income for each year of assessment. Duty-free import of multimedia equipment.</td>
<td>Multimedia Development Corporation</td>
</tr>
<tr>
<td>Companies involved in the export of educational services.</td>
<td>(a) Tax exemption on income equivalent to 50 per cent of the value of the increased export of higher education. (b) Double deduction for expenses incurred in the promotion of export of higher education.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>ELIGIBILITY</td>
<td>TAX INCENTIVES</td>
<td>AGENCY</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Any person who owns buildings used for industrial, technical or vocational</td>
<td>Expenses incurred in constructing or purchasing the building are eligible for industrial Building Allowance 10 per cent for 10 years.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>training approved by the Minister of Finance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any company who owns buildings used for a school or an educational institution</td>
<td>Expenses incurred eligible for Accelerated Capital Allowance i.e. Initial allowance of 20 per cent and annual Allowance of 40 per cent.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>approved by the Minister or Higher Education.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computers and information technology assets including software acquired by</td>
<td>Expenses incurred eligible for Accelerated Capital Allowance i.e. Initial allowance of 20 per cent and annual Allowance of 40 per cent.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>PrHEIs.</td>
<td>Exemption of Import Duty, sales tax and Excise Duty on all educational equipment including laboratory, workshop, studio and language laboratory equipment.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>PrHEIs that are approved technical and vocational training institutions,</td>
<td>Tax exemption on royalty income paid by educational institutions to non-residents franchiser.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>private language centres.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-residents franchisers providing franchised education programmes</td>
<td>Tax exemption on royalty income paid by educational institutions to non-residents franchiser.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>approved by the Ministry of Higher Education.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incentive for lecturers providing accreditation of Franchised Education</td>
<td>Fees from Malaysian Qualifications Authority for lecturers/experts who provide services in the validation, moderation or accreditation process to ensure franchised education programmes are the same quality as those of franchiser institutions, are exempted from income tax.</td>
<td>Inland Revenue Board of Malaysia <a href="http://www.hasil.gov.my">www.hasil.gov.my</a></td>
</tr>
<tr>
<td>Programmes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companies that do not contribute to the Human Resource Development Fund,</td>
<td>Companies that incur expenses for approved training of its employees are eligible for double deduction. The training should be at approved training institutions.</td>
<td>Inland Revenue Board of Malaysia <a href="http://www.hasil.gov.my">www.hasil.gov.my</a></td>
</tr>
<tr>
<td>but provide training for their employees.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deduction for pre-employment training.</td>
<td>Training expenses incurred before the commencement of business qualify for single deduction. The institution must prove that they will employ the trainees.</td>
<td>Inland Revenue Board of Malaysia <a href="http://www.hasil.gov.my">www.hasil.gov.my</a></td>
</tr>
</tbody>
</table>

Source: Ministry of Higher Education.
## Annex 2. Tax incentives for contributors to the education sector

<table>
<thead>
<tr>
<th>ELIGIBILITY</th>
<th>TAX INCENTIVES</th>
<th>AGENCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A company or an individual incurring expenditure in the provision of services, public amenities and contributions to a charity or community project pertaining to education approved by the Minister of Finance.</td>
<td>Single deduction is given for the expenses incurred. Provided no further deduction of the same amount be allowed under Sec 44(6) Investment Tax Allowances (ITA).</td>
<td>Malaysian Industrial Development Authority</td>
</tr>
<tr>
<td>Library</td>
<td>Single deduction is given for the expenses incurred.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>A company or an individual incurring expenditure in the: Provision of library facilities that are accessible to the public; Contributions to public libraries and libraries of schools and institutions of higher education.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scholarship</td>
<td>Single deduction is given for the expenses incurred provided that: (a) The student is in full-time education; (b) The student has no means of his/her own; and (c) Total monthly income of parents/guardian does not exceed M$ 5,000.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>A company incurring expenditure in the provision of scholarship to a student for a diploma or degree course or equivalent of a diploma or degree programme undertaken at a recognized higher educational institution in Malaysia.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>Double deduction for expenses incurred provided that no deduction of the same amount is claimed under Sec 33, 34 and 34A ITA 1967.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>A company or individual contributing in cash to an approved research institution.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>Double deduction for expenses incurred provided that no deduction of the same amount is claimed under Sec 33, 34 and 34A ITA 1967.</td>
<td>Inland Revenue Board of Malaysia</td>
</tr>
<tr>
<td>Payment made for use of the services of an approved research institute or approved research company approved by the Minister of Finance.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A research and development company or contract research and development company which is defined under section 2, Promotion of Investment Act, 1986.</td>
<td></td>
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</tbody>
</table>

*Source: Ministry of Higher Education, World Economy Study 5, pp. 36-56.*
References


Newspapers

Chapter 8

Services liberalization and wage inequality in the Philippines

Glenita Amoranto, Douglas H. Brooks and Natalie Chun

1. Introduction

The period from the early 1990s to the mid-2000s saw trade protection in the Philippines declining and income inequality increasing markedly. Merchandise trade as a proportion of GDP rose from 59 per cent to more than 90 per cent while the Gini coefficient increased from 0.39 to 0.42, based on labour force survey data for hourly wages. The period covers the bulk of the implementation of reforms carried out under the 1992-1998 Ramos administration. This was also a period when the structure of the economy shifted noticeably towards the service sectors in both output and employment; the reductions in protection led to a trade-induced reallocation of employment to sectors that were previously more protected, especially services, where wage inequality was already relatively high (Hasan and Jandoc, 2010).

While market liberalization is expected to lead to efficiency gains, its impact on distributional issues is less clear. Theory suggests that trade liberalization will raise the relative factor price of unskilled labour in developing countries (which presumably have relatively larger endowments of unskilled labour) and thereby lead to a decline in inequality. Goldberg and Pavcnik, (2007) showed that this was not always the case in practice. Increasing inequality during a period of trade liberalization may follow from domestic barriers to factor mobility, varying degrees of sectoral liberalization or skill-biased technical change. A positive impact of trade liberalization (reducing inequality) is expected to result from removal of proportionately greater protection in capital- or skill-intensive sectors. However, in some developing countries with a history of populist policies, such as the Philippines, trade protectionism is higher among labour-intensive sectors (Hasan and Jandoc, 2010).

At the same time as the Philippines eased its trade restrictions, deregulation in the service sectors (both domestically and in the trade context) influenced the shift in sectoral balance and employment. Employment in service sectors is much greater than in industry. In addition, service-oriented firms possess more human capital and focus more on intellectual capital creation than product-oriented companies (Kianto, Hummelinna-Laukkanen and Ritala,

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1 The views expressed are their own and do not reflect those of the Asian Development Bank, its Board of Directors, or its member countries. Rana Hasan offered helpful suggestions. Eugenia Go, Melissa Pascua and Alma Rose Roxas provided valuable research assistance.

2 This period also includes the 1997-1998 Asian financial crisis, but its effects on the Philippines were relatively less than in other Asian countries and widely perceived as only temporary.
The impact of service sector liberalization on inequality therefore deserves much greater policy attention than it has heretofore received.

This chapter uses labour-force survey data to examine the impact of combined trade liberalization and domestic deregulation in the service sectors on employment and wage inequality in the Philippines. It examines whether liberalization has helped people find better employment opportunities in full-time stable wage jobs and the impact it has had on wages. The contribution of liberalization in services to different industries (rather than the contribution of liberalization in a particular industry to wages in that industry) is also considered. The wage analysis focuses on all workers after correcting for the selection of only observing full-time salaried workers. The concern of the authors is increasing wage inequality, as it can work to reduce incentives and retard economic growth.

2. Related literature

The liberalization of trade in services, accompanied by the reform of complementary policies, can induce sectoral and economy-wide improvements in performance. Liberalization in a particular sector can result in lower prices, improved quality and greater variety, leading to enhanced welfare of consumers. It can allow for reallocation toward more productive and efficient sectors (McGuire, 2003). For example, improvements in telecommunications can allow firms to diversify their products and move up the value chain into more complex goods (Fukai and McDaniel, 2010). Liberalization of trade in services can also bring about increased productivity from resulting transfer of technology, while liberalizing services trade through permitting foreign establishments can lead to a more balanced output expansion (Konan and Maskus, 2005).

Whalley (2003) noted that special features of individual services should influence the analysis of impacts of liberalization of those services. Moreover, the types and forms of liberalization also need to be carefully specified in assessing impacts of service liberalization in individual countries. As barriers to service provision may be complex, their effects could be multiple, and market structure, conduct and performance need to be assessed in estimating quantitative impacts of services liberalization.

Zhang, Tang and Findlay (2010) investigated the impacts of service trade liberalization on manufacturing performance through the channel of service outsourcing in the People’s Republic of China (PRC), using a panel dataset of manufacturing firms over 1998-2007. They found that total factor productivity of manufacturing plants was accelerated through specialization, compositional and spill-over effects.

The results of a simulation study by Li, Wang and Zhai (2003) of the impact of service liberalization on employment and output in the PRC found that at the industry level, output would increase in almost all service sectors, expanding significantly in telecommunications, finance, insurance and real estate. However, a slight employment loss would also occur due to productivity improvements in some service sectors. Although the job losses could be offset by the expansion of overall labour demand in non-service sectors, and by the liberalization-induced growth of aggregate demand in the long term, the structural adjustments would
involve certain costs. Delving into greater detail, Fukai and McDaniel (2010) found that service liberalization resulted in the shedding of low-wage jobs due to changes in technology. These studies highlight the importance of implementing complementary policy measures to reduce the strain on the labour market during service trade liberalization.

In India, Shastri, Tripathi and Singh (2010) found that trade liberalization reforms might have given a boost to industrial productivity and brought in foreign investment in capital intensive areas, but these had not created jobs. They recommended that policies and programmes be developed for unorganized sectors, particularly those associated with export markets, and that efforts be made to minimize the total social cost of trade liberalization. Using panel data for about 4,000 Indian firms in 1993-2005, Arnold and others (2010) found that policy reforms in banking, telecommunications and transport services had significant positive effects on productivity of manufacturing firms, with the beneficial effects stronger for foreign-owned firms.

While there are clear beneficial effects in terms of firm productivity and competition from service liberalization as well as liberalization in general, the exact effects that liberalization will have on the wages of workers is an open question. While the Hecksher-Olin theoretical model of trade tends to predict decreases in inequality within a country as a result of liberalization, it has found little empirical support (Leamer, 1995). In fact, greater trade liberalization is often found to result in increased wage inequality. This finding has been confirmed in Mexico (Hanson and Harrison, 1999; and Feenestra and Hanson, 1997), as well as other countries. Moreover, using aggregate country-level data for a panel of countries, Barro (2008) found that the effect of openness on inequality is positive for low-income countries. These findings are further supported by more recent studies by Bergh and Nilsson (2010), and Milanovic and Squire (2007).

The paper detailed in this chapter adds a different dimension to the existing literature as it examines the specific effects of service liberalization on employment and wages in the Philippines. It assumes that there are possible value-added effects from service liberalization that subsequently increase productivity in other sectors, and contribute to changes in the average wages across industries. Moreover, it shows: (a) that ultimately the effect of service liberalization on an economy is an empirical question, as the overriding effects from productivity gains, investments, increased competition etc. can ultimately benefit or depress overall wages, and create or inhibit quality employment opportunities: and (b) that distributional impacts should not be neglected.

3. Service liberalization in the Philippines

Cognizant of the critical role the efficiency of services plays in the cost of production of many of its goods-producing export sectors, the Philippines has, in recent years, embarked on a series of liberalization and deregulation policies in various service sectors in order to improve the competitiveness of its manufacturing and agricultural industries in world markets. As Pasadilla (2004) noted: “Because an inefficient service sector acts like a prohibitive tax on the national economy, the economic cost of protecting inefficient service sectors even exceeds the cost flowing from protectionism in the goods sector”.

The export-led industrialization programme in the Philippines hinged on investment and trade reforms. Expansion of areas and industries open to foreign investors became effective with the enactment of Republic Act (RA) No. 7042, known as the Foreign Investment Act of 1991. This legislation permitted entry of foreign investments in key sectors of the economy, including service sectors. Foreign investment was further facilitated by RA No. 8179, which allowed fully foreign-owned corporations to operate as Filipino businesses (Dueñas-Caparas, 2005). This led to a substantial increase in average annual FDI inflows, rising from US $518 million during 1987-1992 to US $1460 million during 1993-1998 (Austria, 2001). However, legal constraints embodied in the Philippine Constitution that limit market access and national treatment continue to hinder greater FDI (Barrett and Lim, 2009).³

3.1. Banking

Reforms in the Philippine financial sector have occurred since the 1980s, but restrictions on entry in the banking sector have become a major stumbling block in achieving competition. The first half of the 1990s saw a significant change in the structure of the commercial banking sector with the introduction of two major reforms that: (a) reduced restrictions placed on domestic bank entry and branching; and (b) liberalized operation of foreign banks in the country through RA No. 7721, which allows foreign banks to hold up to a 60 per cent share of existing domestic banks, and to create new foreign bank branches (Austria, 2001). This resulted in substantial consolidation through mergers and acquisitions due to increased competition from foreign banks through the latter half of the 1990s, resulting in less than half of the banks being Filipino owned by 2003 (Pasadilla and Milo, 2005).

Pasadilla (2004) maintained that despite some limitations faced by foreign banks in the Philippines the reforms had greatly enhanced the banking sector, contributing to the introduction of many new technological advances, and innovative financial and banking products. It also resulted in: (a) a substantial increase in the number of banks and branches, with most being privately owned and very small; and (b) lower bank margins on the spread between savings deposits and loan interest rates due possibly to competition and greater operational efficiency providing benefits to consumers (Pasadilla and Milo, 2005, and Unite and Sullivan, 2001). However, there have been some adverse consequences to the banking reforms as stiffer competition has resulted in domestic banks taking on less creditworthy customers, and increases in operating expenses being accompanied by decreases in non-interest incomes (Unite and Sullivan, 2001).

3.2. Telecommunications

Reform in the telecommunications sector, which began under the Aquino administration (1986-1992), allowed new franchises to be created through a competitive bidding process in certain segments of the market, most notably within mobile telecommunications services (Patalinghug and Llanto, 2005). However, the largest impact occurred with the issuance of Executive Order (EO) 59 in 1993 under the Ramos

³ One of the possible major barriers to further FDI is the inability of foreign entities to own land found in Article XII of the Constitution.
administration, which dissolved the monopoly held by the Philippine Long Distance Telephone (PLDT) Company over all telecommunications activities (Austria, 2001).

Moreover, R.A. 7925 was passed in 1995 to complement the two previous EOs and to lay down the foundation for the administration, conduct and direction of the telecommunications industry. This required all telecommunication entities to place at least 30 per cent of their shares on the public stock exchange, and privatization of government-owned and operated telecommunication facilities (Patalinghug and Llanto, 2005).

The liberalization and deregulation of the industry introduced new entrants and began the initial wave of investments in telecommunications infrastructure (Mirandilla, 2007). It resulted in a much larger telecommunications network with improvements in the quality of service and product offerings for consumers. However, even though almost 300 firms now provide telecommunication services, the market continues to be dominated by PLDT, and the liberalization has had relatively little impact on landline services (compared to mobile and Internet services). This indicates that significant restrictions still exist within the sector, making it difficult for the sector to become fully competitive (Patalinghug and Llanto, 2005; and Barrett and Lim, 2009).

3.2.1. Distribution

Compared to other service sectors, liberalization in the distribution sector (which includes the wholesale and retail sectors) did not occur until RA 8762 was signed in early 2000. This law allowed foreign entry into the industry, which had previously been reserved for Filipino companies under the Retail Trade Nationalization Law (Dueñas-Caparas, 2005).

While foreigners can own enterprises that either have a registered capital of more than US$ 7.5 million or those which provide luxury products and have a capital of more than US$ 250,000, substantial constraints remain to foreign entry of enterprises of smaller sizes (Asia-Pacific Economic Cooperation, 2005). Prior to March 2002, foreigners could only own a maximum of 60 per cent of an enterprise that had capital of between US$ 2.5 million and US$ 7.5 million; after that date foreigners could own up to 100 per cent of an enterprise, provided that there was reciprocity in the foreigners' home country that allowed entry of Filipino retailers (Barrett and Lim, 2009). Moreover, the “Anti-Dummy Law” has placed substantial limits on foreign employment in the retail sector, while House Bill 260 of 1992 limits domestic borrowing by foreign corporations and may therefore have created disincentives for FDI (Asia-Pacific Economic Cooperation, 2005). This is supported by the fact that only eight wholly foreign-owned companies entered the Philippine retail market between 2000 and 2005 (Asia-Pacific Economic Cooperation, 2005).

3.2.2. Other service sectors

A number of other bills were passed that affected other service sectors (energy, maritime industry, civil aviation and insurance) and paved the way for increased competition within the energy sector. In energy, EO 215 allowed for independent power producers to generate electricity, effectively getting rid of the monopoly held in power generation by the
National Power Corporation (NPC) (Pasadilla, 2004). The petroleum industry was also
deregulated in 1997, allowing competitive pricing of petroleum products (Austria, 2001).

To allow the Philippines to play a greater role in maritime operations in the
Asia-Pacific region, liberalization reforms occurred in 1994 that opened up entry to new
operators on existing routes. Further reforms deregulated domestic shipping rates and
privatized the government ports, creating increased competition that has benefited
consumers by allowing them a wider set of options and cheaper rates (Austria, 2001). Similar
reforms also occurred in civil aviation. Finally, in the insurance industry, liberalization allowed
for partial foreign ownership in non-life insurance companies and resulted in greater FDI into
that sector (Intal, 1999).

4. Data and descriptives

The empirical part of this study first determines the level of restrictions in services,
according to those affecting entry and those affecting ongoing operations, and then computes
their impacts on employment and wages. Once barriers have been identified and classified,
the effect of changes in these barriers is estimated econometrically, controlling for factors
affecting performance in the relevant sector.

In particular, the authors wanted to see whether employment expanded or contracted
in different industries with greater liberalization of services, and what were the effects of the
resulting greater competition on workers' livelihoods. Since in the case of services there are
no protection data that correspond to that existing for agriculture and manufacturing, the
authors constructed indices of restrictiveness by service sector (focusing on banking,
distribution and telecommunication, which provide important inputs to other industries), and
by mode of supply as in the General Agreement on Trade in Service (GATS), i.e., cross-
border trade, consumption abroad, commercial presence and movement of natural persons.

The indices were calculated separately for the pre-liberalization and post-liberalization
periods, and then aggregated into a single service reform index, using technical coefficients
from a national input-output matrix as weights to account for the contribution of services to
that industry. In this manner, every 2-digit industry has a corresponding service reform index
based on the intensity with which the three service inputs are used in the production of the
2-digit industry's output. This policy-based measure of liberalization is intended to account
for changes in product prices as different industries experience different degrees of
liberalization transmitted through their use of services. A further set of weights was used that
account for regional variation in the impacts of service liberalization on an industry, based
on the industry share of employment in a region.

Real wages are derived by deflating nominal wages, as reported by individuals with
their industrial occupation in Labour Force Surveys (LFS), by regional consumer price
indices. Real wages are then regressed on the relevant service reform index, a period
(pre- or post-liberalization) dummy variable, a dummy for broad industry of employment,
educational attainment, age and other individual characteristics.
4.1. Data sample

This study makes use of the following sources of information and data:

(a) Wages and employment data are from the Philippine LFS, which are conducted quarterly by the National Statistics Office;\(^4\)

(b) Monthly basic pay and monthly basic allowance data are from the Occupational Wages Survey (OWS) of the Bureau of Labour and Employment Statistics (BLES);\(^5\)

(c) Government regulations and policies concerning banking, telecommunication and distribution services enacted through Republic Acts, Executive Orders and similar laws, which serve as the basis for quantifying the extent of restrictiveness/liberalization in the country;

(d) The Input-Output (I-O) matrix\(^6\) of the National Statistical Coordination Board.\(^7\) The I-O matrix was used as the basis for deriving weights used in aggregating the banking, telecommunication and distribution restrictiveness indices into a single service restrictiveness index by 2-digit industry codes.

For the wages and employment status the micro records of the 1991 and 2004 LFS were used. The analysis on employment was restricted to those in the labour force, including all people who are working or available for work; thus, it captured people that were either job searching or were discouraged workers. The sample was further restricted to individuals aged between 25 and 65 years in order to focus on the population set that had most likely completed schooling. To examine wages, attention was focused only on full-time salaried workers (i.e., those who had worked for more than 35 hours during the previous week) and employers, assuming that all other types of workers received “unobserved” wages.

Contract workers and part-time workers were considered to have “missing” wages, i.e., large fluctuations in their income due to uncertainty about how much work and the prevailing rate they would receive from one period to the next, thus making it difficult to accurately capture their wages in surveys. For consistency with the 2004 LFS data, which uses “past week-reference period” data to derive the hours worked and labor force status for the past quarter, the “previous week-reference period” data for 1991 was also used, although direct “previous quarter-reference period” data on these are also available for 1991. For almost all questions, information in the 2004 LFS was obtained using “previous week-reference period”. For wages, the “past quarter-reference period” earnings data from the 1991 LFS were used to derive the nominal wage per hour, since “previous week-reference period” data are not available.

\(^4\) Available online at www.census.gov.ph.

\(^5\) Available online at www.bles.dole.gov.ph.

\(^6\) The I-O matrix describes the interrelationships among the various producers in an economy. It presents the interrelationships between different industries in an economy in terms of the variety of product inputs used in production of the final outputs of an industry in a table format.

\(^7\) See www.nscb.gov.ph.
Attention was focused only on the characteristics of the primary job, as that should reflect the work to which individuals dedicated the majority of their time. In the 1991 LFS, what was gathered was earnings which was defined as gross remuneration in cash and in kind paid to employees at regular intervals for time worked or work done together with remuneration for time not worked, such as for annual vacation, other paid leaves or holidays, excluding employer contributions to social security and other benefits that are not explicitly considered as part of a person’s salary. In contrast, for 2004 LFS, data gathered is on basic pay, representing the pay for normal time prior to deductions and excluding other compensation such as bonuses. Thus, adjustments were made on 2004 basic pay data to make it consistent with the total earnings data in 1991. In other words, the 2004 data was converted to earnings data by using the 2004 OWS of BLES which provides data on basic pay and allowances separately by industry groups. Proportions derived from the OWS served as the basis for deriving the equivalent earnings/wages from the basic pay in the 2004 LFS. The CPIs at the regional level were used to convert the nominal wages into real terms. For 1991, the total wage and salary earnings from the primary job for the past quarter was divided by the total number of hours worked during the quarter to arrive at the nominal wage per hour.

4.2. Construction of Service Liberalization Index

The Service Liberalization Index (SLI) was derived using the following broad steps:

(a) Calculating the restrictiveness index for each of the three services covered, namely, banking, telecommunication and distribution;

(b) In estimating the varying importance or impact of each of the three services to the different industries, weights are applied to account for: (i) the intensity with which each of the 3 covered sectors is used in producing the output of a particular 2-digit industry group, which we term as “I-O weights” at a national level; and (ii) the importance each of the service sectors in employing workers in a given region which is captured by hours worked in that sector. These “hours worked weights” vary by region and are thought to better capture the local regional impact of service liberalization;

(c) Standardizing the indices by dividing each by the maximum computed index value;

(d) Converting the standardized restrictiveness indices into liberalization indices by subtracting each restrictiveness index from 1.

The construction of the indices is described in the following sub-sections.

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8 Only 10.4 per cent and 9.5 per cent of those with primary jobs also reported a secondary job in 1991 and 2004, respectively. In only about half of these cases did the type of employment differ across the primary and secondary jobs.
4.2.1. Restrictiveness index methodology

Compared to restrictions on trade in goods, which are usually measured through tariff rates, measuring restrictions on trade in services is more difficult since they often take the form of government regulations, which are harder to identify and quantify. The approach adopted was based on the OECD methodology of Dihel and Shepherd (2007), which builds on the methodology used by the Australian Productivity Commission (APC). The advantage of the OECD methodology over the APC methodology is that it provides a more complete picture of modal coverage by calculating not only aggregate sectoral indices but also separate modal restrictiveness indices where different criteria are applied to assess liberalization in different modes of service delivery. There are four modes of supply identified in the literature where barriers can affect trade:

(a) Mode 1 – cross-border trade in services where physical services are received from abroad;
(b) Mode 2 – consumption abroad where consumers physically travel outside of their home country to consume a service;
(c) Mode 3 – commercial presence where an outside or foreign company decides to physically locate in the domestic market;
(d) Mode 4 – the presence of natural persons where people physically come from a foreign market to temporarily offer their services in the domestic market.

The procedure for calculating the trade restrictiveness index is described by McGuire (2008) and is based on a series of scores and weights that differ depending on the sector for which the index is being constructed. The scores are assigned based on the perception of how stringent a restriction is perceived to be on trade, with higher scores representing more restrictive policies. Greater weights are then assigned on the basis of the perceived economic cost of a type of restriction relative to other types of restrictions.

For the full details and underlying concepts of calculating the trade restrictiveness index, see Dihel and Shepherd (2007), Kalirajan (2000), McGuire (2008) and Dee (2005). Scores and weights used in the trade restrictiveness index for the Philippines are available from the authors on request.

4.2.2. Application of weights to the restrictiveness index

After construction of the indices for each of the service sectors of interest they indices were combined to come up with a single aggregated index of services restrictiveness. To account for the varying importance or impact of each of these services to the different industries, a weighted average of services sector indices was derived using two kinds of weights: (a) the national I-O matrix, which provided a quantitative measure of the value of services inputs used in the production of a given industry; and (b) the proportion of total hours worked in each of the three services to the total hours worked in all industries and services, by region. In this way, it was possible to construct indices that represented liberalization for each time, t, for industry i in region r. Calculated for each of the three service sectors
covered, the “I-O weight” is basically the proportion of value of service inputs used in producing the output of industry \( i \) (industry \( i \) corresponds to the 2-digit industry group based on the 1994 Philippine Standard Industrial Classification) in the total value of all inputs used in producing the output of industry \( i \).

In equation form, if \( TEL_{ir} \) = restrictiveness index of telecommunications services for industry \( i \) and region \( r \), \( DIST_{ir} \) = restrictiveness index of distribution services for industry \( i \) and region \( r \) and \( BANK_{ir} \) = restrictiveness index of banking services for industry \( i \) and region \( r \), then index, \( IND_{rt} \), \( r \in \{TEL_{ir}, DIST_{ir}, BANK_{ir}\}\) is computed as: \( IND_{rt} = IOw_{(IND_{ir})t} x HRSw_{(IND_{ir})r} x IND_{i} \)

where

\[
IOw_{(IND_{ir})t} = \frac{VIO_{(IND_{ir})t}}{\sum_{j \in J} VIO_{(j)rt}}
\]

\[
HRSw_{(IND_{ir})r} = \frac{HRS_{(IND_{ir})r}}{\sum_{r \in R} VIO_{(j)rt}}
\]

The input-output weight for service industry, \( IND_{i} \), at time \( t \) is the value of inputs from that industry at time \( t \) that are used in producing output of industry \( i \) as a proportion of all inputs used for producing outputs in industry \( i \) at time \( t \), whereas \( HRS \) weights represent the proportion of total hours employed for the industry out of all industries in region \( r \) at time \( t \).

The aggregate services restrictiveness index for industry \( i \) and region \( r \), \( SERVICES_{ir} \), is computed as the sum of \( TEL_{ir} \), \( DIST_{ir} \) and \( BANK_{ir} \), i.e.:

\[
SERVICES_{ir} = TEL_{ir} + DIST_{ir} + BANK_{ir}
\]

4.2.3. Liberalization index

The weighted restrictiveness indices are standardized by dividing each by the maximum value. Each standardized restrictiveness index is then converted into a liberalization index by subtracting the standardized restrictiveness index from 1. In equation form:

\[
LIB_{ir} = 1 - \frac{IND_{ir}}{\max(IND_{ir})}
\]

where

\[
IND_{ir} \in \{TEL_{ir}, DIST_{ir}, BANK_{ir}, SERVICES_{ir}\}
\]
5. Descriptives

Given this study’s sample of interest, from 1991 to 2004 the overall labour force of the 25- to 65-year-old population increased by approximately 7.1 million, while the number of full-time workers in stable wage jobs increased by 3.3 million, indicating that full-time salaried workers now account for a slightly larger proportion of the overall labour force population (table 1). Moreover, the degree of liberalization in each of the industries of interest has increased over time, but that telecommunications remains highly restrictive in terms of policies by the authors’ measures while the distribution industry has the least restrictive policies.

Table 1. Selected summary statistics

<table>
<thead>
<tr>
<th></th>
<th>1991</th>
<th>2004</th>
<th>Per cent change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour force (number)¹</td>
<td>17,085,769</td>
<td>24,221,977</td>
<td>41.8</td>
</tr>
<tr>
<td>Full-time salaried workers (number)¹</td>
<td>6,616,708</td>
<td>9,874,002</td>
<td>49.2</td>
</tr>
<tr>
<td>Liberalization indexes (reciprocal of Restrictiveness indexes)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banking</td>
<td>0.4305</td>
<td>0.6759</td>
<td>57.0</td>
</tr>
<tr>
<td>Distribution</td>
<td>0.6182</td>
<td>0.7590</td>
<td>22.8</td>
</tr>
<tr>
<td>Telecommunications – fixed</td>
<td>0.2402</td>
<td>0.4922</td>
<td>104.9</td>
</tr>
<tr>
<td>Telecommunications – mobiles</td>
<td>0.1590</td>
<td>0.3680</td>
<td>131.4</td>
</tr>
</tbody>
</table>

¹ includes only those aged 25-65

Table 2 illustrates that while only about a two percentage point increase in the labour force share of female full-time workers from 1991 to 2004 has occurred, the average wages of females that were full-time workers in stable jobs by 2004 had surpassed the averages wages of males. There appears to have been increasing returns to education in full-time, with stable jobs between 1991 and 2004 for workers who are college graduates, especially in contrast to those with lower education levels. This is consistent with observed trends in other countries where wage differentials are thought to be due to skill-biased technological change. Moreover, the growth of wages in services between 1991 and 2004 significantly exceeded wage growth in industry and agriculture. This is also consistent with the story of skill-biased technological change as service sector jobs tend to be more education/skill intensive than other sectors.
Table 2. Descriptive statistics of key variables

<table>
<thead>
<tr>
<th>Education</th>
<th>All in the LABOR FORCE(^1)</th>
<th>FULL-TIME SALARIED WORKERS only(^2)</th>
<th>Real hourly wage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent in each group</td>
<td>Percent in each group</td>
<td></td>
</tr>
<tr>
<td>&lt;HS</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Some HS</td>
<td>50.9</td>
<td>37.2</td>
<td>32.6</td>
</tr>
<tr>
<td>HS graduate</td>
<td>11.0</td>
<td>12.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Some college</td>
<td>16.6</td>
<td>23.1</td>
<td>19.8</td>
</tr>
<tr>
<td>College graduate</td>
<td>8.9</td>
<td>12.7</td>
<td>12.6</td>
</tr>
<tr>
<td></td>
<td>12.6</td>
<td>15.0</td>
<td>25.1</td>
</tr>
<tr>
<td>Sex</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Female</td>
<td>36.2</td>
<td>38.0</td>
<td>32.5</td>
</tr>
<tr>
<td>Male</td>
<td>63.8</td>
<td>62.0</td>
<td>67.5</td>
</tr>
<tr>
<td>Class of worker</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Worked for private employer</td>
<td>34.3</td>
<td>41.0</td>
<td>74.8</td>
</tr>
<tr>
<td>Worked for government</td>
<td>9.8</td>
<td>9.0</td>
<td>24.4</td>
</tr>
<tr>
<td>Self-employed without employee</td>
<td>43.0</td>
<td>35.7</td>
<td>0.0</td>
</tr>
<tr>
<td>Employer in own family/business</td>
<td>3.4</td>
<td>5.6</td>
<td>0.0</td>
</tr>
<tr>
<td>Worked with pay on own family/business</td>
<td>0.4</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>Worked without pay on own family/business</td>
<td>9.1</td>
<td>8.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Nature of employment</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Permanent</td>
<td>82.4</td>
<td>83.8</td>
<td>80.9</td>
</tr>
<tr>
<td>Short-term</td>
<td>13.8</td>
<td>13.6</td>
<td>13.7</td>
</tr>
<tr>
<td>Worked for diff employer on a day-to-day or week-to-week basis</td>
<td>3.8</td>
<td>2.7</td>
<td>5.3</td>
</tr>
<tr>
<td>Industry</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Agriculture, Fishery and Forestry</td>
<td>43.4</td>
<td>35.4</td>
<td>15.3</td>
</tr>
<tr>
<td>Industry</td>
<td>16.4</td>
<td>15.7</td>
<td>29.7</td>
</tr>
<tr>
<td>Services</td>
<td>40.2</td>
<td>49.0</td>
<td>55.0</td>
</tr>
</tbody>
</table>

---

\(^1\) include only those aged 25-65

\(^2\) include those who worked for at least 35 hours during the past week, are engaged in wage or salaried work, and between the ages of 25 years to 65 years.
6. Empirical approach

The goal of this study was to examine the effects of service liberalization on the probability of being in full-time stable wage employment as well as on the wages of all workers after controlling for other major factors that can affect both employment and wages. Since it was assumed that only the wages of full-time wage employees could be accurately observed, but because the authors wanted to estimate the impact of liberalization on all workers, a model was employed that jointly estimates the employment probability in full-time work while simultaneously correcting for selection of the observed wages as follows:

$$
\log W^*_{irt} = \beta_0 \text{LibIND}_{irt} + \phi X_{irt} + \gamma_r + \gamma_s + u_{1irt}
$$

(5)

$$
VET^*_{irt} = \alpha_0 \text{LIB}_{irt} + \phi Z_{irt} + \gamma_r + \gamma_s + u_{2irt}
$$

(6)

where

$$
W_{irt} = \begin{cases} W^*_{irt} & \text{if } VFT^*_{irt} > 0 \\
\text{missing} & \text{if } VFT^*_{irt} \leq 0
\end{cases}
$$

(6)

$$
VFT^*_{irt} \text{ indicates the latent “unobserved” value of employment in full-time salaried work, } X_{irt} \text{ and } Z_{irt} \text{ are vectors of characteristics of an individual, } i, \text{ in the labour force in region, } r, \text{ at time } t. \text{ Also included are regional fixed effects, } \gamma_r, \text{ to capture differences in standard and cost of living that are unlikely to have changed disproportionately over time, and sector of employment fixed effects, } \gamma_s, \text{ to capture wage differentials that occur between sectors. An indicator variable is used to indicate that an individual has a positive value for full-time work, and thus is equal to 1 if the individual is observed as employed in a full-time salaried job and is equal to 0 otherwise. To control for the possibility that there is correlation between the probability that there are unobserved characteristics captured in the error terms, } u_{1irt} \text{ and } u_{2irt}, \text{ that cause a person to categorize themselves as being in full-time work and drive the observance of patterns of observed wages, it is assumed that the error terms follow a joint normal distribution where } \Sigma \text{ is the variance-covariance matrix of the errors:}
$$

$$
\begin{bmatrix}
  u_{1irt} \\
  u_{2irt}
\end{bmatrix} \sim N(0, \Sigma)
$$

(7)

Assuming that the distribution of the errors is jointly normal, correction can be made for selection via the maximum likelihood estimation of the Heckman model and estimate the impact of liberalization, $\text{LIB}_{irt}$, on both the marginal probability that a worker finds himself or herself in full-time work and the arising log wages for all workers in the labour market.

The individual specific factors, $X_{irt}$ and $Z_{irt}$, capture major characteristics that affect employment and wages such as age, education and marital status. The models for males and females are estimated separately as there is strong evidence that education and age factors resulting in the observed employment and wages differ substantially by gender. This likely arises from the fact that females tend to have a different employment and earning trajectory due to pregnancy and child-rearing decisions that typically factor into their
decisions to work, but rarely come into play in males’ work decisions. In addition, specifications are examined where \( LIB_{it} \) is replaced with \( LIB_{it} Z_{it} \), which interacts liberalization with education indicator variables to examine approximate contributions to wage inequality depending on education groups.

7. Results

Table 3 shows the general effects and distributional effects of aggregate services liberalization while tables 4 to 6 show the same for telecommunications, banking and distribution services, respectively. In general, in addition to age and education, the likelihood of employment in full-time salaried work is a function of being single with a positive impact for females and a negative impact for males. This is consistent with the tendency of single females becoming more likely to enter the labour force to support themselves than married females, while males who are single can afford more to be in vulnerable employment compared to married males. Differences in the propensity of firms in different sectors to hire particular gender employees may also be a factor. This finding highlights the differences in the employment decision process faced by males versus females and the reason to analyse the effects of service liberalization on females versus males separately.

In table 3, after controlling for education, year, age, regional and sector effects, liberalization on average has a positive and significant effect on employment in stable jobs for females, but no statistically significant effect on the probability of full-time work for males (columns 1b and 3b). This result is consistent with service liberalization having some beneficial effects in terms of gains in full-time employment opportunities. Females appear to have captured the majority of the benefits of this type of job creation, while the more competitive environment both through liberalization and additional females entering the labour force may have crowded out some males. Liberalization has resulted in decreased wages for the average female with no significant effect on the wages of males (columns 1a and 3a). This is consistent with an increased supply of females in the overall labour market, a potentially greater competitive environment due to service liberalization that has depressed wages and the types of jobs that the average female obtains versus the average male.

To examine in more detail the effects of service liberalization on the average wages, the effects of liberalization for different education groups are examined by gender in table 3 (columns 2a, 2b, 4a and 4b). Service liberalization is found to significantly increase the employment opportunities of female non-high school graduates in stable wage employment, but has had little effect on other education groups. Moreover, liberalization resulted in a negative and significant effect on the wages of female workers for every education group. However, this negative impact on wages decreases by education group, resulting in increasing wage inequality where there is a wider gap in compensation between lower educated, less-skilled workers and more educated, higher-skilled workers. Thus, it appears that while liberalization may create a higher demand for less-skilled workers, in general it increases the competitive environment and marginalizes less-skilled workers in comparison to more skilled workers. This finding is consistent with a number of past empirical studies, described in the related literature section, that found trade liberalization and openness are associated with increased wage inequality within a country.
<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>FEMALE</th>
<th>MALE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Log of real wage (coefficients)</td>
<td>Employment in full-time salaried job (marginal effects)</td>
</tr>
<tr>
<td></td>
<td>(1a)</td>
<td>(1b)</td>
</tr>
<tr>
<td>Services Liberalization (LIB)</td>
<td>-0.458***</td>
<td>0.082**</td>
</tr>
<tr>
<td></td>
<td>[0.120]</td>
<td>[0.042]</td>
</tr>
<tr>
<td>Low education × LIB</td>
<td>-0.943***</td>
<td>0.279***</td>
</tr>
<tr>
<td></td>
<td>[0.351]</td>
<td>[0.076]</td>
</tr>
<tr>
<td>High school × LIB</td>
<td>-0.854***</td>
<td>-0.014</td>
</tr>
<tr>
<td></td>
<td>[0.293]</td>
<td>[0.063]</td>
</tr>
<tr>
<td>College undergraduate × LIB</td>
<td>-0.675***</td>
<td>-0.014</td>
</tr>
<tr>
<td></td>
<td>[0.095]</td>
<td>[0.048]</td>
</tr>
<tr>
<td>College graduate × LIB</td>
<td>-0.161*</td>
<td>0.053</td>
</tr>
<tr>
<td></td>
<td>[0.088]</td>
<td>[0.063]</td>
</tr>
<tr>
<td>High school</td>
<td>0.289***</td>
<td>0.021**</td>
</tr>
<tr>
<td></td>
<td>[0.031]</td>
<td>[0.008]</td>
</tr>
<tr>
<td>College undergraduate</td>
<td>0.747***</td>
<td>0.059**</td>
</tr>
<tr>
<td></td>
<td>[0.037]</td>
<td>[0.008]</td>
</tr>
<tr>
<td>College graduate</td>
<td>1.293***</td>
<td>0.151***</td>
</tr>
<tr>
<td></td>
<td>[0.046]</td>
<td>[0.011]</td>
</tr>
<tr>
<td>Single</td>
<td>0.139***</td>
<td>0.138***</td>
</tr>
<tr>
<td></td>
<td>[0.008]</td>
<td>[0.008]</td>
</tr>
<tr>
<td></td>
<td>[4.381]</td>
<td>[4.388]</td>
</tr>
<tr>
<td>Sector of employment fixed effects</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Region fixed effects</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Observations</td>
<td>35 710</td>
<td>35 710</td>
</tr>
</tbody>
</table>

Robust standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Year, age and age-squared are included in all regressions but not shown in the table.
Columns a and b above are estimated jointly using maximum likelihood estimation method.
In the case of male workers, liberalization did not have any effect on the probability of full-time work for any education group, except for a decrease in the case of male college graduates (column 4b). Moreover, greater liberalization has had no effect on wages of males except for the wages of workers who only obtained some college education (column 4a). In general, the gender gap has increased in overall wages between females versus males due to liberalization, but may due to increased entry of females into the labour market, especially in the lower end of the education spectrum.

Among the three service sectors, liberalization in the telecommunications sector decreased the probability of employment in full-time work for both males and females (table 4). However, while negative for the average female, the wage effects from telecommunications liberalization, resulted in positive increases for the average male. This is consistent with increased competition and efficiency in gains from this sector, allowing firms to decrease their demand for workers; as a result, this may have skewed the importance of the types of jobs that were supported by these gains to be greater for males, resulting in increased wages compared with decreased wages of females.

The effects of telecommunications liberalization on workers with different education levels shows that much of the decrease in full-time work employment for females was due to decreases in the probability of semi-skilled workers with a high school or some college education obtaining full-time employment, while decreases occurred at every level of education for males. Moreover, the wage effects show significant decreases in the wages of the least educated females and males, with positive increases for college graduates. This conveys the fact that substantial increasing wage inequality was due to telecommunications liberalization. This may in part reflect movement up the value chain into more complex goods and services, with those most qualified reaping the benefits in the early stages.

Liberalization in the banking sector resulted in positive increases in full-time employment for females, but decreased the overall wages of the average female (table 5). In contrast, males had a decreased probability of full-time employment, but no effect on the overall wages of the average male. The pattern of full-time employment is less consistent with normal theories of liberalization effects, with positive impacts for females with high school and graduate degrees on obtaining full-time jobs, but no significant effect on those that did not obtain a high school degree or only had some college education. In contrast, there is a consistently negative effect from banking liberalization for all education groups, with a smaller negative impact for male college graduates compared to other education groups. While liberalization resulted in significantly lower wages at every education group, for the average female this effect was smaller as education increased indicating that banking liberalization was associated with greater wage inequality between low-skilled and high skilled individuals. For males, only the average real wages of college graduates decreased significantly, implying that banking liberalization was associated with somewhat lower wage inequality for males.

Liberalization in the distribution sector, like the banking sector, resulted in positive increases in full-time employment, but decreased the overall wages of the average female
Distribution liberalization, however, had no significant effect on the probability of full-time employment or the average wages of males. All of the increases in full-time salaried jobs were mainly driven through increases for females who were lower educated, while there was increasing wage inequality due to a greater negative impact of distribution liberalization on the low-educated workers than on the high educated workers. In contrast, it was the highest educated males who faced a decreased probability of full-time employment due to distribution liberalization, with no effects on lower-educated males. The overall wage effects within education groups for males was relatively minimal, with only males with some college experiencing a decline in wages due to distribution liberalization. As noted above, liberalization in the distribution sector is more recent than in the other sectors, and the full effects may still be playing out.

The general and distributional effects in tables 3 to 6 are summarized in table 7. The results highlight the substantial differences that service liberalization has had on different groups of females versus males in obtaining stable wage employment in full-time salaried work as well as on the average overall wages. Moreover, the liberalization of the service sector has had a differential impact not only in magnitude, but in the direction of probability of obtaining full-time work. In general, service liberalization depressed wages of females overall and increased wage inequality through a much larger impact on the average wages of low-educated females than on the average wages of high-educated females. This wage inequality effect was more muted for males, with liberalization having little effect on the average wages of males within and between different education groups with the exception of the telecommunications industry.

8. Conclusion

Service liberalization has the ability to lead to substantial improvements in economic efficiency and productivity of firms. This effect occurs not only directly, but also indirectly, with all firms that use services as inputs into their production processes obtaining benefits. However, whether workers actually obtain benefits from service liberalization is an open question. While liberalization may result in efficiency gains and market expansion, there is no guarantee this will result in greater profitability of firms that is then shared with workers. One reason is that service liberalization is potentially accompanied by increased competition, which can erode profits. Moreover, liberalization can introduce technological innovations that reduce the need for labour and alter the type of unskilled or skilled labour that is required.

The results of the present analysis highlight some of the positive and negative implications of service liberalization in the Philippines. Service liberalization, while potentially expanding job market opportunities in stable wage employment, especially for females, can also lead to significant decreases in the average wages of workers, again notably for females. It also potentially opens up greater disparities in the earnings between females and males contingent on educational background. Whether this arises due to increased gender bias or differences in allocation of tasks between different gender groups is an open question.

---

9 See Fukai and McDaniel, 2010, for a more complete discussion of service liberalization and its benefits.
Increasing returns to skills due to greater service liberalization and increasing wage inequality highlights the importance of education for workers in maintaining or raising real wages in the face of increasing competition. This suggests the need for policies to support education as the economic structure shifts from primary and secondary sector production towards greater service sector employment as well as raising skill levels in all sectors.

Greater disaggregation of the data along lines of gender, education, occupation and employment status highlights the usefulness of careful policy analysis in designing programmes to redress distributional imbalances that accompany liberalization and structural transformation. A more detailed analysis may yield further insights. Another area for further exploration is the dynamic processes by which service sector liberalization influences other sectors in the process of structural transformation. Sequencing of liberalization also merits careful consideration. Different lag structures and interaction terms may help to illuminate some of these processes. Disaggregation by mode of service delivery also holds potential for further policy-relevant analysis as well as progress in WTO negotiations.
Table 4. General and distributional effects of telecommunication services liberalization

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>FEMALE</th>
<th>MALE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Log of real wage (coefficients)</td>
<td>Employment in full-time salaried job (marginal effects)</td>
</tr>
<tr>
<td></td>
<td>(1a)</td>
<td>(1b)</td>
</tr>
<tr>
<td>Telecom Liberalization (TEL)</td>
<td>-0.518***</td>
<td>-0.331**</td>
</tr>
<tr>
<td></td>
<td>[0.169]</td>
<td>[0.154]</td>
</tr>
<tr>
<td>Low education × TEL</td>
<td>-1.679***</td>
<td>0.313</td>
</tr>
<tr>
<td></td>
<td>[0.352]</td>
<td>[0.204]</td>
</tr>
<tr>
<td>High school × TEL</td>
<td>-1.401***</td>
<td>-0.670**</td>
</tr>
<tr>
<td></td>
<td>[0.298]</td>
<td>[0.270]</td>
</tr>
<tr>
<td>College undergraduate × TEL</td>
<td>-0.774***</td>
<td>-0.656***</td>
</tr>
<tr>
<td></td>
<td>[0.218]</td>
<td>[0.210]</td>
</tr>
<tr>
<td>College graduate × TEL</td>
<td>0.258**</td>
<td>-0.092</td>
</tr>
<tr>
<td></td>
<td>[0.126]</td>
<td>[0.084]</td>
</tr>
<tr>
<td>High school</td>
<td>0.283***</td>
<td>0.020**</td>
</tr>
<tr>
<td></td>
<td>[0.031]</td>
<td>[0.009]</td>
</tr>
<tr>
<td>College undergraduate</td>
<td>0.738***</td>
<td>0.057***</td>
</tr>
<tr>
<td></td>
<td>[0.040]</td>
<td>[0.009]</td>
</tr>
<tr>
<td>College graduate</td>
<td>1.282***</td>
<td>0.148***</td>
</tr>
<tr>
<td></td>
<td>[0.049]</td>
<td>[0.011]</td>
</tr>
<tr>
<td>Single</td>
<td>0.139***</td>
<td>0.139***</td>
</tr>
<tr>
<td></td>
<td>[0.008]</td>
<td>[0.009]</td>
</tr>
<tr>
<td>Constant</td>
<td>-47.714***</td>
<td>-46.588***</td>
</tr>
<tr>
<td></td>
<td>[5.035]</td>
<td>[5.211]</td>
</tr>
<tr>
<td>Sector of employment fixed effects</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Region fixed effects</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>Observations</td>
<td>34 675</td>
<td>34 675</td>
</tr>
</tbody>
</table>

Robust standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Year, age and age-squared are included in all regressions but not shown in the table.
Columns a and b above are estimated jointly using maximum likelihood estimation method.
### Table 5. General and distributional effects of banking services liberalization

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>FEMALE</th>
<th></th>
<th></th>
<th></th>
<th>MALE</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Log of real wage (coefficients)</td>
<td>Employment in full-time salaried job (marginal effects)</td>
<td>Log of real wage (coefficients)</td>
<td>Employment in full-time salaried job (marginal effects)</td>
<td>Log of real wage (coefficients)</td>
<td>Employment in full-time salaried job (marginal effects)</td>
<td>Log of real wage (coefficients)</td>
<td>Employment in full-time salaried job (marginal effects)</td>
</tr>
<tr>
<td></td>
<td>(1a)</td>
<td>(1b)</td>
<td>(2a)</td>
<td>(2b)</td>
<td>(3a)</td>
<td>(3b)</td>
<td>(4a)</td>
<td>(4b)</td>
</tr>
<tr>
<td>Banking Liberalization (BANK)</td>
<td>-0.568***</td>
<td>0.060**</td>
<td>-0.084</td>
<td>-0.189***</td>
<td>[0.049]</td>
<td>[0.030]</td>
<td>[0.064]</td>
<td>[0.048]</td>
</tr>
<tr>
<td>Low education × BANK</td>
<td>-1.238***</td>
<td>0.107</td>
<td>0.107</td>
<td>0.107</td>
<td>[0.413]</td>
<td>[0.068]</td>
<td>[0.227]</td>
<td>[0.132]</td>
</tr>
<tr>
<td>High school × BANK</td>
<td>-1.199***</td>
<td>0.085***</td>
<td>0.085***</td>
<td>0.085***</td>
<td>[0.125]</td>
<td>[0.031]</td>
<td>[0.060]</td>
<td>[0.084]</td>
</tr>
<tr>
<td>College undergraduate × BANK</td>
<td>-0.792***</td>
<td>0.062</td>
<td>0.062</td>
<td>0.062</td>
<td>[0.116]</td>
<td>[0.041]</td>
<td>[0.060]</td>
<td>[0.081]</td>
</tr>
<tr>
<td>College graduate × BANK</td>
<td>-0.288***</td>
<td>0.097**</td>
<td>0.097**</td>
<td>0.097**</td>
<td>[0.037]</td>
<td>[0.043]</td>
<td>[0.050]</td>
<td>[0.034]</td>
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<tr>
<td>High school</td>
<td>0.287***</td>
<td>0.020**</td>
<td>0.020**</td>
<td>0.020**</td>
<td>[0.030]</td>
<td>[0.008]</td>
<td>[0.039]</td>
<td>[0.022]</td>
</tr>
<tr>
<td>College undergraduate</td>
<td>0.732***</td>
<td>0.058***</td>
<td>0.282</td>
<td>0.282</td>
<td>[0.033]</td>
<td>[0.008]</td>
<td>[0.039]</td>
<td>[0.022]</td>
</tr>
<tr>
<td>College graduate</td>
<td>1.282***</td>
<td>0.151***</td>
<td>0.353</td>
<td>0.353</td>
<td>[0.047]</td>
<td>[0.011]</td>
<td>[0.043]</td>
<td>[0.023]</td>
</tr>
<tr>
<td>Single</td>
<td>0.140***</td>
<td>0.140***</td>
<td>0.140***</td>
<td>0.140***</td>
<td>[0.008]</td>
<td>[0.008]</td>
<td>[0.007]</td>
<td>[0.007]</td>
</tr>
</tbody>
</table>

Robust standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Year, age and age-squared are included in all regressions but not shown in the table.

Columns a and b above are estimated jointly using maximum likelihood estimation method.
Table 6. General and distributional effects of distribution services liberalization

<table>
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<tr>
<th>VARIABLES</th>
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<th></th>
<th></th>
<th></th>
<th>MALE</th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Log of real wage (coefficients)</td>
<td>Employment in full-time salaried job (marginal effects)</td>
<td>Log of real wage (coefficients)</td>
<td>Employment in full-time salaried job (marginal effects)</td>
<td>Log of real wage (coefficients)</td>
<td>Employment in full-time salaried job (marginal effects)</td>
<td>Log of real wage (coefficients)</td>
<td>Employment in full-time salaried job (marginal effects)</td>
</tr>
<tr>
<td></td>
<td>(1a)</td>
<td>(1b)</td>
<td>(2a)</td>
<td>(2b)</td>
<td>(3a)</td>
<td>(3b)</td>
<td>(4a)</td>
<td>(4b)</td>
</tr>
<tr>
<td>Distribution Services Liberalization (DIST)</td>
<td>-0.434***</td>
<td>0.084**</td>
<td>-0.058</td>
<td>-0.015</td>
<td>-0.036</td>
<td>-0.040</td>
<td>-0.011</td>
<td>-0.046</td>
</tr>
<tr>
<td>Low education × DIST</td>
<td>-0.924***</td>
<td>0.277***</td>
<td>0.068</td>
<td>0.042</td>
<td>0.092</td>
<td>0.042</td>
<td>0.075</td>
<td>0.068</td>
</tr>
<tr>
<td>High school × DIST</td>
<td>-0.802***</td>
<td>-0.011</td>
<td>-0.110</td>
<td>0.069</td>
<td>-0.147**</td>
<td>-0.027</td>
<td>[0.094]</td>
<td>[0.046]</td>
</tr>
<tr>
<td>College undergraduate × DIST</td>
<td>-0.638***</td>
<td>-0.019</td>
<td>-0.110</td>
<td>0.069</td>
<td>-0.147**</td>
<td>-0.027</td>
<td>[0.094]</td>
<td>[0.046]</td>
</tr>
<tr>
<td>College graduate × DIST</td>
<td>-0.146*</td>
<td>0.053</td>
<td>0.071</td>
<td>-0.123*</td>
<td>0.054</td>
<td>0.072</td>
<td>0.042</td>
<td>0.046</td>
</tr>
<tr>
<td>High school</td>
<td>0.289***</td>
<td>0.021**</td>
<td>0.165</td>
<td>0.063</td>
<td>0.247***</td>
<td>0.106***</td>
<td>0.042</td>
<td>0.072</td>
</tr>
<tr>
<td>College undergraduate</td>
<td>0.748***</td>
<td>0.059***</td>
<td>0.462</td>
<td>0.063</td>
<td>0.467***</td>
<td>0.072</td>
<td>0.042</td>
<td>0.072</td>
</tr>
<tr>
<td>College graduate</td>
<td>1.294***</td>
<td>0.151***</td>
<td>0.540*</td>
<td>0.063</td>
<td>0.689***</td>
<td>0.103</td>
<td>0.042</td>
<td>0.072</td>
</tr>
<tr>
<td>Single</td>
<td>0.139***</td>
<td>0.139***</td>
<td>0.139***</td>
<td>0.139***</td>
<td>0.139***</td>
<td>0.139***</td>
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<td>0.139***</td>
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<tr>
<td>Sector of employment fixed effects</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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<tr>
<td>Region fixed effects</td>
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<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
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</tbody>
</table>

Observations 35 710 35 710 35 710 35 710 58 487 58 487 58 487 58 487

Robust standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

Year, age and age-squared are included in all regressions but not shown in the table.

Columns a and b above are estimated jointly using maximum likelihood estimation method.
## Table 7. Summary of general and distributional effects of liberalization

<table>
<thead>
<tr>
<th></th>
<th>FEMALE</th>
<th>MALE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>On employment in full-time salaried work</td>
<td>On real wages</td>
</tr>
<tr>
<td>A. OVERALL EFFECT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SERVICES liberalization</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Telecom liberalization</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Banking liberalization</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Distribution services liberalization</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>B. BY LEVEL OF EDUCATIONAL ATTAINMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SERVICES liberalization</td>
<td>Low-educated</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>High school-educated</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>College undergraduate</td>
<td>ns</td>
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<td></td>
<td>College graduate</td>
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<tr>
<td>Telecom liberalization</td>
<td>Low-educated</td>
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<td></td>
<td>High school-educated</td>
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<td></td>
<td>College undergraduate</td>
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<td></td>
<td>College graduate</td>
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<tr>
<td>Banking liberalization</td>
<td>Low-educated</td>
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<td>High school-educated</td>
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<td></td>
<td>College undergraduate</td>
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<td></td>
<td>College graduate</td>
<td>+</td>
</tr>
<tr>
<td>Distribution services liberalization</td>
<td>Low-educated</td>
<td>+</td>
</tr>
<tr>
<td></td>
<td>High school-educated</td>
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<td></td>
<td>College undergraduate</td>
<td>ns</td>
</tr>
<tr>
<td></td>
<td>College graduate</td>
<td>ns</td>
</tr>
</tbody>
</table>

- ns – no significant effect
- + – increases
- – decreases
References


Chapter 9
Economy-wide impacts of liberalization in the Vietnamese banking sector

Huong Dinh

1. Introduction

The world economy was severely affected by the global financial crisis of 2008 and Viet Nam was no exception. In 2009, the global economy contracted by 1.1 per cent, with advanced economies hit hardest and experiencing an average drop in output of approximately 3.3 per cent, according to International Monetary Fund (IMF) (2010) data. In Viet Nam, the gross domestic product (GDP) growth rate declined from 8.5 per cent in 2007 to 6.2 per cent in 2008; in the trade deficit in 2008 reached US$ 18 billion, a figure equivalent to 21 per cent of GDP, while inflation reached 26 per cent (General Statistics Office, 2009).

The current global financial crisis has promoted a significant rethink of banking regulation in many parts of the world. In 2010, the Seoul G20 summit endorsed a new bank capital and liquidity regulatory framework devised by the Basel Committee on Banking Supervision, in order to strengthen the resilience of the global banking system. The crisis has further prompted a renewed look at the distinction between prudential regulation and trade barriers in banking services, casting some doubts on whether further trade reforms in the banking sector are necessary.

As in many other countries, scepticism towards further trade reforms in the banking sector runs rampant in Viet Nam. The Government of Viet Nam holds that the country has already opened up its banking market to foreign competition too much relative to other Asian countries. The Government thus argues that there is little room for, and likely few gains to be achieved from further trade reforms. Concern has also arisen among policymakers about the crowding-out effects of foreign banks on domestic operators. There is quite clearly ample room for research into the desirability of further trade reforms in Viet Nam’s banking sector.

In 2006, the State Bank of Vietnam (SBV) increased the minimum charter capital requirement of dong (D) 3,000 billion applicable to banks as a way of restructuring the banking system. This requirement, on the one hand, had a prudential intent to cushion bank capital against the effects of a financial crisis; on the other hand, it can be seen as a way for the Government to consolidate its ownership in the banking system, thus imposing a potential barrier to trade in banking services. In reaction to the global financial crisis, SBV imposed several new regulations on the banking sector. The first came in August 2008, when SBV

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1 The author is grateful to Philippa Dee for her constructive comments and suggestions. The views expressed are those of the author and should not be attributed to Australian National University.
(2008a) announced that it would temporarily stop licensing new joint-stock commercial banks. In an attempt to cope with the inflationary pressure caused by the global financial crisis, SBV also reintroduced interest rate ceilings. Although these regulations have been much criticised, their possible damaging effects have yet to be quantitatively evaluated.

Anecdotal evidence shows that inadequate prudential regulation in the banking sector as well as a lack of proactive macro-economic policies have led the Government of Viet Nam to implement the de-liberalizing policy steps noted above, and to resort to trade barriers in order to control the banking sector. As the banking sector is central to the overall health of the economy, the Government hopes that heightened control of the sector will correct for recent macro-economic imbalances. Such policies might have been tolerated two decades ago when Viet Nam first started to open its markets. However, resorting to such practices today could result in inefficient and damaging prudential regulation in the banking sector.

Papers analysing the trade liberalization of Viet Nam’s banking sector (Oh, 1999; Rajan and Sen, 2002; Dee, Le and Pham, 2005; Vo, 2005; Nguyen, T.T.H., 2008; Nguyen, H.S., 2009; and Leung, 2009) all tend to agree that Viet Nam should take further steps toward liberalization of the banking sector. However, all except the paper by Dee, Le and Pham (2005) involved qualitative analysis. Using the FTAP (Global Trade Analysis Project Model with treatment by foreign direct investment [FDI]) model, Dee, Le and Pham found that Viet Nam could secure marginal positive gains from unilateral reforms in the banking sector. This result may be underestimated because they only modelled the rent-creating effects of trade barriers, yet cost-escalating effects also deserve to be taken into account.

The paper discussed in this chapter investigates whether further trade reforms are worth undertaking in Viet Nam’s banking sector. It explores the potential benefits of further trade reforms in the light of recent regulatory developments. These trade reforms include both Viet Nam’s World Trade Organization (WTO) commitments and potential unilateral reforms. The paper contributes to the current literature by incorporating more thorough first-round impacts of trade barriers in banking services into a computable general equilibrium (CGE) model based on more careful econometric analysis than previously. That analysis, by Dinh (2011), found that trade barriers were cost-escalating and rent-creating, rather than only rent-creating (Kalirajan and others, 2000).

The analytical framework for the current study is a multi-sectoral computable general equilibrium model of the Vietnamese economy and the rest of the world, which incorporates foreign direct investment – the so-called FTAP-VN model. The FTAP-VN model not only covers most features of the Global Trade Analysis Project (GTAP) model, but also provides extra important features that facilitate the impact assessment of services trade liberalization. The modifications include an incorporation of trade barriers in banking services and a separation of firms’ activities by domestic and foreign ownership.

The study found that potential trade reforms would be worth pursuing because they expand the operation of several key export sectors as well as the financial sector, thereby improving real GDP and economic welfare. Despite being highly criticized, the increased minimum capital requirement is found to cause a trivial damaging effect on the economy as
a whole, so it could be kept given its prudential role. As expected, the interest rate ceiling is seen to cause a significant welfare loss, and should therefore not be re-imposed.

The chapter is organized as follows. Section 2 discusses recent trends in Viet Nam’s banking sector. Section 3 describes the methodology and data used in the study, and presents different simulations of trade reforms. Section 4 analyses the sectoral and overall economy-wide effects of policy changes. Section 5 concludes by putting forward relevant policy implications.

2. Viet Nam’s banking sector

2.1. Key reforms and achievements

During the past two decades, Viet Nam has gradually taken a number of steps toward a market-oriented banking system. A decisive step was the establishment of a two-tier banking system in 1989.2 Another step was the opening up of the country’s banking market to investment from the domestic private sector and foreign investors, as explicitly expressed in the Law on Credit Institutions and in Viet Nam’s accession commitments to WTO. Foreign banks could initially enter directly in the form of representative offices, foreign bank branches and joint-venture banks or indirectly via foreign share purchases, and can now do so in the form of a fully foreign-owned limited company. Viet Nam also implemented a restructuring programme for both joint-stock commercial banks and state-owned banks in order to improve the efficiency of bank management and operation (IMF 1998 and 2004). Banking activities have been stimulated in terms of both diversification and outreach. In the late 1990s and the first half of 2000s, SBV liberalized interest rates to reflect the price of capital. SBV also gradually adopted international practices, such as the Basel capital requirements, in order to strengthen the role of prudential regulation in preserving the stability of the banking system.

Viet Nam’s banking sector has undergone far-reaching changes as a result of the relaxation of domestic regulations and international commitments to market entry. Banking service suppliers in Viet Nam have both multiplied and diversified. In 2009, after 20 years of financial reform and international integration, there were five state-owned banks, 39 joint-stock banks, 5 joint-venture banks, 40 foreign bank branches, 5 fully foreign-owned banks, more than 1,000 credit funds, and 30 financial and leasing companies (SBV, 2009) compared with only 4 state-owned banks in 1989 (Vu, 2008). As shown in figure 1, state-owned banks are thus gradually losing their earlier monopolistic power, with their lending reduced from 81 per cent of outstanding loans in 2001 to 71 per cent in 2006. Joint-stock commercial

2 The first tier is the State Bank of Vietnam (SBV) acting as the central bank and being responsible for controlling monetary policy as well as regulating and supervising the whole banking system. The second tier initially consisted of only four specialized state-owned commercial banks, and its composition has subsequently been extended to a number of banks with various forms of ownership, all responsible for providing banking services to the economy. The two-tier banking system separated the commercial from the regulating function of SBV, partly removing this regulating body’s previous problem of acting as both “a player and a referee” in the banking market. This change provided SBV with somewhat greater autonomy in implementing monetary policy and improving its operational efficiency (Government of Viet Nam, 1987 and 1988).
banks (JSCBs) are filling the void and their market share increased from 9 per cent in 2001 to 21 per cent in 2006. Meanwhile, the market share of foreign banks has remained stable at around 10 per cent, as this bank group is limited to wholesale banking activities. However, the market share of foreign banks is expected to increase in the coming years as restrictions on retail banking activities are relaxed.

Another key trend is the declining role of state-owned enterprises (SOEs) as dominant borrowers. From 1992 to 2006, credit to SOEs was reduced from 82 per cent to 30 per cent of total bank credits.³ To a large extent, this reflects the success of privatization in Viet Nam, where the private sector has been encouraged to grow.⁴ This has also resulted partially from the determination of the Government to drive out smaller inefficient SOEs.⁵ Another important factor has been the Government’s commitment to reducing support for SOEs through policy lending.

![Figure 1. Credit structure and growth by bank ownership, 2001-2006](image)

**Figure 1. Credit structure and growth by bank ownership, 2001-2006**

In line with financial liberalization, Viet Nam’s banking system has gradually accumulated assets. As shown in figure 2, during 1996-2007, the total real assets of the

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³ Author’s calculation, based on International Financial Statistics data (IMF, 2009).

⁴ As of August 2008, there were about 250,000 private enterprises and 3 million family-run businesses (International Financial Corporation, 2008). The private sector was primarily involved in trade and service business. The total investment of this sector in 2008 was nearly four times its investment in 2000. In 2008, the private sector contributed approximately 47 per cent of GDP and employed 87.2 per cent of the total workforce, while capturing about 40 per cent of total investment (General Statistics Office, 2009).

⁵ After being merged and/or consolidated, the number of state-owned enterprises was dramatically reduced from 12,000 in 1988 to 6,000 in 1992 (Le, 2003). As of December 2010, 5,846 state-owned enterprises had been restructured since 1992, of which 3,944 were equitized, 261 transformed into one-member limited liability companies and 1,902 merged (Viet Nam Chamber of Commerce and Industry, 2011).
sector increased on average by 24.4 per cent per year, lifting real banking assets in 2007 to Vietnamese dong (D) 1,212.5 trillion. Relative to ASEAN member countries and the People’s Republic of China, Viet Nam had the highest growth rate of bank assets during that period and was the only country in the region that experienced continuously positive year-on-year asset growth rates. As a result, from a very low starting position Viet Nam has gradually improved its position and has achieved a level of financial depth that is broadly comparable to its ASEAN counterparts. During the 1990s, Viet Nam ranked bottom among ASEAN countries in terms of its banking assets/GDP ratio.

![Figure 2. Viet Nam's growth rate of real banking system assets, 1996-2007](source: Author's calculation based on International Financial Statistics (IMF, 2009)).

2.2. Current problems

Although there is enormous potential for Viet Nam to further develop its banking sector, the expansion of the industry remains limited. The main barriers to the development of the country’s banking sector include high government ownership as well as restrictions on new entry and expansion by both local and foreign banks. Such restrictions also include two recent backward policy steps – the increased minimum capital requirement and the re-imposition of interest rate ceilings. While the latter restrictions may have a somewhat prudential justification, they may also result in a number of distortions in banking operations that are discussed below.

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6 For comparison purposes, values of banking assets, credits and deposits are measured using the 2005 price.
7 By 2008, expansion in credit saw Viet Nam with the third-highest banking assets/GDP ratio.
8 For example, up to 50 per cent of Vietnamese enterprises did not have access to credit from the formal financial sector. In particular, only 22 per cent used bank loans for investment. Among those that took out loans, bank loans accounted for only 12.7 per cent of their total investments (International Financial Corporation, 2009).
2.2.1. Pervasive presence of the Government in the banking system

The Government of Viet Nam explicitly expressed its intention to control the country’s banking sector in “The plan for Viet Nam’s banking industry development to 2010 and strategic guidance towards 2020” (Government of Viet Nam, 2006a). Under the plan, the Government aims to develop state-owned commercial banks (SOCBs) and joint-stock commercial banks (in which the State holds controlling shares) into key leaders in the banking system. Accordingly, these banks have been encouraged to enlarge their operational scale, financial capacity, technology, management and business efficiency. The ambition of controlling the banking system is also expressed in the Government’s determination to hold a controlling share in equitized SOCBs (Government of Viet Nam, 2005). This is further illustrated by the Government’s decision to raise minimum capital requirements, which will be analysed below.

While it seems reasonable for the Government to regulate the banking sector because of its central intermediation role in the economy as well as its high systemic importance, the same cannot be said of governmental involvement in banking in ways that limit competition. For one, it is still far from clear that a trade-off between competition and financial stability exists (Allen and Gale, 2004). Indeed, the stability of the financial system stands to be enhanced through proper supervision and monitoring, without reducing competition. Concentration of the banking sector in the hands of state-owned banks often leads to cost inefficiency, while greater overall efficiency may be expected from higher competition.

Anecdotal evidence suggests that the Government’s desire to control the banking system is due to the fact that banking is seen as an important source of economic rents for government officials at the central and local levels. As long as the Government holds a controlling share in SOCBs, officials can continue to dictate these banks’ operation in ways that serve their own interests.

High government ownership likely leads to high degrees of market concentration, resulting in lower competition and too-big-to-fail problems. The current structure of Viet Nam’s banking market is a typical example of excessive concentration. In 2008, the country’s top four banks, which were all SOCBs, made up 67 per cent of total banking assets and 61 per cent of total credits to the economy. High concentration is not necessarily bad for economic development. However, given the SOCBs’ well-documented inefficiency, their domination may hinder competition in the banking system and impede resource allocation in the economy as a whole. SOCBs can distort the extension of loans and the collection of deposits (Hawkins and Turner, 1999). This high concentration has also led to too-big-to-be-controlled and too-big-to-fail problems. In the early 2000s, the Government indeed had to bail out a number of SOCBs when their level of non-performing loans (NPLs) reached 80 per cent and most of them were loss-making (International Financial Corporation, 2008).

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9 Author’s calculation, based on International Financial Statistics (IMF, 2009).
10 Among the different bank groups, SOCBs have the highest non-performing loans rate and lowest rate of return on average assets (Dinh, 2011).
A further consequence of the Government’s pervasive influence over the banking sector is the discrimination the private sector encounters in accessing credit. Although SOCBs are allowed to turn down non-viable SOE requests for funding, the latter are still preferred customers of SOCBs; this results in crowding out credit available to the private sector and reducing the overall efficiency of credit allocation.

2.2.2. Restrictions on market entry, banking operations and foreign participation

(a) Restricting market entry

In order to screen new entries into the banking system, applicants are required to pass socio-economic needs tests and meet minimum capital requirements (Government of Viet Nam, 2004). The socio-economic needs tests include an examination of the number of current credit institutions in the market, the business scope of applicants and the potential impact of new banks on the economy. However, it is hard for the regulators and supervisors to determine the optimal number of banks in the economy as well as the potential impact of newcomers. The vagueness of licensing conditions also leads to undue administrative discretion.

The minimum capital requirement is the minimum charter capital that a bank needs to own in order to set up its business. This requirement is applied to foreign and domestic banks. The main prudential purpose of this measure is to provide a capital cushion for banks against failure. However, the increased minimum capital requirement may cause some distortion problems – increasing government ownership, creating unfair winner selection, triggering share speculation and increasing the concentration of large banks. These problems are discussed further in sub-section 2.2.3.

(b) Restricting banking operations

Although Viet Nam has gradually relaxed regulatory impediments to trade in banking services, banking operations are still restricted. Under its WTO accession protocol, Viet Nam allows financial services to be supplied solely through commercial presence (WTO, 2007). Various administrative measures prevail in banking operations in order to meet stabilization and socio-economic purposes. Such controls are applied to both deposit-taking and lending activities, foreign exchange business and network expansion.

Banks find it difficult to mobilize funds as well as to make loans because of interest rate ceilings, targeted lending policy and some regulations discriminating against loans to the private sector. Interest rate ceilings cause non-transparent competition between banks. Targeted lending is still pervasive in state-owned banks, generating a crowding-out effect on private lending. Regulations discriminate against the granting of unsecured loans to private

11 In cross-border transactions, Viet Nam is only bound to open the way for: (a) provision and transfer of financial information, and financial data processing and related software by suppliers of other financial services; and (b) advisory, intermediation and other auxiliary financial services, including credit reference and analysis, investment and portfolio research and advice, and advice on acquisitions, corporate restructuring and strategy (WTO, 2007).
borrowers. For example, private enterprises must be profitable for two years in a row in order to qualify for unsecured loans from SOCBs (Leung, 2009). Such a requirement automatically rules out the inclusion of newly-established firms on the shortlist of SOCBs.

The most highly restricted activity is the foreign exchange business, where both price (exchange rate) and quantity (volume of transactions) are strictly controlled. The spot exchange rate between the United States dollar and the Vietnamese dong quoted by authorized credit institutions must be in the band of $\pm$3 per cent of the inter-bank exchange rate notified by SBV (2008b). During shortages of foreign currency, exporters are forced to sell their foreign currency revenue to SBV. While it seems plausible for the central bank to intervene in the foreign exchange market in order to keep the currency stable, the above measures create a significant gap between the official and market exchange rates. Given such a gap, banks hesitate to sell foreign exchange to firms, which often have to rely on the black market to buy dollars for their imports. The foreign exchange business is weakly developed, with the share of inter-bank transactions in total foreign exchange market turnover being only 14 per cent in 2007, compared with a range of 55 per cent to 95 per cent in other Asian countries (Nguyen T.P., 2009).

Network expansion has also recently been tightened as a reaction of SBV against the rapid expansion of bank branches by newly recapitalised banks. SBV limits the number of branches a bank can establish by raising the paid-up capital requirement imposed on each additional branch. In addition, SBV imposes several administrative measures that limit bank branching. For example, a bank cannot apply for an additional branch if it is fined more than D 15 million for breaching administrative regulations in the year preceding its application.

While there is a prudential rationale behind the paid-up capital requirement for each additional branch, the case for imposing administrative measures so as to restrict branching is decidedly weaker. There is no doubt that administrative measures can raise transaction costs for both banks and their customers. It also facilitates local monopolistic competition by limiting the geographic scope of competition (Calem and Nakamura, 1998), thereby increasing bank fees. This measure also discourages product differentiation, making it difficult for banks to serve the public well. Such impediments inhibit the achievement of needed economies of scale. In practice, banks have tended to circumvent the above regulation by setting up credit funds and installing extra ATMs.12

(c) Restricting the presence of foreign banks

Although foreign banks have recently been able to enter Viet Nam’s banking market more easily, they are still face restrictions in several areas. First, the foreign ownership share in any joint-venture bank is limited to 49 per cent of equity capital (WTO, 2007). This limit restricts the scale of joint-venture banks, which may force them to incur additional real resource costs. For example, because of the equity capital limit, a joint-venture bank cannot mobilize extra capital from its foreign counterpart for expanding operations. It must thus

12 Credit funds can accept deposits and loan applications, which are then sent to the nearest branch of the bank for processing.
borrow from the Vietnamese market at high interest rates. In addition, this measure is partly redundant and should be relaxed when fully foreign-owned banks have already been allowed.

Second, the Government still imposes a cap of 30 per cent on foreign purchases of shares in local banks in order to avoid the danger to domestic banks being taken over by foreign banks (SBV, 1993).

Third, under Viet Nam’s commitments to WTO, onshore foreign bank branches are not allowed to open other transaction points outside their head offices (WTO, 2007).

Fourth, until 2011, foreign banks were not permitted to accept local-currency deposits in excess of 1,000 per cent of their charter capital from Vietnamese residents with whom they have no credit relationship (WTO, 2007).

Fifth, Viet Nam maintains a number of restrictions on the temporary movement of natural persons, including key bank personnel (WTO, 2007). Viet Nam further requires that at least 20 per cent of managers, executives and specialists in joint-venture banks be Vietnamese nationals (WTO, 2007).

Partnerships between foreign and local banks can bring them mutual benefits. Domestic partners can thicken their capital cushion and improve their banking technology via the partnership with foreign banks. Foreign banks can rely on local partners to understand local market and business culture. More importantly, foreign banks may not cope well with changes in the legal environment without local partners. In addition, the share purchase of local banks can help foreign banks to make a profit more quickly than setting up a greenfield commercial presence. Partnerships can help foreign banks make use of the existing branch networks of local banks as well as their local partners’ personnel. Thus, foreign banks can generally find it more beneficial to cooperate with domestic banks than to overwhelm their partners.

The current problem of most joint-stock commercial banks with low capital compared with the current minimum capital requirement suggests that raising the foreign share purchase cap could be a sound policy decision. Such a policy change would help recapitalize joint-stock commercial banks that are undercapitalized. It would also benefit state-owned commercial banks that are burdened with high levels of non-performing assets. A lesser bail-out burden could arguably result from greater foreign bank presence. In addition, Vietnamese banks would have more opportunities to raise their competitiveness thanks to the technology, know-how and expertise transferred from foreign investors. Local banks would thus face less danger of being outmanoeuvred by fully foreign-owned banks. The problem of interconnected lending might also be mitigated with the stronger presence of foreign partners in local banks (Hawkins and Turner, 1999).
2.2.3. **Policy backsliding**

(a) **Increased minimum capital requirements**

In 2006, SBV required commercial banks to raise their charter capital substantially from the previous minimum requirement.\(^{13}\) This action was aimed at improving the quality of the banking system rather than the quantity of output from the sector.\(^{14}\) The policy change is consistent with the view that Viet Nam has too many banks relative to its population (Leung, 2009). However, there is an unclear relationship between the two aggregates (Jaffee and Levonian, 2001).

A number of problems are created by the increased minimum capital requirement. For example, such a requirement unfairly treats joint-stock commercial banks because at the time it was introduced all state-owned banks except the Mekong Housing Bank (MHB) had already met the requirement.\(^{15}\) Ironically, this implies that JSCBs are forced to squeeze their operations relative to SOCBs, even though they are more active and performing better. In other words, the Government wants to pick the winners on its own rather than let the market assume this role.

Second, the requirement can lead to several distortions in the market. Most joint-stock commercial banks have charter capital lower than the requirement.\(^{16}\) This situation greatly complicates the ability of small banks to recapitalize as the deadline to meet the requirement looms. It is thus not surprising that small banks might have to sell their shares at prices lower than par value in return for capital, causing a loss to existing shareholders, at

\(^{13}\) The previous minimum capital requirement was: D 2,200 billion for Agribank; D 1,100 billion for other SOCBs; D 70 billion for urban joint-stock commercial banks in Hanoi and Ho Chi Minh City; D 50 billion for urban joint-stock commercial banks in other provinces; D 5 billion for rural joint-stock banks; US$ 10 million for joint-venture banks; and US$ 15 million for foreign bank branches (Government of Viet Nam, 1998). Under the new requirement, all non-SOCBs had to increase their charter capital to D 1,000 billion (about US$ 60 million) no later than 31 December 2008 and to D 3,000 billion (about US$ 175 million) no later than 31 December 2010 (Government of Viet Nam, 2006b). The latter deadline was recently extended by one year to 31 December 2011 (Allens Arthur Robinson, 2010). At the same time, the requirement for all SOCBs was D 3,000 billion no later than 31 December 2008, but the requirement was unchanged for foreign bank branches.

\(^{14}\) As explicitly stated in “The plan for Viet Nam’s banking industry development to 2010 and strategic guidance towards 2020”, the Government aims to develop Vietnamese banks into advanced multi-functional commercial banks that can be regionally and globally comparable (Government of Viet Nam, 2006a). However, this action indicates that the Government is intent on limiting new entries as well as reducing the current number of commercial banks.

\(^{15}\) As of 31 December 2006, the charter capital of SOCBs (in billions of dong) was: 3,616 for VietinBank (Bank for Industry and Commerce of Viet Nam) (2007); 4,356.74 for (Bank for Foreign Trade of Viet Nam) (2007); 6,513.45 for Agribank (Bank for Agriculture and Rural Development of Vietnam) (2007); 4,077.401 for BIDV (Bank for Investment and Development of Viet Nam) (2007); and 774 for MHB (Mekong Housing Bank) (2007).

\(^{16}\) As of 13 April 2010, among 39 joint-stock commercial banks, only 15 banks had charter capital higher than the requirement of D 3,000 billion. Among 24 banks with charter capital below this requirement, 15 banks had less than D 2,000 billion, and four had just D 1,000 billion in charter capital (Thuy Trieu, 2010).
least in the short term. This, in turn, would encourage share market speculation. The strict requirement could even incite small banks to borrow at a high interest rate from the informal market to illegally thicken their capital. This may occur if small banks are not keen on merging with other banks and are unable to recapitalize through issuing new shares to both existing and new shareholders. In addition, the high demand for recapitalization could increase market interest rates, making it difficult for banks to both mobilize funds and make loans. The sudden increase in capital, in turn, may encourage newly-recapitalized banks to seek very high profits, such as via over-branching or excessive risk-taking.

The higher requirement for paid-up capital also implicitly encourages mergers and acquisitions of small banks. On the one hand, such concentration might help to improve the cost efficiency of banking operations by eliminating excessive capacity in data processing, marketing and overlapping networks (Furlong, 1998). It may also help to reduce aggregate risk by permitting a more diversified investment portfolio. On the other hand, a higher concentration of banks may reduce lending to small and medium-sized enterprises, as the lending model of big banks does not cater to the needs of such businesses (Berger and others, 1998). As most enterprises in Viet Nam are in the latter category, such a process may not be to their benefit in terms of access to bank credit.

(b) Re-imposition of interest rate ceilings

The changes in interest rate regulation since 2008 have meant that the Government of Viet Nam has taken a backward step in the interest rate liberalization process. As of 2008, Viet Nam had liberalized deposit interest rates for 12 years and lending rates for six years. However, in 2008, Viet Nam reapplied the interest rate ceiling as a means of curbing rising inflation (SBV, 2008c). Because of this administrative intervention, the deposit rate was kept lower than inflation, causing large losses for depositors. During the second half of 2008, the real deposit rate rose to about 10 per cent. All banks offered nearly the same interest schemes to their customers, which were barely lower than the ceiling rate. Confronting the cap on interest rates, banks circumvented this rule by charging up-front fees to borrowers and giving bonuses to depositors.

By the end of 2009, the Government had started to tighten its monetary policy, resulting in a rise in interest rates. In December 2009, SBV asked commercial banks to keep deposit rates under 10.5 per cent otherwise their liquidity would be put under investigation. Accordingly, interest rate ceilings were applicable to both deposits and lending, repeating the scenario of 2008.

Under the continued criticism from both banks and the researcher community, the interest rate ceiling that had applied to medium- and long-term loans was abolished in February 2010. However, banks still found ways to avoid the ceiling rate applicable to short-term loans. For example, short-term loan contracts were booked as long-term ones. In mid-April 2010, the lending rate ceiling on short-term loans was finally abolished. Also, since that time, some banks have started to defy regulations by raising their deposit rates higher than the recommended rate ceiling.
The experience of using direct control on interest rates by SBV has shown that this measure distorts bank operations. This administrative instrument leads to unsound and non-transparent competition between banks, creating more opportunities for corruption between banks and government inspectors, and between bank credit officials and borrowers. Government intervention lost its effectiveness, thereby undermining the public’s trust in public interest regulation. To prevent these distortions, Viet Nam should not use direct intervention measures on interest rates in future.

Anecdotal evidence suggests that a lack of competence in prudential regulation has forced SBV to use administrative measures to control the banking sector. In addition, the lack of prudential regulation and supervisory capacity makes it difficult for SBV to identify which commercial banks operate imprudently and breach its rules. Thus, SBV has tightened entry requirements as a way of screening newcomers, and has applied administrative measures in order to prevent the adverse selection of banks. To some extent, when Viet Nam was at an earlier stage of market reform in the 1990s, such measures could be tolerated. However, as Viet Nam has been in the process of liberalization and economic integration for 20 years, the continued reliance on such administrative practices has led to poor prudential regulation and supervision.

2.3. Estimating the effects of alternative policy scenarios

Using the FTAP-VN model (see annex 1 for a description of model specifications and data used), this chapter examines several potential trade reforms. The first scenario is the elimination of current restrictions on licensing, and the reduction in screening and approval requirements both for domestic banks and for foreign banks. This would imply that the procedures for processing applications for banking licences became more transparent. Further, the applicants would be subject only to notification requirements rather than to an economic needs test in order to obtain an operating licence.

The second scenario is the equitization of SOCBs, which would reduce current government ownership in three fully state-owned commercial banks and two equitized state-owned commercial banks (where the government currently controls 81 per cent of total shares) to 51 per cent.\(^{17}\) Government ownership in the banking sector would thus be reduced from the current level of 34 per cent to 21 per cent.\(^{18}\)

The third scenario is the removal of the current foreign equity ownership cap of 49 per cent in joint-venture banks. The foreign equity ownership cap is suggested for removal since it acts as a trade barrier on banking services.\(^{19}\) This recommendation also stems from the fact that the current cap is partially redundant, because wholly foreign-owned banks have been permitted.

\(^{17}\) Only Vietcombank and Vietinbank have completed their initial public offerings.

\(^{18}\) Government ownership is calculated as the total government equity capital in SOCBs as a share of the total equity capital of the banking system. When the Government sells its ownership in SOCBs, its ownership shares in the banking system will become smaller.

\(^{19}\) Because of the foreign equity cap, joint-venture banks are limited in size of operation, so they find it difficult to obtain economies of scale.
The fourth scenario is the removal of current administrative restrictions on banking operations. This would cover the removal of directed lending to state corporations, controls on foreign exchange business, and administrative limitations on network expansion.

The last scenario is the combination of all the above unilateral trade reforms.

This chapter also measures the economy-wide effects of the two recent backward steps in Viet Nam’s banking sector: (a) the increased minimum capital requirement, which requires every bank to recapitalize their charter capital to at least D 3,000 billion by the end of 2011; and. (b) the re-imposition of interest rate ceilings. Index measures of trade barrier levels (before and after policy changes) are imputed using results in Dinh (2011). Trade restrictiveness indexes for banking services are calculated using a two-step approach. The first step scores the levels of individual restrictions (before and after policy changes) using the template in table 4.A.1 of appendix 4A of Dinh (2011). The second is to calculate the summary trade restrictiveness indexes (TRI) for barriers to establishment and operation, using the classification of restrictions in table 5.1, chapter 5, and individual weights in table 4.1, chapter 4 of Dinh (2011). The trade restrictiveness index ranges from unrestrictive (0) to fully restrictive (1).

The resulting levels of TRI before and after policy changes are presented for domestic and foreign banks, respectively, in the second and the fifth columns of table 1. In all cases, TRI for foreign banks is higher than that for domestic banks. This is because foreign banks face a higher number of restrictions than domestic banks. It is also because, in many restriction categories, foreign banks are discriminated against in the application of regulations that also potentially affect domestic banks.

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20 Five state-owned commercial banks are responsible for directed lending into their specialized areas. For example, Agribank is in charge of providing subsidised loans in rural areas while BIDV is responsible for lending to investment projects.

21 Twenty-four restrictions are considered – 13 common restrictions and 11 restrictions applicable only to foreign banks. The common restrictions consist of limitations on establishment (restrictions on licensing, screening and approval requirements, and government ownership), restrictions on traditional banking operations (limitations on lending or fund raising, restrictions on undertaking settlement services or foreign exchange business, restrictions on network expansion, and interest rate controls), and restrictions on non-traditional banking activities (restrictions on banks’ ability to undertake insurance, securities, and real estate business and to own non-financial firms). In addition to these common restrictions, foreign banks may face limitations on the foreign ownership share in joint-venture banks, legal forms of establishment, reciprocity requirements, restrictions on the temporary and permanent movement of natural persons and the composition of the board of directors. They may also face limitations on delivering various services via cross-border supply and consumption abroad.

22 The weight of each restriction represents its relative economic importance, imputed by the principal component analysis (Dinh, 2011).

23 For example, foreign banks face equity cap in joint-venture banks while domestic banks do not.

24 For example, foreign banks are more restricted in taking local currency deposits than domestic banks.
Table 1. Levels of trade restrictiveness indexes, productivity and tax equivalents in Viet Nam before and after the policy changes of interest

<table>
<thead>
<tr>
<th></th>
<th>Domestic banks</th>
<th>Foreign banks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TRI PE TE</td>
<td>TRI PE TE</td>
</tr>
<tr>
<td><strong>Current policy settings</strong></td>
<td>0.074 13.8 7.7</td>
<td>0.163 30.5 14.8</td>
</tr>
<tr>
<td><strong>Towards trade liberalization in banking services</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reducing barriers to establishment(^{a})</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After eliminating restrictions on licensing, and reducing screening and approval requirements</td>
<td>0.058 10.8 6.1</td>
<td>0.151 28.2 13.9</td>
</tr>
<tr>
<td>After equitization</td>
<td>0.068 12.7 7.2</td>
<td>0.157 29.4 14.4</td>
</tr>
<tr>
<td>After removing the foreign ownership cap</td>
<td>0.074 13.8 7.7</td>
<td>0.145 27.2 13.5</td>
</tr>
<tr>
<td>Reducing barriers to operation(^{b})</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After removing restrictions on operation</td>
<td>0.037 6.9 4.1</td>
<td>0.09 16.8 9.1</td>
</tr>
<tr>
<td>After all trade reforms</td>
<td>0.015 2.8 1.7</td>
<td>0.054 10.2 5.9</td>
</tr>
<tr>
<td><strong>Retrograde steps</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After re-imposing ceiling rates</td>
<td>0.085 15.9 8.7</td>
<td>0.174 32.6 15.6</td>
</tr>
<tr>
<td>After increasing the minimum capital requirement</td>
<td>0.075 14.1 7.8</td>
<td>0.165 30.8 14.9</td>
</tr>
</tbody>
</table>

*Source:* Author’s calculation.

*Notes:*  
\(^{a}\) For domestic banks, barriers to establishment are restrictions on licensing, government ownership, and screening and approval requirements. For locally-incorporated foreign banks, in addition to these restrictions, barriers to establishment include the foreign ownership limit, reciprocity requirements, restrictions on the permanent movement of natural persons and the composition of the board of directors.  

\(^{b}\) For domestic banks, barriers to operation are restrictions on lending, fund mobilization, foreign exchange business, settlement services, interest rate pricing, and branching and placing ATMs. For locally-incorporated foreign banks, in addition to these restrictions, barriers to operation include limitations on the temporary movement of natural persons.

The resulting changes in the restrictiveness indexes arising from the policy changes of interest are presented for domestic and foreign banks, respectively, in columns 2 and 5 of table 2. The change in TRI arising from all trade reforms is equal to the sum of TRI changes for individual reforms.

As shown in table 2, the combination of eliminating restrictions on licensing and reducing screening and approval requirements reduces the restrictiveness index for domestic banks more than for foreign banks. This is because in addition to administrative licensing procedures applied to all applicants, domestic bank applicants are more restricted by the Government’s decision to temporarily limit the new entry of joint-stock commercial banks (SBV, 2008a). So, in terms of licensing, restrictions on domestic banks are scored higher than those on foreign banks. Screening and approval requirements affect both domestic and foreign banks equally. The elimination of licensing restrictions, combined with the reduction of screening and approval restrictions, leads to a larger fall in TRI for domestic banks than for foreign banks.
By contrast, removing restrictions on bank operations reduces the TRI for foreign banks more than for domestic banks. Foreign bank branches are currently more restricted than domestic banks in taking local currency deposits from residents and in lending. This is why restrictions on foreign banks are scored higher than those targeting domestic banks. Accordingly, the removal of restrictions on bank operations will reduce the TRI for foreign banks more than for domestic ones. The elimination of the foreign ownership cap affects only foreign banks. It thus reduces the TRI for this bank group only. Equitization, the re-imposed interest rate ceiling and increased minimum capital requirement all lead to the same changes in TRI for both domestic and foreign banks.

TRI provide an ordinal measure of relative restrictiveness, but not a cardinal measure of economic significance. Deriving a cardinal measure requires additional economic analysis of the TRI effects on bank performance. The analysis by Dinh (2011) found that barriers to establishment and operation have a statistically significant positive effect on both cost and profit in banking. So the reduction in this type of restriction is modelled as a reduction in both the productivity and the output tax equivalents.25

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25 Imports of financial services delivered through cross-border supply are separate from banking services delivered via commercial presence. The study models trade liberalization in banking services supplied through commercial presence, so there is no need to model any change in the import tax.
The before- and after-policy change productivity and tax equivalents are calculated from the corresponding trade restrictiveness indexes, using the econometric results in Dinh (2011). Columns 3 and 6 in table 1 present the resulting levels of productivity equivalent (PE) for domestic and foreign banks, respectively, both before and after the policy changes of interest. The corresponding columns in table 2 present the changes in the productivity equivalents of these banks, arising from the policy changes of interest. Columns 4 and 7 in table 2 present the resulting levels of tax equivalent (TE) for domestic and foreign banks, respectively, both before and after the policy changes of interest. The corresponding columns in table 2 present the changes in the tax equivalents of these banks, arising from the policy changes of interest.

A reduction in the productivity equivalent means an improvement in the productivity of banks. A reduction in the tax equivalent implies a reduction in the price mark-up of banks. Thus, for example, the elimination of barriers to operation would result in both a 6.9 per cent productivity improvement and a 3.6 per cent price mark-up decline for domestic banks (table 2). For foreign banks, this elimination would lead to both a 13.7 per cent productivity improvement and a 5.7 per cent price mark-up decline (table 2).

As noted in Annex 3, the change in the productivity equivalent is proportional to the change in the trade restrictiveness index. Accordingly, any policy change (such as equitization) that causes the same change in the trade restrictiveness index for both domestic and foreign banks will also cause the same change in productivity equivalents. However, as also noted in Annex 4, the change in the tax equivalent is positively correlated with the change in the trade restrictiveness index, but is negatively correlated with its initial level. As a result, policy changes (such as equitization) that lead to the same change in the trade restrictiveness index for domestic and foreign banks will cause a larger reduction in tax equivalents for domestic banks than foreign ones. Nevertheless, the overall reduction in tax equivalents from all trade reforms is still larger for foreign banks than domestic ones, as shown in table 2, largely because more policy restrictions are removed.

2.4. Sectoral output effects

As figure 3 shows, in any trade reform the final price of financial services falls, regardless of whether the services are provided by domestic or foreign financial institutions. Removing restrictions on bank operations leads to a larger decline in the price of foreign services than of domestic ones. This is because this reform results in both a larger price mark-up decline and a higher productivity improvement for foreign financial institutions.

Despite exerting first-round impacts on foreign banks only, the removal of the foreign ownership cap also leads to a slight reduction in the price of domestic financial services. This is because the reduced price of foreign services encourages customers to substitute foreign services for domestic ones, causing a lower demand for domestic services and thus a reduced price of such services. As foreign banks account for only 9 per cent of total financial market, this substitution effect is small and, therefore, so is the fall in the price of domestic financial services.
The combination of removing restrictions on licensing and reducing screening and approval requirements lowers the price of domestic financial services slightly more than that of foreign services. Although domestic banks enjoy a notably higher productivity improvement and bear a significantly larger price mark-up decline, their relative price reduction is somewhat restrained because substitution in demand away from foreign services induces a further decline in the price of foreign services. Equitization creates the same change in the productivity equivalent and price mark-up for domestic and foreign banks, thus leading to the same reduction in their prices.

Figure 3. Fall in prices of financial services driven by trade reforms

Source: Author’s projection from FTAP-VN.

Trade reforms lead to improved productivity and lowered prices of financial services, thus stimulating both supply and demand for these services. The resulting output expansion in the financial sector is demonstrated in figure 4, which shows that among all trade reforms, the highest effect on output expansion, 19.5 per cent, results from the removal of restrictions on banking operations. All combined trade reforms are projected to improve the output of financial institutions by 34.6 per cent. With the exception of the removal of the foreign ownership cap, trade reforms are projected to expand the output of both domestic and foreign financial institutions. In other words, trade reforms benefit both types of institutions, in contrast to the negative perception of the Government of Viet Nam about the crowding-out effect of foreign banks on their domestic counterparts.

Removing restrictions on banking operations leads to a reduced relative price of foreign to domestic services, but does not cause a reduction in the output of domestic services, even though the elasticity of substitution in demand between them is high. The elasticity of substitution between domestic and foreign financial services is assumed to be 10 in FTAP.
puzzle can be explained by the fact that this reform generates a productivity improvement for both domestic and foreign institutions, thereby enlarging their supply capacity. In particular, the supply expansion of domestic financial services is big enough to outweigh any substitution away from such services caused by an increased relative price of domestic to foreign financial services. So the final effect is an output expansion of domestic financial institutions, but this expansion is relatively smaller than that of foreign counterparts.

The only reform that benefits foreign financial institutions at the expense of domestic ones is the removal of the foreign ownership limit. This reform generates a productivity improvement and causes a price mark-up decline for foreign institutions only, thus expanding their supply. The crowding-out impact on domestic banks, however, is trivial because of the small share of foreign banks in Viet Nam. This effect would even be cancelled out if the potential benefits of FDI in terms of technology and know-how transfer were captured in the model.

Although trade reforms lead to an output expansion in the financial sector, this expansion comes at the cost of output contractions in many other sectors, regardless of bank ownership. Under all unilateral trade reforms, for most sectors the contraction is minimal (figure 5). However, in some specific industries – notably transport equipment but excluding motor vehicles and parts, iron, steel and non-ferrous metals, and other business services – the contraction is larger, at between 2.1 per cent and 3.4 per cent.

In addition to the financial sector, a few other sectors appear to benefit from trade reforms in banking services. Under any reform, regardless of ownership, the expanded sectors are: coal, oil and gas mining; petroleum and coal products; and air and land transport. The expansion of these three sectors results from their relatively close inter-linkage with the financial sector. The first two sectors are the main exporters in Viet Nam, so they
always need international settlement services. They also have a good capital surplus (especially in foreign currency), a good capital source for banks and other financial institutions. As a result, financial services make up 8 per cent of total costs in the first two expanded sectors, whereas the share of this input in most other sectors is less than 1 per cent. The coal, oil and gas mining sector is also the largest customer of the financial services sector, accounting for 28 per cent of total financial services consumption. So any fall in the price of financial services induced by trade reforms implies a reduction in production costs of the coal, oil and gas mining sector and the petroleum and coal products sector, thereby encouraging their expansion. Any subsequent price fall of petroleum and coal products, in turn, stimulates the expansion of the air and land transport sector, because the former accounts for 71 per cent of the production cost of the latter.

Source: Author’s projection from FTAP-VN.
Although there can be little doubt that the two backward policy steps in contention in this chapter can expand production in most sectors, they lead to a contraction of the financial sector and that of a few other sectors. However, the contraction of the financial sector is substantially larger than the expansion of any other expanding sectors. The increased minimum capital requirement is projected to contract the output of the whole financial sector by 0.7 per cent and to improve the output of other sectors by 0.07 per cent at most (figure 6). Such a contraction occurs because the increased minimum capital requirement raises the government ownership share and hence the real resource costs for incumbent banks, while also increasing their economic rents and thus discouraging both supply and demand for financial services.

**Figure 6. Sectoral output change under the increased minimum capital requirement**

Source: Author's projection from FTAP-VN.

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27 The other contracting sectors include petroleum and coal products, air and land transport, recreational and other services as well as electricity and gas production and distribution.
The same outcome flows from the re-imposed interest rate ceilings. It is estimated that this policy reduces the output of the financial sector by 4.3 per cent while improving the output of other sectors by 0.5 per cent at most (figure 7). Compared with the increased minimum capital requirement, the damaging effects of the interest rate ceilings are much higher.

**Figure 7. Sectoral output change under the re-imposed interest rate ceiling**

- Other
- Iron, steel and non-ferrous metals
- Transport equipment n.e.c
- Textiles
- Chemical, rubber and plastic products
- Leather products
- Manufactures n.e.c
- Electronic equipment
- Fabricated metal products
- Communication
- Paper products, publishing
- Mineral products n.e.c
- Wood products
- Water transport
- Other mining
- Wearing apparel
- Food, beverages and tobacco manufacture
- Machinery and equipment n.e.c
- Forestry
- Agriculture
- Public services, education and health
- Trade
- Construction
- Motor vehicles and parts
- Water
- Insurance
- Coal, oil and gas mining
- Electricity, gas production and distribution
- Recreational and other services
- Air, land transport
- Petroleum and coal products
- Financial services n.e.c

*Source:* Author's projection from FTAP-VN.

### 2.5. Sectoral employment effects

In general, the effects of trade reforms in banking services on sectoral employment are similar to those observed for sectoral output (figure 8). Skilled workers are shown to be slightly disadvantaged relative to unskilled ones. Trade reforms encourage a higher demand
for both types of labour. As financial services are skilled-labour intensive, an expansion in the financial sector induces a fall in the skilled to unskilled labour ratio. As a result, in expanding sectors, increases in skilled labour employment are less than in unskilled labour employment; in contracting sectors, the demand for skilled labour contracts by more than that for unskilled labour.

Figure 8. Sectoral labour employment change driven by all combined trade reforms

Source: Author’s projection from FTAP-VN.

GTAP 7 Database shows that, in Viet Nam’s financial sector, skilled labour accounts for 41 per cent of the total labour costs, whereas this share in most other sectors is less than 20 per cent.

The fall in the skilled to unskilled labour ratio is represented by: \( \frac{L^1_s}{L^0_s} < \frac{L^1_u}{L^0_u} \) where \( L^0_s, L^1_s \) represents skilled labour before and after trade reforms, \( L^0_u, L^1_u \) represents unskilled labour before and after trade reforms. This inequality can be rewritten as \( \frac{L^1_s}{L^0_s} < \frac{L^1_u}{L^0_u} \) or \( \frac{L^1_s - L^0_s}{L^0_s} < \frac{L^1_u - L^0_u}{L^0_u} \). This inequality means demand for skilled labour increases at a lower rate than for unskilled labour in expanding sectors (where demand for both types of labour increases) or a higher reduction rate of demand for skilled labour than for unskilled labour in contracting sectors (where demand for both types of labour is reduced).
In line with the impacts on output, the two backward policy steps are projected to expand employment in a number of sectors but at the expense of a few others (figures 9 and 10). The extent of employment contraction in the financial sector is more than 10 times greater than the job creation rate in expanding sectors. Unlike other forms of trade reforms, the two backward steps tend to disadvantage unskilled relative to skilled labour. This is because the contraction in the financial sector leads to a fall in demand for labour and a rise in the skilled to unskilled labour ratio. A consequence is a larger fall in demand for skilled labour than for unskilled labour in expanding sectors, and a smaller increase in the demand for skilled labour than for unskilled labour in contracting sectors.30

\[ \frac{L_s^1 - L_s^0}{L_s^0} > \frac{L_u^1 - L_u^0}{L_u^0} \]

This inequality means demand for skilled labour increases at a higher rate than that for unskilled labour in expanding sectors (where demand for both types of labour increases), or a lower reduction rate of demand for skilled labour than for unskilled labour in contracting sectors (where demand for both types of labour is reduced).

**Source:** Author’s projection from FTAP-VN.
2.6. Macroeconomic effects

The previous sub-section analysed the costs and benefits of policy changes for individual sectors in terms of output and job creation. In order to assess the costs and benefits for the economy as a whole, this sub-section discusses some important macroeconomic effects of simulated policy changes on real GDP, real national income, the aggregate capital stock, the GDP price index and real wages.

Figures 11 to 14 show that all potential trade reforms exert a small but positive effect on real GDP and real national income. This is because the expansion in the financial sector driven by trade reforms is big enough to cancel out any contraction in other sectors. The largest possible effects on real GDP and real national income come from the relaxation of restrictions on banking operations, whereas the lowest ones come from removing the foreign
ownership cap in joint-venture banks. Combining all possible trade reforms can raise real GDP by 0.72 per cent and real national income by 0.84 per cent annually, relative to what it would have been without the reforms.

All potential trade reforms are also projected to have a positive effect on the aggregate capital stock. However, such an increase is significantly smaller than the gain in real GDP. This implies that the main source of real GDP gain is the improved productivity and more efficient resource use that results from removing trade barriers.
The rise in the prices in most sectors outweighs the fall in the price of financial services, leading to a slight increase in the general price level. Combining all trade reforms would raise the general price level by 0.14 per cent. However, this price change is a one-off effect, not an impact on inflation, and is an acceptable by-product of the gain in real GDP.

The damaging effects of the two retrograde policy steps – the increased minimum capital requirement and the re-imposed interest rate ceilings – are seen more clearly through the macroeconomic effects. Both policies are projected to contract real GDP and the aggregate capital stock. Such a result is obtained because trade barriers cause a productivity loss and a less efficient resource use in the financial sector, as mentioned above. As a result, a substantial output reduction in the financial sector cancels out any expansion in other sectors, leading to a fall in real GDP. Among these two policy changes, the damaging effects of the increased minimum capital requirement are trivial while those emanating from the re-imposed interest rate ceilings are much more significant.

Trade reforms in banking services lead to a rise in real wages for both skilled and unskilled workers (figure 14). In particular, the real wages of skilled workers grow more than those of unskilled workers. As explained above, trade reforms result in a rise in demand for both types of labour as well as a lower skilled-to-unskilled labour ratio, implying a higher marginal product of skilled labour to unskilled labour. Real wages for skilled labour increase at a higher rate than for unskilled labour. In contrast, the two retrograde policy steps reduce real wages for both unskilled and skilled workers. Such policies lead to a fall in demand for labour and a higher skilled-to-unskilled labour ratio, implying a relatively lower marginal product of skilled labour compared to unskilled labour. Not surprisingly, real wages for skilled labour drop at a higher rate than for unskilled labour.
2.7. Overall welfare effects

The previous analysis of macroeconomic effects provides a preliminary picture of the costs and benefits of different policy changes on the economy as a whole. In order to complete the picture, this sub-section looks at overall economic welfare changes – defined as the US dollar value of utility change arising from the measured policy changes.

To facilitate the analysis, the FTAP-VN model breaks down the overall economic welfare change into five sources. The allocative efficiency effect shows how much the economy would gain as a result of reallocating existing resources towards more efficient uses. The endowment effect shows how much the economy would gain, because of an increase in factor endowments. The terms of trade effect shows how much the economy would gain from any increase in the ratio of export to import prices. The technical change effect shows how much the economy would gain because of improvements in productivity, including the endogenous productivity gains from greater variety. Finally, the international interest and rent payments effect shows how much the economy would gain from an increase in net dividend and interest receipts. Table.2 in annex 2 presents the sources of welfare change in different policy change scenarios.

Compared with other individual trade reforms in the banking sector, removing restrictions on bank operations brings the highest gain to the economy as a whole (figure 15). If current impediments to lending, fund raising, settlement services, foreign exchange business and network expansion were to be removed, it is estimated that Viet Nam would gain the equivalent of US$ 175 million per year, equivalent to 0.42 per cent of GDP. Meanwhile, the combination of removing restrictions on licensing and reducing screening and approval requirements would bring a gain of US$ 73.8 million per year. Equitization, for its part, would bring a further gain of US$ 25.4 million per year.
The current estimation of the effects of trade reforms in Viet Nam's banking sector is more thorough than that estimated by Dee, Le and Pham (2005). This is largely because they only took into account the rent-creating impacts of trade barriers in banking services, while this study projects both cost-escalating and rent-creating impacts of trade barriers, based on detailed econometric evidence. Not surprisingly, the current estimation projects higher welfare gains for Viet Nam than that by Dee, Le and Pham (2005).

In all possible trade reform scenarios, the productivity effects account for the largest share of the total gains – some 72 per cent (figure 16). As noted above, the main effect of reforming cost-escalating trade measures in banking services is to release real resources for use in the financial sector and other sectors. The significant share of productivity effects confirms the importance of reforming cost-escalating measures.

The second most important contributor to overall gains is the improvement in allocative efficiency. This effect contributes some 25 per cent-28 per cent of the total gains from reforming trade barriers. The allocative efficiency gain arises from the increased output and reduced price because of removing pre-existing distortions.

In all possible trade reforms, except those involving the removal of restrictions on bank operations, the terms of trade effect contributes insignificantly to the increase in real incomes. As is suggested by its name, the terms of trade effect applies to the prices of cross-border trade. This effect is not important in the case of trade reforms in banking services, where commercial presence is the most important mode of service delivery. In addition, banking trade reforms primarily imply changes to behind the border measures of a pre-regulatory nature.
It was found that neither the endowment nor the net international payment effects were significant. The trivial role of the latter effects is largely due to the predominance of productivity effects, which enable the economy to produce more from existing resources. Consequently, the need for additional foreign capital is small, as is the resulting increase in overseas repatriation.

While trade liberalization in banking services is found to improve real incomes, the damage caused by retrograde steps in Viet Nam’s financial liberalization process is significant (figure 15). The re-imposition of interest rate ceilings is projected to cause a welfare loss of US$ 52.5 million per year. Compared with the re-imposed interest rate ceilings, the loss caused by the increased capital requirement is much lower, indeed trivial, at US$ 7.8 million per year. The damage to the economy caused by these backward steps is mainly through the higher real resource costs imposed on incumbent banks, reducing productivity in the financial sector and causing higher costs in other sectors that have close linkages with this sector, thus bringing about a net loss to the economy. The retrograde steps also increase the price mark-up in the financial sector, leading to an allocative efficiency loss.

### 3. Conclusion and policy implications

Using the FTAP-VN model, the analysis presented in this chapter finds that potential trade reforms in Viet Nam’s banking sector can expand production and create jobs in some key export sectors beyond the financial services sector itself. Although the expansion of the financial industry may come at the relative expense of other sectors, the net effect is a non-trivial improvement in both real GDP and economic welfare, compared to the absence of banking sector reforms.
Trade reforms in banking would generate a rise in employment of both unskilled and skilled labour in the financial sector. In the future, in order to avoid a shortage of skilled labour in the financial sector and consequent pressure on wages, Viet Nam would need to invest in education and training, particularly in banking and finance-related professions.

Contradicting the negative perception of the Government regarding the alleged crowding-out effects of foreign banks on domestic banks, potential trade reforms can bring benefits to domestic banks as well as to their foreign counterparts. The analysis presented in this chapter suggests that Viet Nam should broaden the scope of its trade reforms with regard to domestic banks and foreign banks rather than only removing discrimination against foreign banks.

Among alternative reform scenarios, the removal of restrictions on banking operations creates the highest positive impacts on real incomes. Such a reform not only encourages existing resources to be reallocated more efficiently, but, more importantly, also improves productivity. Accordingly, banks should be given more autonomy in selecting their customers, administrative measures that restrict bank branching should be removed and banks should be allowed more flexibility in their foreign exchange transactions.

Relaxing licensing restrictions as well as screening and approval requirements would also reduce the real resource costs for banks, help improve banking productivity and yield a positive welfare gain to the economy. Procedures for processing applications for bank licences should be made more transparent. The Government should also speed up the equitization of state-owned commercial banks.

Finally, removing current foreign ownership limits would also be worthwhile. Although this reform brings a smaller gain than other trade reforms, the benefits in terms of capitalization and technology transfers to local counterparts are likely to be significant. A further reason for engaging such reforms is that the cap is partially redundant, since fully foreign-owned banks have already been permitted entry into the Vietnamese financial market.

As expected, the two retrograde policy steps – the increased minimum capital requirement and the re-imposed interest rate ceilings – contract the operation of the financial sector significantly, while generating a very modest (almost trivial) expansion in many other sectors. The net effect is a fall in real GDP and a loss of economic welfare. These damaging effects stem from the fact that the two policy steps not only make resource allocation less efficient, but also escalate real resource costs to the economy as whole. Given the small loss caused by the increased minimum capital requirement and its prudential purpose of recapitalizing local banks, such a policy could be implemented, but should be combined with a lifting of the current cap on foreign share purchases in local banks. However, the significant losses caused by the re-imposed interest rate ceilings suggest that such a policy should no longer be envisaged or pursued.
Annexes

Annex 1. FTAP-VN model

Model description

FTAP-VN is a multi-sectoral computable general equilibrium (CGE) model of the Vietnamese economy and the rest of the world based on the FTAP model by Hanslow, Phamduc and Verikios (2000) and Dee (2010). As any CGE model, FTAP-VN describes economic relationships between a central government, a representative household, and firms interacting via labour, capital and commodities markets in each region, using a system of mathematic equations. Optimizing behaviours govern decision-making by government, households and firms. In general, markets are assumed to clear.

Unlike the GTAP model, FTAP-VN differentiates the economic activities of foreign-invested firms from those of domestic firms, making it possible to capture the effects of each policy change of interest by ownership. Foreign ownership shares in Viet Nam are calculated as the ratio of foreign-invested firms’ capital to total sectoral capital (see table 1, annex 2). The output and all other data of foreign-invested firms in each sector are calculated by multiplying the corresponding data for the whole sector by the foreign output share. With a treatment of ownership in the model, FTAP-VN is able to control for many benefits of FDI that GTAP cannot (Dee, 2005). For example, FTAP-VN reflects how FDI can relax domestic constraints on capital. It also captures how FDI contributes to product diversification as well as product specialization, where a particular industry has a comparative advantage. However, the current FTAP model has yet to capture the transfer of skills, technology and management know-how from FDI to local firms.

Another distinguishing feature of FTAP-VN model is that this model incorporates increasing returns to scale and large group monopolistic competition in all sectors. This assumption is based on the fact that in Viet Nam’s banking sector, five state-owned commercial banks account for nearly three quarters of the banking market, but there is a competitive fringe of joint-stock commercial banks. Monopolistic competition is also pervasive in manufacturing, petroleum, oil and gas products, and mining sectors where state economic corporations dominate the market. So in the Viet Nam model, it is relevant to assume large group monopolistic competition rather than small group oligopoly. In the model, the monopolistic competition assumption is captured by parameter choices. This is done by using higher elasticities compared with those in GTAP, in order to accord better with the notion of firm-level product differentiation associated with large group monopolistic competition (Francois, McDonald and Nordstrom, 1995). These parameter values are also more consistent with engineering studies of the extent of economies of scale and hence product differentiation. Endogenous productivity gains are also incorporated to capture the benefits of increased product variety.

In FTAP, it is assumed that the current period investment, which is formed from savings, can be added up to the next period capital stock, allowing capital stocks to
accumulate over time. It is also assumed that net bond holdings of each region can adjust to finance the expansion of capital that cannot be financed by domestic savings. This treatment of capital enables FTAP to provide a long-term snapshot view of the economy-wide effects of trade liberalization 10 years after the reform has occurred. This treatment of international capital mobility was developed by McDougall (1993) and incorporated into GTAP by Verikios and Hanslow (1999).

FTAP-VN has four primary factors (labour, capital, land and natural resources). Skilled and unskilled labour is assumed to be perfectly mobile between sectors in each region. Consequently, a uniform price for each type of labour is applied across industries within each economy. Because of the behaviour of asset holders, capital is less than perfectly transformable between industries and regions, thus allowing rental prices to differ across industries. Land is supplied with a transformation elasticity of 1, and is used only in the agricultural sector. The elasticity of transformation of natural resources between industries is so small that the supply of this factor to each industry is essentially fixed.31 This assumption comes from the fact that natural resources are irrecoverable; if it is already used in this industry, then it cannot be transferred to another industry. Consequently, the rental prices of capital, land and natural resources can vary from industry to industry.

Barriers to trade in banking services include all regulations that restrict the entry or operation of both domestic and foreign banks.32 These barriers can raise costs33 or create rents34 for incumbent banks (Dinh, 2011). Therefore, in the FTAP-VN model, barriers to trade in banking services are represented by both tax and productivity equivalents. The model reflects the current barriers in banking services by injecting current tax equivalents as an implicit output tax using an FTAP adaption of GTAP’s “Altertax” feature (Malcolm, 1998). The rent from this tax is modelled as going to the banking sector rather than to the Government. For foreign-invested firms, a part of this rent is modelled as being taxed before being repatriated to home countries. The productivity equivalent estimate does not need to be injected into the model database, because it is inherent in current bank cost structures.

FTAP-VN describes the economic structure of the Vietnamese economy and the rest of the world using Global Trade Analysis Project (GTAP) 7 Database. FTAP-VN has

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31 Natural resources are used as inputs in agriculture, forestry, and coal, oil, gas mining and other mining.

32 The General Agreement on Trade in Services under WTO has a relatively narrow definition of such non-discriminatory restrictions on market access that are recognized as trade barriers. They include limitations on the number of service suppliers, the total value of service transactions or assets, the total number of service operations or the total quantity of service output, the total number of natural persons, and the permissible forms of establishment as well as the participation of foreign capital. More broadly, trade barriers can be extended to all non-discriminatory, non-prudential restrictions on both foreign and domestic service suppliers (Findlay and Warren, 2000).

33 For example, limitations on local currency deposit taking impose extra cost on borrowing for foreign bank branches.

34 For example, restrictions on licensing create more market power for incumbent banks, enabling them to charge their customers an extra fee. This fee is akin to a tax on customers but the revenue goes to banks rather than to the Government.
32 sectors and two regions (Viet Nam and the rest of the world) aggregated from the GTAP 7 Database.\textsuperscript{35} In order to reflect more accurately the economy-wide effects of trade barriers in banking services, it would be ideal, if the banking sector were separated from other financial intermediaries. In practice, the GTAP 7 database aggregates banks with other financial intermediaries (except insurance companies) into the financial services sector.

**Closure**

In this chapter, a long-term standard closure of the FTAP model is applied as described in Hanslow, Phamduc and Verikios (2000). All regional factors of production except capital are assumed to be exogenous. Regional capital stocks are endogenously determined in the model, so that capital accumulation and international borrowing can be allowed for. The government saving ratio in each region is made exogenous; however, in order to maintain budget neutrality in government accounts, the income tax rate is endogenous. The model is solved by the GEMPACK economic modelling software (Harrison and Pearson, 1996).

\textsuperscript{35} This dataset provided individual country input-output tables as well as detailed data on bilateral trade, transport and merchandise trade protection for 113 regions and 57 sectors in 2004. The country input-output tables account for the intersectoral linkages within regions while the other data show economic linkages between regions (Badri and Walmsley, 2008).
Annex 2. Foreign share by sector and overall welfare impacts

Annex table 1. Foreign share by sector in Viet Nam, 2004

<table>
<thead>
<tr>
<th>Sector</th>
<th>Foreign share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>5.4</td>
</tr>
<tr>
<td>Forestry</td>
<td>9.1</td>
</tr>
<tr>
<td>Coal, oil and gas mining</td>
<td>75.4</td>
</tr>
<tr>
<td>Other mining</td>
<td>4.4</td>
</tr>
<tr>
<td>Food and beverages and tobacco manufacture</td>
<td>35.1</td>
</tr>
<tr>
<td>Textiles</td>
<td>56.5</td>
</tr>
<tr>
<td>Wearing apparel</td>
<td>46.9</td>
</tr>
<tr>
<td>Leather products</td>
<td>71.1</td>
</tr>
<tr>
<td>Wood products</td>
<td>31.4</td>
</tr>
<tr>
<td>Paper products, publishing</td>
<td>17.7</td>
</tr>
<tr>
<td>Petroleum, coal products</td>
<td>72.4</td>
</tr>
<tr>
<td>Chemical, rubber, plastic products</td>
<td>37.0</td>
</tr>
<tr>
<td>Mineral products n.e.c</td>
<td>35.2</td>
</tr>
<tr>
<td>Iron, steel and non-ferrous metals</td>
<td>33.2</td>
</tr>
<tr>
<td>Fabricated metal products</td>
<td>40.4</td>
</tr>
<tr>
<td>Motor vehicles and parts</td>
<td>78.0</td>
</tr>
<tr>
<td>Transport equipment n.e.c</td>
<td>52.0</td>
</tr>
<tr>
<td>Electronic equipment</td>
<td>77.5</td>
</tr>
<tr>
<td>Machinery and equipment n.e.c</td>
<td>54.1</td>
</tr>
<tr>
<td>Manufactures n.e.c</td>
<td>51.8</td>
</tr>
<tr>
<td>Electricity and gas production and distribution</td>
<td>3.0</td>
</tr>
<tr>
<td>Water</td>
<td>3.1</td>
</tr>
<tr>
<td>Construction</td>
<td>1.2</td>
</tr>
<tr>
<td>Trade</td>
<td>9.5</td>
</tr>
<tr>
<td>Air and land transport</td>
<td>7.6</td>
</tr>
<tr>
<td>Water transport</td>
<td>7.0</td>
</tr>
<tr>
<td>Communication</td>
<td>0.2</td>
</tr>
<tr>
<td>Financial services n.e.c</td>
<td>9.4</td>
</tr>
<tr>
<td>Insurance</td>
<td>28.7</td>
</tr>
<tr>
<td>Other business services</td>
<td>45.8</td>
</tr>
<tr>
<td>Recreational and other services</td>
<td>54.6</td>
</tr>
<tr>
<td>Public services, education, and health</td>
<td>10.7</td>
</tr>
</tbody>
</table>

Source: Author’s calculation from General Statistics Office (2008 and 2010) data.

Notes: Sectoral foreign ownership shares in Viet Nam, imputed as the ratio of capital of foreign-invested firms to total capital. Viet Nam’s firm ownership shares in the rest of the world are treated as zero since outward stock FDI of Viet Nam is too small.
Annex table 2. Overall welfare impacts

(Unit: US$ million)

<table>
<thead>
<tr>
<th></th>
<th>Removing restrictions on licensing</th>
<th>Equitization</th>
<th>Removing the foreign ownership cap</th>
<th>Removing restrictions on operation</th>
<th>All unilateral reforms</th>
<th>Re-imposing interest rate ceiling</th>
<th>Raising minimum capital requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocative efficiency effect</td>
<td>18.807</td>
<td>6.762</td>
<td>3.204</td>
<td>50.165</td>
<td>75.133</td>
<td>-14.145</td>
<td>-2.095</td>
</tr>
<tr>
<td>Endowment effect</td>
<td>1.990</td>
<td>0.676</td>
<td>0.341</td>
<td>6.225</td>
<td>11.370</td>
<td>-1.322</td>
<td>-0.203</td>
</tr>
<tr>
<td>Term of trade</td>
<td>0.706</td>
<td>0.286</td>
<td>-0.362</td>
<td>-0.598</td>
<td>-2.250</td>
<td>-0.861</td>
<td>-0.105</td>
</tr>
<tr>
<td>Technical change</td>
<td>53.858</td>
<td>18.872</td>
<td>5.657</td>
<td>137.748</td>
<td>218.089</td>
<td>-38.968</td>
<td>-5.817</td>
</tr>
<tr>
<td>Other effects</td>
<td>-1.550</td>
<td>-1.163</td>
<td>-6.908</td>
<td>-18.368</td>
<td>-22.213</td>
<td>2.785</td>
<td>0.385</td>
</tr>
<tr>
<td>Total</td>
<td>73.811</td>
<td>25.433</td>
<td>1.932</td>
<td>175.172</td>
<td>280.130</td>
<td>-52.511</td>
<td>-7.835</td>
</tr>
</tbody>
</table>

Source: Author’s calculation from FTAP-VN.
Annex 3. Relationship between PE and TRI

This section calculates the first-order derivative of the change in the productivity equivalent (PE) with regard to the change in the trade restrictiveness index (TRI). Since the productivity equivalent is calculated as: 

\[ PE_1 = \frac{TC_1 - TC_0}{TC_0} \times 100\% \]

so

\[ \Delta PE = PE_2 - PE_1 = \frac{TC_2 - TC_0}{TC_0} \times 100\% - \frac{TC_1 - TC_0}{TC_0} \times 100\% = \frac{TC_2 - TC_1}{TC_0} \times 100\% \]

Suppose that total cost is evaluated at the median values of prices and quantities, so that it depends on TRI and a constant. It follows:

\[ \Delta PE = \frac{(TC_0 + \beta_C TRI_2) - (TC_0 + \beta_C TRI_1)}{TC_0} \times 100\% - \frac{\beta_C TRI_2 - \beta_C TRI_1}{TC_0} \times 100\% \]

\[ = \frac{\beta_C \Delta TRI}{TC_0} \times 100\% \]

The first-order derivative of with respect to can be calculated as:

\[ \frac{\partial \Delta PE}{\partial \Delta TRI} = \frac{\beta_C}{TC_0} \times 100\% > 0 \text{ as } \beta_C > 0 \text{ and } TRI > 0 \]

This means that the change in the productivity equivalent is proportional to the change in TRI, as \( \beta_C \) and \( TC_0 \) are constant.
Annex 4. Relationship between TE and TRI

This section calculates the first-order derivatives of the change in the tax equivalent with regard to both the initial trade restrictiveness index and the change in the trade restrictiveness index. Since the tax equivalent (TE) is calculated as:

\[ TE_1 = \frac{TR_1 - TR_0}{TC_1 - TC_0} \times 100\%, \text{ so} \]

\[ \Delta TE = TE_2 - TE_1 = \frac{TR_2 - TR_0}{TC_2 - TC_0} \times 100\% - \frac{TR_1 - TR_0}{TC_1 - TC_0} \times 100\% = \frac{TR_2 - TR_1}{TC_2 - TC_1} \times 100\% \]

\[ = \frac{TC_2 + \Pi_2}{TC_1} - \frac{TC_1 + \Pi_1}{TC_1} \times 100\% = \frac{\Pi_2 - \Pi_1}{TC_2} \times 100\% \]

Suppose that total cost and profit are both evaluated at the median values of prices and quantities, so that each depends on TRI and a constant (for total cost, for total profit). It follows that:

\[ \Delta TE = \frac{\Pi_2 - \Pi_1}{TC_2} \times 100\% = \frac{\Pi_0 + \beta_\Pi TRI_2}{TC_0 + \beta_C TRI_2} - \frac{\Pi_0 + \beta_\Pi TRI_1}{TC_0 + \beta_C TRI_1} \times 100\% \]

\[ = \frac{\Pi_0 + \beta_\Pi TRI_1 + \Delta TRI}{TC_0 + \beta_C TRI_1 + \Delta TRI} - \frac{\Pi_0 + \beta_\Pi TRI_1}{TC_0 + \beta_C TRI_1} \times 100\% \]

For convenience, the subscript of the initial trade restrictiveness index is dropped out, so

\[ \Delta TE = \frac{\Pi_0 + \beta_\Pi TRI + \Delta TRI}{TC_0 + \beta_C TRI + \Delta TRI} - \frac{\Pi_0 + \beta_\Pi TRI}{TC_0 + \beta_C TRI} \times 100\% \]
The first-order derivative of the change in the tax equivalent with respect to the initial trade restrictiveness index can now be calculated:

\[
\frac{\partial \Delta TE}{\partial TRI} = \frac{\beta_{\Pi} \left[ TC_0 + \beta_c \left( TRI + \Delta TRI \right) \right] - \beta_c \left[ \Pi_0 + \beta_{\Pi} \left( TRI + \Delta TRI \right) \right]}{\left[ TC_0 + \beta_c \left( TRI + \Delta TRI \right) \right]^2} \times 100% \]

\[
= \frac{\beta_{\Pi} \left[ TC_0 \right] - \beta_c \left[ \Pi_0 \right]}{\left[ TC_0 + \beta_c TRI \right]^2} \times 100% \]

\[
= \frac{\beta_{\Pi} \left[ TC_0 \right] + \beta_c \left[ TRI - \beta_c TRI \right]}{\left[ TC_0 + \beta_c TRI \right]^2} \times 100% \]

\[
= \frac{\left[ \left( \beta_{\Pi} - \beta_c \right) \left( TC_0 \right) \right] \times \left[ \frac{1}{\left[ TC_0 + \beta_c \left( TRI + \Delta TRI \right) \right]^2} - \frac{1}{\left[ TC_0 + \beta_c TRI \right]^2} \right]}{\left[ TC_0 + \beta_c \left( TRI + \Delta TRI \right) \right]^2} \times 100% \]

for \( \beta_c > 0; \beta_{\Pi} > 0; \beta_{\Pi} > \beta_c \) and \( TRI > 0 \)

This means that the change in the tax equivalent is negatively correlated with the initial level of restriction.

The first-order derivative of the change in the productivity equivalent with regard to the change in the trade restrictiveness index can now be calculated:

\[
\frac{\partial \Delta TE}{\partial \Delta TRI} = \frac{\beta_{\Pi} \left[ TC_0 + \beta_c \left( TRI + \Delta TRI \right) \right] - \beta_c \left[ \Pi_0 + \beta_{\Pi} \left( TRI + \Delta TRI \right) \right]}{\left[ TC_0 + \beta_c \left( TRI + \Delta TRI \right) \right]^2} \times 100% \]

\[
= \frac{\left( \beta_{\Pi} - \beta_c \right) \left( TC_0 \right)}{\left[ TC_0 + \beta_c \left( TRI + \Delta TRI \right) \right]^2 TR_0} \times 100% > 0 \]

for \( \beta_c > 0; \beta_{\Pi} > 0; \beta_{\Pi} > \beta_c \) and \( TRI > 0 \)
This means that the change in the tax equivalent is positively correlated with the change in the trade restrictiveness index where:

\[ TC_0, TR_0, \Pi_0 \] are, respectively, the total cost, total revenue and profit when there are no trade barriers in banking services.

\[ TC_1, TR_1, \Pi_1 \] are, respectively, the total cost, total revenue and profit when there are trade barriers in banking services. The cost, profit and revenue are predicted from the estimated unit cost and profit functions.

\[ \beta_c, \beta_{\Pi} \] are the coefficients of the trade restrictiveness index in the unit cost and unit profit functions, respectively.
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