**The London School of Economics and Political Science**

# *Global and Regional Sourcing of ICT-enabled Business Services: Upgrading of China, Hong Kong and Singapore along the Global Value Chain*

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## Declaration

I certify that the thesis I have presented for examination for the PhD degree of the London School of Economics and Political Science is solely my own work other than where I have clearly indicated that it is the work of others (in which case the extent of any work carried out jointly by me and any other person is clearly identified in it).



I declare that my thesis consists of 99,612 words.

Sancia Wai-San Wan

## Abstract

Offshoring, as part of globalisation, first started decades ago with manufacturing processes disintegrated along the global value chain and dramatically redistributed to low-cost regions. The next global shift of work involving ICT-enabled business services has arisen since the 1990s, especially featuring the success of India's supplier role. The possibilities for the Global South to move up the value ladder are well demonstrated by the achievements of the newly industrialised economies in East Asia in the first shift and of India in the second. In the services sector, however, potential for upgrading is conditioned by quality-based elements, such as trust, culture and language, which vary both between producing and market areas. Flows are increasingly multi-directional, requiring attention to the neglected issue of demands from fast-growing Southern economies.

So how do locations and firms in the Global South attempt to upgrade in the regime of rising services offshoring? The Indian experience especially in serving Anglophone markets in the Global North has been widely documented – but not that of East Asian economies, with their distinct characteristics and strong historic, ethnic and cultural ties with each other. This study examines the upgrading possibilities and constraints of China, Hong Kong and Singapore along the global services chain. For cross-case analysis, it focuses on three specific sets of services, including information technology, finance and accounting, and customer contact services. The concepts of global value chain, competitive advantage and capabilities are applied to reconstruct the phenomenon of services offshoring from both the demand and supply perspectives in the selected locations, and synthesise the dynamics between locational characteristics and firm strategies. A series of distinct upgrading strategies are identified, involving mixes of manufacturisation, knowledge-intensification and deepening relational capabilities to exploit both regional advantages of language/cultural proximity and established global links.

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# List of Abbreviations

| | |
|---|---|
| ASEAN | Association of Southeast Asian Nations |
| BC/DR | business continuity and disaster recovery |
| BPO | business process outsourcing/offshoring |
| BRIC | Brazil, Russia, India and China |
| C&SD | Census and Statistics Department, Hong Kong |
| CCIIP | China Council for International Investment Promotion |
| CEO | Chief Executive Officer |
| CEPA | Closer Economic Partnership Agreement (between Hong Kong and Mainland China) |
| CIBER | Center for International Business Education and Research, Duke University |
| CICPA | Chinese Institute of Certified Public Accountants |
| CICS | Customer Information Control System |
| CIO | Chief Information Officer |
| CMM | Capability Maturity Model |
| CPA | Certified Public Accountant |
| CRM | customer relationship management |
| CSIA | China Software Industry Association |
| CSIP | Software and Integrated Circuit Promotion Center, Ministry of Industry and Information Technology, People's Republic of China |
| CSSIP | China-Singapore Suzhou Industrial Park |
| CTO | Chief Technology Officer |
| DOI | Digital Opportunity Index |
| EBPOS | Extended Balance of Payments Classification of Services |
| EGCI | Hong Kong/Guangdong Expert Group on Co-operation in Informatisation |
| EMS | electronics manufacturing services |
| ERP | enterprise resource planning |
| ESCAP | United Nations Economic and Social Commission for Asia and the Pacific |
| ESS | Eastern Software System Co., Ltd. (India) |
| EU | European Union |
| F&A | finance and accounting |
| FDI | foreign direct investment |
| FIE | foreign-invested enterprises |
| GaWC | Globalization and World Cities |

| | |
|---|---|
| GCC | global commodity chain |
| GDP | gross domestic product |
| GFCI | Global Financial Centres Index (by Z/Yen Group) |
| GM | General Manager |
| GPN | global production network |
| GSLI | Global Services Location Index by A. T. Kearney |
| GVC | global value chain |
| HKCCA | Hong Kong Call Centre Association |
| HKD | Hong Kong Dollar |
| HKGCC | Hong Kong General Chamber of Commerce |
| HKTDC | Hong Kong Trade Development Council |
| HR | human resources |
| IC | integrated circuit |
| ICT | information and communication technology |
| IDA | Infocomm Development Authority of Singapore |
| IDI | ICT Development Index |
| INSEAD | INStitut Européen d'ADministration des Affaires, or European Institute of Business Administration |
| IP | intellectual property |
| IPO | initial public offering |
| ISIC | International Standard Industrial Classification |
| ISO | International Organization for Standardization |
| IT | information technology |
| ITES | information technology-enabled services |
| ITO | information technology outsourcing/offshoring |
| ITU | International Telecommunication Union |
| JV | joint venture |
| KIBS | knowledge-intensive business services |
| KPI | key performance indicators |
| KPO | knowledge process outsourcing/offshoring |
| LPI | Logistics Performance Index (by World Bank) |
| M&A | merger and acquisition |
| MDP | Management Development Program |
| MII | Ministry of Information Industry, People's Republic of China |
| MNC | multinational corporation |
| MNE | multinational enterprise |
| MOFCOM | Ministry of Commerce, People's Republic of China |
| MTI | Ministry of Trade and Industry, Singapore |
| NASSCOM | National Association of Software and Services Companies, India |
| NBS | National Bureau of Statistics of China |

| | |
|---|---|
| NIDoL | new international division of labour |
| NRI | Networked Readiness Index |
| OECD | Organisation for Economic Co-operation and Development |
| OGCIO | Office of the Government Chief Information Officer, Hong Kong |
| OLI | ownership-specific (O), location (L) and internalisation (I) |
| ORN | Offshoring Research Network based at Duke University |
| PRD | Pearl River Delta |
| PwC | PricewaterhouseCoopers |
| R&D | research and development |
| RBV | resource-based view |
| RHQ | regional headquarters |
| RMB | Renminbi, the official currency of the People's Republic of China |
| SaaS | software as a service |
| SAR | Special Administrative Region (of the People's Republic of China) |
| SEDB | Singapore Economic Development Board |
| SGD | Singapore Dollar |
| SingStat | Singapore Department of Statistics |
| SME | small and medium-sized enterprise |
| SOE | state-owned enterprise |
| TCS | Tata Consultancy Services Co., Ltd. |
| TCT/TCE | transaction cost theory or economies |
| TEDA | Tianjin Economic-Technological Development Area |
| THE | The Times Higher Education |
| TNC | transnational corporation |
| UGC | University Grants Committee, Hong Kong |
| UKTI | UK Trade & Investment |
| UNCTAD | United Nations Conference on Trade and Development |
| USD | United States Dollar |
| VP | Vice-President |
| WEF | World Economic Forum |
| WFOE | wholly foreign owned enterprise |
| WSIS | World Summit on the Information Society |
| WTO | World Trade Organization |
| Y2K | the Millennium bug |
| YRD | Yangtze River Delta |
| ZGC | Zhongguancun, Beijing |

# Chapter 1 Introduction

> *A new phase of globalization, international trade in services, has been emerging for at least a decade […]. Developing countries around the world, particularly in Asia, have become large producers of services for developed countries. The range of such services is impressive. It includes back-office services such as payroll; customer-facing services such as call centers and telemedicine; design services such as the design of application-specific integrated circuits; research services such as conducting clinical trials; venture capital provision, from Taiwan to Silicon Valley, for example; software services such as programming; and IT and infrastructure outsourcing such as the managing of corporate e-mail systems and telecommunications networks. These new fields of service exports join the traditional fields of tourism and labor migration.*
>
> (Dossani, 2006, pp. 241-242)

## 1.1 Thesis Statement

The above paragraph from a paper published in *Brookings Trade Forum 2005: Offshoring White-collar Work* indicates the deepening relationship between developed and developing countries in international services trade and the expanding scale of this new wave of global shifts. In the last decade or so, the phenomenon of offshoring of white-collar work first aroused fears in the West about losses of service jobs that they once dominated to emerging Southern countries like India and China. From the economic development perspective, the earlier literature in the Anglo-Saxon regime was therefore occupied with examining the extent of international sourcing of ICT-enabled services (van Welsum & Vickery, 2005; van Welsum & Reif, 2006b), and its impact on employment and trade in the home countries, i.e. mainly the United States (Garner, 2004; Amiti & Wei, 2005; Liu & Trefler, 2008) and the United Kingdom (Abramovsky, Griffith & Sako, 2004; Gordon*, et al.*, 2005; Sako, 2006). The increasing geographic extent, scope of activities involved and complexity of arrangements have been attributed to both the continued changes in technology and management on the demand side and the increasing capabilities on the supply side, such as a dramatically expanding mass of graduates that fuel the supply of skilled labour in the host countries. The offshoring of these services 'continues the trend toward fragmentation and specialization in global value chains' (Gereffi, 2006, p. 16), which 'has helped to spur the industrialization and upgrading processes that have

occurred in developing countries', but more importantly this phenomenon also exhibits 'striking asymmetries and knowledge gaps' (Gereffi, 2006, pp. 4-5). While the effect of services offshoring varies across regions, and there are opportunities and constraints different from the manufacturing shifts facing developing countries in producing a wider range of such services; research from the supply perspective has primarily been based on the Indian experience (Nair & Prasad, 2004; Grote & Täube, 2006), with just a limited body of empirical studies on other fast-growing economies, such as China (Wright, 2009), Eastern Europe (Hardy, Micek & Capik, 2011; Sass & Fifekova, 2011) and Latin America (Gereffi, Castillo & Fernandez-Stark, 2009).

More notably, the demand perspective of Southern economies in the global services trade has long been neglected. Only recently has their demand as an evolving aspect of services offshoring, especially South-South services trade, started to be recognised (UNCTAD, 2008; Gereffi & Fernandez-Stark, 2010), although those demanded by the traditional core economies in the Global North are still clearly of greater volume and sophistication. Multinational corporations (MNCs) based in the conventional 'newly industrialised economies' (NIEs), including South Korea, Taiwan, Hong Kong and Singapore, have expanded strongly in the global value chain in terms of both supply and demand of overseas producer services particularly to support their industrial and trading activities in the region and worldwide (Winkler, 2009; Kang*, et al.*, 2010). Another recent observation is the new demand from large developing countries, especially Brazil, Russia, India and China (BRIC countries) representing 38% of developing countries' demand in IT services in 2009, which is being further stimulated by rapidly expanding domestic outsourcing needs (Fernandez-Stark, Bamber & Gereffi, 2011).

Therefore, in view of these research gaps as stated in the previous paragraphs, including the neglected aspects of both the demand and supply perspectives, as well as the increasing complexity of global sourcing of ICT-enabled services, the goal of the present study is to explore and examine the capabilities of the Global South to move up the global services value chain through the lens of the rising phenomenon of services offshoring. I focus on three East Asian economies, China, Hong Kong and Singapore, and three specific service sectors, information technology, finance and accounting, and customer contact services. Specifically, the research question we shall address is: What are the upgrading paths, constraints and strategic choice of

capabilities development of China, Hong Kong and Singapore along the global services value chain in the light of the recent rise of global sourcing of ICT-enabled business services?

For the rest of this chapter, we shall briefly portray the background contexts that underline the research goals, scope and design. We shall subsequently state specifically the research problem and objective, and provide a brief description of the methodology. The significance of this study will also be highlighted. An outline of the remaining chapters of this thesis will be presented at the end.

## 1.2 Background Information

With the continuous improvement of technology and intensified competition, firms have been relentlessly finding ways to cut costs and achieve better production capacities through a variety of organisation and geographical strategies and by reengineering the production process. Although geographical redistribution and specialisation of production started decades ago when manufacturing processes were massively moved from more advanced economies to developing regions, there has been a 'second' wave of international division of labour particularly related to the relocation of services work from the Western countries to emerging economies, such as India, China and Eastern Europe, since the 1990s (Apte & Mason, 1995; Bardhan & Kroll, 2003; Jahns, Hartmann & Bals, 2006; Bryson, 2007).

Generally, the term 'offshoring' is used to emphasise the geographical relocation of these processes; whereas 'global sourcing' calls attention to the disaggregation of services on a wider geographical scale. Specifically, offshoring or global sourcing of services refers to sourcing of particular services, either from organisations based overseas, by setting up cooperative contracts with these organisations, or from foreign affiliates or branches with complete ownership (Jahns, Hartmann & Bals, 2006).

Offshoring is not the same as outsourcing in that the latter involves sourcing and using a third-party supplier without regard to any geographical change. While outsourcing emphasises the organisational restructuring of the production of a firm's processes, offshoring encompasses the geographical change of a production activity aside from the necessary organisational transformation. Table 1.1 illustrates different

sourcing models by contractual/legal arrangement and geographical location. Offshoring can mean sourcing from an unaffiliated or third-party firm *operating outside the national boundary of the sending company*, which to be more specific can be known as 'offshore outsourcing'. But it can also refer to in-house performance of a function through establishing affiliates or subsidiaries abroad, which is typically identified as 'captive offshoring' (UNCTAD, 2004; Bunyaratavej, Hahn & Doh, 2007). More than a simple buy-or-make decision, offshoring can thus be viewed as a strategic decision to reject domestic internalisation of an activity or operation.

**Table 1.1: Sourcing Business Models.**

<table>
<tr><td>Contractual/legal arrangement</td><td colspan="3"></td></tr>
<tr><td rowspan="2">Buy from external sources<br>E.g. third-party suppliers</td><td colspan="2">Onshore outsourcing</td><td rowspan="2">Offshore outsourcing</td></tr>
<tr><td>Contracting<br>Staff augmentation</td><td>Pure outsourcing</td></tr>
<tr><td>Hybrid/collaborative<br>E.g. joint venture</td><td colspan="2">Co-sourcing<br>Build-operate-transfer (BOT)</td><td>Co-sourcing<br>Offshore development centres</td></tr>
<tr><td>Make within the organisation<br>E.g. completely-owned subsidiary, acquisition, branch office</td><td>Internal delivery</td><td>Shared services</td><td>Captive offshoring</td></tr>
<tr><td rowspan="3"></td><td>Onsite</td><td>Offsite</td><td rowspan="2">Offshore</td></tr>
<tr><td colspan="2">Onshore (same country)</td></tr>
<tr><td colspan="3">Geographical dimension</td></tr>
</table>

Source: modified from Jahns, Hartmann and Bals (2006, p. 222), with author's interpretation.

Note: Boxes shaded in grey refer to 'offshoring' in general without regard to the organisational arrangement.

The first massive international shifts of work in manufacturing are generally assumed to be successful. Not only has it confirmed the feasibility of disintegrating the production chain and optimising its organisational and geographical redistribution, but also shown the increasing capacity of developing regions to meet the requirements of the sending countries, primarily the triad economies of the Global North (the US, the UK and Japan) at first. The four 'Asian Tigers', Singapore, Hong Kong, Taiwan and South Korea, as the first movers within the East and Southeast Asia region (except Japan) have particularly demonstrated the upgrading possibility for lagging regions (e.g. Kim, 1998; Ernst, Haggard & Borrus, 2000; Masuyama & Vandenbrink, 2003).

China and the ASEAN-4 (Malaysia, Thailand, the Philippines and Indonesia), among the current 'newly industrialised countries' in the region, have meanwhile achieved considerable industrialisation and are also catching up quite rapidly despite certain tough constraints facing each of them at present (e.g. Felker, 2003; Gandhi, 2007; Gereffi, 2009; Brandt & Thun, 2010).

The offshoring of services was first attributed to the realisation by First World MNCs both that distant transmission of services work was made possible by the advancement and constantly falling costs of ICTs, and of the substantial labour cost differentials between home countries and remote developing regions. The uneventful passage of the millennium bug (Y2K) problem that brought about a huge short-term demand for IT professionals from offshore locations, particularly India, to deal with one-off recoding, has further built up the confidence of Western corporations in offshore suppliers and triggered a deeper decoupling of the value chain to send out non-core functions to the latter. Empirical research has found that the relocation of services work abroad is no longer confined to pure cost considerations. The drivers could also include seeking greater efficiency and/or flexibility, increased speed to market, to access to skills, markets and/or technology (Dalcher, 2005, pp. 12-13; Couto*, et al.*, 2006; Daga & Kaka, 2006).

The types of services that are amenable to offshoring are usually characterised by irrelevance of face-to-face servicing, an information-based work process, low set-up barriers, low social networking requirements, and intensive use of routine labour implying the need to search for considerable wage differentials. While lower-end activities such as data entry have been among the earliest to be offshored, some higher value-added tasks across a wide range of sectors, such as customer analyses, geographical information systems, legal research and architectural drafting, have started to be sent from high-income economies to certain capable lower-cost regions, such as India (Apte & Mason, 1995; UNCTAD, 2004; International Financial Services, 2005; Palvia, 2007).

Aside from the changes in technology and management, the improving capabilities of host countries have also contributed to the expansion of services offshoring. The Indian success, for instance, has been attributed to years of accumulated growth and institutional improvements, rather than mere 'millennium

luck' (Sheshabalaya, 1999; George & Hirschheim, 2008). These particularly refer to an expanding supply of young educated workers who possess good English abilities, the country's colonial background, improved ICT infrastructure, and the support of some industry institutions, especially the National Association of Software and Service Companies (NASSCOM). The trajectory of India in the services value chain probably suggests the possibilities for other Southern economies to play a more dynamic role in the global production system. However, the observation that the services development of some Southeast Asian economies, especially for overseas markets, has fallen well behind in the services chain raises doubts about the causes of such difference and whether it is merely that these countries come later than India. In addition, the success factors of India are unlikely to be duplicated by other locations, not only because the conditions now facing them are no longer the same as at the time of India's emergence before the millennium, but also because some of these attributes may not be applicable to the market in which other economies can make better use of their capabilities they have acquired. One example is that while the majority of Chinese graduates may not possess English skills as good as those of their Indian counterparts, China could take advantage of its other language abilities and other distinctive sources of advantage to get more engaged in the global production network.

Despite the increasing capacity of Southern economies beyond routine types of services, certain service functions obviously remain concentrated in the core economies because they involve core competencies critical to the firms' value creation (Hall, Cronin & Catchpole, 2003). Major concerns limiting the offshorability of some services are associated with potential risks in aspects of culture, language and communication, business management conventions, political conditions, regulatory compliance, provision and quality of infrastructure, and supplier credibility (Beulen, Fenema & Currie, 2005; Bhide, 2005). This in turn indicates the distinctive features of services as critical obstacles for lagging regions to overcome in order to upgrade to higher-value functions. This dilemma further leads to a distinction within the meaning of 'upgrading' which can be seen between: one's progression to a position better than its previous; and progression to a position better than its competitors. With regard to the latter, if there is to be a time when the Southern economies catch up their Northern counterparts, it could be one where technological breakthroughs ceased to be the latter's monopoly.

With increasing involvement of developing countries in supplying a wide range of ICT-enabled services, the most active and successful in this happen to be in Asia (UNCTAD, 2008). As mentioned earlier, the rise of Southern suppliers and MNCs as a new source of demand has contributed to the growing complexity of the global services production networks. The UNCTAD report on development and globalisation also points out that South-South services exports have intraregional characteristics (UNCTAD, 2008). However, there still lacks substantial empirical evidence in the literature dealing with issues concerning the development trajectories of Southern economies and the relationships between them in the global services value chain.

Building upon the preceding studies of services offshoring and economic trajectories of Southern economies in earlier international shifts of manufacturing, the present study attempts to fill in the gap where an in-depth investigation is needed, from both demand and supply perspectives, to examine whether and how these lagging locations can move up the value chain of global sourcing of ICT-enabled business services in a global-regional-local dynamic context.

## 1.3 The Research Problem

The dramatic rise in services offshoring in the last decade or so has invited another wave of concerns over the development trajectories of the Global South which has been conventionally considered as major recipients of foreign investments traditionally of lower technological and organisational complexities. They have also imported a greater volume of high-end technology and services, as compared to their exports in these. In spite of their deepening engagement in the global services value chain, whether and how the Southern economies can move on to higher-value functions remains a critical question to be addressed, as there is likely a limit to the types of activities currently offshored to these locations. With further disintegration and reintegration of value chain processes, the key to upgrading does not lie in the execution of more of those standardised processes but in the progression by moving away from routine, codified processes to more customised, innovative and knowledge-intensive ones. The main concern is that Southern players' thrust towards the higher end may be restrained by their lack of the kinds of tacit knowledge that are required for these highly contextualised functions. Hence, the possibility to get hold of such

knowledge and capacity in pushing towards a higher end is critical to sustaining their development in their own right.

Against this background, the general problem is whether (and how) Southern locations can make use of the rising opportunities (and challenges) to improve their current relative positions in the global production system. Since one of the research goals in this thesis is to examine both the demand and supply perspectives of Southern economies' services trade and development trajectories, the Hong Kong and Singapore experiences are analysed for the bidirectional flows in consideration of their open economies and relative maturity in services development, while the case of China is primarily examined for the supplier perspective based on an expectation of its fast-growing role in supplying ICT-enabled services to overseas clients but limited demand from its service firms for offshore services due to restrictive local conditions. However, throughout the analysis and discussion, there are further observations on both the demand and supply of all three economies and their relationships in the global and regional mosaics. As mentioned, intraregional flows are evolving in the services trade within the Global South, for example, inside East (and Southeast) Asia. Therefore, it is anticipated that the regional linkage may be crucial to the development of services offshoring business in the East Asia region, in parallel to intensifying global connectivity.

Based on the theoretical and empirical understandings of the research issue, a series of broad research hypotheses are proposed to express expected relationships between the various variables associated with the division of labour (particularly in services), services' distinctiveness and upgrading prospects of lagging locations.

To deal with the research question stated in Section 1.1, this study attempts to explain the recent patterns of trade in services, particularly three selected sets of services, including information technology, finance and accounting, and customer contact, in China, Hong Kong and Singapore, the key aspects of competitive advantage influential to their competitiveness in services, and their service firms' strategies in the face of rising opportunities and challenges in both global and regional contexts.

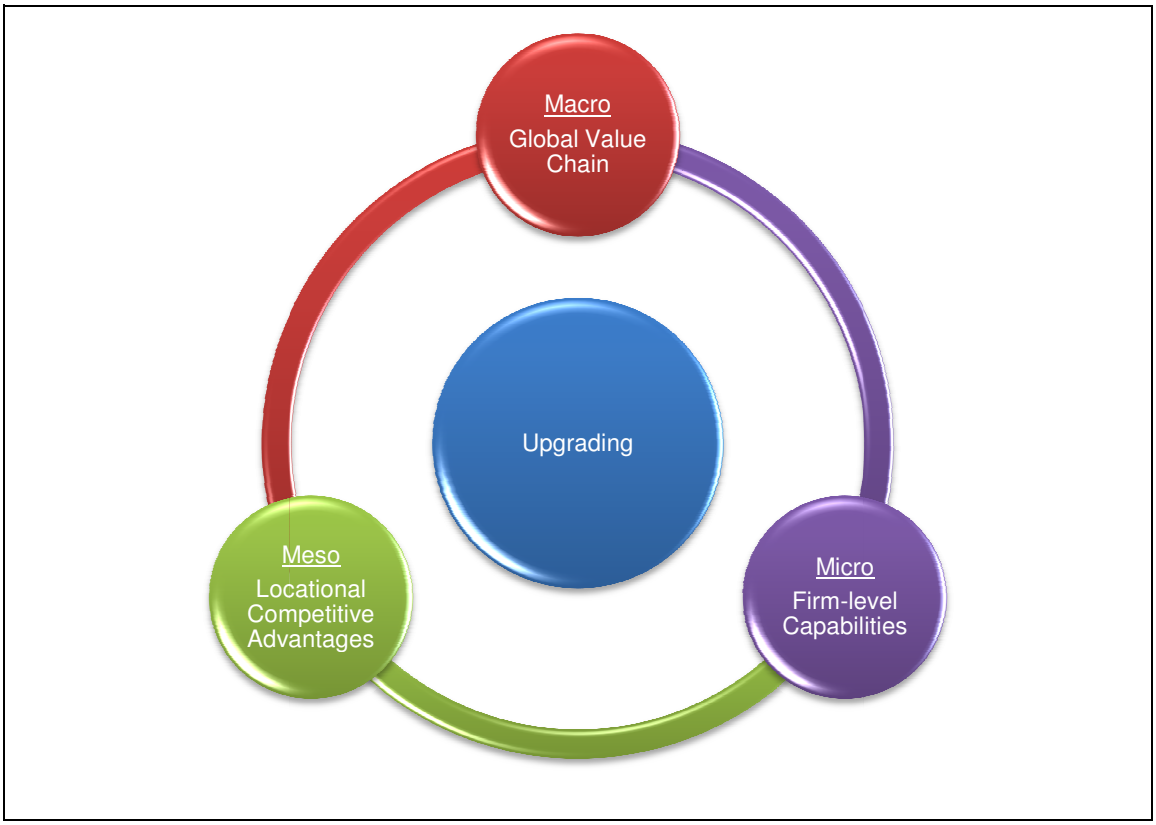
In particular, we are interested in examining whether there are any patterns of demand and supply that may be specific to the East Asia region, particularly those three economies. If so, how are they related to the development trajectories of each of

these locations? How are the sectoral value chain characteristics associated with these development patterns? What are the competitive (dis)advantages of these economies that are influential to the development of these services? After illustrating these relatively descriptive problems, we can seek to examine how firms of these sectors based in each of these economies have perceived upgrading and developed capabilities to move on to higher-value functions. How are these firm strategies linked to the locational characteristics? What are the main features that have been remarkable with the specific development paths of the regional locations/firms and that could provide us a deeper understanding of the value chain dynamics?

## 1.4 Overview of the Methodology

A research framework is formulated based on three particular paradigms that are considered most relevant to the research problem (see Figure 1.1). Firstly, the global value chain (GVC) concept (see, e.g., Gereffi, Humphrey & Sturgeon, 2005, 2006) is adopted for analysing the relationships of multiple firms and locations in various service activities on a global scale. It is useful for our study because of its emphasis on value creation and linkage, and its geographical/organisational scalability for sector-specific studies. Secondly, building upon the dynamic positioning in the GVC, we also apply the competitive advantage framework put forward by Porter (1998), to examine the factors that have made a difference to the patterns between places in production and trade in services. By stressing quality-based competition, which is especially true for upgrading of service functions, we look into the key aspects of locational competitiveness. Lastly, the capabilities paradigm is adopted to explain the pursuit of abilities to deploy and redeploy existing assets a firm possesses in response to changing endogenous and exogenous circumstances (see, e.g., Helfat*, et al.*, 2007; Teece, 2007). It emphasises dynamic strategies a firm needs to develop its competences and readjust them from time to time in face of altering competitive environments. We shall also show what relatively upgrading means for firms in terms of strategy formulation. Chapters 2 and 4 will include more in-depth discussion respectively on each of the three particular theoretical paradigms and their relevance to each other, and on how they are methodologically applied to the present study.

**Figure 1.1: Conceptual Framework of the Research.**




The present study takes a qualitative, constructivist approach to reconstructing the relationships between services offshoring and upgrading of the Global South. This is a cross-case study, as we look into three selected economies (Mainland China, Hong Kong and Singapore) and three sets of services (information technology, finance and accounting, and customer contact) for cross-location and cross-sector analysis in terms of both comparisons and relationships.

As a research strategy, this study triangulates multiple theoretical paradigms as shown in Figure 1.1, sources of evidence and methods, and levels of analysis. The types of data adopted include both primary surveys aiming at service firms and supporting institutions, socio-economic figures and documentary data from, for example, government reports, policy announcements and the media. Systematic processing and analysis of the data are performed. A detailed account of the research methodology will be presented in Chapter 4.

## 1.5 Significance of the Study

In view of the research void of the demand perspective of the Global South and other cases beyond India in the supply-side research, the present research attempts to capture both the demand and supply angles of the phenomenon of services offshoring in association with the upgrading trajectories of a select of East Asian economies. As the existing literature has largely focused on the manufacturing sectors in examining the experiences of the Global South, this study can shed light on their emerging role in the global services production network, while applying the insights from the seminal theoretical paradigms based upon which most preceding empirical studies were done on manufacturing. Therefore, this study can further offer new implications for the applicability of these theories to services studies.

In addition, this research will bring about relevant implications beyond the selected cases to other regions in the Global South and other service activities. It will also give stakeholders, including service firms, supporting institutions and policymakers, insights into the complex picture of upgrading in the global services value chain in the dynamic global-regional-local mosaics. This study will also shed light on the possible upgrading paths and strategies based on some locational and sectoral characteristics that stakeholders in the selected study areas and other lagging economies may consider.

## 1.6 Outline of the Chapters

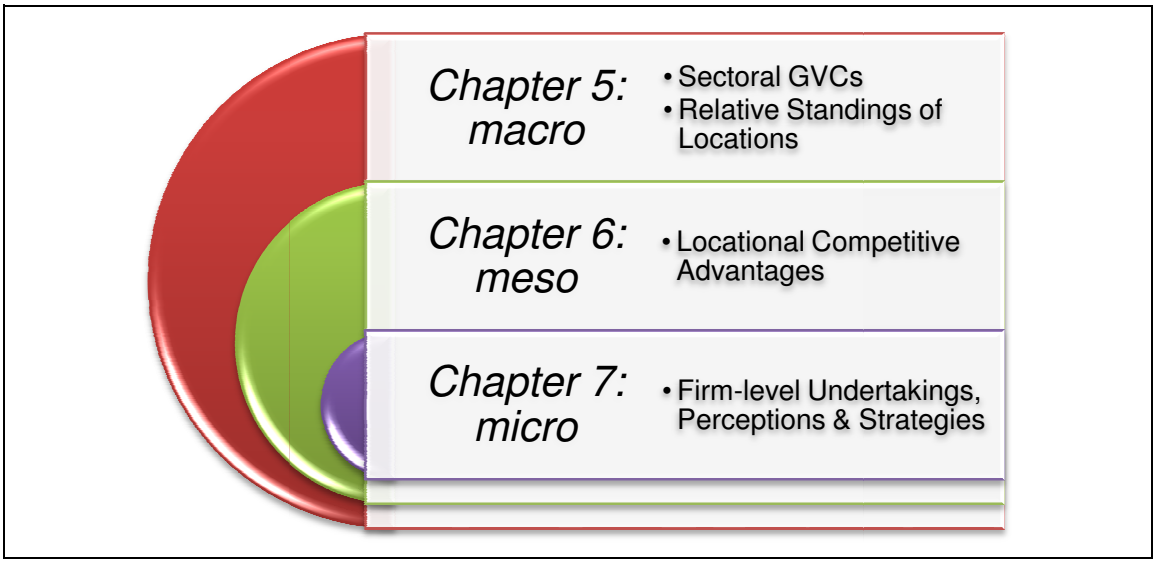
This thesis comprises eight chapters including this introduction. As mentioned, we seek a multi-theoretic approach to conceptualising the research problem. In Chapter 2, to understand the logic of international division of labour and development, we review seminal theories in specialisation, division of labour, international trade, FDI and the firm. We also consider classical development/dependency theories and the paradigms of global production system and capabilities. These theoretical concepts will help us comprehend the fundamental concepts laid behind the phenomenon of services offshoring and the transferability of these manufacturing-originated theories to services studies. We can subsequently conceptualise the distinctiveness of services, particularly knowledge-intensive services, in relation to the issue of global sourcing. These then lead us to the formulation of the research framework as briefed above and drawn in Figure 1.1.

In Chapter 3, a systematic review of previous empirical studies will inform us of the different aspects of concern in services offshoring. We shall first consider the origins of services offshoring (particularly the Indian experience). Also discussed will be the changes in the demand and supply patterns since then in terms of geographic extension, scope of services and sophistication of organisation.

After developing solid conceptual and empirical understandings of the research problem, we shall explain the research methodology in Chapter 4. The research objective, methodological proposition, and application of the conceptual framework will be detailed. We shall then discuss the research strategy that supports the choice of data sources and methods. The types of data and their collection and processing procedures will be explained.

The empirical and discussion chapters are arranged in logical order from descriptive to analytical according to the flow in the research framework (Figure 1.2). At the macro level, an understanding of the global value chain in specific sectoral and locational contexts will first be sought in Chapter 5. In so doing, we shall comprehend the varying value hierarchies of different processes in the selected sets of services, i.e. information technology, finance and accounting, and customer contact services. In relation to the dynamic global services chain and different characteristics of the concerned sectors, the development trajectories of the three economies will then be reviewed and discussed at the meso level in Chapter 6. After examining the value chain dynamics and locational trajectories, in Chapter 7, we shall first explain the perceptions and strategies of the service firms at the micro level, in relation to the global-regional-local mosaics. Then some crossover comparisons for the selected economies and sectors will be made for a deeper analytical understanding.

**Figure 1.2: Empirical Chapters with Three Levels of Analysis.**




Chapter 8 will conclude the whole thesis by summarising the important findings and analyses of the study, particularly mapping firm strategies on to locational characteristics for an integrative and comparative understanding of the upgrading possibilities and constraints of the concerned economies. We shall further discuss the study's limitations and recommend important future research avenues. By drawing broader geographic insights, we emphasise the dynamics between regional advantages of linguistic and cultural ties and GVC upgrading.

# Chapter 2 Theoretical Understandings and Conceptual Framework

## 2.1 Introduction

Having outlined the research objective and question in the introductory chapter, we seek a solid theoretical foundation for the present study in this chapter. As this research is aimed at examining the upgrading paths and choice of selected economies in the Global South in the regime of rising global sourcing of offshore ICT-enabled business services, we shall first briefly look at the theories of specialisation and division of labour, international trade, FDI and the firm in Section 2.2. These will give us a deep understanding of the geographical and organisational specialisation of production and division of labour. In Section 2.3, we shall subsequently consider the classical development theories and particularly the relatively recent political-economic theories which aim to explain whether and how locations and firms develop capabilities and upgrade.

The distinctiveness of services, particularly with respect to the issue of global services sourcing, and the conceptual implications of such will be discussed in Section 2.4. These will inform us about the transferability of the manufacturing-originated theories discussed in Sections 2.2 and 2.3 to services studies, and why any single stream of the existing theoretical literature is not adequate for a purposeful account of this study's research problem. We then adopt three specific theoretical perspectives, global value chain, competitive advantage, and capabilities, to formulate a suitable conceptual framework in Section 2.5, for the objectives and concerns of this study. Section 2.6 will conclude this chapter.

## 2.2 Geographical and Organisational Specialisation of Production and Division of Labour

Since not every country or firm can produce all goods and services, each of them specialises in certain parts of the spectrum of production processes of different products and services. Theorists from different disciplines have attempted to conceptualise such geographical and organisational division of labour. The

intensifying and increasingly sophisticated services globalisation, particularly the shift of a wider range of and a rising amount of high-order services to developing regions, has led us to review the existing theories. In this section, we shall consider and relate several of such theories useful for our theoretical understanding of how production activities are distributed geographically and organisationally.

### 2.2.1 Geographical Specialisation of Production: Division of Labour, Competitive Advantage, and OLI Paradigm of MNCs

To seek conceptual explanations on the geographical division of labour, we can draw on several of the seminal paradigms, including the concepts of division of labour by Adam Smith and others, the comparative advantage theory by David Ricardo and others, the competitive advantage framework by Michael Porter, and the eclectic paradigm of FDI by John Dunning.

**Specialisation of production and division of labour**

In the traditional sense, division of labour is concerned with the location of trade, i.e. what to produce and what to buy, which is determined by comparative advantage, i.e. the endowment of labour and capital in the simplest form of theorisation.

Adam Smith (1776) in his book *An Inquiry into the Nature and Causes of the Wealth of Nations* analyses the concept of 'division of labour'. According to Smith, 'The greatest improvement in the productive powers of labour, and the greater part of the skill, dexterity, and judgment with which it is anywhere directed, or applied, seem to have been the effects of the division of labour' (Smith, 1998, p. 11). He begins with the example of pin-making within a workshop, the production process of which is broken up into a number of branches where each worker is responsible for one or a few distinct tasks. A proper division and subsequent reintegration of such different operations, based on the notion of specialisation and economies of scale, would therefore help improve productivity and therefore economic growth and wealth creation. Although in Smith's time all tasks within an activity were to be carried out in the same place, his concern about the size of the market as the limits to division of labour would still be relevant to the contemporary period of globalisation.

With a much larger market size, geographical specialisation and division of labour take place, in which the production process is divided into various routines and distributed to different locations based on certain production criteria and market conditions. With regard to this, the theory of comparative advantage (Ricardo, 1817; Heckscher & Ohlin, 1991) conceptualises an international division of labour by industry, and emphasises the disparities of quantitative cost advantage between advanced and developing countries. The Ricardian theory states that in a free market a country would specialise in producing and exporting products in which it has a cost advantage relative to other countries and relative to other things it could make, and import those in which it has a comparative disadvantage (Ricardo, 1817). Building on Ricardo's, the Heckscher-Ohlin theory developed in the early 20$^{th}$ century considers only two production factors, labour and capital, for a simplified model for factor endowments of two countries (Heckscher & Ohlin, 1991).

The logic of comparative advantage helps explain how the differences in various endowments determine which parts of the production spectrum nations/regions are specialised in and what kinds of products they export and import. As such, generally speaking, under free trade, developed countries would specialise in high-tech and/or skill-intensive products that they have a relative cost advantage to produce, whilst importing low-order products such as agricultural and labour-intensive manufactured goods from developing countries. However, the comparative advantage theory at its time of theorisation still concerns industrial division of labour and only considers all tasks within an industry to be performed within one single location, as the problem is that costs of coordination and transport are too high to produce intra-industry fragmentation economies.

Developments of technologies, particularly in transportation and communications, and their costs of usage, the increasingly complex organisational form of firms, particularly that of MNCs, as well as trade liberalisation and economic reforms, since the 1970s have triggered a 'new set of conditions for capital expansion and accumulation' (Fröbel, Heinrichs & Kreye, 1976). While this evolution in the internationalisation of production processes and trade flows has given birth to the 'new international division of labour' (NIDoL) which first happened in labour-intensive parts of manufacturing, all these technological, organisational and regulatory changes have released the constraints on globalisation of services only since the 1990s. Much

industrial production has been shifted from the Global North (the US, Europe and Japan) to the Global South, such as the emerging economies in Asia and Latin America, where costs for producing labour-intensive parts of the manufacturing process are substantially lower (Fröbel, Heinrichs & Kreye, 1980). Such worldwide reorganisation of production has been primarily led by transnational or multinational corporations (TNCs/MNCs) which have expertise to solve the co-ordination problems. In part because of an evolved business form, these organisations are capable of decomposing the production process and reintegrating the tasks on a global scale (Frank, 1980; Fröbel, Heinrichs & Kreye, 1980). The breaking up of the process into simple units has allowed companies to easily and quickly train even unskilled labour force to carry out otherwise complex operations.

It was observed that the separation and geographic dispersion of manufacturing processes by the late 1970s primarily happened within a particular industry (Fröbel, Heinrichs & Kreye, 1978; Levy, 2005). Following the trend of manufacturing, the worldwide redistribution of services has taken off since the late 1990s, which is labelled as the 'second global shift' (Bryson, 2007). Taking advantage of low-cost and real-time transmission of data driven by cheaper advanced information and communication technologies (ICTs), and improved organisational capacity, MNCs are increasingly capable of separating and coordinating 'a network of contractors performing an intricate set of activities' (Levy, 2005, p. 687). They have learnt from their experiences the growing international subcontracting in the 'first' global shift and from the lean production systems that have diffused internationally to other manufacturing and service sectors since their initial adoption by Japanese auto manufacturers (Levy & Dunning, 1993; Levy, 2005).

The reengineering of the services value chain and the standardisation of services together has offered the possibility of relocation of some service tasks from high- to low-cost locations. This 'new' offshoring phenomenon 'does not affect any sector in particular; rather, it affects specific value chain tasks, leading to a micro-division of labour' (Levy, 2005, p. 689). A common example is that offshore technicians are contracted by hospitals based in, say, the UK, to read X-rays sent via the Internet. It is therefore suggested that 'conventional theories of sector-based comparative advantage are losing their traction' (Levy, 2005, p. 689).

The routinisation and standardisation of such tasks and their geographical shifts seem to merely suggest deskilling of labour, implying the continued monopoly of those actors and locations already privileged in the earlier wave of NIDoL. Such dilemma will be further discussed in Section 2.3 on the theorisation of development particularly of the Global South in light of the increasing integration and restructuring of the global economy.

Nevertheless, since the geographical redistribution of production has become increasingly sophisticated, the simple models derived on a few cost-based variables and focused on the vertical industrial change are inadequate to explain how and why different actors can change their factor endowments and thus their cost advantage. Moreover, these earlier conceptualisations are primarily concerned with costs as the determinant of competitiveness, which however gives limited explanations on the development of technological and organisational capacities, and the roles of different actors.

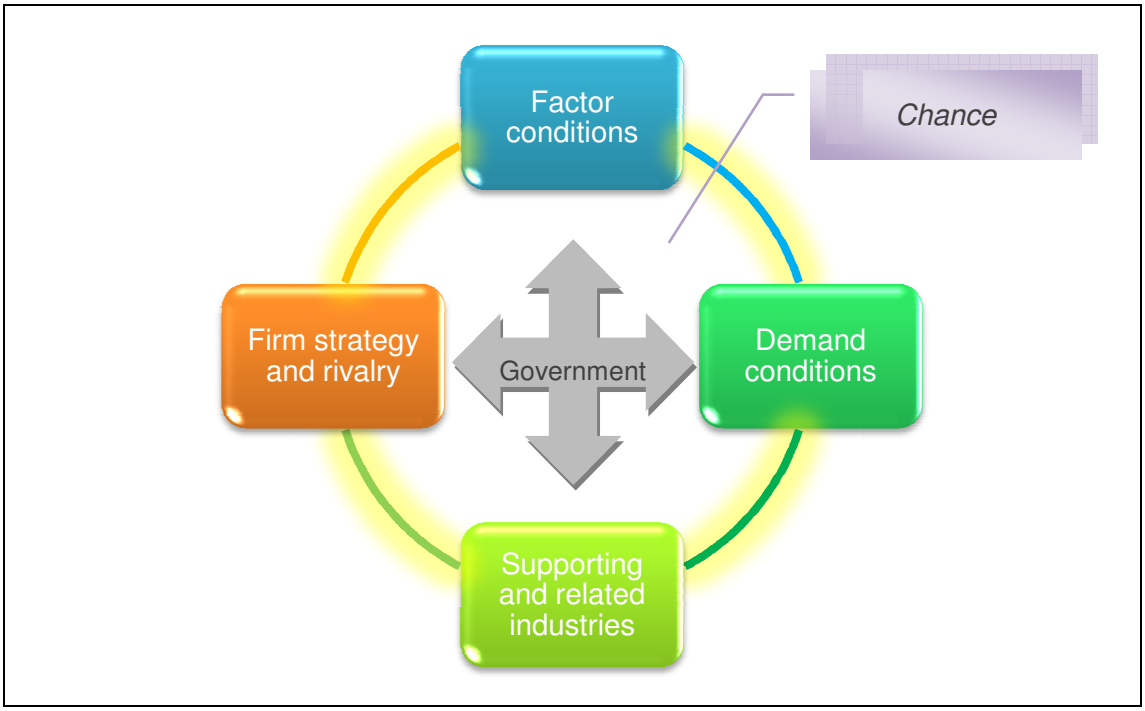
**Competition beyond costs: The Porterian framework of competitive advantage**

Competition is, as Michael Porter (2008, p. xi) puts it, 'one of society's most powerful forces for making things better'. It has never stopped intensifying and has spread across many more sectors of society. At its core are 'the drivers of industry competition, the ways in which companies gain and sustain competitive advantages and the principles of developing a distinctive strategy' (Porter, 2008, p. xii). To achieve competitiveness means to sell and make a profit based on providing value to customers in contested markets. While 'no nation can be competitive in everything' (Porter, 1998, p. 7), not all nations have competitive advantages. While everyone can compete to sell based on cheapness; competitive advantage suggests to achieve sustainable competitiveness is to go beyond cost-based competition, i.e. based on quality and differentiation which however not everyone possesses or is able to capture.

Porter's (1998, 2008) competitive advantage framework seeks to offer explanations for the question: Why are firms based in a particular nation able to create and sustain competitive advantages against the world's top rivals in a specific field? National competitiveness and prosperity rest on the presence of 'a business environment, along with supporting institutions, that enable the nation to productively *use* and *upgrade* its inputs' (Porter, 1998, p. xxii).

The Porterian model encompasses four broad attributes (i.e. factor conditions; demand conditions; related and supporting industries; firm structure, strategy and rivalry), as well as two additional variables (i.e. government and chance), and portrays their interrelationships (Porter, 1998) (see Figure 2.1). As a mutually reinforcing dynamic system, these forces and their interactions together shape the environment in which local firms compete by leveraging the dynamics of globalisation to promote or impede the creation of competitive advantages.

**Figure 2.1: The Porterian Model of Competitive Advantage.**




Source: based on Porter (1998).

What is novel about the Porterian framework is his emphasis on the quality of each of the four forces and the interaction among them. Whilst comparative advantage is about cheapness; the strategy of gaining and sustaining competitive advantages is not simply to achieve cost leadership but also differentiation, which aims at quality and uniqueness relative to value and cost (Porter, 1985). It grows fundamentally out of a firm creating value for its buyers that exceeds the cost of creating it (Porter, 1985, p. 3). Value is what buyers are willing to pay, and superior value derives from selling at lower prices than rivals for same benefits or from offering unique benefits that allow a higher price to be charged.

Differentiation can be based on the product itself, the delivery system, the marketing approach, or/and a wide array of other attributes (Porter, 1985, p. 14). If a firm strategically chooses attributes that are distinctive from its rivals', it will be able 'to command a premium price, to sell more of its product at a given price, or to gain equivalent benefits such as greater buyer loyalty during cyclical or seasonal downturns' (Porter, 1985, p. 120). Such qualities help the firm sustain competitive advantages and gain a monopolistic position in the industry.

**(1) Factor (input) conditions:**

Factors of production are the inputs necessary to compete in any industry (Porter, 1998, p. 73). They range from natural resources, human resources and capital resources to various types of infrastructure, such as the legal system and access to research institutes. According to the standard trade theory which rests on production factors, nations are endowed with varied stocks of such factors, which determine their pattern of competitive advantage, and hence trade and specialisation. A country will export those goods and services that are produced with intensive use of production factors that are well-endowed and/or that it uses more productively.

The factors most important to competitive advantage are however not simply inherited but need to be upgraded and replaced within a nation or region in a continuously evolving trajectory (Massey, 1995). Over time, the nation/region must improve efficiency, quality and ultimately specialisation in particular spatial clusters where a group of strong auxiliary sectors could optimise their locational advantages and support each other, so as to increase productivity. The initial stock of factors is therefore less important than the rate at which they are formed, upgraded and made more specialised for particular industries. Specialised factors, particularly those central to innovation and upgrading (e.g. a specialised research institute), 'not only foster high levels of productivity but tend to be less tradable or available from elsewhere' (Porter, 2008, p. 227). These factors are necessary for realising higher-order competitive advantages.

**(2) Demand conditions:**

Home demand shapes the rate and character of improvement and innovation by a nation's firms through the dynamic influence of its composition (or nature of

buyer needs), its size and pattern of growth, and the mechanisms by which that nation's domestic preferences are spread to foreign markets or internationalised (Porter, 1998, p. 86). Firms can make choice of market segments for differentiation by understanding local demand. With an emphasis on the quality of home demand, a significant number of increasingly sophisticated domestic buyers pressures local firms to improve and attain high standards, and provides insights into current and future needs that tend to be difficult to gain through foreign markets alone (Porter, 2008, p. 228). This sophistication nevertheless needs to correspond to what are or could be marketable qualities internationally. Demand conditions at home therefore affect 'whether firms can and will move from imitative, low-quality products and services to competing on differentiation' (Porter, 2008, p. 228).

It is nevertheless important to bear in mind that, as the Porterian model is a mutually reinforcing system, the effect of those conditions on competitive advantage also depends on other dynamic variables of the framework. If appropriate supporting industries are absent or weak, for instance, firms may not be able to make a prompt response to the changing buyer needs.

**(3) Supporting and related industries:**

The presence in a nation of supporting industries that are internationally competitive creates advantages in downstream industries. This is achieved via efficient, early, quick and sometimes preferential access to the most cost-effective inputs (Porter, 1998). However, more important than mere access to or availability of machinery or other inputs is the advantage that home-based suppliers offer in terms of ongoing coordination. Related to this, the most crucial benefit probably lies in the process of innovation and upgrading. Competitive advantage is created through close collaborative relationships between top suppliers and the industry. Proximity of managerial and technical expertise, together with cultural affinity, tends to facilitate free and open flows of information, and to reduce transaction costs.

The presence of internationally successful home-based industries that are related is likely to bring about new competitive industries. These should be industries in which firms can coordinate or share activities in the value chain when competing, or those which involve products that are complementary (Porter, 1998, p. 105). Similar to the case of supplier industries, the presence of competitive related industries tends to

ease information flow and facilitate technical interchange thanks to proximity and cultural similarity. It also provides a source of new entrants who may bring a new competition approach for the industry. In addition, international success in one industry can stimulate demand for complementary products or services of another auxiliary industry in the nation, where such complementarity may apply to the same markets with different products. The force of this 'pull-through effect' however differs across industries (Porter, 1998, p. 107). While it seems to be strongest early in the life cycle of the industries involved, first-mover advantages may still persist long after the link between complementary products fades.

In brief, if a nation has competitive advantages in several related industries, its success in one of those industries is more likely. Yet, it is not necessary to possess advantage in all supplier and related industries in order to achieve and sustain competitive advantages in an industry. The effects of both home-based supporting and related industries still depend on other forces. For instance, if an industry is close to world-renowned domestic suppliers but does not have access to advanced factors like active rivalry or demanding home customers, it may gain insufficient advantages to compete internationally.

**(4) Firm strategy, structure and rivalry:**

This element of the Porterian model refers to the conditions, in particular, the rules, incentives and norms, in a nation or region governing how firms are created, organised and managed, and the type and intensity of domestic rivalry (Porter, 1998, p. 71). The goals, strategies and organisational forms of industries differ across countries; but they have to match with the sources of competitive advantages in a particular industry. Crucial national differences in managerial approaches and organisational skills are often observed in areas as follows:

> the training, background, and orientation of leaders, group versus hierarchical style, the strength of individual initiative, the tools for decision making, the nature of the relationships with customers, the ability to coordinate across functions, the attitude toward international activities, and the relationship between labor and management. (Porter, 1998, pp. 108-109)

These variations in managerial practices shape advantages and disadvantages in competing in different types of industries. In addition to managerial attitudes, whether firms are willing and able to compete globally is also dependent on other factors such as pressure from domestic market saturation or local rivalry.

With regard to domestic rivalry, one side of the argument is that it causes duplication of effort and prevents firms from achieving economies of scale; thus, to compete against foreign competitors, the nation should nurture a handful of 'national champions' or promote inter-firm cooperation with the scale and strength. However, according to Porter (2008, pp. 227-228), economies with low productivity often have limited local rivalry; whilst the move to an advanced economy requires developing vigorous domestic rivalry. Rivalry need not be restricted to price; in fact, it must shift from low wages to low total cost, and ultimately evolve beyond cost to include differentiation and quality. Competition must move from imitation to innovation and from low investment to high investment, not only in physical assets but in intangible resources such as skills and technology.

In a nation/region, a group of capable domestic rivals try alternative strategic approaches and creates a range of products covering many segments, thus enhancing innovation and shaping a fertile environment for creating and sustaining difficult-to-replicate competitive advantages through competition with foreign rivals. This process of local rivalry creates advantages for the entire national industry that are external to any particular company.

**(5) Role of the government:**

Governments can influence each of the four forces in positive or negative ways. To mention a few instances, subsidies, education policies and the like can have significant impact on factor conditions. Domestic demand conditions can be affected if the government sets up local product standards or regulations, which will influence buyer needs. Also, the government is often a major buyer of many products and services in a nation, which can either positively or negatively affect its industries. It can also shape the context for firm strategy and rivalry through such mechanisms as tax policy and antitrust laws. Certain government measures can however have bad influence on competition in the nation, including both tariff and non-tariff ones, such as different regulatory standards for products. In turn, government policy can be

influenced by any of the forces. For example, strong home demand for a product may push the government to introduce safety standards earlier than otherwise.

**(6) Chance:**

In Porter's words, '[c]hance events are occurrences that have little to do with circumstances in a nation and are often largely outside the power of firms (and often the national government) to influence' (Porter, 1998, p. 124). Examples of particular influence on competitive advantages include: acts of pure invention, major technological discontinuities (such as biotechnology), discontinuities in input costs (such as the oil shocks), significant shifts in world financial markets or exchange rates, surge of world or regional demand, political decisions by foreign governments, and natural/human disasters. Chance events can create discontinuities that lead to shifts in competitive position, by nullifying the advantages of previously established rivals and creating opportunities for a new nation's firms. Yet, the effect of chance events on different nations varies, and can be positive or negative.

The ultimate logic of the Porterian competitive advantage model is that nations succeed in particular industries because their home environment is the most dynamic and the most challenging, thus stimulating and urging firms to upgrade and widen their advantages over time (Porter, 1998). In general, more specialised resources that are difficult to imitate, more sophisticated domestic demand, stronger related and supporting industries, and keener local rivalry among firms in a given industry are more likely to help it grow and compete in the global economy.

**FDI and MNC: Dunning's eclectic OLI paradigm**

The internationalisation of business is nothing new to either developed or developing countries (Tolentino, 2000). In particular, the bulk of outward FDI at the global level, predominated by the US MNCs, was associated with primary commodity production before the Second World War. Since then, as the home countries in America and Europe have advanced their industrial development and as their firms gain maturity as MNCs, their outward FDI has gradually progressed towards more sophisticated forms of manufacturing and services activities that embody greater technological and organisational complexities. The later period has seen the internationalisation of Japanese corporations, particularly in the automobile, consumer

electronics and associated technology industries, since the 1960s, and more recently MNCs in fast-emerging economies, such as the four 'Asian Tigers', evolving in an increasingly shorter time span (Tolentino, 2000; Lall & Urata, 2003).

MNCs generally have different patterns of internationalisation in different types of home countries, with different development trajectories, owing partly to variations in national resource endowments, industrial development path, market size and position, and so on. Therefore, we need to understand why and how certain locations are preferred to others by some firms for supply of particular production inputs and/or for overseas business investment. In regard to this, Dunning's eclectic paradigm of MNCs is helpful in explaining the locational determinants of FDI (Dunning, 1980, 1981, 1988).

Dunning draws upon Hymer's pioneering microeconomic theory of the multinational enterprise (MNE) in the 1960s (Hymer, 1968, 1976; Pitelis, 2002), and the works of Buckley and Casson (1978), Casson (1979), Caves (1971), Coase (1937), McManus (1972), and others. According to Dunning, firms develop and deploy their resources internationally when and where they are able to take advantage of some combination of three potential sources of advantage: ownership-specific (O), location (L) and internalisation (I) advantages. The notion of 'O' advantages explicitly makes use of Hymer's claim that firm ownership advantages, as assets not available to local firms, are a prerequisite for compensating the disadvantage of being foreign, as additional costs arise when operating in foreign markets (Dunning & Rugman, 1985), which is indeed also a source of Porterian competitive advantage. Through their mobility, MNCs may effectively co-ordinate, more than merely possess, their assets in different countries, and thus gain a competitive edge over indigenous firms. Over time, firms invest and improve their combination of tangible and intangible assets.

The 'L' element aims at explaining the choice of location in terms of locational advantages. It involves access to country-specific assets, such as materials, markets, labour, infrastructure and government. The 'I' element is also involved, because existence of ownership advantages or location advantages are not themselves adequate to explain FDI, which also involves a decision to 'internalise' an activity within the command hierarchy of the firm (rather than simply purchase from a local supplier), reflecting circumstances where ownership advantages need to be protected

and developed within the firm, and/or substantial efficiency savings in terms of reduced transaction costs. In other words, Dunning's OLI paradigm helps to frame logical questions for firms to answer when deciding foreign investment, rather than offer the 'correct' answers in particular conditions.

Disaggregation of the production chain, and increasing offshoring of non-core services to remote locations, allowing increased use of third-party foreign vendors, seems to reflect a reduced importance of ownership-specific and internalisation advantages. In fact, with deeper and wider geographical and organisational shifts of production, the location advantages have increasingly emphasised a broader portfolio of locational assets beyond simply lower input costs, or availability of resources (Bunyaratavej, Hahn & Doh, 2007). In addition, faced with an array of potential risks and market uncertainties, firms still need to carefully decide whether to opt for third-party vendors, joint ventures, or captive establishments. Choosing to internalise offshore activities may reflect transactional market failures, such as the risk of a supplier's misunderstanding of foreign markets or a partner's potential dishonest behaviours. These transaction-related cost concerns will be discussed in the next sub-section (2.2.2). While each of the three sources of advantage comprises distinct conditions, each must be satisfied for FDI to occur in a particular case.

In his more recent work, Dunning (2000, 2001) identifies four specific types of FDI, each of which has different, but not exclusive, motives. They include: (1) *market-seeking*, or demand oriented (to satisfy particular foreign markets), (2) *resource-seeking*, or supply oriented (to gain access to natural/basic resources), (3) rationalised or *efficiency-seeking* (to promote a more efficient division of labour or specialisation of an existing portfolio of foreign and domestic assets), and (4) *strategic asset-seeking* (to protect or augment the existing 'O' advantages of the investing firms and/or to reduce those of their competitors). He observes the changing focus of the FDI motives in the 1990s as compared to the 1970s (Dunning, 2009). In general, the surge of knowledge-intensive and integrated MNE activities, alongside the need of firms to exploit and control intangible knowledge assets from a variety of locations, has changed the ways FDI is deployed. For instance, strategic asset-seeking FDI is now more geared to augmenting the 'O' advantage by the acquisition of new assets, or by a foreign inter-firm partnership. Dunning, admits that, in line with the idea of Porter (1998; 2001; 2008), 'more attention needs to be given to the importance of location

*per se* as a variable affecting the global competitiveness of firms', principally in view of the changing locational requirements of mobile investments, and the growing significance of the structure and content of the location portfolio of firms in sustaining their global competitive positions (Dunning, 2009, p. 16).

Overall, the OLI paradigm gives us a good understanding of how foreign investment is decided based on both firm-specific and country-specific considerations. However, taking the perspective of MNCs based in developed countries, the OLI framework falls short in offering a constructive account of how certain regions within the Global South in recent years have succeeded in acquiring better competitiveness. The empirical observations that relatively sophisticated service processes have been increasingly performed by developing countries tend to challenge the static core-periphery hypothesis.

To sum up, the above discussion on the theories of geographical specialisation of production, including those on division of labour, the competitive advantage and the locational choice of MNCs, has allowed us to understand how the spatial distribution of different functions and international competition have evolved. In particular, we have noted the different forces in affecting firms' decision of cross-border production and investment, and in creating and modifying a country/region's advantages. Among these, the competitive advantage framework contributes a dynamic perspective of how a location sustains and improves its competitive position. In spite of its accurate emphasis on quality-based competition, there is a need to take into further consideration, for instance, the relevance of local demand, and the role of global actors (e.g. inter-state policy and supranational institutions). Its application to the present research will be explained in our conceptual framework formulated in Section 2.5.

### 2.2.2 Organisational Division of Labour and Firm's Decision of Sourcing: Transaction Cost Economy (TCE) and Resource-Based View (RBV)

Since services offshoring is not merely concerned with the geographical (re)distribution of production processes, but also a result of organisational transformation (either within or across organisations), we need to consider the micro-level perspectives of how different organisations make the 'make or buy' decision (Gambino, 1980; Abramovsky & Griffith, 2006; Trefler, 2006). The transaction cost theory or economies (TCT or TCE) and the resource-based view (RBV) are useful in

explicating the processes in which individual organisations decide whether, what and in what way to engage in shifting service processes abroad.

As a principle of TCT, the total cost of any given quantity and quality of outsourced or offshored part of the production chain includes not only spending on that input itself but also the costs associated with 'governing' the transaction from external or affiliated suppliers (Globerman & Vining, 2006). The transaction costs for offshoring/outsourcing are closely associated with market contestability and asset specificity. In a contestable market, characterised by low barriers to entry and exit, one or a few firms are at present available, but if the price paid by the outsourcing firm is higher than the average cost incurred by external suppliers, a large number of firms will quickly become available. In a contestable market, characterised by low barriers to entry and exit, one or a few firms are at present available, but if the price paid by the outsourcing firm is higher than the average cost incurred by external suppliers, a large number of firms will quickly become available. In contrast, in a market with low contestability, the vendor would charge a price above marginal cost, which is a 'bargaining cost' at the stage of contract negotiation (Globerman & Vining, 2006, pp. 6-7). After the implementation of the contract, if the supplier who is difficult to be replaced behaves opportunistically in an untrustworthy way, while the risk of contract breach externalities is high, it may incur an extra 'opportunism cost' for the buyer.

In addition, asset specificity, which may refer to physical, location or human assets, relates to the uniqueness of the good or service being exchanged between two parties (Grover, Myun Joong & Teng, 1996; Globerman & Vining, 2006). If a product is customised and not readily transferable to alternative parties, such high asset specificity will likely limit the feasibility and benefits of offshoring for the buyer. In this case, the close access to these specific assets allows the supplier to enjoy higher control over the production process. On the contrary, more standardised products and services tend to imply lower costs for outsourcing/offshoring as suppliers can expand their economies of scale. Indeed, increasing globalisation and the advance of ICTs have helped reduce the transaction costs of routine tasks, especially because the increased access to cheaper labour especially for labour-intensive production opens up new markets, and thus reduces the search and negotiation costs for buyers. With regard to offshoring, high asset specificity results in high transaction costs in sourcing high-end services from abroad, due to the difficulty in transferring tacit knowledge across

geographic space and even across different subsidiaries of MNCs (Kundu, Jain & Niederman, 2007).

Another firm-level perspective the resource-based view (RBV) attempts to elucidate the competitive success of firms on the basis of resource heterogeneity (Barney, 1991; Teece, Pisano & Shuen, 1997; Gilley, Rasheed & Al-Shammari, 2006; Helfat, *et al.*, 2007). This paradigm is a development from the Porterian competitive advantage. Based on the hypothesis about the sources of sustainable competitiveness derived from valuable, rare, imperfectly imitable and non-substitutable resource endowments, the RBV suggests a basic distinction between core and peripheral functions, with firms outsourcing those which do not form the core of their business from which competitive advantage stems.

According to the RBV assumptions, resources and capabilities vary significantly between firms within an industry. While resources refer to the tangible, intangible and human assets that an organisation owns, controls, or has access to on a preferential basis (e.g. through alliances), capabilities are the abilities the organisation deploys to apply these resources (Helfat, *et al.*, 2007). Capabilities can come from either within (firm-specific) or outside (inter-organisational network). There could be different categories of capabilities that reflect different types of competences and skills. Jarvenpaa and Mao (2008), and Ethiraj, *et al.* (2005), for instance, have focused on client-specific, process and human resources capabilities. In general, firms can learn through repeated interactions with clients over time and across different projects. They can also develop capabilities through deliberate and persistent investments in infrastructure and systems to improve their task delivery routines and technical competences. Human resources capabilities, for example, are about practices in recruitment, training, mentoring, assignment of tasks for specialisation, compensation, performance appraisal, career development, and so on. Capabilities can be derived from outside too, particularly with increasing complexities in geographical and organisational distribution of work (Lorenzoni & Lipparini, 1999; Mahmood, Zhu & Zajac, 2011).

To modify its resource base and acquire better capabilities, firms need to leverage dynamic capabilities that determine their ability to create, integrate and reconfigure internal and external competencies over time to adjust to changing

circumstances (Teece, Pisano & Shuen, 1997; Zollo & Winter, 2002; Helfat & Peteraf, 2003; Winter, 2003). This involves a purposeful and systematic management process to alter the organisation's operating routine in quest of raising competitiveness and better value creation which is in turn subject to varying path dependencies and market positions. The concept of dynamic capabilities and its relevance to this study will be discussed in detail in Section 2.3.3.

In order to yield sustainable competitive advantages, appropriate resource and competence bundles have to be identified (Teece, 1986; Gilley, Rasheed & Al-Shammari, 2006). Firm resources that are qualitatively distinctive and immobile must be valuable, rare, imperfectly imitable and non-substitutable resource endowments in order for them to hold the potential of sustained competitive advantages (Barney, 1991). Firms should therefore seek to develop areas that are unique and difficult to imitate so that they can maintain rent-earning status for a critical period of time (Barney, 1991; Doh, 2005).

According to the core competence approach, offshoring and outsourcing enables organisations to devote more resources to strategic planning and management, and concentrate on their core business where it can achieve supremacy rather than on routine functions (Razzaque & Sheng, 2002). Doh (2005) points out that the collective benefits of global sourcing may be more important than pure cost motivations. Offshoring is thus an internal process and business strategy that represents a direct deployment of firm-level capabilities as seen by the RBV.

To further envision how and why some firms are successful in situations of rapid and unpredictable change, and to take into account the processes by which firms are able to control and coordinate knowledge assets, the recent RBV-derived concepts, including 'dynamic capabilities', are focused on the development and deployment of capabilities at both organisational and geographical scales (Doh, 2005).

As discussed, while the TCT deals with the search for the most efficient governance structure for cost minimisation, the RBV looks at the pursuit of competitive advantages. Firms face both of these issues when they decide whether, what and how to outsource and offshore. Given the desire to develop capabilities across a range of business areas but inevitable constraints on resources, they need to prioritise resource allocation in certain key business areas where they possess strengths.

These together determine the 'make or buy' decision, and thus the changing relationships across geographic and organisational space.

To sum up, this section has arrived at some conceptual understandings of the geographical and organisational specialisation and division of labour based on a series of seminal theoretical paradigms. Over time, as technologies and management advance, and as specialisation becomes more complex, the division of labour is no longer just between a set of vertical industries but between tasks within and across sectors. With fiercer competition, firms' competitiveness is increasingly and more crucially derived from resources and capabilities that are heterogeneous, difficult to be imitated, valuable and marketable. More than just cost-cutting, the acquisition and deployment of these indeed require both a critical mass of quality and sophisticated home market conditions. MNCs adopt different spatial/organisational strategies by leveraging both their home advantages and the dynamics of globalisation in order to improve their international competitiveness. Firms decide to source production processes from outside their home base, as they seek to minimise costs and sustain competitive advantages. Through the process of offshoring, they restructure and reintegrate affected functions within and across organisations, thus leading to changing spatial relationships. While the theories discussed in this section have helped us understand these conceptual issues, they are still limited to the demand perspective and to the advanced economies' experience. We need to understand the other side of the story, i.e. the perspectives of the Global South, for example, how lagging economies come into the services offshoring arena and how the NIDoL in services may relate to possible improvement in their relative positions.

## 2.3 Development and Catch-up of Developing Countries: Classical Development Theories, Global Production System, and Capabilities

We have sought some theorisation of differences between countries in production and trade, as well as of firms' locational decisions in Section 2.2. However, we still do not know what 'development' means, especially to the Third World/Global South, the relationships between them and the First World/Global North, and whether and how these can be and probably have changed. In particular regard to the present study's focus, it is important to seek some conceptualisation of whether and how the increasing disaggregation of the global services production would affect and possibly

change the relative position of Southern economies, or whether the traditional obstacles to development apply in this field too. Therefore, in this section, we shall first make reference to the classical development theories for some of the theoretical underpinnings of how the concepts of 'Third World' or 'Global South' development have evolved. Subsequently, the recent paradigms of global production system and capabilities will be discussed, as they are applicable to and useful for our understanding of how these locations may come to grasp higher positions in the global economy.

### 2.3.1 Classical Development Theories

From the much earlier economic and social theorists, for example, Adam Smith (1776), David Ricardo (1817) and those of modernisation theories, like W. Arthur Lewis (1954) and Walt Rostow (1960), all the way through to the dependency theorists of the later 20th century (e.g. Frank, 1969a, 1969b; Palma, 1978; Cardoso & Faletto, 1979; Frank, 1979), the literature on social change and development is largely associated with industrialisation and whether and how this affects the gaps between wealthier and poorer nations (Roberts & Hite, 2007). These theories differ in respect to whether and how less developed countries can change in pursuit of social and economic benefits for themselves. Yet, a common argument is that the process of 'development' has shaped the Global South's labour, institutions and other conditions to fit the needs of the Global North.

Modernisation theorists attempt to understand the process of development and offer a composite picture of the meaning of being 'modern' (Roberts & Hite, 2007). In general, by 'modernisation' they mean the adoption of new ways of material life and the 'improvement' of education and basic values. According to modernisation theory, societies could and should go through 'stages of growth' from premodern, preindustrial and relatively stagnant societies to ones that are industrial, modern and dynamic (Rostow, 1960; Glassman, Neil & Paul, 2001). As such, every nation was believed to be able to become modernised provided that they will do so in the way 'we' (European powers) have done. This could be done by building up (human as well as financial) capital accumulating enough to 'take-off', and by adopting the capitalist culture and acting as an economic man whose ways of doing things would fit into the European model. In spite of some terminological and conceptual variations, the range

of modernisation theories all conceive the dichotomy between North/core/developed and South/peripheral/developing countries, and perceive development as a process of sequential changes from one point to another along one single pattern (Roberts & Hite, 2007). They highlight the positive role played by the Global North in facilitating 'development' of the Global South (Glassman, Neil & Paul, 2001). However, even if a nation follows the European way of development, the outcome is unlikely to be the same as what the European powers and other nations have undergone, due to variations in circumstances, and particularly to the fact of Europeans' first-mover status, as dependency theorists have argued.

Formulating critiques of colonial and neo-colonial relationships since the late 1950s, the dependency theorists point to long-term exploitation by wealthy nations in Europe and North America as the reason why poor countries in Africa, South America and Asia remained poor (Hite & Roberts, 2007). This line of argument differs greatly from that of modernisation theorists and classical Marxist theorists who advocate non-industrialised states as merely being further behind on the development ladder (Willis, 2011, p. 77). Conventional dependency theorists (most notably Andre Gunder Frank) consider a situation of dependency as inescapable as long as peripheral nations are involved in the capitalist world economy. Subordinated under the Northern powers, the Southern economies were linked to the global capitalist system merely as a source for cheap labour and resources and as a market for the core's high technology, high value-added manufactures (Hite & Roberts, 2007). Therefore, although the peripheral countries might be able to industrialise through import-substitution programmes and foreign investment from the core states, surpluses from the former would be drained off to the latter, further accentuating the North-South polarity (Lim, 1991). Moreover, the forms of development of poorer nations tend to be biased by the core countries, as their skills and capabilities are constrained to what the latter want them to possess and acquire, thus limiting their autonomy of choice.

Emerging from and in response to critiques of the earlier dependency theories, primarily led by Immanuel Wallerstein (1974), some dependency theorists and others (e.g. Evans, 1979; Chase-Dunn, 1989; Evans, 1995) have contributed to the development of a distinct 'world systems theory' (Chirot, Neil & Paul, 2001; Roberts & Hite, 2007). The world systems theorists attempt to move beyond the rather crude dichotomy of core-periphery, and to engage in more rigorous attention to the impact of

historical contexts. Like the dependency school, the world systems theory views that under capitalism poor 'peripheral' nations have been systematically underdeveloped by the wealthy and powerful 'core' nations (Chirot, Neil & Paul, 2001). Unlike the pessimistic form of dependency theory, however, the world systems theory perceives the possibility of mobility in the hierarchy of the single global system. There is an additional category of 'semi-peripheral' states in-between, which have features of both the core and the periphery. They act as intermediaries in the processes of exploitation of the periphery by the core (Roberts & Hite, 2007). But this semi-peripheral zone is also where revolutions against the world system are most likely (Chirot, Neil & Paul, 2001).

However, the previously dominant development frameworks, such as the modernisation approach, had taken a Eurocentric or Western-centric approach, by which they viewed the world from a European or Western perspective and with an implied belief that their model of success, as the correct way to develop could and should be applied to other societies that were lagging behind. Albeit the contribution of the dependency school, the traditional version of all these development theories generally conceives of development as linear stages growth, implying predetermined one-directional change from agricultural to manufacturing, from backward to advanced (Escobar, 1995; Willis, 2011). Moreover, the core-periphery or North-South dichotomy has been criticised for subsuming the Northern and Southern countries as two homogenous groups, and neglecting the diversities within each of them and even within a single nation. Furthermore, these earlier theories are more focused on economic growth and increases in economic wealth as the key definition of 'development'; even the world systems theory is criticised for being too economistic, and overlooking culture as causation (Roberts & Hite, 2007).

Notwithstanding many decades of layers of sophistication superimposed on their core ideas, in response to such and other criticisms, the earlier development theorists' work remains bedrock for many contemporary explanations of development and social change. Continuing to tackle the theoretical challenge of the asymmetrical power relations between different groups of nation-states and the development policy-making particularly of the South, a complex and differentiated body of work has emerged since the 1970s. Already implicated in a number of conventional theories, such as dependency theory, the intensifying blending between global processes and

local forces has led to further theorising of development in relation to globalisation. This body of literature has taken into account ideas of greater autonomy and choice of individuals' ways of living when theorising 'development' (Johnston*, et al.*, 2000; Willis, 2011, p. 224). It has acknowledged temporal and spatial diversity, the local needs and requirements of the range of societies, as well as polycentric geographies and network perspectives.

In view of these theoretical implications, and for the purpose of the present study, rather than being an end point, 'development' is perceived as an ongoing process of positive change that serves as an aspiration for societies of the South (and the North) to deploy autonomous capacity to change and improve based on their own needs and experiences. This emphasis on autonomy of choice contrasts with the new way of dependency which seems implicit in the NIDoL. In face of the mounting engagement of Southern economies in the global production system not merely in manufacturing but also increasingly in higher-end services, more recent theories tackling North-South political-economic relations and the intertwining of globalisation and the national/regional development trajectories and prospects need to be considered, as will be discussed in Section 2.3.2. This is to understand whether, how and why Southern countries are able to change their way of development primarily affected by the Global North's needs, and achieve an autonomous way of progress if desired.

As briefly discussed earlier in Section 2.2.1, in the recent services offshoring phenomenon, low-cost countries can and indeed perform a wider range of higher value-added services that were not possible previously. Such services, however, seem to be merely shifted to these locations due to the increasing possibility of standardisation and codification. Although a growing body of empirical work has suggested the significance of FDI to a country's growth (Borensztein, De Gregorio & Lee, 1998; OECD, 2002a; Contessi & Weinberger, 2009), the important questions are what the FDI is for and how sustainable it is. One problem is that poorer countries may only be able to gain *conditional* advantage from such form of capital accumulation. In other words, there may not be much technological spillover from resourceful MNCs to lagging locations, probably because of the latter's limited absorptive capacity (W. M. Cohen & Levinthal, 1990) and/or because of the intention of the former to control such spillover in order to maintain their monopolistic position. In relation to this, the increasing implementations of services offshoring have raised concerns about an

evolved kind of dependency, as it may further intensify reliance by developing countries on the capital and resources of advanced economies (Doh, 2005). Codification and digitalisation of service processes appears to exaggerate deterritorialisation of routine functions, making it easier for MNCs to switch between cheap locations. This argument is usually countered by one emphasising the (re)territorisation of knowledge-intensive and innovation-based services, but these, however, remain concentrated in specialised clusters of advanced economies. Threatened by the possibility of changing strategies and decisions of MNCs, Southern economies may end up competing in a race to the bottom or to stay put. What may follow is that lagging regions have to offer the right kinds of labour, infrastructure and policies in order to satisfy whatever MNCs want and thus apparently for the mere sake of their profit needs. This tends to imply the continuing asymmetrical power hierarchy of established locations and MNCs over emerging and developing countries; while it is still unclear whether and how the latter can achieve autonomous capacity to change in their own right.

### 2.3.2 Theories of Global Production System: Global Commodity/Value Chain (GCC/GVC) and Global Production Network (GPN)

Since the 1980s, emerging from the world systems theory and synthesising the literature discussed in Section 2.2.1, there has been another body of literature aiming to analyse not only the overall process of production but also its relationship with various social activities within and across national boundaries. This conceptual strand includes the 'global commodity chain' (GCC), 'global value chain' (GVC), and 'global production network' (GPN).[1] In general, they attempt to explain how global production processes are organised and governed, and how such patterns in turn affect the development and upgrading opportunities of the various geographical locations and organisational entities involved. There are differences between these three approaches but it is not our purpose to compare the specifics of each and the co-evolution beyond acknowledging their non-trivial conceptual distinctions. Here we shall first identify the focuses of these three interlinked perspectives, and then assess their theoretical implications and applicability in relation to the present study.

[1] See, e.g., Gereffi & Korzeniewicz (1994) and Bair (2009) for GCCs; *Global Value Chains Initiative* (n.d.), Gereffi, et al. (2001), Gereffi & Kaplinsky (2001), Gereffi, et al. (2005), Schmitz (2005) and Sturgeon (2009) for GVCs; and Coe, et al. (2004), Coe, et al. (2008a, 2008b) and Yeung (2009) for GPNs.

**Global commodity/value chain**

Extending his earlier work on world systems, Gereffi and colleagues in the 1990s formulated the global commodity chain (GCC) approach and shifted the agenda to the analysis of inter-firm linkages, chain governance and the ways value is created and distributed along the commodity chain (Gereffi & Korzeniewicz, 1994; Gereffi, Humphrey & Sturgeon, 2005). Connecting labour, production, households, states and enterprises to one another within the global economy, a GCC is a complex of networks that involve the full range of processes that result in a product from its conception, through the different interlocking stages of production, to its end use and beyond (Gereffi, Korzeniewicz & Korzeniewicz, 1994; Gereffi*, et al.*, 2001; Kaplinsky & Morris, 2001).

The GCC analysis looks at competitiveness as a function of organisational strategies of firms and states. It agrees with Porter's competitive advantage framework that two primary but 'lower-order' factors, i.e. low-wage labour and organisational flexibility, help explain shifts in the geographical location and organisation of production in GCCs. More important 'higher-order advantages' are also pinpointed for driving the dynamic trends in international competitiveness, such as 'proprietary technology, product differentiation, brand reputation, customer relationships, and constant industrial upgrading' (Gereffi, Korzeniewicz & Korzeniewicz, 1994, p. 6).

The global value chain (GVC) concept is the immediate descendant of the GCC framework. The term 'value' is preferred to and has replaced 'commodity' because it is able to both capture the concept of 'value added' and draw 'attention on the main source of economic development: the application of human effort, often amplified by machines, to generate returns on invested capital' (Sturgeon, 2009, p. 117). While some activities induce higher value than others, some actors in the chain (usually known as lead firms) have more power over others (often referred to local suppliers) (Schmitz, 2005, p. 4). The GVC focuses on the 'internal' explanatory factors for industry dynamics (Bair, 2005). The question of value comprises two facets: first, how and by what processes value is created; and, second, how and by what processes the resulting value is distributed (Gibbon, Bair & Ponte, 2008).

In the earlier stage, the GVC theorists emphasise the analysis of governance patterns of the chain. They observe that changes in the power relations over time

between actors in the GVC (primarily lead firms vs. local suppliers) are associated with predictable combinations of three crucial variables (Gereffi, Humphrey & Sturgeon, 2005, 2006):

i. *Complexity of transactions* – changes in information complexity and requirements for outputs/services: more complex transactions, greater interaction among actors;
ii. *Codifiability* – codification of rather complex information for the ease of data transmission between firms; and tension between codification and innovation; and
iii. *Capabilities in the supply-base* – increase/decrease as a result of increased learning vs. introduction of new suppliers/ new technologies/ increased requirements by lead firms.

The important question is: How and why does the complexity of inter-firm transactions, the codifiability and supplier competence change? While it is unrealistic to assume that GVCs are evolving along a single trajectory; we need to take into account the different weights of these variables across industries (Gereffi, Humphrey & Sturgeon, 2005). There is however no single best approach to organising GVCs. In addition, technological change and new ways of bundling chain activities can also modify the standards for codifying product and process specifications, thus changing the governance pattern from one type to another. Moreover, established actors and locations may gain major advantage from actively participating in the rule-setting process. Although these variables are sometimes determined by the technological characteristics of products and processes, it is 'the effectiveness of industry actors and the social processes surrounding the development, dissemination, and adoption of standards and other codification schemes' that open the door for policy interventions and business strategy (Gereffi, Humphrey & Sturgeon, 2005, p. 98). For instance, lead firms may choose to establish less hierarchical relationships with their lower-tier suppliers in order to reduce transaction-specific investments and increase flexibility (Humphrey & Schmitz, 2002). Also, power relationships may evolve when existing suppliers acquire new capabilities. Such capability acquisition may also be achieved through learning in one chain and applying to another, as firms often operate simultaneously in more than one chain.

From the earlier research largely preoccupied with firm-level governance analysis (particularly focusing on the influential coordinating role of MNCs and the experience of local suppliers in taking the linkage opportunity to develop their capabilities), and of the numerous ongoing streams of research and theory-building under the GVC or closely related categories, Sturgeon (2009, p. 128) has identified three pillars of GVC theory:

i. the character of linkages between tasks, or stages, in the chain of value-added activities;
ii. how power is distributed and exerted among firms and other actors in the chain; and
iii. the role that institutions play in structuring business relationships and industrial location.

These three elements, both individually and in combination, are useful in explaining why observed inter-firm relationships and geographic patterns have emerged and transformed in an industry, or part of an industry, and also envisage their possible patterns in the future. While Gereffi's GCC category of 'governance' can be split into two distinct areas of inquiry, i.e. power and firm-level coordination determinants, institutions constitute the third category (Sturgeon, 2009). Therefore, while the three pillars do intersect at points of analysis, Sturgeon makes clear that the broad thrust of GVC framework encompasses more than the theory of firm-level governance, and thus calls for equal attention to power and institutions.

Linkages to GVCs, which are similarly suggested by both GCC and GPN approaches, tend to offer opportunities for local producers to learn from the global leaders of the chains that may be buyers or producers (Giuliani, Pietrobelli & Rabellotti, 2005). Acquiring capabilities and gaining access to markets (and also marketing channels) are therefore considered two key elements for less developed regions to achieve upgrading and sustainable economic development (Humphrey, 2004).

**Global production network**

Initially developed by the Manchester school researchers (Henderson*, et al.*, 2002; Coe*, et al.*, 2004), as well as independently by Dieter Ernst and colleagues

(Ernst, 2002; Ernst & Kim, 2002), the GPN framework combines insights from the GCC/GVC analysis, ideas derived from the actor-network theory and the varieties of capitalism/business systems literature. It evolved in dialogue with, and as a critique of, the GCC framework (Dicken*, et al.*, 2001; Bair, 2008). The GPN proponents are discontented with the GCC/GVC's (apparently) linear structures, and its (initially) narrow focus on the governance of inter-firm transactions, although they agree that these three perspectives share similar conceptualisations in terms of 'the nexus of interconnected functions, operations and transactions through which a specific product or service is produced, distributed and consumed' (Coe, Dicken & Hess, 2008a, p. 272). The GPN set out to 'incorporate all kinds of network configuration' and 'encompass all relevant sets of actors and relationships' (Coe, Dicken & Hess, 2008a, p. 272).

In their framework, global production networks are defined as 'the globally organized nexus of interconnected functions and operations by firms and non-firm institutions through which goods and services are produced and distributed' (Coe*, et al.*, 2004, p. 471). It proposes that in such networks firms develop diverse forms of equity and non-equity relationships among themselves, thus blurring traditional organisational boundaries. In addition, the GPN presents a wider institutional framework with non-corporate actors such as governments and labour unions as constituent parts of the overall production system (Coe, Dicken & Hess, 2008a).

With essentially asymmetrical power, the sets of corporate and institutional actors influence the creation, capture and enhancement of value in the production networks; whereas each of them is deeply embedded within and their interrelated actions are greatly influenced by, with different degrees, the socio-political contexts and the broader structures and institutions of the global economy (Coe*, et al.*, 2004; Coe, Dicken & Hess, 2008a). It is therefore a strong relational view of the world that seeks to understand contemporary forms of industrial organisation and their relationship with local or regional development processes (Dicken*, et al.*, 2001; Coe, Dicken & Hess, 2008a).

The GPN theorists suggest that the embeddedness and (re)production of socio-political contexts are essentially territorially specific (mainly, but not exclusively, at the national level), while the production networks themselves are not (Henderson*, et*

*al.*, 2002). In other words, from the territorial point of view, GPNs '"cut through" national and regional boundaries in highly differentiated ways, influenced in part by regulatory and non-regulatory barriers and local socio-cultural conditions, to create structures that are "discontinuously territorial"' (Coe*, et al.*, 2004, p. 471). The GPN framework focuses on the multi-actor and multi-scalar characteristics of international production systems, and particularly attempts to connect with notions of subnational regional development and clustering dynamics (Coe, Dicken & Hess, 2008b, p. 267).

Similar to the GCC/GVC approaches, the GPN paradigm also emphasises the linkage between local suppliers and lead firms, which can offer opportunities of capabilities development for the former through learning from the latter. Working within and linking the GPNs is a 'strategic coupling' process between local actors (domestic firms and institutions) in certain regions and global lead firms (Coe*, et al.*, 2004; Yeung, 2009). On one hand, global lead firms, as powerful actors that orchestrate and coordinate complex GPNs in their respective industries, spanning different territories and regions, have to fit their services to specific geographic markets through spatial, organisational and technological fixes in order to retain flexibility and speed, and thus to sustain competitive advantages (Yeung, 2009). On the other hand, the GPN notion also emphasises the active role of local factors in response to external control.

Specifically, Yeung (2009) identifies three types of regional development trajectories, including international partnership, indigenous innovation, and the provision of production platforms. Through these mechanisms, strategic coupling as a mutually dependent and constitutive process involving shared interests and cooperation between two or more groups of actors is achieved. A particular region may experience more than one type of strategic coupling. From Yeung's empirical observation, some Asian regions including Yangtze Delta in China and Penang in Malaysia have achieved strategic coupling as production platforms, which is nonetheless not a straightforward reflection of the NIDoL logic as their coupling with the global production networks is coordinated through Asian partners of global MNCs (Yeung, 2009). Largely relying on competitive cost structures, ample labour supply, stable policy environment, fiscal and other financial incentives, some developing regions have not, however, had a strong institutional set-up directed to promoting indigenous capability. Their policy challenge is therefore more complicated as local

firms remain relatively weak in organisational and technological capabilities, while they face increasing pressure from cost-based competition as a result of an expanding pool of new entrants to market.

**Theoretical applicability to the present study**

Having reviewed the GCC/GVC/GPN paradigms, we shall move on to assess their theoretical pertinence to the present study. Despite differences in terminology and emphasis, some GVC and GPN proponents themselves agree that these theories share certain ontological, epistemological and methodological elements (Bair, 2008; Coe, Dicken & Hess, 2008b; Sturgeon, 2009). Their conceptual approaches are network-oriented (Coe, Dicken & Hess, 2008b, p. 267), and share the 'baseline assumption that various types of international, inter-firm networks have become central features of a wide range of contemporary industries' (Sturgeon, 2009, p. 127). They both aim at understanding the social and developmental dynamics of contemporary capitalism at the global-local nexus (Bair, 2005, p. 154), particularly all acknowledging the significant impact of governance structures and their associated power asymmetries on firm-level and locational upgrading (Coe, Dicken & Hess, 2008b, p. 268). Bair (2008, p. 357) suggests that it might be more useful to consider these theories of global production system as complementary to rather than contending with each other.

The term 'chain' apparently signals unidirectional relationships. However, contrasting to what Vind and Fold (2007) claim, the understanding for the present study is that it does not necessarily mean the absence of reverse and interweaving flows of goods, capital and information, which are often observed within intra- and inter-firm/industry relationships. Sturgeon distinguishes 'chains' and 'networks' at the organisational scale by linking the two ideas in such that

> a "chain" maps the vertical sequence of events leading to the delivery, consumption and maintenance of a particular good and service, while a "network" maps both the vertical and horizontal linkages between economic actors, i.e., recognizing that various value chains often share common economic actors and are dynamic in that they are reused and reconfigured on an ongoing basis. (Sturgeon, 2001, p. 6)

Sturgeon continues to state that the term 'value chain' is applied

> to denote a particular, product-based thread of activity that, at a given moment in time, runs through a larger constellation of activities and dynamic configurations embodied in a production network. A value chain can be thought of as a sub-set of a production network […]. (Sturgeon, 2001, p. 6)

While the present study recognises the complex institutional and geographical forces underpinning the global production system, as more explicitly hypothesised in the GPN approach, we use the terms GPN and GVC interchangeably depending on the context. Yet, we specifically intend to draw on the GVC concept that focuses on how nodes of value-adding activity which is deeply embedded, produced and reproduced within the socio-political, institutional and cultural contexts (Dicken, 2011, p. 18) are linked in the global economy. As Sturgeon (2009, p. 127) suggests, 'The chain metaphor is simply a heuristic tool for focusing research on complex and dynamic global industries,' and can serve as a scalable conceptual tool that helps inquiry 'move easily from local to the global levels of analysis'. Pietrobelli and Saliola (2008) also agree that the dynamic flow of economic and organisational activities between producers within different sectors can easily be shown even on a global scale.

Further aspects of the GVC concept, of particular relevance to this research, will be discussed in Section 2.5 on the conceptual framework.

### 2.3.3 Capabilities Development and Deployment

Concerted efforts from the fields of international business and strategic management have been made to theorise concepts like 'resources', 'competencies', 'capabilities' and 'dynamic capabilities' as researchers seek answers to the question of why some firms persistently outperform others (Barney & Arikan, 2001). Many of these were derived from the resource-based view (RBV) (discussed earlier in Section 2.2); while many authors use these terms interchangeably, and there is no consistent agreement on such terminological distinctions. The RBV emphasises the importance of developing valuable and marketable competencies that are distinctive and difficult to be imitated by competitors. In general, capabilities are traits that enable the firm to exploit its capital attributes in financial, physical, organisational and individual terms

to implement strategies (Barney & Arikan, 2001, p. 139). One simple example is that a firm owns a software programme for its business implementation, which forms one of its technological assets, but in order to apply this programme to suit its business needs, the firm has to possess a range of capabilities, such as the skills of integrating the software and other assets to its whole production process. According to the concept of 'dynamic capabilities', however, merely holding a bundle of good resources and capabilities is not enough for firms to sustain their competitiveness; indeed, they need to have the ability to learn and evolve in order to change the existing resource base to adjust to the changing situation.

'Dynamic capabilities' is defined as 'the firm's ability to integrate, build and reconfigure internal and external competencies to address rapidly changing environments' (Teece, Pisano & Shuen, 1997, p. 516). Given path dependencies and market positions, it is a learnt and persistent pattern of collective activity through which the organisation purposefully and systematically generates and modifies its operating routines in quest of process improvements (Leonard-Barton, 1992; Zollo & Winter, 2002; Helfat*, et al.*, 2007). Therefore, dynamic capabilities could open new strategic alternatives or 'paths' for the organisation by altering its resource base (Helfat*, et al.*, 2007, p. 2). Yet, possessing a dynamic capability or a bundle of dynamic capabilities does not automatically translate into improved competitiveness. We need to first ask how much value that dynamic capability creates, and subsequently assess such value creation relative to the dynamic capabilities of other organisations (Helfat*, et al.*, 2007, p. 13). In other words, value creation by dynamic capabilities is context dependent, as it varies over time and circumstances.

In relation to outsourcing and offshoring, dynamic capabilities as a coordinative management process imply potential for interorganisational learning. Participating in the global production system and intensifying international economic transactions means increased potential of international knowledge diffusion and thus opportunities for local capability formation in lower-cost locations (Ernst & Kim, 2002). Therefore, access to expertise and competencies can be a great motivation for forging and maintaining external relationships, even when asset specificity is high (Sturgeon, 2009), i.e. the transferability of assets from an intended use is low, which in turn is likely to require more rigid contracts or internalisation to tackle the threat of opportunism. While knowledge internalisation and capability formation involve both

individual and organisational learning, organisational learning is not simply the sum of individual learning (Ernst & Kim, 2002, p. 1424). Although 'dynamic capabilities' is primarily a firm-level paradigm that aims to explain the heterogeneity of firm performance, such strategic or entrepreneurial decisions require fit between the company and its competitive environment, as Helfat et al. (2007, pp. 20-21) emphasise. Country-specific resources are available on equal terms to all firms competing in an industry, but firm-specific capabilities may affect a particular firm's ability to gain access to or to assess its use of these resources (Fahy, 1996).

In his recent revisit of the concept, Teece (2007) has categorised dynamic capabilities into three types: (1) to sense and shape opportunities and threats, (2) to seize opportunities, and (3) to maintain competitiveness through enhancing, combining, protecting, and when necessary, reconfiguring the organisation's tangible and intangible assets. With such sensing, seizing and transformational capabilities supported by such organisational and managerial processes as coordination/integrating, learning and reconfiguring, dynamically competitive firms do not simply 'build defences to competition' but 'help shape competition and marketplace outcomes through entrepreneurship, innovation and semi-continuous asset orchestration and business reconfiguration' (Teece, 2007, pp. 1344-1345).

Dynamic capabilities are shaped by the co-evolution of various learning mechanisms, which together can influence the development of operating routines (Zollo & Winter, 2002). While such mechanisms can be broadly divided into formal ones (e.g. FDI and rent-creating alliances) and informal ones (e.g. offsite socialisation between managers) (Ernst & Kim, 2002; Malik, 2008), Zollo and Winter (2002) have identified three specific types: (1) experience accumulation (experiential wisdom derived from trial and error learning and the selection and retention of past behaviours); (2) knowledge articulation (collective learning through sharing, confronting and challenging each other's viewpoints in such forms as group discussion, debriefing sessions and evaluation processes); and (3) knowledge codification processes (diffusion of existing knowledge through explicit forms of knowledge circulation, such as a manual for the execution of a complex task). These processes are in turn subject to several conditions, including commitment of learning investment, environmental conditions (e.g. the speed of technological development in that industry), organisational traits (e.g. acceptance of continual change practices), and task features

(e.g. scope involved, frequency and coordination/opportunity costs). Ernst and Kim (2002, p. 1424) also point out that productive learning is particularly affected by the organisation's 'absorptive capacity', a concept developed by Cohen and Levinthal (1990), which analyses its intensity of effort or commitment, as well as its existing knowledge base.

Overall, the geographical and organisational specialisation of work and division of labour has evolved from manufacturing to services and from vertical industries to tasks and even micro tasks. This reorganisation of production across space made possible by technological and management developments has led to a wider range of Southern economies being able to engage in processes in the value chain which they previously were unable to do. The global value chain concept explains how different activities and locations are linked together, and how and by what processes value is created and distributed. While some theorists maintain that offshoring of services merely imply the continued dependence of peripheral economies on the advanced counterparts, as a result of routinisation and standardisation of service processes controlled by the latter; others believe that less developed countries are indeed gradually pushing towards the higher end of the GVC and point to a more complicated set of conditions for capital accumulation and expansion, and thus competition beyond costs.

The Porterian competitive advantage framework suggests that increasing sophistication of home market conditions would help firms develop specialised resources that are unique, valuable and marketable. It is nonetheless important to be aware that while country-specific resources are available on equal terms to all firms competing in an industry, firm-specific capabilities will affect whether and how a firm is able to take (full) advantage of these resources. For developing country/Southern firms, linkage to the global production network, especially with internationally competitive players, would be a great opportunity to develop capabilities to change their existing resource assets and thus nurture competitiveness. This strategic coupling, as conceptualised in both the competitive advantage, GVC/GPN and capabilities paradigms, is nevertheless dependent on the concerned firms' path dependencies and market conditions.

## 2.4 Distinctiveness of Services and Conceptual Implications

Most of the theories on the spatial patterns of cross-border production and trade and on the development of the Global South established before the late 1990s as reviewed and discussed above are focused on industries, particularly manufacturing activities. Nevertheless, the question which is critical to the present study is: How far are these ideas that have been manufacturing-originated transferable to services studies? With services continuously transforming, dramatically being internationalised, and increasingly dominating the economies of many fast-growing regions and cities, greater efforts have been made in conceptualising the location, trade and other facets of service activities. In the following, we identify the distinctiveness of services from manufacturing. From this, we discuss the areas of conceptual concern when examining the phenomenon of global shifts of services production.

### 2.4.1 Conceptualising Services

Evolving from custom and practice a century ago or so, the conventional definitions and classifications of services 'group industries with outputs which do not involve the direct production of material goods; sectors which are relatively detached from material production' (Marshall & Wood, 1995, pp. 11-12). Such a simple distinction with respect to which services are merely distinguished as 'residual' activities left-over after production is no longer adequate in post-industrial contexts (Daniels, 1993; Marshall & Wood, 1995). For services, there seems to be a wide range of variations, ranging from education and health services to financial and business services. To adequately and critically distinguish services from other production activities, several quasi-generalisations are identified:

**(1) *Inseparability* and *embodiment*:**

A manufactured product has a size and a shape, which the customer can touch and see, so it is tangible in nature. Services are however essentially intangible, although the use of tangible goods may or may not be required during the production process or upon purchase (Monger, n.d.). However, more important is that goods are embodied in services; while services are embodied in goods. Put simply, they are symmetric. The value of a good is determined by its characteristics and functionality rather than its size or shape, which in turn are determined by the services, such as

design and logistics, that enable it to work well, i.e. to satisfy the customer's expectation. Such services are therefore a means to an end for manufactured goods, and vice versa.

On the other side, in relation to its intangible and embodied nature, at the operational level, a 'product' in services cannot always be separated from the process and it is in fact a process (Gallouj, 2002, p. 40). A service cannot be stored. Business consultancy services, for example, may be delivered in a codified format, such as a written report, but such advice cannot be 'banked' since its nature is embodied in the reaction to it of the customer (Marshall & Wood, 1995, pp. 30-31). It is the specification and interpretation of such information that constitute the critical service. In other words, material products may be directly applied for service transactions but the quality of services determines their effectiveness in relation to the needs and reactions of the recipient. Such material goods are therefore a means to a service end.

**(2)** ***Limited rationalisation and opaque markets:***

While manufactured products are produced, services are performed. For goods, the question is whether it works, no matter how it is produced. However, for services, due to their nature, it has been difficult to separate the quality and the characteristics of production, compared with manufactured products. The quality of a service therefore 'derives not from its physical characteristics' but from the performance of the service provider/agent (Monger, n.d., p. 6). In spite of the application of standard systems, the heterogeneous attributes of services from one transaction to another make it difficult for customers to judge quality in advance of purchase, and how exactly it will impact on themselves (Bryson, Daniels & Warf, 2004, p. 19). In addition, it is associated with customers' perceptions about how a service is performed. It is sometimes difficult for suppliers to know if they are meeting customer expectations. Yet, it may be worth noting that at some point manufactured goods could have inconsistent quality, while their standard is comparatively easier to be controlled than services.

**(3) Importance of *trust*, *culture and regulations*:**

Owing to its embodied nature, the simultaneity of production and consumption, and customer participation, services involve some form of social

relationship developed between the producer and the customer. The close relationships between culture, trust and service quality have been widely examined (e.g. Furrer, Liu & Sudharshan, 2000; Jaebeom, Swinder & Sunhee, 2006). When trust based on informal relationships and long-term experience is not enough, regulations usually come in to formalise a relationship. Indeed, these elements of trust, culture and regulations are increasingly influenced by continuing separation of different tasks in the production process. With respect to offshore investment and transactions, the international entry mode for service suppliers is more likely determined by people-oriented measures of uncertainty: behavioural uncertainties, trust propensity and asset specificity (Brouthers & Brouthers, 2003).

Within the services offshoring agenda, the impact of culture on the quality and outcome of a service being executed in one location vis-à-vis another has been extensively discussed, particularly concerning how the managerial control over offshored processes could have impact on the reconstruction of local identities and identifications, as well as how local culture of those offshore locations might in turn affect the management decisions of lead firms (Granered, 2005; L. Cohen & El-Sawad, 2007; Pal & Buzzanell, 2008). In case of uncertainties in trust and cultural affinity, and due to the diverse nature of services, there have been concerted efforts in the industry to seek more coherent and standard regulations especially at the international and regional levels. Service suppliers attempt to standardise and quantify performance measures, for example, using key performance indicators (KPIs) to evaluate their operational goal, and lead firms also employ strict certification schemes for suppliers.

### 2.4.2 Evolving Division of Labour in Services

Over time, services are transforming themselves. The historical constraints of tradability of services and of the inseparability of service quality and labour character mentioned in the previous subsection are changing. Such traditional limits to services production and particularly offshoring have been released thanks to a range of evolving forces, including the developments of technologies, especially information and communication technologies (ICTs), the continually decreasing costs of using such technologies, the liberalisation in and standardisation of services trade, the adoption of MNC managerial structure that was first initiated in manufacturing, and

the spread of higher education, among many other facilitating factors. All these changes have been covered by all the theories reviewed in the previous sections.

Unlike the earlier version of division of labour in manufacturing, which was about separation of tasks and specialisation between industries, the neo-Fordist way of organising and producing services is what Massey (1995) terms as 'technical division of labour'. It is an internal technical division of labour with a characteristic spatial form. It involves a dual process: (1) of separating the functions of conceptualisation from those of execution, and (2) of the increasing fragmentation of the tasks of execution, as observed in the industrial production (Massey, 1995, p. 32). These together have possibly increased the service element in production. A task that previously engaged the processes of thinking the job through, organising it and actually doing it is now broken down into two separate jobs, i.e. setting up the task and actually performing it. Therefore, it corresponds to what Braverman (1974) has termed as 'deskilling' of labour, as to carry out the manufacturing job does not seem to involve the use of the worker's brain. Such distinctive technical division of labour initially in manufacturing has now spread to services.

Within the evolving services NIDoL, there tend to be two contrasting processes going on. First is rationalisation, which seems to imply the separation of hands and the brain. In other words, the service labour is intended to be 'deskilled' (Braverman, 1974; Massey, 1995) so that standardisation and codification of services is achieved for consistency of service quality and cost reduction. The other evolutionary process is embeddedness and embodiment. Although some services are less resistant to rationalisation and thus may be broken into smaller tasks in search of cheapness, others are more resistant, as a high level of embodied and embedded skills, knowledge, experience, culture and perceptions are required during the service production process. Because of the increasing possibility of decoupling and recoupling the services GVC, even the higher market spectrums could start off by decoupling and standardising a proportion of less complex inputs, just like handmade or hand-finished elements in manufactures. However, this reintegration and customisation, corresponding to Massey's technical division of labour, may still be hierarchical, as the 'brains' of the integrators and designers are required.

The spatial implication of the NIDoL in services seems to be that 'high-status, highly paid, non-routine jobs in the upper echelons of control and professional functions' are centralised in conventional headquarters locations, with low-status, low-income 'routine clerical work' being decentralised (Massey, 1995, p. 184). However, the latter part has indeed undergone continuous redefinition and recognition, which tends to be particularly relevant to the emerging markets' upgrading possibilities, as they could enlarge their scope of engagement and widen the range of activities they can perform. Moreover, the varied nature of service activities and their potential for productivity change have crucial impacts on their locational patterns that are driven by factors different from manufacturing activities (Marshall & Wood, 1995). Despite the incessant disintegration and reintegration of processes in the GVC, the intrinsic and distinctive nature of services, as hypothesised in Section 2.4.1, entails the increasing importance of embodied and embedded qualities that suppliers need to acquire.

### 2.4.3 Knowledge as a Dynamic Input in Services Production

As the economy is transforming, the nature of competitive advantage is altering, partly due to the increasing role of knowledge in the production process (Bryson, Daniels & Warf, 2004). More tangible products are bearing increasing content of knowledge, leading to the blurring boundary between manufacturing and services, as it is more difficult to determine whether one is consuming the tangible product or the knowledge service embedded in it.

Considering the locational patterns of service activities that are knowledge-driven requires us to further distinguish between different types of knowledge. We can consider the bipolar distinction between codified and tacit knowledge initially proposed by Polanyi (1967). While in the past generic business processes as a whole were considered a type of knowledge-intensive activity that required tacit knowledge, they could now be decomposed into more refined tasks through complex business reengineering, and are thus subject to redefinition. Their production may predominantly involve merely codified knowledge. While services that have been offshored so far are more of information-based types; some low-cost regions are increasingly supplying knowledge-intensive services for overseas clients (Youngdahl & Ramaswamy, 2008; William, Kannan & Kishore, 2010). The distinction between information-based and knowledge-intensive services is largely based on their content

of production input. Simply put, the production of information-intensive services requires input of explicit knowledge which is codified and transmittable across space and time. The grasp of such information enables people to describe a condition or situation, and answer questions of who, when, what, and/or where (Stenmark, 2002).

When we talk about knowledge-intensive services, we often refer to those that require tacit knowledge. This category of services is more about truths and beliefs, perspectives and concepts, judgments and expectations, know-how and know-why, ones which are protected from codification and/or tied to contexts and practice. Tacit knowledge is primarily person-embodied, especially embodied in groups and team behaviours (Howells, 1996). It can be transferred between groups but to transform tacit knowledge to codified knowledge for spatial and temporal transfer requires particular mechanisms that involve a high degree of investment and commitment, for example, recording and integrating the expertise and experience of a panel of experts in a specific field to create a detailed manual for dissemination. Aside from the fact that some tacit knowledge by nature cannot (yet) be codified, some *is not codified* because of the choice of the possessor (e.g. the company who controls it) so as to, for example, protect the monopolistic ownership status and the rent following from that.

Since tacit knowledge is socially and culturally embedded and embodied, the production process of knowledge-intensive services demands a much higher degree of personal exchange, relationship and trust. We thereby identify three general kinds of concerns, namely, personal relationship building based on face-to-face contacts, the importance of proximity to market intelligence, and the concerns of risks and uncertainties, in relation to the possibility of offshoring and outsourcing of different types of services activities. Overall, asymmetries of knowledge and capabilities, externalities and regulations across locations tend to have considerable impact on the geographical pattern of global sourcing of services.

### 2.4.4 Conceptual Implications

Here we shall sum up the conceptual implications from the above discussion on the distinctiveness of services and their dynamics in the global production system. The historical constraints of tradability of services and of local culture and labour character to their production have been progressively uplifted by a range of evolving forces, particularly the widespread of ICTs and complex business process redesign by

MNCs. While services link all the value-chain activities and affect the functionality and performance of products, some of their key attributes as discussed in Section 2.4.2 seem to be changing. Meanwhile, the place-bound characteristics that have significant influence on the tacitness of some knowledge-based services remain, particularly in managerial functions given the rise of technical division of labour across organisation and geography. The MNC management structure, the managerial reorganisation of processes, and the increasing command over processes being further standardised, all of which first emerged from the traditional practice in manufacturing, are now applied to services. The continuity of such manufacturing concepts therefore implies a certain extent of transferability of the manufacturing-originated theories. For the purpose of this study, we adopt three pertinent and interlinked theoretical paradigms that have been discussed in Sections 2.2 and 2.3 for a conceptual framework. They were not directly or explicitly designed for services studies but the combination of them is applicable to examining the upgrading paths and strategies of the Global South in the global production system of ICT-enabled services.

## 2.5 Formulating the Conceptual Framework

The building blocks of the present research are based on the three theoretical paradigms that have been discussed earlier in Sections 2.2 and 2.3: (1) global value chain, (2) competitive advantage, and (3) capabilities (refer back to Figure 1.1). In this section, we shall assess their conceptual pertinence and their relationships with each other, particularly in association with the research aim of this study.

Our research objective is to examine the upgrading paths, constraints and strategic choice of the selected East Asian economies, Mainland China, Hong Kong and Singapore, through the lens of the evolving trend of global sourcing of ICT-enabled business services. While value chain activities can be contained within a single geographical location or spread over extended regions, the notion of global value chain (GVC) emphasises the relationships of multiple firms and locations that perform these activities on a global scale. The GVC concept is applied to seek network-oriented perspectives of how the production system of such services works at the global scale. This framework is therefore geographically scalable. The GVC can be sector-focused, so we attempt to make use of this concept to focus on the value-adding hierarchy of the selected service sectors. It is useful for this objective as a specific process of services

or a particular location can be represented as a node on the chain that illustrates its relative position on the value-adding ladder in the production network. To examine the potentiality of countries and firms participating in the GVCs, it is vital to understand whether they are engaged in transaction (buying or selling) or interaction (which also involves intensive exchange of information and knowledge sharing) (Schmitz, 2005).

The GVC emphasises value creation, linkage, hierarchy and network. The participation in the network of production entails access to markets and resources, and exchanges (including opportunities to acquire and develop capabilities). It however also implies constraints for lower-end producers, partly because the value chains are often controlled by a limited number of buyers, i.e. 'lead firms' mostly based in the Global North, which 'undertake the functional integration and coordination of internationally dispersed activities' (Gereffi, 1999, p. 41). The continuing decoupling and recoupling of production processes on a global scale means more and more production sites and local suppliers are getting involved in the GVCs, thus triggering fiercer competition and potentially provoking a race to the bottom among those competing based merely on cost advantage. Lower-tier service suppliers find it difficult to move up the chains not merely due to the presence of and the asymmetric control by higher-end producers, but also because of the growing role of knowledge (particularly tacit knowledge), relationship, culture and trust in the production of high-end services, as discussed in Section 2.4 on the distinctiveness of services. Nonetheless, the value creation and relationship in the GVCs are dynamic and can be changed over time, so are the positions of firms. Some East Asian economies, for example, South Korea, Hong Kong and Singapore, have climbed up to higher positions in the GVC to not just serve their immediate region but also play important roles in the international economy, as both suppliers and buyers, particularly via their growing indigenous MNCs. The empirical studies on the global shifts of different ranges of ICT-enabled services will be discussed in Chapter 3.

With the need to sustain competitiveness relative to the dynamics in the GVCs in mind, it is necessary to explain what factors would make a difference to the patterns between places, particularly with regard to the sectors under investigation in the present study. For the economies of Mainland China, Hong Kong and Singapore, we need to examine the factors and actors involved in the services production and upgrading processes at the regional and national scales. Therefore, at the meso level,

the competitive advantage framework is aimed at how locations and firms develop and sustain their competitive positions by responding to and interfacing with the conditions present and resources available in the region. These conditions are referred to as factor conditions, market demand, supporting and related industries, and firm structure, strategy and rivalry, as well as the role of the government (Porter, 1998). Firms can compete through implementing generic strategies by focusing on appropriate competitive advantages – lower cost or product/quality differentiation, and competitive scope – broad or narrow target. This is closely related to the resource-based view (RBV) and the core competence approach.

The framework considers the ultimate source of competitiveness as coming from innovation-based strategies that are too distinctive for rivals to imitate. It helps us determine where such locational factors as human resources, culture and trust come from, whether they are supply- or demand-driven, and how they are relevant to improving the location's relative position in the global economy. We should however not constrain these perspectives within the national scale, but need to take into account of how these factors are influenced by and influencing the changing conditions at different spatial and temporal scales.

Building on the understanding of the environmental conditions, we further analyse what exactly upgrading means for firms in terms of strategy formulation by applying the concept of capabilities. Dynamic capabilities are taken into account as this concept explains the sources of enterprise-level competitive advantages over time. We can therefore assess the firm's ability to change the existing assets in response to the changes in market conditions that are primarily explained by using the competitive advantage framework. The dynamic capabilities concept 'not only emphasises the traits and processes needed to achieve good positioning in a favourable ecosystem, but it also endeavours to explicate new strategic considerations and the decision-making disciplines' (Teece, 2007, p. 1347).

Nonetheless, various conditions have to be met before a dynamic capability, or a combination of dynamic capabilities, can confer a competitive advantage (Helfat, *et al.*, 2007, p. 14). The first requirement is the technical fitness of dynamic capabilities of the same type must be distinctive from competitors. The second is the demand for their services; competitive advantage comes from applying capabilities

that only have value in use. The third is the dynamic capabilities must be rare in relation to the demand; otherwise the playing field between competitors can be easily levelled; whereas no competitive advantage is derived if another dynamic capability can substitute it even if it is rare in its type. Taking the GVC notion together, we can have a good basis for understanding international and inter-/intra-organisational knowledge diffusion that will help capabilities acquisition and transformation. The GVC concept illustrates the possibility of learning and acquiring capabilities through linkages and network participation.

The three-pillar conceptual framework of the present study can cater for both demand and supply perspectives for both developed and developing countries and regions. It should nevertheless be considered and applied with dynamism in mind. Moreover, the macro, meso and micro conditions and actors should not be treated separately, but indeed interact with each other at different degrees over time and space.

## 2.6 Conclusions

This chapter has reviewed the key theories dealing with specialisation of production, geographical and organisational division of labour, international trade, MNC location, the global production system, and firm-level capabilities. We have sought a conceptual understanding of the evolving spatial relationships from manufacturing to services, and from simple industrial specialisation to increasingly complex business process reengineering of continuously redefined tasks and micro tasks across industries.

In particular, the Porterian competitive advantage is useful for examining the various attributes of a location and their interaction in affecting the competitiveness of its particular industry in the global economy. The notion of technical division of labour is valuable as it demonstrates the dilemma between conceptualisation of tasks primarily using tacit knowledge and execution of such tasks and their further breakdown primarily adopting more codification, which is also applicable to the evolving trend in services NIDoL. This redistribution of production and internationalisation of business is closely associated with the distinct locational strategies of MNCs to compete not only based on cost savings but increasingly based on quality-driven competitive advantages. The GVC/GPN paradigms also offer insightful concepts that demonstrate how local suppliers from the Global South could

develop their capabilities through linkages to the global production system and resultant inter-organisational learning. To leverage the dynamics of globalisation, these firms are to nurture capabilities that are heterogeneous, unique, valuable and marketable to match with their specific sectoral and firm attributes. Getting hold of dynamic capabilities means firms can adapt their resource assets to the changing market conditions over time and space.

In view of all these geographical and organisational transformations in the global services production system, the asymmetric power relations between the Global North and the Global South, as widely discussed in the various streams of development theories, seem to continue to have significant implications for Southern economies even though they are increasingly engaged in higher value-added services production as compared to their previous situations. While advanced economies tend to control tacit knowledge and thus monopolistic rents via powerful MNCs and rule-setting institutions at the global and regional levels, emerging countries seem to be able to develop capabilities via linkages to the GVC. It however remains unclear whether the latter merely continue serving the demand and interests of the North and their MNCs, or can really progress with autonomous capacity.

In the present study, we have selected three study areas, including Mainland China, Hong Kong and Singapore in East Asia, and three specific types of services, including information technology, finance/accounting, and contact centre services, as our focus of analysis on the upgrading trajectories of Southern economies in the global services value chain. These study areas and specific sectors are differentiated in ways that will provide significant theoretical and empirical implications. We aim to address the research question: What are the upgrading paths, constraints and strategies of Mainland China, Hong Kong and Singapore in moving up the global services value chain? It covers the key range of services that are increasingly shifted to remote locations and the locations that have been increasingly actively engaged in the global services production system. The study is aware of and can show the heterogeneity within ICT-enabled services that are amenable to offshoring, and that within the Global South demonstrating the effects of path-dependent development trajectories. More details of the research methodology will be presented in Chapter 4.

Having built up the key conceptual understanding of international trade and development, with particular regard to the growing role of ICT-enabled services, we shall assess in the next chapter the existing literature on the recent trends of global services sourcing and the impact of such development on developing countries. These empirical observations and underpinnings will provide a solid foundation for the set-up of this study.

# Chapter 3 Empirical Background of the Phenomenon of Global Sourcing of ICT-enabled Business Services

## 3.1 Introduction

The preceding chapter has discussed a series of seminal theories that conceptualise geographical and organisational division of labour, the form of which has evolved dramatically and become more complex over time. Theory has explained the importance of competitive strategies based on quality and differentiation particularly in services industries which involve socially and culturally embedded and embodied elements of production. The capabilities hypothesis and the paradigms of global production system have shed light on the possibilities and strategic approaches of Southern economies and their indigenous firms to improve their relative positions in the global value chain with their development autonomy.

In this chapter, empirical literature on the phenomenon of global services sourcing will be reviewed and discussed. The recent rise of ICT-enabled business services in fact stems from the continuously evolving spatial distribution of labour, trade and investment, particularly since the 1950s when offshoring of production activities took off on a truly worldwide scale (Hymer, 1976; Dunning & Lundan, 2008; Dicken, 2011). As First World MNCs continued to look for ways to cut costs and compete efficiently, following the success in the dispersion of manufacturing production, they started to reengineer service processes by identifying and reshuffling generic functions starting as early as in the 1960s (Richardson, Belt & Marshall, 2000; Dossani & Kenney, 2007). This resulted in the decentralisation of back-office activities first domestically to suburban areas of the core cities and lower-order cities, and subsequently to nearshore and more recently offshore regions. A handful of developing countries, particularly India, have developed into popular offshore services suppliers for these advanced economies MNCs in the past three decades or so. With continued development of their capabilities, in combination of changes in technologies and management, alongside other factors, such as trade liberalisation, services offshoring has grown in terms of geographic extension, scope of services types and sophistication of organisation.

In the following sections, we shall first discuss the path through which the spatial shift of ICT-enabled business services has come to today's scale (Section 3.2). Section 3.3 will show the geographical pattern of the services offshoring in terms of both demand and supply sides. We shall not only take into account the locations that have been conventionally considered senders and recipients, but also discuss the rise of other emerging markets. In Section 3.4, we shall take a closer look at the types of offshored services with regards to the scope and the changing complexity of client organisations' demand and suppliers' expertise. Section 3.5 will conclude this chapter by highlighting the major empirical characteristics of the phenomenon, and pave the way to the next chapter's discussion on the methodology of the present study.

## 3.2 The Emergence of Global Sourcing of ICT-enabled Business Services

### 3.2.1 The Origins of Decentralisation of Business Services

The spatial shift of services characterised by decoupling of components of services delivery happened first within the Global North (Richardson, Belt & Marshall, 2000; Dossani & Kenney, 2007). The financial industry, in particular, adopted large-scale computing early on from the late 1950s, and set up massive centralised data processing units at headquarters (Dicken, 2011). These units were subsequently relocated to less expensive centres or the suburbs due to both land and labour cost concerns. As early as in the 1960s, American MNCs, for instance, began relocating back-office processes from their headquarters to smaller Midwestern towns in the US. In spite of significant cost savings, the 'shallowness of non-metropolitan labour markets' had partly restricted the scale of operations of these facilities (Dossani & Kenney, 2007, p. 774). Wilson (1995, p. 209) illustrates that

> Materials, usually in the form of documents or magnetic tapes, are sent by air [and sea] from the US, Canada, and Europe to processing facilities offshore. […] After processing, results are returned to originating data processing locations by courier, air freight, dedicated line, satellite or telephone/modem.

The relocation of service jobs to offshore countries can be traced back to the 1970s. Tata Consultancy Services (TCS) was created as the first domestic software firm in India by drawing together the IT expertise of Tata Group to serve the needs of

its affiliate companies (George & Hirschheim, 2008, pp. 309-310). Meanwhile, the Western organisations such as Texas Instruments and Motorola also discovered India as a source of qualified professionals at costs dramatically lower than at home. Later, TCS entered into an agreement with a leading American manufacturer of business equipment company Burroughs, according to which Burroughs would obtain contracts from clients and TCS would develop applications for them.

In the early 1970s, the most remarkable precedent of offshore services provision emerged, as some software programming was bought from India by the advanced countries (Schware, 1987; D'Costa, 2003). In the initial stage, this was first done by moving Indian engineers temporarily to work sites in the US and the like (D'Costa, 2003). Ireland and Israel were the other early beneficiaries involved in software offshoring (Dossani & Kenney, 2007). The skilled workers travelled to clients' sites to offer a range of activities, such as programming, conversions, testing, debugging, porting, installing and maintaining systems. Most of these tasks are 'tedious, uncreative, and requires lower-level skills since the bulk of the instructions and specifications come from the client' (D'Costa, 2003). Around the same period, service flows became convertible into stocks of information (Dossani, 2006). This digitised storage and transmission allowed physical and temporal separation between producers and customers. The programming languages were also standardised some years later, easing the information service flows between different computer systems.

The UNCTAD (2002) has observed that over the past few decades India has evolved from low value-added 'body shopping' to more autonomous offshore software customisation and eventually started moving towards more sophisticated package and product development. With further economic liberalisation and improving business environment, the 'India brand' was gradually born (George & Hirschheim, 2008, p. 310).

In 1977, the Indian government decided to limit foreign investment to protect domestic infant industries, thus forcing IBM which had been in the country since 1952 to leave India (George & Hirschheim, 2008, pp. 309-310). IBM's departure opened the computer market to domestic firms such as Wipro and Satyam, as well as to foreign companies such as Burroughs and ICL. In 1985, Texas Instruments set up a captive offshore development centre in India to take advantage of the labour arbitrage. Many

other MNCs, including Motorola and General Electric (GE), followed and established captive centres in the country.

By the early 1990s, large diversified First World conglomerates, which had been formed in the 1960s and 1970s, started to closely examine their value chains in order to identify processes that would no longer offer them unique advantages (Dunning & Lundan, 2008). American firms first began shifting some typing, credit card processing and call centre activities to Latin and Central America, particularly Mexico and the Caribbean (Posthuma, 1987; Wilson, 1995), and insurance claims processing and call centres to Ireland (Lohr, 1988; Richardson & Belt, 2001). The advent and subsequent widespread of dispersed computer networks, particularly the Internet, with significantly lower telecommunication costs, in the 1990s has led to more extensive decentralisation of back-office functions both domestically and transnationally, although centralisation of these activities is in no way superseded partly due to security and regulatory considerations (Dicken, 2011). In a series of 'make-or-buy' decisions, the MNCs began to outsource an increasing scope of activities previously performed in-house (Dunning & Lundan, 2008).

Dossani and Kenney (2007, p. 780) document that MNCs which already had existing software development faciltiies in India initiated the earliest offshore business processing operations. These include the first back-office operations established by American Express in 1993, British Airways in 1996, and GE in 1998 to deal with a range of data processing and call centre functions primarily to serve their developed country customers. As these captive establishments matured and expanded offerings to other companies outside their parents, some of them were spun off and became stand-alone companies, for example, WNS by British Airways in 2002, and Genpact by GE in 2004 (Chary, 2009).

Therefore, the supply of cross-border services was already there well before the millennium turn. Western companies who were still skeptical of their availability and quality, however, only saw Indian counterparts as mainframe maintenance providers (Flinders, 2010). It was not until the late 1990s when India, now a top

destination of ICT-enabled business services, established itself as a distant source of cheap programmers who could solve Y2K bugs (Liu & Trefler, 2008).[2]

### 3.2.2 Y2K as a Turning Point

For the developed world, the Y2K problem was just too big, too urgent and too geographically extensive to tackle on its own (Vashistha & Vashistha, 2006, p. 9). There were a lack of software engineers in the US and other advanced countries, especially those who were still familiar with those legacy systems, mostly mainframes, that were involved in the bug problem. On the other side, well before the emergence of Y2K, Indian engineers had already worked on those computer systems in their country. Therefore, when Western companies realised the possibility of foreign engineers to help with the Y2K bug, they first applied the 'body shopping' practice to hire these professionals from abroad, particularly India (Yourdon, 2005; Arora, 2006; Dossani, 2006). Y2K then became the turning point when supply was eventually met by demand.

The later version of ICT-enabled services offshoring has been transformed from the 'body shopping' practice towards the turn of the millennium due to innovations in both technology and management, as well as tighter visa restrictions in the West, resulting in the diminished need of physically transferring workers from abroad to work onsite (Aneesh, 2001).

Around the same period as the feasibility and cost effectiveness of offshoring has been realised, management was undergoing a massive reengineering movement in the 1990s to achieve significant savings through reorganisation (Dossani & Kenney, 2007). This could be partly done by examining, decomposing and standardising the activities necessary to complete a process, which has facilitated the separation of the work process either geographically, organisationally, or both (Davenport, 1993; M. Hammer & Champy, 1993; Gereffi, Humphrey & Sturgeon, 2005). Business process reengineering has often been accompanied by digitisation of some part or even an entire process. Together with the management restructuring, the informatisation of service flows has facilitated fragmentation of a production chain.

[2] Y2K refers to the year 2000 by when computer systems would have to be upgraded to accommodate the use of four digit calendar dates.

Lacity and Rottman (2008, pp. 95-97) in their IT offshore outsourcing research surveyed a US retail company which, like many other large Western companies, had temporary but urgent need of additional IT manpower to work on such a project as six million lines of COBOL code to make Y2K compliant, and subsequently began looking offshore for the short-term need. In 1997, the IS director of that retail company considered one Indian supplier among the few which were able to handle the large volume of work at that time. Nonetheless, the retail company, as Lacity and Rottman (2008, p. 96) emphasised, 'did not really perceive the selection of an Indian supplier as a radical new model called "offshoring" - the Indian supplier was just another preferred contracting firm'. With very positive experiences with the Indian supplier on the Y2K project, the retail company also engaged the same supplier to tackle another project requiring immediate attention before the completion of the Y2K project. It was a version upgrade to the mainframe Customer Information Control System (CICS), which required no new functionality but considerable technical work. Based on the early successes with Y2K and the CICS upgrade, the US retail company began to give the Indian supplier more projects that increasingly required new domain expertise or new technical skills. In other words, sending work to India was just part of outsourcing, though that was comparatively new for many others.

In general, the story of that retail company has illustrated that the successful experiences of Western companies with Indian suppliers in the Y2K event have helped the former build up confidence in the latter and grown into longer-term partnerships. Since the early 1990s, it has been frequently reported that leading multinationals such as GE, Citicorp, HSBC, Texas Instruments, and Motorola had already begun offshoring business services to India. The opportunity to sell services also promptly caught the attention of giant consulting firms, such as McKinsey and the Gartner Group, which have been publicising offshoring through numerous reports and selling their services simultaneously (Dossani & Kenney, 2007). Liu and Trefler (2008) have also observed that captive offshoring and offshore outsourcing has gained steady rise since 1996.

### 3.2.3 After Y2K

When the Y2K event passed peacefully, Western companies started to realise cost saving by relocating business processes to low-cost offshore locations as a great

opportunity. The focus of international services trade has already moved from 'body shopping' to offshore sourcing via ICT links. Offshore work has contributed 45% of the total export earnings (grew from just 5%) to India's software industry (Balasubramanyan & Balasubramanyan, 2000). Some of its large indigenous transnational firms have developed own packages. The progressive shift from onsite to offshore developments by MNEs and by Indian firms on behalf of foreign clients points to the country's improved project management skills and experience, as evident in Indian developers' growing autonomy (D'Costa, 2003).

The global Indian diaspora has played a notable part in the growth of the software and ITES industry in their home country, although Dossani (2006) argues that the diaspora has only been influential in the past decade. It is true that overseas Indian nationals have brought a less significant contribution in terms of FDI to their home, as compared to the Chinese diaspora abroad including those from Hong Kong and Taiwan which have by and large aimed at exploiting the low-cost labour and government incentives. However, much of the contribution of the Indian diaspora in the offshoring sectors has been in intangible forms in terms of, for example, knowledge and technology transfer (Panagariya, 2006; Srinivasan, 2006; Raymer, 2008). As mentioned, using temporary worker visas, the Indian diaspora brought computer programmers from their home to the US market during the 1980s. The subsequent collaboration between the American and Indian professionals has led to confidence building, contributing to the later development of services trade between the two sides. So the establishment of diasporic networks across the globe through labour mobility and perhaps knowledge transfer may potentially bring about long-term benefit to the home country (if not more necessarily sustainable than FDI).

Firms move parts of their production to other locations mainly to search for cost efficiencies by exploiting the wage differentials. Such production-oriented cost motives could be explained by a number of factors, such as reductions in wages, specialisation and increased flexibility of the workforce. Given the same or similar nature of a task, a worker in lagging countries who is also able to do the work is paid at a much lower wage level, compared with one in the Global North. Winkler (2009) has also argued that labour cost savings could be even higher when less-skilled tasks are relocated to low-cost locations. Hourly rates for an IT employee in Asia and other emerging markets are reported to be 30-75% lower than those in the US (Pfannenstein

& Tsai, 2004). With a narrower range of estimates, Gordon, *et al.* (2009) suggest that offshore locations like India tend to offer 80-90% lower salary levels than UK onshore sites, while it seems to be 20-30% cheaper in terms of labour costs for work to be done nearshore such as within the British Isles. Rudiger (2007, p. 8) also suggests large wage gaps: the hourly rate of call centre operators in India is 60p to £1.25 per hour, equivalent to only 13-20% of that in the UK or the US; software engineers £5,000-15,000 annually (15-17%); accountant £10,000 (12%); market research analysts £24,000 (13%); HSBC average £2,500 (14%). Estimations in the press and consultancy reports vary substantially because of reasons like differences in national living costs, sampled job types and ranks. Also, direct wages reflect only part of the labour costs; there are other benefits paid by the firm to its workers, e.g. travel subsidies, housing allowance and medical insurance, which can make a huge difference between states as labour regulations vary.

Offsetting such big differences in labour-related costs, costs of activities can be significantly higher for offshored activities taking into account the economic concept of transaction costs. To assess the real difference between doing a task onshore and sourcing it offshore requires careful estimation of the sum of all transaction costs involved. Carmel and Tjia (2005) have suggested certain types of additional costs in order for the firm to estimate the overall offshoring balance, including efficiency (productivity compared to the onshore), travel (e.g. any need for extended onsite work), overhead allocation, governance (e.g. communication with vendors and contract management) and risk mitigation (e.g. investment in resources in case of failure, backup and recovery). Eichmann (2004, p. 14) has similarly listed some cost factors of global outsourcing, for example, costs of selecting a vendor and initial travelling, transition cost, cost of layoffs at the source side, depending on national labour legislation, 'cultural' cost, from transition-related productivity slumps, and communication costs caused by cultural misunderstandings and high turnover at offshore vendors. These costs may add up to an extra 50% or more of the contracted costs. Schaaf (2004, p. 6) in a Deutsche Bank research bulletin has also suggested that such additional offshoring costs could erode the potential labour savings, and subsequently the cost savings in a more realistic estimation would work out at between 20% and 30%. Studies by Gordon*, et al.* (2005, 2009) suggest that moving jobs successfully to India could save 40-60% of the original costs even after taken into account all associated costs, such as infrastructure, training, supervision, personnel

management and (possibly) maintenance of a shadow capacity at home, i.e. London, as a back-up. The cost-cutting potential is likely to be more exploited with experience accumulated in the later stage of offshoring.

The wave of global services offshoring has heightened since the millennium, as numerous press reports and company announcements in 2002 and 2003 outlined plans by a number of large MNCs to move a wide variety of back-office functions to low-wage remote locations (Sturgeon*, et al.*, 2006). Not only have they intended to establish their own offshore affiliates, but work has also been outsourced to Indian multinational such as Sykes and Wipro, as well as gradually to domestic contractors (Dossani and Kenney, 2003). Throughout more than a decade's development, the global services shift is no longer confined to mere IT and basic business processing services or to a few developing countries. For instance, Tata Consultancy Services (TCS) headquartered in Mumbai, India is a global IT services, business solutions and outsourcing firm. TCS started as a computer division providing in-house computer services to other Tata Group companies. It has then moved to export IT and software services since the early 1970s and subsequently grown into one of the largest software and services solutions corporate in Asia and even in the world in its own right through continuous expansion, acquisitions and restructuring. Another Indian BPO firm OfficeTiger was established by two Americans in Chennai in 1999 who had hired highly-educated Indians to work for Western clients remotely (Warrier, 2006). The company began by offering data management and subsequently has moved to analyse and process securities reports and other documents drawn up by lawyers and bankers in the US (Kripalani, 2005; Gordon*, et al.*, 2009).

In addition, although India has been the primary recipient, this new business and investment has also been channelled to other places in Asia, Eastern Europe and the Caribbean that were previously considered only for some simple tasks like data entry (Sturgeon*, et al.*, 2006). The process has become broader, deeper and more multidimensional in terms of type of services, range of countries and process sophistication. We shall further discuss the dynamic phenomenon of global services sourcing with regards to geography and types of offshored processes respectively in the following sections.

## 3.3 Geography: The Demand and Supply Sides

The literature has conventionally viewed and examined the pattern of services trade or offshoring by distinguishing the Global North as the sending or source side and the Global South as the receiving end. For a general illustration of the scale of the offshoring activity, some estimates reported in key industry and academic literature might help, although the numbers of jobs at stake tend to vary widely in different sources. The first projections by Forrester Research for the US identified 175 out of 505 of the occupation types as at different degrees of risk to offshoring, with for example an expected 26% of its computer programmer jobs having been relocated offshore (McCarthy, 2002; Gordon, *et al.*, 2005). The estimates for 16 European countries by a subsequent Forrester Research suggested that the number of offshored jobs would rise from 82,000 in 2004 to 1.17 million by 2015, particularly led by the UK growth (Parker, 2004). On an international scale, the McKinsey Global Institute also estimated that 11% of worldwide service employment (160 million jobs), as an upper bound, could be relocated to low-wage countries by 2008; while 4.1 million of these jobs would actually be moved (Farrell, *et al.*, 2005). Due to the absence of an agreed definition of tradable ICT-enabled services, and the lack of disaggregated data for services jobs and trades in some countries, the coverage of which can vary across countries and institutions, estimations of the shares of the source and supply sides also vary.

Some studies find that services offshoring tends to occur between high-income countries rather than between high- and low-income countries, as the OECD countries export and import the majority of the global services, and due to specialist high-order demands (such as those of intra-industry trade). The contribution of exports of these services to GDP as percentage proportion, however, is already higher in India than in its developed counterparts like the US and Germany (Dachs & Weber, 2007). In other words, from the development perspective, services offshoring seems to offer potentially higher benefits to India and other emerging countries, as compared to their other domestic economic activities. In this section, we shall assess the demand and supply patterns of ICT-enabled services in terms of their common and emerging origins and destinations.

### 3.3.1 The Demand Side

High-income, advanced economies, particularly the OECD countries, are conventionally the 'demand' sides which offshore service tasks and import back the outputs either for direct consumption or further processing (van Welsum & Reif, 2006a; Dachs & Weber, 2007). Regionally, by the late 2000s, North America, being the first to offshore, is projected to have contributed at least half of the global demand for offshore services, followed by Europe (about 31%), Asia (16%) and the rest of the world (2%) (Gereffi & Fernandez-Stark, 2010, p. 26). Another study also estimates that the US and the UK have been two dominant home countries, respectively accounting for more than 70% of all worldwide and two-thirds of all European offshoring (Majluf, 2007). In Asia, Japan has acquired as much as 60% of China's software exports (Ministry of Economy, 2007, p. 282).

Using the IMF Balance of Payments data, Winkler (2009) finds that the absolute top ten importers of tradable services (including the four categories of computer and information, communication, financial, and other business services) are all developed countries except for Brazil which is ranked 10$^{th}$ in computer and information services imports. The US, the UK and Germany top the ranking, while other European nations, such as Spain, France, Italy and the Netherlands, as well as Japan, are the common top ten importers in these services categories. Despite the dominance of these advanced countries, some developing countries, including China and other Asian countries, as well as CEECs, are often ranked among the top 20 in terms of services imports. In the relative measure (as percentage of GDP), Winkler (2009) finds mostly smaller and often developing economies among the top five importers. It is important to note that India and Russia show larger import shares than Japan and the US. China is even ranked higher in computer and information services and other business services.

In general, the triad of the Global North, i.e. the US, Western Europe and Japan, tend to generate the major demand for ICT-enabled services in the globe. Meanwhile, certain large developing countries have also imported a significant amount of services, due to their need of higher value-added inputs which they do not have the comparative advantage to produce.

The firms in the advanced economies first began to send some IT and other basic business processing work to remote locations, such as India, Ireland and Israel, as they were pressurised to cut costs in face of fiercer competition and realised the possibility of significant cost saving potential through offshoring. Meanwhile, the economy of the Global North has shifted from labour-intensive to knowledge-based, and from routine to non-routine work (Gereffi, 2006; Dossani & Kenney, 2007). Firms attempt to search for new efficiency as they are reorganising the business process and increasingly unbundling non-core corporate functions from core activity (Doh, 2005; van Welsum & Vickery, 2005; Sako, 2006). Firms are engaged in offshoring also to access strategic resources, such as skills and markets, when it is difficult to find the right expertise in a tight domestic labour market (van Gorp, Jagersma & Livshits, 2007). They also aim to improve services quality through offshoring by recruiting technology and knowledge in leading scientific and technological communities (van Gorp, Jagersma & Livshits, 2007).

The global competitive landscape is changing, as is the need for talent. Some studies have pointed out that the motive to offshore is no longer merely about cost savings; a global race for talent is emerging (Manning, Massini & Lewin, 2008; Lewin, Massini & Peeters, 2009). While some knowledge processes are offshored, global firms focusing on innovation are seeking high quality labour on a worldwide scale. This emerging trend will be discussed later in Section 3.4. Some firms also intend to tap into new markets through offshoring (van Gorp, Jagersma & Ike'e, 2006). In particular, this is usually done by setting up own facilities or partnering with local suppliers (George & Hirschheim, 2008).

The demand pattern of IT and business processes by multinational firms is nonetheless changing, according to some observers. MNCs no longer stick to one global operating centre but prefer several regional centres due to time zone constraints, language requirements and concerns about cultural affinity with their clients and subsidiaries (Manning, Massini & Lewin, 2008; Gereffi & Fernandez-Stark, 2010). In addition to the demand from MNCs in the Global North, MNCs based in fast-growing Southern economies, representing 26% of the 'Forbes Global 2000' firms, are generating new demand for offshore services from their lower-cost counterparts, creating a new trend in services offshoring (Gereffi & Fernandez-Stark, 2010). As the Southern economies are starting to prosper, some of these MNCs have set up ITO and

BPO centres in other emerging markets to cater for the needs of their clients in those regions. Therefore, unlike core manufactures in the US or EU, the need for localisation in certain service functions has more to do with high calibre human resources to suit their market requirements.

While some researchers have compared the recent shift of ICT-enabled services with the relocation of manufacturing activity to low-wage offshore locations, some argue that this new wave of globalisation would be likely to have a different impact on the Global North. Due to the distinctiveness of services, particularly high-end services, from labour-intensive manufacturing, as discussed in Chapter 2, the shift of routine services work to offshore locations in this new era is different from the relocation of assembly work some decades ago. The latter was characterised by the absorption of the laid-off manufacturing workers into the expanding services industry which required limited training during the second half of the 20$^{th}$ century (Dossani, 2006). However, services workers are expected to possess higher qualifications and soft skills, due to the qualitative nature of services as discussed in Section 2.4 of Chapter 2. Thus, the restructuring from low-end to high-end services work has led to concerns within the developed world with regard to possible trade restrictions, and to the timely creation of adequate high-end, innovative jobs and re-education of its people to perform such knowledge-demanding work.

### 3.3.2 The Supply Side

#### Major Host Locations

The global market of services offshoring is observed to be oligopolistic, in that the business has been concentrated in a relatively small number of countries (Majluf, 2007). Aside from being the major importers, the UK and the US have shown growing shares of exports in most of the services categories in the past two decades, according to the study by Winkler (2009). The 2004 and 2005 trade figures illustrate that both countries were listed among the largest surplus countries for computer and information services as well as for other business services. Meanwhile, France was the largest net exporter of communication services. The UK and the US were also the biggest net exporters of financial services, alongside other smaller economies including Luxembourg, Switzerland and Hong Kong. Interestingly, while India and Ireland constituted the largest surplus countries of computer and information services,

they were the largest deficit countries for other business services, reflecting their specialisation in the former category of services. Therefore, while some developing countries have been growing rapidly in exporting specific parts of the services spectrums; developed countries like the UK and the US have also maintained strong exports of certain specialised services. All this empirical evidence has shown that different groups of economies have established varied market niches.

Bunyaratavej, Hahn and Doh (2007) show that China, India, Ireland, the Netherlands, Pakistan, Slovakia, Spain and the UK all have at least one core-efficiency-creating competency among the key inputs, including wages, education, infrastructure and cultural differences. Their study uses project information that covers more than 36,000 worldwide FDI projects in customer support centres, shared service centres, IT and software, as well as regional headquarters between 2002 and 2005 to examine the attractiveness of host economies for global sourcing of services from the perspectives of service firms based in the US. Nonetheless, we shall bear in mind that these countries supply very different niches, especially the UK, the Netherlands and Spain vis-à-vis China, India and the like.

The McKinsey Institute estimates that five host countries have accounted for almost 84% of the global offshoring industry (Farrell*, et al.*, 2005). India has been the leader taking up 32% of the total market, followed by Ireland with 23%, Canada with 10%, Israel with 9.5%, and China with 9%. According to Nair and Prasad (2004), more than 25% of global MNCs have outsourced their software requirements to Indian companies. The National Association of Software and Service Companies (NASSCOM), the trading body and the chamber of commerce of the IT-BPO industry in India, estimates that the total revenue aggregate for the sector has reached USD 46 billion by 2009, which would be almost a ten-fold increase compared to the amount reported for 1998 (NASSCOM, 2007; Gereffi & Fernandez-Stark, 2010, p. 31).

As a benchmarking survey of potential offshore destinations, the A. T. Kearney Global Services Location Index (GSLI) analyses and ranks the top 50 locations across the globe that provide typical remote functions, including IT services and support, contact centres and back-office support (Monczka*, et al.*, 2005; A.T. Kearney, 2007). Based on 43 measurements grouped into three categories, financial attractiveness, people and skills availability, and business environment, the 2005 GSLI

shows that China has been striving to catch up to India which has topped the Index, notably in terms of university enrolment as well as in greater efforts in acquiring international management and organisation certifications. In addition, other Southeast Asian markets (including Malaysia, Thailand, the Philippines, Indonesia and Singapore and Vietnam) are growing very strongly, occupying the top 20 locations. The 2007 GSLI further indicates that India and China remain the most favourable locations, leading the Index by a wide margin.

The Offshoring Research Network (ORN) based at Duke University has conducted a multiyear survey on the offshoring projects of American and European firms (CIBER, 2008). Its second survey released in 2005 finds that India obtains 43% of implementations of such projects, which has however decreased from 69% for the first survey. China and the Philippines have achieved, respectively, 12% and 8%, doubling their shares since the first survey (Lewin*, et al.*, 2005). However, referring to the 2006 survey findings, China still lags India particularly in areas of expertise and language requirements (Couto*, et al.*, 2006). Nonetheless, we should bear in mind that the ORN surveys are targeted at the US and a few European nations, with respondents whose offshoring criteria probably different from those other Asian countries including Japan.

Throughout the recent global services shift, new entrants have been emerging to provide different types of services, gradually forming a pattern of specialisation. For instance, certain transition nations in Eastern Europe, such as the Czech Republic, Poland, Hungary and Belarus, have begun to serve the pan-European market (Aggarwal & Pandey, 2004; Rosenthal, 2005; Engman, 2007; Gal, 2011). Other fast-growing economies, for example, the Philippines, China, Thailand, Singapore, Hong Kong, Brazil, Mexico and South Africa, have also been catering for particular segments of the offshoring industry (Farrell, 2006; Winkler, 2009). As evident in Winkler's study (2009) mentioned earlier, certain Southern economies have exhibited a clear specialisation pattern as they have been among the largest net exporters of one or two specific service categories, for example, India in IT services, Hong Kong in financial and other business services, and China in other business services, while they have imported significant relative amounts of other services.

**India's success**

The emergence of Southern economies has been enabled by their progressively better conditions, including an expanding supply of young educated workers and improving ICT infrastructure, as well as other supporting factors. As illustrated earlier in Section 3.2, India's rise is the result of years of accumulated growth and institutional improvements, rather than mere 'millennium luck' (Sheshabalaya, 1999; George & Hirschheim, 2008). In particular, NASSCOM has played an influential role in the growth of the Indian software and services industry. NASSCOM is a non-profit organisation established in 1988 to facilitate Indian software and services business and to encourage R&D. It functions as both a chamber of commerce and a single point of reference for information on the industry, as well as lobbies (with) the state in India. At the time of its establishment, the 38 founding members accounted for 65% of the Indian software industry's total revenue; by 2007, NASSCOM's membership grew to 1,100 including over 200 global firms, accounting for over 95% of the revenues of the Indian software and services industry (Kshetri & Dholakia, 2009).

NASSCOM has played a phenomenal role in bringing critical institutional changes in a weak regulatory environment. It has also helped establish responsible industry behaviours. It has proactively educated software users and encouraged lawful use. In the early 1990s, for instance, it teamed up with the Manufacturers Association for Information Technology to launch the Indian Federation Against Software Theft (InFAST) to fight software piracy (Kshetri & Dholakia, 2009). Apart from developing and enforcing industry codes and standards, it also drafted plans for new legal measures to safeguard intellectual property and prevent data theft. NASSCOM has successfully collaborated with the government and law enforcement agencies. Equally important, NASSCOM has put concerted efforts in strengthening the brand associated with Indian software and services. Nonetheless, the influence of NASSCOM in the later stage of India's move towards high-end innovative functions is likely to be different from its leading role in the early stage. There are usually institutional limits to the development of an increasingly sophisticated industry while other factors, such as local exchange of tacit information, are becoming more important for ongoing innovation (Trefler, 2006).

Alongside the contribution by NASSCOM, the success story of India is also attributed to a number of other interrelated factors. The colonial background and the English-speaking middle class have served as the underlying factors helping to dilute the potential language and cultural conflicts between the Western contractors and the Indian vendors. The early restrictions on foreign ownerships, having protected the infant domestic industry, but the subsequent liberal reforms in economic and telecommunications policies, and thus the influx of transnational corporations have paved India's offshoring trajectory (Dossani, 2006; Dossani & Kenney, 2007). The presence of strong private entrepreneurship and the return of transnationally-trained diaspora, supported by the state incentives, such as the establishment of the software technology park and research institutes, the provision of duty-free imports of hardware, abolition of income taxes, installation of satellite facilities, and exemption from tedious customs and export clearance procedures, all act as catalysts to boost a conceive environment (Balasubramanyan & Balasubramanyan, 2000; Parthasarathy & Aoyama, 2006; Srinivasan, 2006). The attainment of certifications, usually promoted by industry associations like NASSCOM, also helps firms to prove international recognition of their credibility in quality standard and data security, and to comfort customers' concerns about difficulty in quality control or in managing remote operations (George & Hirschheim, 2008). India indeed has the highest number of IT companies with ISO and CMM certificates (Eichmann, 2004).

The case of India has illustrated the range of possible factors contributing to the success of offshoring. However, other developing countries may possess similar attributes, such as a growing mass of educated workers and improving English abilities; yet, they do not necessarily and may not be able to replicate the same growth path as India. Regardless of the existence of varied sets of growth factors, locations with similar attributes, such as advanced infrastructure, still need to make use of appropriate mechanisms to mobilise these factors into assets that are commercially marketable for attracting investment and facilitating development.

**Varied factors for other emerging locations**

The sophistication of suppliers in the emerging markets has progressively increased, with a mix of factors contributing to the development of different countries at different times to varied scales. The Philippines, for example, has emerged as one of

the major offshore call centres for firms from the US, as a result of its tradition of bilingual education and affinity to the American culture, in addition to the wage differentials (Friginal, 2007). Unlike India and the Philippines, however, China's emergence is not based on the presence of a large English-speaking population. China has been engaged significantly in services trade with its neighbouring Asian countries, particularly Japan and South Korea (Furniss, 2003). This has been explained by the language compatibility of the large pool of educated Chinese workers, many of whom particularly in Northeast China know Japanese and Korean, as well as the culture and history shared between these Asian counties, besides their physical proximity. Dossani (2006) further contrasts India with China, suggesting that the former has a mature judicial system and commits conformity to WTO obligations, whereas the latter has just started gradual reforms in these aspects. In spite of better infrastructure, China on the contrary lacks a history of private entrepreneurship, a large pool of English-speaking population and a mature judicial system.

In Europe, German firms, for example, choose Eastern Europe as their destination due to its proximity and similar time zone, in combination of other factors including cost differentials, language and cultural affinity (Matejic, 2005). A study of intra-firm trade between Austria/Germany and Eastern Europe also finds that reduced levels of corruption with improvements in the contracting environment have increased the attractiveness of Eastern Europe as the location for European firms, in turn encouraging intra-firm imports from that region (Marin, 2006). In addition, a survey on the global labour market by the McKinsey Institute has suggested that graduates from Eastern Europe are generally perceived by US and UK firms as more employable (Farrell*, et al.*, 2005). In the same study, MNCs would consider employing 50% of engineering graduates from Czech, Polish or Hungarian universities, as compared to 25% from India, and only 10% from Russia and China.

With regard to state support, different government attitudes towards services trade and offshoring are also likely to result in varied policy orientations. For example, Brazil has relied on a sophisticated domestic banking industry to generate demand, hoping that it would lead to the creation of an internationally competitive software industry (Arora, 2006). Unlike Brazil, China tends to be following a more traditional import-substitution model.

Overall, the matching between offshore locations and their clients is based on different requirements of cost savings, operation scale, types of skills and level of education of the workforce, cultural similarity and language proficiency, as well as sensitivity to service disruptions, risk tolerance, and so on. Moreover, as Couto*, et al.* (2006, p. 6) explicitly state, 'where you offshore depends on what you offshore'. Therefore, when evaluating whether a location is capable of undertaking specific tasks, it is important to make clear of what criteria that activity is to match with.

## 3.4 Offshored Services Types: Shifting from Simple Tasks to More Sophisticated Work

MNCs began to scrutinise their value chains to reengineer production activities organisationally and geographically first in manufacturing since the 1970s when firms, having considered the costs and other strategic motives, including new uncertainties about market trends, decided to source intermediates from third-party suppliers and/or abroad. Services have replicated manufacturing's vertical reorganisation as MNCs have transformed the organisation and management of generic business functions throughout the past three decades, as generally discussed in Section 3.2. First relocated offshore were the simple tasks unbundled from the value chain of the corporation's production. As technology advanced and business organisation changed, the vertical disintegration became more complex. Alongside the increasing sophistication of suppliers, a wider range of new and old tasks can now be decoupled from the original process and performed outside the organisation and/or its base location. Unlike the first 'global shift', the geography of this NIDoL is primarily determined by the education and language abilities of service workers at the low-cost countries, and their abilities to culturally relate to their foreign customers (Bryson, 2007). Here we shall review the literature with regards to the types of services being offshored and the changing pattern of such in relation to the capability development of suppliers.

First, we shall look at how the offshorable ICT-enabled services are commonly identified and classified in the literature. In view of the inability of the International Standard Industrial Classification (ISIC) for services trade to offer an ideal definition of the types of services subject to offshoring, international institution agencies, academic researchers and industry practitioners have provided lists of the

types of offshored services in their publications. Amongst many, that of Abramovsky, Griffith and Sako (2004) is both fairly comprehensive and relatively compatible with the ISIC. As shown in Table 3.1, these authors classify services into 'business services' and 'other services' from the demand perspective. The former are demanded by private and public companies, while the latter are demanded by individuals. However, Abramovsky, Griffith and Sako have put 'financial activities' in the 'other services' list and thus not considered as offshored business services. Yet, as Winkler (2009) rightly points out, financial intermediation and related activities should be so regarded, as banking, insurance and finance represent 35% (the largest part) of the total services offshoring market. This is because of the fact that these services are being offshored due to the increasing internationalisation of finance, and of the unbundling of corporate financial functions resulting in the handling of generic business processes in centralised units. We therefore move 'financial activities' under the category of 'IT-enabled services' in the table. It is also noted that some other services that are offshorable are missing, such as 'post and telecommunications', 'renting of machinery and equipment', and R&D.

**Table 3.1: Classification of Services.**

| Business services | | |
|---|---|---|
| IT-enabled services | IT-computer services | Other services |
| ▪ Renting of machinery equipment and other<br>▪ Research and development<br>▪ Legal activities<br>▪ Financial activities<br>▪ Market research and management consultancy*<br>▪ Architectural activities and technical consultancy^<br>▪ Advertising<br>▪ Other business services# | ▪ Software consultancy<br>▪ Data processing and database activities<br>▪ Hardware consultancy<br>▪ Maintenance and repair of computing machinery | ▪ Wholesale and retail trade<br>▪ Transportation and communication<br>▪ Real estate<br>▪ Hotel and restaurants<br>▪ Public administration<br>▪ Health<br>▪ Education<br>▪ Other services |

Notes:

* Business and management consultancy, market research and public opinion polling, management activities of holding companies

^ Architectural and engineering activities and consultancy, technical testing and analysis

\# Labour recruitment and provision of personnel, investigation and security activities, industrial cleaning, photographic activities, packaging activities, secretarial and translation services, other business activities

Sources: modified from Abramovsky, Griffith and Sako (2004, p. 9), and Winkler (2009, p. 38).

In general, empirical studies have considered two main broad categories of offshored services, namely information technology and business processing, which match with the common definition in such studies as Abramovsky, Griffith and Sako (2004) and Winkler (2009). Like other classifications, the categories are neither exhaustive nor mutually exclusive. As the offshorability of different types of services is dynamic over time, the lists tend to grow and may be very specific.

Information technology offshoring/outsourcing (ITO) generally covers services that are directly involved with information technologies. Examples include software development and implementation services, data processing and database services, IT support services, application development and maintenance, business intelligence and data warehousing, content management, e-procurement and business-to-business marketplaces, enterprise security, package implementation, system integration, enterprise application integration, total infrastructure outsourcing, web services (Internet content preparation, etc.), web-hosting, and application service provider (Mattoo & Wunsch-Vincent, 2004, p. 767).

Business processing offshoring/outsourcing (BPO) can be subdivided into customer interaction services, back-office operations, and more independent professional or business services, examples of which are listed below (Mattoo & Wunsch-Vincent, 2004, p. 767):

- Customer interaction services: sales support, membership management, claims, reservations for airlines and hotels, subscription renewal, customer services helpline, handling credit and billing problems, telemarketing, and marketing research services.
- Back-office operations: data entry and handling, data processing and database services, medical transcriptions, payment services, financial processing (financial information and data processing/handling), human resource processing services, payroll services, warehousing, logistics, inventory, supply chain services, ticketing, insurance claims adjudication, and mortgage processing.
- More independent professional or business services: human resource services (hiring, benefit planning and payroll, etc.), finance and

accounting services (including auditing, bookkeeping, taxation services, etc.), market service, and product design and development.

As can be seen, some of the processes listed above are highly standardised and routine, such as data entry, inventory and ticketing, which require minimal specialised skills. Some processes are however likely to demand certain degree of tacit knowledge and domain skills, such as product design and development. Some observers therefore attempt to describe the types of offshored services in terms of their interaction and knowledge levels. Javalgi, Dixit and Scherer (2009), for instance, define three offshore outsourcing service types, by linking them to three types of international outsourcing levels (See Table 3.2). They include people-based or customer contact services, IT and IT-enabled back-office services, and knowledge-based services. When Western corporations realised the huge cost saving potential of offshoring and the availability of a significant mass of educated workers in emerging markets, they started moving certain IT-enabled people-based and other back-office activities to India, China, Brazil, the Philippines and the like. On the supply side, advancements in IT infrastructure and the trade liberation, and significant technology and R&D investment by the developing countries have enabled their service providers to deliver such ITO and BPO services across the world principally via ICT links.

With regard to the strategic levels, each of these sourcing types covers specific processes that are transactional, strategic, or transformational. The first level is primarily driven by cost cutting and has minimal impact on the formulation of organisation's business strategy or restructure. The second level is increasingly motivated by reasons other than costs, for example, access to expertise not available at home. The processes offshored are associated with the organisation's business strategisation. The highest level is aimed at transforming the organisation's core activities, and so demands intensive interaction and sophisticated knowledge of the organization and the industry.

**Table 3.2: Services Sourcing Types and Strategic Value to the Firm.**

| Types of services sourcing | Conventional/tactical outsourcing | Strategic outsourcing | Transformational outsourcing |
|---|---|---|---|
| People-based/customer contact services | ▪ Customer interaction services (call centres)<br>▪ Online customer services<br>▪ Telemarketing | ▪ Facility management<br>▪ Project management<br>▪ Customer support | ▪ Hiring and recruiting<br>▪ Training and staff development<br>▪ Customer relationship management (CRM)<br>▪ Technical support |
| IT and IT-enabled back-office services | ▪ Payroll processing<br>▪ Billing services<br>▪ General transaction processing<br>▪ Data entry<br>▪ Customer feedback<br>▪ Insurance claims processing | ▪ Finance and accounting functions<br>▪ Credit and tax analysis | ▪ IT strategy and planning<br>▪ Database management |
| Knowledge-based services | ▪ Network support<br>▪ Market research<br>▪ Advertising and business communications | ▪ Data analysis<br>▪ Data mining<br>▪ Software development | ▪ Testing of medical/clinical drugs<br>▪ Computer programming<br>▪ New product design<br>▪ Architectural design<br>▪ Engineering design<br>▪ Strategic planning |

Source: based on Javalgi, Dixit and Scherer (2009, p. 162).

In the case of India, it is observed that, unlike earlier offshoring of software programming which was pushed by the Indian firms, MNC subsidiaries led the way in the establishment of the non-software services offshoring (Dossani & Kenney, 2007). In software outsourcing, Indian firms have dominated their market in terms of employee number and revenue, although MNC service providers such as IBM and Accenture are growing fast. In contrast, the offshoring business of other IT-enabled business services is characterised by the domination of MNCs which are engaged in the largest and most sophisticated operations, although domestic Indian suppliers also entered the market in the early stage. One point to note is that the role of foreign firms is not just confined to large MNCs but also involves smaller global firms. Dossani and

Kenney (2007) further comment that the most sophisticated work being executed in the country increasingly becomes similar to that being done anywhere in the world. Many observers have analysed how Indian suppliers have expanded their sophistication and shifted to higher value-added activities over the years. These suppliers have developed both technical and marketable capabilities through, for example, accumulating local expertise and nurturing to address specific market niches (Kaka & Sinha, 2005; Keun Lee & Park, 2010) or by acquiring related Western companies in order to achieve better credibility with clients (Henley, 2006).

As suppliers are involved in wider and increasingly complex processes, and engaged with their clients over time, they may develop expertise in certain areas of offshore services. Some service providers have recently started labelling their services as KPO (knowledge process outsourcing/offshoring) so as to distinguish themselves from transaction process tasks associated with the terms ITO and BPO. For illustration, knowledge-intensive processes usually involve 'market and industry research, data and statistical analysis, competitive analysis, and support in legal and administration processes' (Mierau, 2007, p. 3). Different from traditional BPO/ITO, KPO indicates a major industry shift, away from doing standardised, rules-based processes to executing highly complex and customised ones (Aggarwal & Pandey, 2004). While BPO offers extensive process expertise, KPO emphasises business expertise. The latter requires considerable domain knowledge, advanced analytical and technical skills, as well as exercise of judgement and interpretation. Thereby, KPO can be regarded as the next step up the outsourcing/offshoring value chain (Sen & Shiel, 2006; Mierau, 2007).

Kobayashi-Hillary and Sykes (2007) elaborate the human resources criteria of KPO suppliers by stating that

> The offshore team servicing a KPO contract cannot be easily hired overnight as they will be highly educated and trained, and trusted to take decisions on behalf of the client. […] IT outsourcing is strongly focused around technical professionalism, and the migration to business process outsourcing introduces this extra dimension of application professionalism. Ever more complex services, as implied by KPO, demonstrate this very well.

Both Kobayashi-Hillary and Sykes (2007), and Mierau (2007) emphasise that the key aspect of KPO is creating strategic value for the client rather than (just) cost-saving. This approach is deemed to offer sustainable competitive advantages for both the customer and the supplier. Unlike BPO/ITO, which tend to have highly specified service level agreements written with precisely defined and measureable items for quality, KPO deals are more focused on the service provider's understanding of its client's needs, its capability to adjust accordingly and trust between them (Sen & Shiel, 2006, p. 147). Sen and Shiel (2006, p. 147) point out that

> While for BPO the procedures to solve a problem are usually well known and employees can be trained in the methodology, for a KPO often times there may not be a standard method of reaching a solution or end product. This creates a high level of risk and uncertainty but with potential for high value.

From their five case studies of financial services, legal services and healthcare services outsourced by US firms to India and Ireland, Sen and Shiel (2006) have observed two types of knowledge processes outsourcing. The first is the outsourcing of simpler knowledge *tasks*, which may be core or non-core. However, the client firm then *integrates* these tasks into the end solution or interpretation it seeks. The second type is that the supplier performs and completes a non-core task, and the client firm subsequently integrates this with a number of other non-core and core tasks. This work is more complex and may involve an entire process that is outsourced along with the integration mechanism. Their case for illustration was 'the pharmaceutical industry where R&D in entire disease categories may be outsourced or the outsourcing clinical trials in a particular disease category' (Sen & Shiel, 2006, p. 153).

Despite the shift of some operational integration of knowledge tasks to service providers (outside the home country), strategic integration still remains within the boundaries of the firm. In addition, Sen and Shiel (2006) analyse that organisations engaged in the more complex KPO, like the second case of their observation, tend to adopt 'insourcing' (i.e. sourcing from within the firm through captive or joint venture abroad) or create a 'virtual office' that implies de facto extensions of the client firm.

Overall, we could notice the increasingly diversified scope of service processes involved. The emerging trend of shifting from ITO and BPO to KPO in certain

contexts/countries not only implies variations in the complexity of the offshore processes themselves and the changing business organisation in global firms. It also highlights the choice of the mode of operation and cooperation between the supplier and the client, as well as the improving capabilities of some suppliers.

## 3.5 Hypotheses

Based on the theoretical and empirical understandings of the research issue as discussed in the previous chapter and this chapter, we formulate a series of broad hypotheses about the juxtaposition of the evolution of geographical specialisation, the development of emerging economies and the spread of services offshoring.

(1) With the advancement of technology and intensified competition, firms attempt to:

   i. reduce costs,
   ii. achieve a better capacity of producing products/services beyond cost-cutting, and
   iii. reengineer the production process to accomplish the above two goals.

(2) In so doing, firms also realise the different possibilities of spatial and organisational division of labour, which allow them to spread out their operations based on the fit between geography and organisation.

(3) The geographical division of labour entails a hierarchy of places in the global production system, in which developed countries and global cities (higher-order locations) are engaged in higher-value functions and developing countries and peripheral cities (lower-order locations) are engaged in lower-value functions.

(4) This place hierarchy is not static as there is a possibility for lower-order locations to move up. They can engage in the functions that higher-order locations once performed, as evident in the manufacturing shifts in the mid-19$^{th}$ century. At the other end, higher-order centres push to higher complexities of the value chain, increasing the sophistication of the organisation and distribution of activities in the global production system.

(5) This disintegration and reintegration of activities across space and organisation is applicable to all activities but was first witnessed and

theorised in manufacturing production. The recent decade has seen dramatic shifts of services, facilitated by the use of ICTs and made possible by business process reengineering, from higher-order centres to lower-order locations. While some services become more standardised and tradable, and in turn offshorable; some others which involve high value-added, tend to remain in higher-order centres. Although lower-order locations are therefore able to engage in service functions that were previously done by higher-order centres, these activities tend to be of lower value compared to those that remain in their counterparts.

(6) Unlike the production requirements of high-order manufactured goods, high-value services requiring a high degree of tacit knowledge in production are characterised by *relationship, trust, culture, language and market knowledge* which are deeply embodied in the person who produces them and embedded in the contexts where they are produced.

(7) Hence, to move to non-standardised, higher-value service processes, firms need to develop capabilities in these quality-oriented aspects, which cannot be achieved through learning by knowing, but through *learning by doing and sharing*. The acquisition of experience is crucial to the accumulation of the above 'soft' capabilities characterised by quality and sophistication.

(8) While services offshoring is a recent phenomenon relative to the history of manufacturing shifts and its conceptualisation in the literature, the success story of India as the most popular offshore supplier of an increasing range of ICT-enabled services provides an example for other lower-order locations, as the Indian experience shows the possibility of moving up the value chain despite the *constraints*.

   i. Indian suppliers have experienced a lagging development trajectory, bureaucratic government, vast poverty of the country and so on; but they have taken advantage of, for instance, good English abilities and increasing education levels of the middle class, and economies of scale, to develop deeper relationships with their clients and eventually involve in more and higher-order processes.

   ii. The language abilities are matched with the surging demand from the English-speaking Anglo-Saxon countries.

iii. The economies of scale have allowed Indian suppliers to supply generic business processes to a wide range of customers from different industries. So, by growing their scale economies, they are able to increase the economies of scope, and thus address the demand of different customers by exploring a variety of opportunities across different functions and/or customer spectrums.

iv. Therefore, the India case offers expectations for lower-order locations that they can also upgrade under certain *conditions*.

(9) Based on the observations on the manufacturing shifts and the Indian experience in services offshoring, locations have their competitive advantages and firms have their capabilities *not externally imposed*; rather, they have own choice of whether, what and how to develop current and new resource assets and capabilities under certain conditions influenced by their varied development trajectories. Therefore, the emergence of other Southern economies in services development is subject to both *path dependence* and *strategic choice*.

## 3.6 Conclusions

The offshoring of services originates from the evolution of internationalisation of production activities, and the decentralisation of basic service functions first domestically and subsequently transnationally. With advancements in technology and management, Western companies started to source IT and other business services from an increasing distance, first via such conventional means as telephone, post and fax, and then via modern ICT links, as they realised the possibility of considerable cost savings and vast supply of talent in the emerging markets. In relation to the increasing demand for offshore services is the tighter immigration controls in the West, particularly since the 9/11 terrorist attacks in the US, which have to a certain extent limited the physical transfer of skilled workers from abroad to work onsite, despite the continued intra-firm rotations to link up with customers' needs. Over time, the offshoring of these services is no longer confined to a limited number of remote locations or merely IT and basic business tasks. While firms at the demand side consider services offshoring not just with a cost-cutting motive in mind, they seek resources across the border to suit their dynamic business needs and strategies. The

source firms no longer stick to just one or two global processing centres; rather, they tend to diversify their sources of inputs to optimise both cost savings and resources utilisation, which in turn requires more refined organisation of their production processes.

Many Southern economies, such as those in Eastern Europe and Southeast Asia, have been growing fast by taking advantage of their distinctive set of capabilities that are to match with different needs of the source sides. In fact, the Indian experience has shown the possibilities for other emerging economies of climbing up the value ladder under certain conditions, particularly those characterising and affecting the offering of higher-order services, including language, culture, trust and market knowledge. Suppliers are developing their capabilities through accumulating experiences and other growth strategies, as well as with the effective support from the state and other agencies. The recent years have witnessed the emergence of some knowledge processes being offshored, such as R&D and product design, due to the international firms' need to seek global talent and the increasing sophistication of suppliers in emerging markets. Nonetheless, there remain certain constraints for developing countries to move up the value chain, as the core functions, particularly those involving organisation and integration of disintegrated offshored tasks, are still under the control of client firms in the advanced economies.

In short, neither the source countries' demand nor the offshore services destinations' conditions and capabilities change in a linear trajectory. The scope and organisation of the types of offshored services are very dynamic in relation not just to their own process nature, but also to the geographical and management characteristics. Therefore, we shall adopt careful approaches to the specific areas of investigation when analysing the services offshoring phenomenon in different geographical and organisational contexts. Having reviewed and learned the empirical background in this chapter and the relevant theoretical underpinnings in the previous chapter, we shall discuss in Chapter 4 the specific research methodology that will frame the research design and empirical analysis of the present study.

# Chapter 4 Research Methodology

## 4.1 Introduction

This chapter details the methodology of the present research. The previous two chapters have reviewed the theoretical and empirical literature that is relevant to our research topic. We have observed certain empirical and methodological limitations in existing studies on services globalisation and developing country upgrading. We have also identified the three theoretical strands of global value chain, competitive advantage, and capabilities development as relevant and useful to the present research. Here we are going to explain the research design guided by the conceptual framework developed from these three bodies of concepts. In view of the research problem and question, we shall establish the relationship between those theoretical concepts and the practical elements of the conduct of this research.

In Section 4.2, we shall first identify the research goal and objective. Given the aim and nature of the research, a cross-case study approach is adopted, as will be explained in Section 4.3. Section 4.4 discusses the methodological assumptions based on constructivism and the methodology strategy based on triangulation, which guide our research scope and methods. Following the logic of these, we formulate a conceptual framework that integrates the three conceptual strands mentioned above, as will be explained in Section 4.5. This framework leads our way to data gathering and analysis. Section 4.6 details the specifics of the data gathered and their applications and limitations. The methods of data processing and analysis are then discussed in Section 4.7. Section 4.8 concludes the chapter by restating the present study's theoretical and empirical significance with respect to the choice of the research design.

## 4.2 Research Goal and Objective

In consideration of the theoretical, empirical and methodological gaps discussed in the previous two chapters, we have observed the following issues in the literature that have driven the choice of empirical setting and methodology of the present research:

(1) The need for more case studies of services sectors, particularly taking into account the differences and dynamics between and within sectors

(2) The increasingly multidimensional flows between and among developing and developed countries

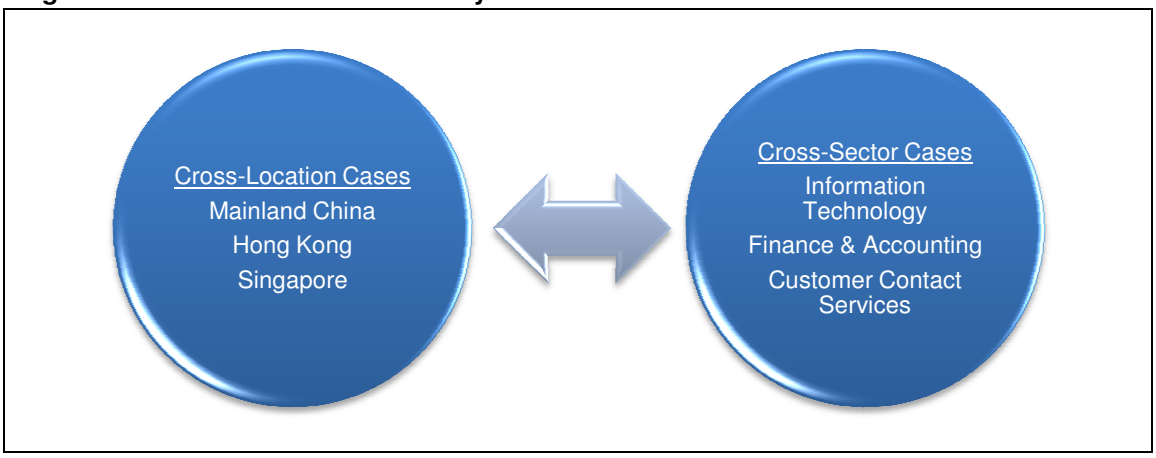
(3) The catch-up attempts in services sectors of developing countries

(4) The need of case studies of services upgrading of developing countries beyond India

In view of these, we attempt to make cases of locations from fast-growing Southern economies beyond India to investigate their catch-up paths and upgrading strategies in the rise of global services sourcing, by adopting a more multi-dimensional analytical approach.

Therefore, we select three East Asian economies, Mainland China, Hong Kong and Singapore, and three services sectors, information technology (IT), finance and accounting (F&A), and customer contact services, to attempt cross-location and cross-sector comparisons, using the lens of the services offshoring phenomenon (see Figure 4.1). The cross-case study approach will be discussed in Section 4.3.

**Figure 4.1: Cross-Case Pattern Analysis.**




Specifically, we aim to address this question: *What are the upgrading paths, constraints and strategic choice of capabilities development of Mainland China, Hong Kong and Singapore in moving up the global services value chain?*

With a focus on the upgrading paths and strategies, the present study adopts a qualitative research approach and has an exploratory and inductive nature. The

researcher is interested in process, meaning and understanding gained primarily through words. Throughout the course of the research, as the researcher became familiar with the phenomenon, questions were to emerge and changed, rather than a fixed set to be constructed through measurement. The researcher was also aware of the need to see evidence of the interpretive choices made, and assessed the biases inherent in the work over the duration of this research study.

## 4.3 Cross-Case Study Approach

The particular research design of this study is based on a nested comparative case study approach (Patton, 2002, pp. 447-449). The cross-case pattern analysis of the individual cases would generate cross-sector and cross-location comparisons. It is aimed at generating an intensive, detailed examination of the cases. Although this research design is not for generalising the cases studied to other cases or to populations beyond the cases, it is hoped that the significance of the findings should go beyond them, which can be learnt and transferrable. We shall learn the processes that the selected locations and organisations have gone through, and the limits we have not known.

With regard to the cross-sector case design, based on the understanding that the supply and demand conditions vary for different sectors and different types of services with different value-added within the same sector, the value ladder of each sector should vary. Therefore, this research is designed to study and compare three specific sets of services (IT, F&A, and customer contact), as each has different requirements in technological input, organisational structure, human capital, regulations and so on, which are shaped by particular markets and client segments and would in turn result in varied matches with locational attributes.

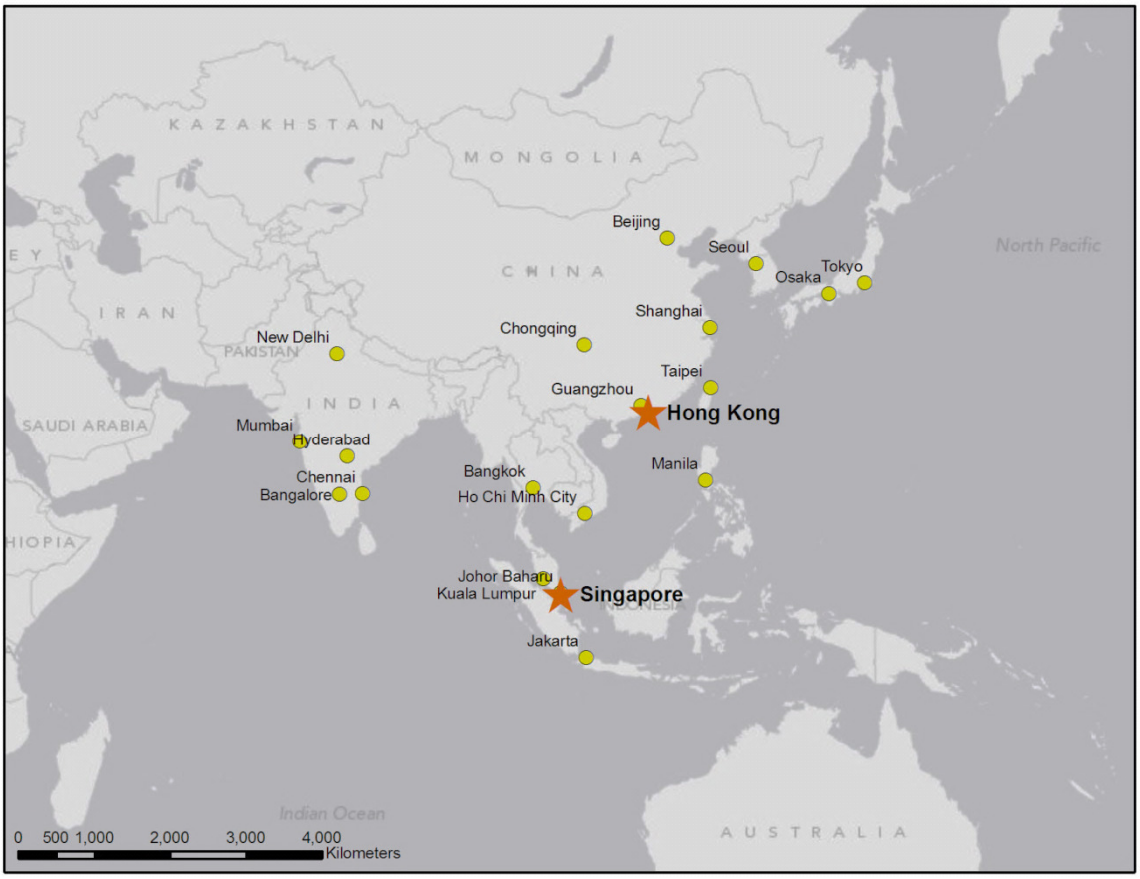
For particular illustration, the IT sector is expected to have higher technological requirements, and the F&A sector is assumed to have a greater emphasis on human assets; while both should also have strong regulatory needs and constraints in spite of different focuses. The customer contact sector is traditionally perceived as merely constituting call centres delivering lower-end telephony services, as compared to the other two sectors, but still requires a certain level of human resources that are compatible with the clients in terms of language and culture. Indeed, for modern enterprises, all these three types of services support the backbone of their business.

Overall, the three sectors with expected contrasting and changing requirements and constraints should yield meaningful comparisons of different upgrading strategies.

Even within the same sector, the capability requirements for doing different tasks vary and are dynamic over time and space. For instance, the decoupling and reintegrating of software development functions has led to reduced human capital requirements and increased remote production for certain processes but local embeddedness for other processes and even for the same processes remains due to sticky location-specific input requirements.

With respect to the cross-location case design, in view of varied economic trajectories, relative positions in the global production system and thus upgrading strategies of firms in different locations and sectors, this research aims to compare a select of locations in the fast-growing East Asian region for cross-location analysis on upgrading possibilities. In terms of location selection, Hong Kong and Singapore as two small open city economies have achieved considerable levels of development compared to other Southern economies, and thus are assumed to play critical roles as both supplier and consumer in global services sourcing. Both of them are expected to engage in higher-end activities compared to other economies in the region, and have niche areas of specialisation, which would likely be IT and F&A services, rather than customer contact services, among the three sectors under study. Albeit conventionally being put in the same development category, Hong Kong and Singapore do have had different political-economic development paths and varied connectivity with different regions and countries, and thus should have varied focuses in terms of upgrading their specialised services. Figure 4.2 shows the geographical situations of Hong Kong and Singapore in the Asia Pacific region.

**Figure 4.2: Hong Kong, Singapore and Other Major Cities in the Asia-Pacific Region.**



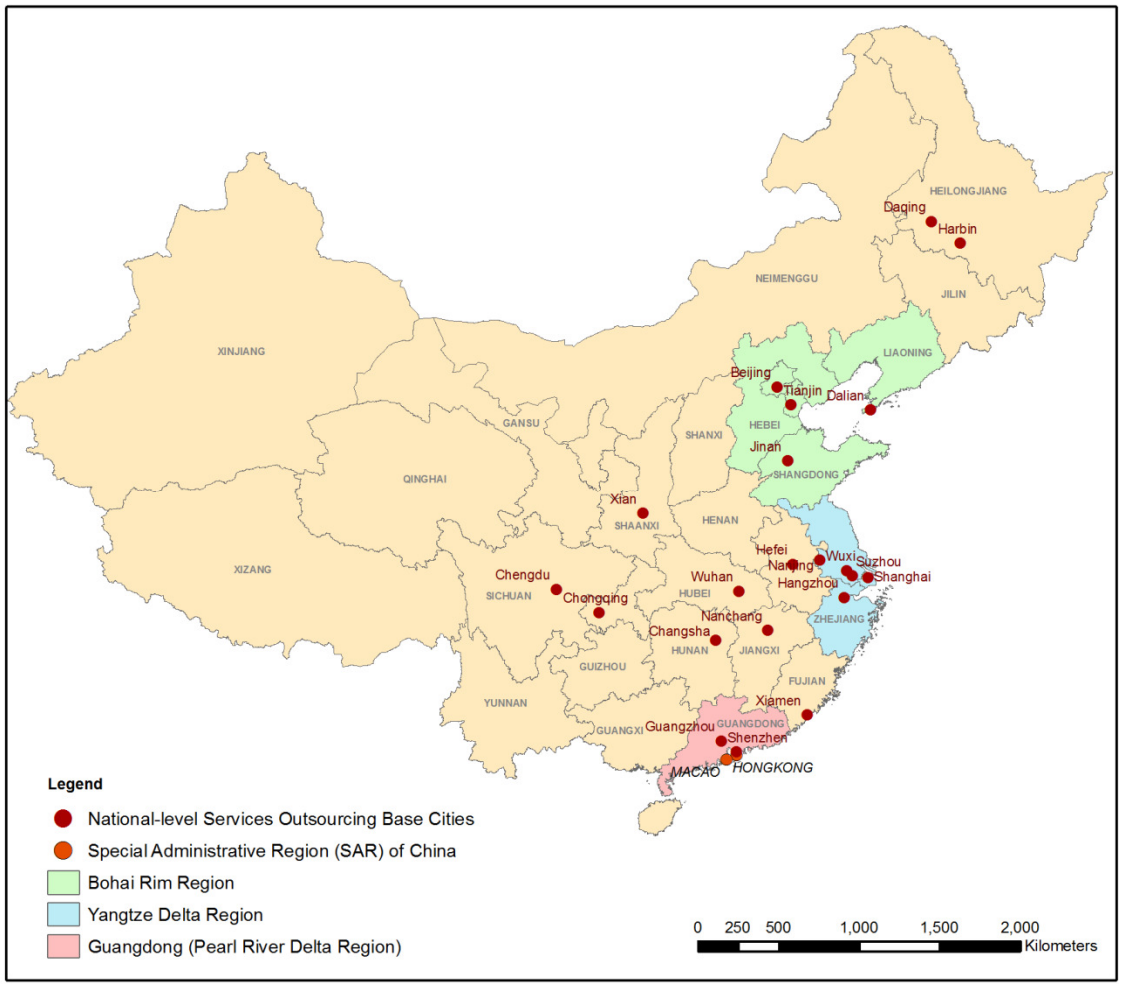

Source: created by author based on ESRI (2011b, 2011a).

China is studied primarily as a host country for offshored services based on the understanding of the recent global services offshoring trend in which the country is supplying an increasing number of low-cost skilled workers for a range of remotely tradable service tasks. Yet, its demand for international services especially those of higher value-added should be acknowledged. In contrast to the two city economies, we assume China should be facing greater constraints in upgrading its IT and F&A services, while its customer contact services are expected to have taken advantage of economies of scale and its language/cultural capabilities that suit the demand from neighbouring countries. In consideration of within-sector processes, China with a huge geographical scale is also assumed to have regional specialisation in higher value-added services while economies of scale in lower value-added services.

Given China's observable internal geographical variations, the present research also focuses on a handful of regions (and cities) in the country for further comparisons, as a mere examination of the national average would otherwise result in distorted analysis. This research selects three specific regions in China as focus for

data collection and analysis, including (1) Bohai Rim region, (2) Yangtze River Delta region, and (3) Pearl River Delta region (Guangdong) (Figure 4.3). In particular, as the Chinese government has designated a series of national-level 'services outsourcing model cities' in its policy aiming to stimulate the country's development of information-based and knowledge-oriented services, we are concerned with how these cities are relevant to their respective regional development and to China's overall services growth trajectory. In addition to comparisons, we expect Hong Kong and Singapore to have different degrees and types of connections with Mainland China, which would in turn produce another angle of analysis of regional dynamics.

**Figure 4.3: China's Major Growth Regions and Services Outsourcing Cities.**




Source: created by author based on 'Historical geographic database (GIS) for the PR China 1990-2006'.

## 4.4 Methodological Assumptions and Strategy

This study approaches the comparative case study based on *constructivism* as the methodological assumption (Patton, 2002; Bryman & Bell, 2003; M. D. Myers,

2009). The recent trends and studies have indicated that the phenomenon of services offshoring has become more sophisticated than previously observed, and how it develops depends on actors' perceptions of the market conditions, their own capabilities and upgrading paths. The multiple dimensions of this global phenomenon, intertwining local forces and effects, have motivated the adoption of a constructivist approach in the present study. Both the researcher and the actors being observed were in the process of reconstructing the realities by interpreting the matters together. Reality is constructed within cultures, social settings and relationships among people, all of which are temporally dynamic. This research is thus expected to offer an interpretation that provokes and encourages further questions which evolve with time rather than one that presents ultimate explanations. Therefore, it involves multiple perspectives not only of the actors involved in services offshoring and the upgrading processes of the locations, but also of the researcher who engages in the co-construction of knowledge between herself and the researched.

Based on the constructivist assumptions and the research hypotheses, we apply the strategy of *triangulation*, which informs the theoretical perspectives, sources of data and methods of analysis in this research.

Triangulation is a plan of action that will help observers partially overcome the personalistic biases stemming from single methodologies and the deficiencies flowing from one investigator or one method (Denzin, 1978, p. 294). Denzin identified four basic types of triangulation, which include (1) theory (multiple vs. single perspectives in relation to the same set of objects); (2) methodological (within-method and between-method); (3) data (subtypes: time, space, person); and (4) investigator (multiple vs. single observers of same object). This research applies multiple triangulation which combines multiple theoretical perspectives, sources of data and methods.

Theoretical triangulation permits the widest possible conceptual use of any set of observations (Denzin, 1978). This research adopts the perspectives of global value chain, competitive advantage, and capabilities, based upon which a conceptual framework is formulated as mentioned in Chapter 1 and shown in Figure 1.1. The relevance of and relationships between the three concepts will be explained in Section 4.5.

The conceptual framework with the three levels of analysis entails that not only multiple theoretical perspectives are involved, but also multiple data types and methods are engaged in order to construct the multiple and dynamic angles of interpretation of the research problem under study. The strategy of data triangulation is employed based on the need for different data implied by each of these perspectives.

The constructivist concept indeed indicates multiple or possibly diverse constructions of reality, and thus the present study has engaged multiple data sources and methods of searching and gathering such data. This is not to confirm whether people's perceptions would be true reflections of a situation but rather to accurately reflect people's perceptions (Stainback & Stainback, 1988). The point of triangulation is also to study and understand when and why there are differences (Patton, 2002). As Mathison critically points out,

> It is a mistake to assume that only inconsistent and contradictory data need to be explained by the application of these various levels of knowledge. All of the outcomes of triangulation, convergent, inconsistent, and contradictory, need to be filtered through knowledge gleaned from the immediate data, the project/program context, and understandings of the larger social world. (Mathison, 1988, p. 16)

The present research triangulates data sources by examining the organisation's undertakings and perceptions, and the upgrading paths and strategies in a variety of different situations – as they are reported in government documents, public media and by the organisations themselves (in the original surveys and their company websites). The use of a mix of data sources is aimed at integrating multiple views of, and practices within, different levels of actors, including service suppliers and users, individuals as skilled services labour, governments and institutions. The specifics of such data collection will be detailed in Section 4.6.

This study also triangulates multiple methods which included documentary analysis, interviews, questionnaires and descriptive numerical data. It is however taken into account that findings collected by different methods would unlikely hold 'such a character that they can be readily compared so as to pronounce them to be matched or mis-matched' as the circumstances in which research findings are produced shape their

form differently (Bloor, 1997, p. 39). Further details of these methods of data processing and analysis used in this study will be explained in Section 4.7.

## 4.5 Applying the Conceptual Framework

In consideration of the research questions, the conceptual framework of this study combines the theoretical perspectives of global value chain (GVC), competitive advantage and capabilities development for a multi-dimensional analysis of the research problem.

At the macro level, the GVC concept emphasises the way the global production system operates. It links various spatial levels of actors, including country, region, industry and firm. Each of them contributes to the system by specialising in certain activities and creating certain levels of value, and thus they occupy different relative positions on the chain. The dynamic value ladder of different processes within an economic sector entails the constraints facing a location that seeks to climb up to higher value-added activities. In addition, there is also the question whether such constraints can be modified over time, for example, advancing technology to reduce the necessity of face-to-face transactions. This level of analysis informs the need of data that help explain the economic trajectories of locations in response to their relative positions in the global production system, particularly in the value chains of selected sectors that these locations are specialised in and/or aim to develop.

However, despite the applicability of the GVC concept in answering these questions, we still need to understand *how* a specific location or firm is able to achieve higher value creation in the production system. It is this gap that the combination of competitive advantage and capabilities theories can inject important conceptual strengths as well as guide the gathering of more holistic data for another angle of analysis.

At the meso level, competitive advantage explains how a location can develop its competitive edge over other locations based on consideration of several interconnected factors, i.e. factor conditions, demand conditions, support/related industries, firm strategy and rivalry, and the government's role. Qualities of these aspects and their qualitative changes are emphasised, as is distinctively conceptualised in the Porterian model. Based on these five facets around which a location develops its

competitiveness, this study collects and scrutinises the relevant data according to such pattern of analysis. Making use of a comprehensive collection of both numerical and qualitative data, the study could broaden the scope of comparative analysis.

At the micro level, the concept of capabilities, particularly dynamic capabilities, facilitates analysis on how firms develop their abilities in changing and improving their operating routines through certain knowledge transfer mechanisms and deliberate learning investment. Merely relying on the other two dimensions, i.e. GVC and competitive advantage, would result in the neglect of the diversities at the firm level. The acquisition and deployment of capabilities indeed point to the progression and ambitions of different firms, which are in turn closely associated with their linkage to the GVC and locational competitive advantages that are reciprocal to their growth patterns and strategic choices. Moreover, since a location's capabilities do not equal the sum of individual firms' capabilities, the theory of competitive advantage can integrate firm-level capabilities into a wider geographical perspective to seek an understanding of how certain agents and factors help transfer firm-specific capabilities into a location's competitiveness. Given that firm-level behaviours and perceptions are concerned, the data considered useful include company cases which are gathered from qualitative surveys, company information and other relevant data published in the media. These data are expected to generate interpretations of their actual undertakings of services production and demand, as well as their capability-seeking behaviours.

In combination, the GVC concept links the other two theoretical strands into a bigger picture of how value is created in terms of relative position with other locations in the global production network, and how upgrading is achieved by emerging economies with their capabilities developed and put into practice. Overall, the present study attempts to combine the promising elements of the three concepts for a multi-level analysis to engage locational attributes critical to the catch-up strategies of a region/state.

We however need to emphasise that all these processes are dynamic over time and space. Take the global value chain concept as an example. Although there is a chain and a position for a location on the chain at a specific point of time, factors such as the engagement of innovative entrepreneurship can change the layout of the chain and the position at a subsequent time point by restructuring and reintegrating the

processes. Such dynamics are in fact a function of firms' responses to specific constraints, particularly in terms of changing market conditions, at a specific time and place.

The comparative case study approach makes use of the conceptual framework to examine the interrelationships between different levels of analysis. In turn it also reflects the dynamic elements in the framework. In other words, the cross-sector and cross-location cases under study would present how the global production systems, competitive advantages of locations and capabilities of firms are contextualised in relation to sectoral and locational variations.

The dynamic relationships between the three levels of analysis and the upgrading process also reflect the need of multiple data sources and methods.

## 4.6 Data Collection: Types and Procedures

With respect to data triangulation, this research uses both numerical and documentary data, and original surveys based on both questionnaires and interviews. This section lists and explains the specific types and procedures of such data.

### 4.6.1 Socio-economic and Trade Data

International trade data are examined so as to provide the general background of the phenomenon of international services trade. They are particularly examined for the degree of connectivity of the concerned countries to the world and specific regions in terms of services trade in general and of selected types of services in particular. The overall services exports and imports of the world and specific countries are categorised as 'total EBPOS services'[3] in the UNCTAD database. Trade data of certain types of services are obtained, including financial services, computer and information services, and other business services. Data of some countries/regions beyond the three study areas, such as India, the US and the EU, are also used for general comparisons on the services flows. Most of the detailed trade figures are only available from the year 2000 onwards, while every effort is made to find and examine earlier and most up-to-date data whichever available and relevant, which also applies to other archival data types.

[3] EBOPS refers to extended balance of payments services classification.

In addition to trade figures, socio-economic statistics are gathered as they provide rich information on the development trajectories of the locations for temporal and spatial comparative analyses. These data are primarily derived from public databases of government departments and quasi-/non-governmental institutions. They are particularly useful for examining locational competitive advantages. The categories of such data range from GDP and FDI to employment and education in specific areas. These data are drawn from statistical yearbooks, and other regular and occasional social and economic survey reports of the respective locations. For China, provincial and local official publications are used, in addition to the national aggregated data.

As a principle, variations in availability across data types and locations are taken into account when carrying out interpretations. It is aware that different datasets from different locations, using different definitions and/or data collection methods, mean unfeasibility of rigid comparisons. There might not be detailed breakdown of desired sub-categories for certain locations and time periods. Statistics by further detailed breakdown, such as 'accounting, auditing, bookkeeping and tax consulting services' (ISIC code: 9312), that are only available for some service categories and a limited number of countries, are also used for further examination of the locations' international trade links.

### 4.6.2 Documentary Data

Documentary evidence is gathered in order to grasp a wider scope of the background, rationale and stands of decision making, strategic planning and resource allocation with regards to the phenomenon of global services offshoring and the catch-up attempts of the locations and their firms. Such documentary data are also used to compare findings from other data sources. See Appendix I for the types and examples of such textual data used.

Lists of government departments and related quasi-/non-governmental institutions, such as private sector-led industry associations and research institutions, that are associated with economic development in general and with promoting ICT-enabled services and/or offshoring/outsourcing in particular, are first generated (See Appendix II). Relevant information and documents from these institutions are collected and reviewed to assess the stands, plans and strategies.

News from the public media, such as mainstream newspapers and specialised magazines, both international and domestic, are retrieved for analysing the latest and past trends of the phenomenon, and the undertakings, perceptions and constraints industry players in services offshoring have. Critical commentaries produced by and interviews with experienced industry players published in the media are carefully studied for comparing the survey results to show any contradiction over the perceptions of the organisations and additional insights that could be drawn.

We need to be aware of the variations in data availability and quality across location and time. For cross-location research, existing data, such as official figures or survey evidence, that are submitted to a secondary analysis may limit the comparability of the data in terms of categories and data-collection methods (Bryman, 2008). Even within the same country, such as China in the present study, inter-provincial variations in data availability and quality are observed. Therefore, the researcher has to cross-check and make reasonable judgments when using and comparing these data, as these are significant facts about the situation and the research constraints. In addition, some potentially critical documents and statistics may be sensitive and not publicly available, limiting the potential data sources.

### 4.6.3 Qualitative Surveys of Firms and Supporting Institutions

Two levels of original qualitative surveys, with one targeting private sector service firms and the other targeting supporting institutions, were designed with mostly open-ended questions in order to capture participants' views in their own terms. They survey the actual undertakings of services offshoring and the perceptions of competitive advantage and capabilities development of their home/host locations in association with the specific service activities. The surveys offer an in-depth look into the cases, and allow explorative analysis and potential themes to emerge. Concerning the conduct of the surveys, the researcher is aware that any non-random sampling method entails the potential for error and bias (Chadwick, 1984). Conducted at a relatively small scale, however, the surveys do not aim to be representative of the whole populations, and the results are not for generalisation beyond targeted populations.

The firm-oriented survey is aimed at gauging the actual and planned undertakings of services offshoring/outsourcing of the firms, the management's

perceptions of capabilities development of the firms, and the positive and negative attributes of their host/home locations in relation to their global services business. The institution-oriented survey's purpose is to look into the concerned institution's perceptions of the current and potential development of its home location with respect to its supply and demand of services in the global economy. Details of each of these surveys including the sampling procedures, instrumentation, participants and responses are summarised as follows:

**The survey of service firms**

***Pilot study***

A preliminary trial of the survey was conducted. The researcher requested, through personal networks, one senior manager at a Singapore company, and two university professors respectively from Hong Kong and Mainland China who had rich experience in partnering and working locally and regionally with high-rank businessmen to go through the whole survey instruments, including the informed consent form and questionnaire, so as to learn about and identify any problems. Following their feedback, the researcher made necessary changes to the wording and layout of the questionnaire and information sheet.

***Sampling procedures***

Since this research study is focused on three specific types of services, i.e. IT, F&A, and customer contact services, in the three locations, a purposive stratified sampling method is adopted. In response to the research objective and research hypotheses, Hong Kong and Singapore are examined from both user and supplier perspectives; while Mainland China is studied primarily from the supplier standpoint. For the survey part for China, the targeted population is further slimmed down to a handful of regions where clusters of those service sectors have better developed, as Chapter 3 briefly mentioned and Chapter 6 will show in greater detail. These Chinese regions specifically surveyed include the Bohai Rim (spanning Beijing, Tianjin, part of Hebei Province, part of Liaoning Province, and part of Shandong Province), Yangtze River Delta (generally covering the triangular-shaped territory of Wu-speaking Shanghai, southern Jiangsu province and northern Zhejiang province of China), and Pearl River Delta (comprising part of Guangdong Province) regions (Figure 4.3). So,

the sample covers firms headquartered in these areas, regardless of their branch locations.

From February 2009, the researcher started collecting lists of firms engaged in those sectors (one for each of the three economies). Since the sources of company lists are different for each location, certain procedures were appropriated and performed to ensure systematic sampling. For Hong Kong, lists of companies of the three service categories (each with particular sub-sectors) were obtained from the online company directory of the Hong Kong Trade Development Council (HKTDC). In the case of Singapore, Kompass, a business-to-business directory accessible on the National Library Board platform, was used to generate such lists. For China, the company listings on ChnSourcing.com, a government-led outsourcing advisory platform, were used. Additional sources were consulted for obtaining more companies that met the selection criteria when there was an inadequate number in the lists and/or for double-checks of the information when any doubts arose, for example, Hong Kong General Chamber of Commerce (HKGCC), Hong Kong Call Centre Association, 51callcenter.com, cti-cn.com, and Contact Centre Association of Singapore.

Certain 'essential' characteristics of the population were identified for the sample. The researcher sampled the first 100 firms on each of Chinese company lists and the first 50 firms on each of the lists for Hong Kong and Singapore, which were checked relevant to the survey based on criteria including firm size (not fewer than 50 employees), functions and business/client location, if such information was available before the survey. If the list had fewer than 100 or 50 valid firms, all of those within this preset quota were sampled. Senior management personnel who were expected to hold key decision-making roles, for example, CEOs and executive managers, were the target respondents. Before sending out the invitations, cross-checks on the contact details of the sampled companies (especially names and positions of the addressees) with their websites were carried out. In July 2009, the researcher sent out the invitation letters and questionnaires by post or email. About two weeks after the initial invitations, follow-up emails and phone calls were made to check the decisions of the sampled firms.

***Instrumentation***

Two sets of questionnaires, respectively for Hong Kong and Singapore as both user and supplier locations, and for Mainland China primarily as a host location, were designed to seek the undertakings and perceptions of the firms with regards to services offshoring/outsourcing and their business strategies to move up the value chain. Both sets contained mainly open-ended questions as it was not desirable to confine the scopes of potentially interesting answers. See Appendices V and VI for copies of the questionnaires.

The questionnaire for Hong Kong and Singapore consisted of six parts. Part I requested the basic information of the firm, including its sector, location and staff size. Part II covered questions about the firm's current and planned use and supply of offshored services, including the host/client location(s), type(s) of processes and service delivery model involved.

Part III and Part IV concerned the firm's experiences respectively as a service user and as a service supplier. The former attempted to learn about the firm's organisational changes, supplier criteria, difficulties, perceived risks and reengineering policy. These aspects are important to the understanding of why the firm chose to source external services and how it managed the relationship between its core competence and the offshored processes.

Part IV on the firm's experiences as a service supplier asked about the perceptions of the firm as a service supplier towards formal supporting organisations, government's policies, and strategies to meet clients' demands, sustain competiveness and move up the value chain, as well as its perceived upgrading challenges. These aspects help to explain the supplier firm's goals to meet the requirements of clients and improve its business, as well as the formulation of such strategies in association with the support from the government and supporting institutions.

Part V further explored the firm's future plans, particularly its intended areas for capabilities development and upgrading. These questions attempted to seek a deeper understanding of how the firm strategised its business direction in response to the perceived upcoming opportunities and challenges. Part VI sought the respondent's contact details and consent to take part in an in-depth follow-up interview.

Questions in the questionnaire for Mainland Chinese suppliers were similar to that for the two city-states, except for the third part concerning user perspectives. In other words, Part III was omitted for that survey, while Part IV became Part III of the questionnaire.

However, since the questionnaires were designed for semi-structured interviews, the questions might not be asked in sequence as outlined in the questionnaires, while additional questions were asked to supplement further information and stimulate more interesting discussions during face-to-face and telephone interviews. After receiving the responses from the firms, their company details were assessed to acquire background understandings for the conduct of interviews and follow-ups.

***Participants and responses***

The replies and completed self-administered questionnaires were returned through post, email and fax; whereas the in-depth interviews were conducted in-person and via telephone between August and October 2009. Further follow-ups with some firms were done via email in order to establish clearer understandings of their views. A summary of the responses and a general profile of the respondent firms are respectively produced in Table 4.1 and Appendix VII. There were a total of 27 participating firms with responses received and conducted in various forms. The use of varied survey arrangements was based on the consideration that the targeted respondents were highly ranked management personnel who usually had tight schedules; therefore, it was hoped that increased flexibility would generate better responses not just in terms of number of responses but also the quality of their answers. The duration of the telephone and face-to-face interviews ranges from 30 minutes to 1 hour 20 minutes.

Bearing in mind the nature of the survey that was designed to seek qualitative and in-depth answers, the number of responses could be considered fairly satisfactory. Moreover, the amount of non-responses was not a critical matter to the present study, since the surveys were not aimed at gauging a large-scale representative sample but intended to serve as a departure point of undertaking in-depth case studies of the participating organisations. Once they gave a positive reply and were in contact, their details not just from their official websites but also from other sources such as the

public media were collected and assessed so as to exhaust as much useful and relevant information and data as possible for comprehensive case studies.

One more point to take into account is that the surveys were conducted in the middle of 2009, just after the outbreak of the global economic crisis towards the end of 2008. A few of the firms that wrote formally to decline stated that they lacked resources to deal with survey requests as their priority was to recover their business from the global recession. It was also aware that senior management personnel who were 'available' had a much higher chance of being included in the samples than were those who were away from work or who were difficult to contact for other reasons. 'Available' and 'unavailable' persons might be quite different and thus biased results could likely be obtained since the 'unavailable' were underrepresented.

**Table 4.1: Summary of Responses of the Firm-level Survey.**

| | IT | F&A | CC | Total sent | Total returned | Total valid |
|---|---|---|---|---|---|---|
| Mainland China | 100 | 86 | 43 | 229 | 21 | 9 |
| Hong Kong | 50 | 50 | 25 | 125 | 27 | 13 |
| Singapore | 50 | 50 | 31 | 131 | 26 | 5 |
| Total sent | 200 | 186 | 99 | 485 | -- | -- |
| Total returned | 32 | 26 | 16 | -- | 74 | -- |
| Total valid | 10 | 13 | 4 | -- | -- | **27** |
| *Response rate* | -- | -- | -- | -- | *15.3%* | ***5.6%*** |

Notes: Valid responses refer to those that provided adequate answers to the questions of either the questionnaires; while those that provided a written response to decline the invitation or returned the questionnaire with inadequate answers to the questions would be considered invalid.

## The survey on supporting institutions

### *Sampling procedures and instrumentation*

The lists of the supporting institutions used for documentary data collection mentioned in Sub-section 4.6.2 were adopted as the sampling frame. In addition to relevant national-level intuitions, local institutions specifically based in the three selected regions (Bohai, YRD, and PRD regions) were included. Initial enquiries were

sent to the sampled institutions to seek their intentions of taking part in the survey and their desired arrangements.

A set of open-ended questions were designed for semi-structured interviews. In case of written responses, the respondents were initially asked to answer the questions and subsequent follow-ups were attempted to seek further understandings of their stands if their initial responses were ambiguous. The primary questions included: the organisation's perceptions towards the current situation and future prospects of services development, particularly with respect to international trade, of its home country; the capabilities and constraints facing the location's businesses; and its policies in facilitating the development.

***Participants and responses***

There were a total of six supporting institutions that had given useful, detailed responses to the survey (see Appendix VIII for a general profile of these organisations). The face-to-face and telephone interviews lasted between 30 minutes and one hour. Although the means and depth of their answers varied, this survey has offered another constructive angle of insights into the services offshoring and upgrading issues in the region.

**Ethical considerations**

To ensure the transparency and data confidentiality of the surveys, an information sheet covering the necessary details about the survey procedures and the code of conduct was produced and provided to the sampled firms and institutions (see Appendices III and IV). In consideration of confidentiality, all the participating organisations would be labelled with unidentifiable codes to ensure anonymity in all the publications with results deriving from the survey responses, including this thesis and other reports/papers disseminated and to be disseminated. It should however be borne in mind that published information available to the general public and cited in this study may inevitably bear the names and identifiers of some of our informants. While every effort is made to ensure their anonymity as far as our surveys are concerned, their information and comments in these published sources, especially which need to be included in the references, might still reveal their identities.

## 4.7 Data Processing and Analysis

Corresponding to the research question and conceptual framework, particular procedures and methods were taken to handle and analyse the data gathered from the various sources.

The method of textual analysis was used. A series of procedures were adopted for interpretation of the data. The first step was prepare and organise the raw data, including transcribing the audio material. The qualitative analysis software tool NVivo was applied for managing, classifying and labelling/coding the texts gathered from the government publications, media reports, questionnaire responses, interview transcripts, company websites, and so on. For the original surveys, the profiles and archives of the participating organisations were re-examined to highlight any potential gaps or overemphasis in the data set, as well as in the diversity of participants' characteristics and circumstances. The researcher also integrated and compared the data gathered from different sources such as interviews conducted by third-parties and information from the participating organisations' websites.

The texts were first read with the initial research questions and concepts from the literature reviewed in mind so as to gain an overview of the data coverage, but some emergent themes also evolved in this stage of reading. The themes were then located and initial labels assigned. Table 4.2 shows the labels used in the coding process and the themes adopted in the interpretation. The researcher subsequently undertook open coding and axial coding to identify causal patterns in the data. Certain properties or characteristics of the filed passages were identified relevant to specific categories, while others were excluded based on careful interpretation. The data and previous codes were further examined to seek evidence to support and compare between the themes developed in response to the framework outlined in Section 4.5 that combines the concepts of global value chain, competitive advantage and capabilities development. The four broad interrelated themes have shaped the following three empirical chapters of this thesis, with the latter two themes (firm-level engagements and capabilities) shaping the last one of them.

**Table 4.2: Labels Used in the Coding Process and Emergent Themes.**

| | |
|---|---|
| **Global value chain – Roles in the global/regional economy**<br>▪ External trade links<br>▪ Internal market growth<br>▪ Increasing geographical-organisational mingling | **Locational competitive advantage (+/-)**<br>▪ Demand conditions<br>▪ Factor conditions<br>▪ Firm structure and strategies<br>▪ Related and supporting industries<br>▪ Government |
| **Firm-level engagements in services offshoring/outsourcing**<br>▪ What: types of processes sourced/supplied<br>▪ Where: operating, supplier and client locations<br>▪ Who: relationship with clients and suppliers<br>▪ How: mode of offshoring/outsourcing<br>▪ Why: decision of current and planned offshoring/outsourcing | **(Dynamic) Capabilities (+/-)**<br>▪ Human resources capabilities<br>▪ Process capabilities<br>▪ Client-specific capabilities<br>▪ Core competencies<br>▪ Learning mechanisms<br>▪ Upgrading paths |

## 4.8 Conclusions

With the empirical setting of the global services offshoring phenomenon, the present study is aimed at examining the possibilities of Southern economies beyond India to upgrade through the global value chain, from both the demand and supply perspectives, using the lens of the recent rise of ICT-enabled business services. Based on the theoretical and empirical observations, and building upon the quasi-hypotheses (discussed in Chapters 2 and 3), this research attempts to examine the capabilities development and the upgrading choice of Mainland China, Hong Kong and Singapore, by applying a cross-location, cross-sector comparative approach. This cross-case design was based on the constructivist assumptions that a comprehensive contextual understanding is needed in order to capture the multidimensional scale of the phenomenon under investigation.

In consideration of the constructivist assumptions, this study adopts the strategy of triangulation. This has motivated the formulation of a conceptual framework that combines three interrelated theoretical perspectives, i.e. global value chain, competitive advantage and capabilities development. The integration of these theoretical perspectives is useful for explaining how the locations and firms attempt to

develop their strengths in response to the locational attributes in order to gain better relative positions in the global production system.

The combination of such theoretical and methodological design has in turn supported the use of multiple data sources and methods. The data sources included socio-economic and trade data, documentary evidence, and original qualitative surveys. They were then interpreted and analysed primarily based on the major perspectives of the framework, with emerging themes formulated and further conceptualised. Empirically, the adoption of a mix of useful and relevant data types was aimed at understanding the complexity of the phenomenon under study and addressing the research problem from a holistic perspective.

Overall, the research was designed to contribute not only to the empirical understandings of the strategic development paths of developing countries in face of increasing globalisation of business and production, but also to the empirical application of the three conceptual strands in an integrative approach. The following chapters will present the empirical results as guided by the methodology, corresponding to the three levels of analysis shaped by the conceptual framework.

# Chapter 5 Value Ladders of the ICT-Enabled Business Services, and the Economic Trajectories of China, Hong Kong and Singapore

## 5.1 Introduction

We have reviewed the theoretical and empirical literature related to the present study and set out the research methodology in the previous chapters. Turning now to our substantive study of the capabilities of China, Hong Kong and Singapore in ICT-enabled business services, we start by examining the overall background setting for the three specific services sectors (information technology (IT), finance and accounting (F&A), and customer contact services) and the development trajectories of those three locations, specifically their services development, in relation to their relative positions on the services value chains.

We shall first discuss the dynamic value hierarchies of the various services sectors, i.e. IT, F&A and customer contact services, in Section 5.2. This will demonstrate how different characteristics of specific services are associated with task and skill requirements that contribute to higher or lower value to the production chain, and with changes in the firm's focus and attempts to upgrading. Section 5.3 will examine the general economic development backgrounds of those three economies and particularly the growth trends of their services and trade in those selected sectors. From these factual observations, we shall then realise their relative positions in the services GVC. Section 5.4 will conclude the analysis and discussion of this chapter, and pave the way for the analytical focus of the next chapter.

## 5.2 Value Ladders of Information Technology, Finance & Accounting, and Customer Contact Services

We shall first identify the service processes in the three sectors and their characteristics in relation to the value they contribute to the final product or the margin of the firm. We shall present the general value ladder of each of the three services sectors under study, using pyramid diagrams for illustration. Examples of the various service functions are provided to demonstrate the value hierarchy of different

processes within a sector, which is however also contingent on many other aspects, such as technology, customer segment and regulations. Also described are the dynamics within their value chain that are associated with changes in the firms' focus and attempts to upgrade. We therefore need to bear in mind that such pyramids can change and are changing at different times and in specific market conditions.

### 5.2.1 Information Technology Services

Since the 1990s, ICTs have formed the backbone of literally all aspects of business. The IT processes themselves can be classified into three broad categories, involving infrastructure, software and consulting. In addition to these services-oriented processes, the software industry also includes a spectrum called 'embedded software' which can be put in-between software services and software products. It is 'built in' to the electronics in, to mention a few, audio and visual equipments, appliances, security systems, and so on.

Figure 5.1 shows a pyramid delineating the levels of value-added of the IT service processes. In general, towards the top of the pyramid are those with the highest value-added, while those at the bottom typically contribute lowest value to the business.

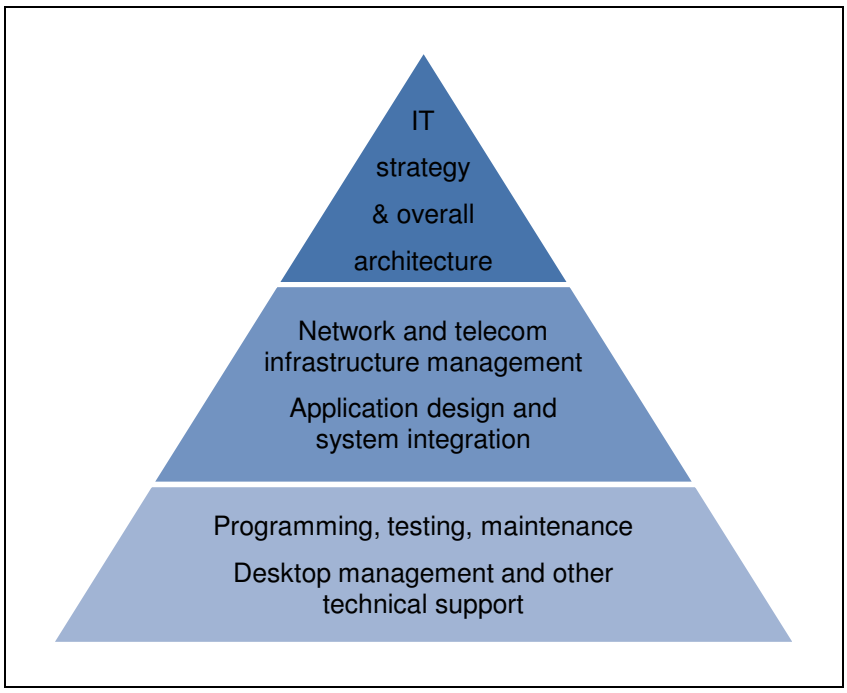



**Figure 5.1: Value Ladder of Information Technology Services.**

**Lowest value-added**

***Implementation: Programming, testing and maintenance of software***

Implementation is the process of programming the source code for a computer programme project, which is written in a programming language such as C/C++, COBOL and Java. In order to create such a programme to instruct the computer to help you do something, the software engineer may modify the code from an existing source or create an entirely new set. Testing the programme is required before deployment. It helps stakeholders gather information about the application's quality and make an evaluation of it. It also ensures that bugs are detected and adjusted. Maintenance is a continuous process of monitoring and enhancing the software to cope with unforeseen problems or newly required functionality after its deployment. At this stage of implementation, knowledge of the application domain, specialised algorithms and formal logic is required. Therefore, software engineers are expected to possess a depth of technical knowledge and IT certifications. Since the implementation process is relatively routine and codifiable, especially when the development of a system can often be broken up into a number of modules, its transaction is indeed less complex.

***Desktop management***

In addition to software development, IT services also include the infrastructure part. As a process of monitoring all the computing devices within an organisation, desktop management is an integral part of information systems management. It typically comprises the installation and maintenance of hardware and software, spam filtering, administration of use permissions, and the increasingly important security enforcement tasks, such as guarding against threats from viruses and spyware, and controlling 'greynet' applications[4] (TechTarget, 2009). Although unresponsive devices sometimes do need physical attention, with the recent ICT advancements, such tasks can now be performed virtually and remotely, without access to the physical site where the computing facilities are actually located. For instance, there is now software that enables a computer even which is locked up or powered off to respond to management commands (Overby, 2008). For this spectrum of services,

[4] Greynet applications are network-based programmes that corporate network users download and install without permission from their company. Examples include instant messaging or VoIP applications, peer-to-peer file sharing programmes and RSS readers.

hands-on knowledge in administering computing devices, servers, backup and peripherals is required. Basic disciplinary certifications are generally needed.

The above show just two specific examples of the spectrum of IT services that yield relatively smaller profit margin compared to other processes involving a higher level of 'soft' knowledge and complex interactions. Yet, we must bear in mind that some higher value-added processes may become standardised and thus less knowledge-intensive through further process decoupling given some of the previous constraints uplifted over time. However, some processes that are generally considered lower knowledge-intensive may remain sticky and require more rigid requirements, leading to higher value-added, in certain circumstances, such as higher specificity of particular segment of customers and stricter industry regulations in the concerned market. Such variations should apply when we consider the value ladders of other sectors.

**Middle level of value-added**

***Application design and system integration***

Application design is a process of problem-solving and planning for a software solution that helps users carry out tasks by applying the interface on a computing device. There are different types of applications for different aspects of life. Typical examples are word processors, spreadsheets, media players, and also Internet apps such as Google Docs. More specialised, sophisticated types include enterprise infrastructure software, Enterprise Resource Planning (ERP) systems, media content creating/editing software, and so on. The design and development of all these apps is a planning and structured process. By gathering and analysing the customer expectations, the development team (involving not merely software engineers but sometimes also business analysts and other management expertise) needs to recognise and interpret the abstract customer requirements and subsequently determine the prioritised requirements and the scope of development (OSIC Software Innovation Center, 2008).

System integration is 'at the downstream end of an organised process of decomposing complex problems into many smaller related problems, solution of the smaller problems by teams of specialists, and integration of the results into a solution to the original larger problem' (Grady, 1994, p. 3). The purpose of system integration

is to pull separate sub-systems together by determining the 'glue' between the interfaces of these sub-systems (wdsl, 2008). The process not only links together different computing systems and software applications physically and/or functionally, but also 'ensures that the hardware, software and human system components will interact to achieve the system purpose or satisfy the customer's need' (Grady, 1994, p. 3). To align the discrete sub-systems, system integrators use a variety of techniques such as computer networking, enterprise application integration, business process management or manual programming (wdsl, 2008).

With the growing realisation of the need to improve productivity and gain competitive advantages, the design and presentation of system solutions is becoming more reciprocal with business strategy formulation. In particular, a rapidly rising number of organisations seek to integrate their traditional functions with the Internet portals, such as the adoption of electronic billing and payment by companies to achieve cost savings and interactive customer connections. Due to its more dynamic nature, the SI work generally requires a broad range of skills, including software and hardware engineering, interface protocols, and general problem solving skills.

In general, unlike the above two types of IT services, application design and system integration professionals normally require a breadth of knowledge that is related not only to specific technological fields, but also to how different IT techniques can be aligned and made use of for meeting the requirements of end-users. Compared to the implementation type of personnel, they tend to have more complex interactions with colleagues and a more detailed understanding of the market and customers. Therefore, the transaction of application design and system integration requires higher supplier capabilities than simple coding and testing tasks. For a supplier that starts with simple implementation processes to upgrade to something like application design, it has to develop capabilities in acquiring a better understanding of the client requirements.

***Network and telecom infrastructure management***

The process of network and infrastructure management oversees the overall structure of an organisation's IT systems. Rather than merely a single software application or a set of programmes, this set of services covers the top-level administration and maintenance of large networks, involving security, monitoring,

control, allocation, deployment, coordination and planning. These are supported by a set of procedures, equipment and operations to optimise the network's operational efficiency when unexpected loads or failures that would otherwise cause a congested, inefficient state are to be avoided and dealt with at once (Freeman, 2004; Web Hosting Ratings, 2010). The skills-set required ranges from knowledge of installation and usage optimisation, to everyday system maintenance, monitoring, traffic analysis, and other necessary activities (Hancock, 1998). Furthermore, it needs in-depth knowledge of how the network hardware and software work, in addition to extensive systems management experience with many operating systems. While design skills are considered inessential, programming experiences may be an add-on. Hancock (1998, p. 19) summarises that 'developing of the skill set required for network management is not terribly difficult, but it is time consuming'. Despite the sophistication of such processes, a number of factors including the maturity of management technologies and the critical bandwidth improvements (in terms of both cost reduction and increased reliability) have made outsourcing infrastructure management to remote locations possible (Tucci, 2006). Yet, regardless of the emergence of more complex management tools, especially when networks are growing in size and complexity, a greater need for coordination is unlikely to be resolved simply by adoption of such tools, and increasing complication of the network management process is thus expected. There has also remained reluctance to offshore data centres due to concerns of data security and regulatory issues, and the technical complexity.

**Highest value-added**

***IT strategy and architecture***

At the top of the value ladder is the formulation of corporate IT strategy integrated with the overall enterprise architecture. This involves processes of design and management of complex computer networks and information databases to achieve consensus decisions on policies, principles, standards and solutions. The aim of an IT architecture is 'to guide the process of planning, acquiring, building, modifying, interfacing and deploying IT resources' throughout the organisation (McAfee, 1997), so that the market and customer demands, the practical solutions and the characteristics and capabilities of the organisation are balanced (D. K. Hammer, 1997).

Rather than merely in-depth knowledge in a single field, the IT strategy formulation and architecture demand multidimensional skills from experts who are not engaged in practical implementation but address the wider picture of the entire organisation and even the whole industry. This spectrum contributes much higher value-added than other processes at the other end of the pyramid, as it not only requires extensive breath of technical and professional knowledge and experience, but also needs a wide range of important 'soft' skills including leadership and managerial visions. An IT architect's job often requires understanding and interpretation of the requirements, creation of a model, subsequent validation and improvement, and continuous monitoring and updating of the entire system cycle. Involved throughout these processes are continuous intensive complex communications between IT architecture professionals and all stakeholders of the project, ranging from customers to the management and implementors. Thus, not only is the proximity to the market vital at this stage of corporate decision-making, but also due to the intensive tacit knowledge involved means that the transactions tend to be too complex for codification.

### 5.2.2 Finance and Accounting Services

The processes of F&A services, indeed like many other business services, have been not merely vertically disintegrated from F&A corporations, but also decoupled from firms of different scales that demand these processes from specialised shared services units. The value ladder of F&A services can therefore be visualised as the following pyramid (Figure 5.2). Like the one for IT services, the lowest level constitutes processes that are transaction-dominated, while the middle level consists of those that are relatively judgment-intensive. The highest level is strategically important to the company.

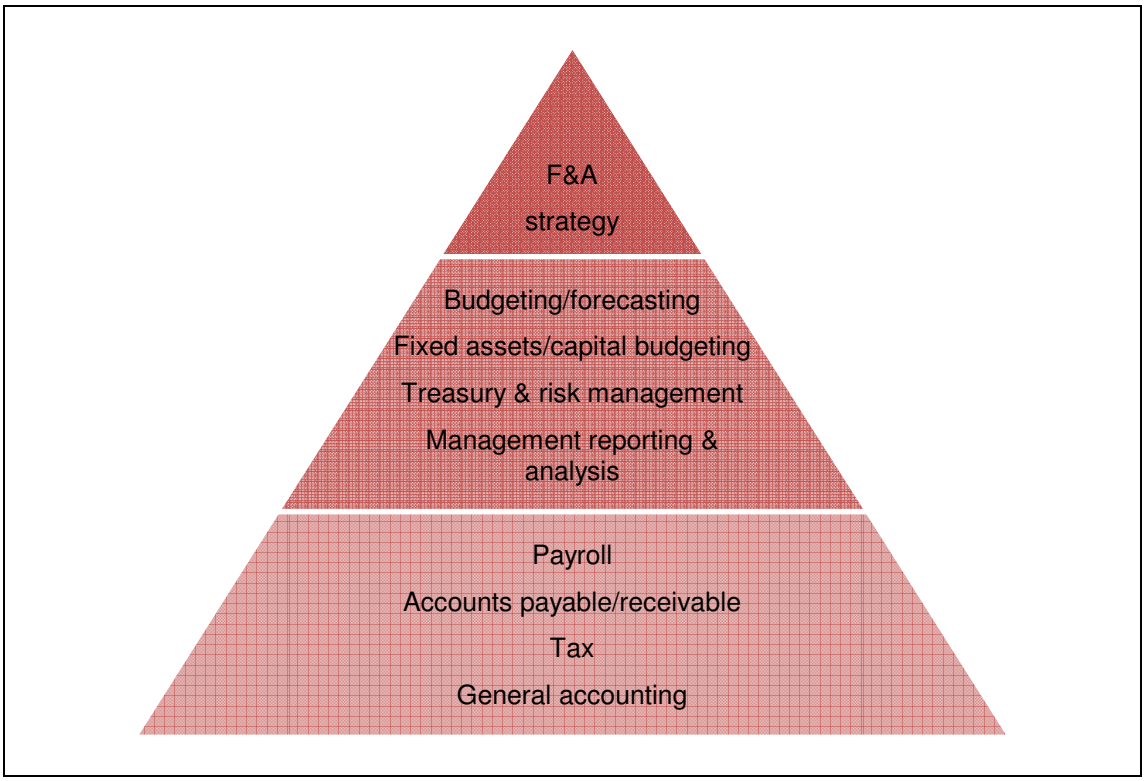



**Figure 5.2: Value Ladder of Finance and Accounting Services.**

Sources: modified from Sako (2006) and Everest Research Institute (2009).

### Lower level of value-added: Payroll, accounts payable/receivable, tax and general accounting

At the bottom of the pyramid are processes that are relatively routine, transactional and easily codified. Firstly, payroll is one of a series of accounting transactions dealing with the records and calculations of all the payments a company makes to their employees, such as salaries, overtime, bonuses and holiday pay, as well as deductions from, for example, mandatory pension contributions. Accounts payable refers to a company's trade accounts representing obligations to pay for goods and services received. This process usually involves maintaining master data, processing payment requests from suppliers, and reporting (Sako, 2006). On the other end, accounts receivable is the processing of money transactions owed to the company for goods or services it has sold to customers. It usually involves customer setup, billing, cash applications, credit and collections, customer inquiries, and reporting.

General accounting constitutes a relatively routine process of collecting and ledgering general account activities, for instance, general entries of debits and credits, account cancellations, inter-company accounting, and closings. The accountants

produce financial statements including balance sheets, income statements, general ledgers, bank statements and reports usually on a quarterly basis and for the fiscal year.

Also transaction-intensive is the process of accounting for tax purposes. This spectrum handles the preparation of a company's financial information for calculations of tax obligations, filing of tax returns, planning for future tax compliance (for example, by checking what tax breaks are available), and other tax-related accounting processes.

Since the above tasks tend to be technical and computer-aided, a university degree or a high level of 'soft skills' (like those helping one make a good judgment) may not be the first prerequisite for staff recruitment. The transactions can be easily codified and digitised: the company sends the electronic version of the records which are encrypted via the Intranet or Internet to its accounting or payroll agency. The latter processes the records and produce reports which are then sent back to the company. Such processes therefore can be performed remotely, after taking into consideration such issues as regulations and security.

**Middle level of value-added**

***Budgeting/forecasting and fixed assets/capital budgeting***

Budgeting and forecasting can involve simply a mandatory estimate of the forthcoming fiscal year's revenues and expenses of a company, or a more strategic approach to constantly improving the company's ability to accurately predict their future operations and related resource requirements (Rasmussen & Eichorn, 2000). Companies typically make an annual budget, and subsequently revise this several times over the year. Such revisions are forecasts, which are, by using historical internal accounting and sales data, to make the best prediction of what will happen to the company in financial terms over a given time period. On the other hand, fixed assets or capital budgeting is about planning particularly for assessing and financing long-term outlays such as for fixed assets like facilities and equipment, and capital investments in new products and R&D projects that are expected to produce cash inflows over a period of time exceeding one year. Project selection is very crucial to the success of the pursuit of long-term capital investment, as such type of expenditures can be very large and have a significant impact on the financial performance of the company, while

its resources are limited given a number of competing opportunities (Internet Center for Management and Business Administration, 2007).

Both overall budgeting/forecasting and capital budgeting involves substantial monitoring and analysis of data and information not merely on the company itself, but also related to the investment environment among many other factors. The understanding, mastering and reporting of all these variables and their relationships indeed require sophisticated technical and professional skills and a high degree of judgment.

***Treasury and risk management***

Treasury and risk management is the management of a company's investments in, for example, bonds, currencies and derivatives, as well as of its treasury deficits, payment systems and the different associated financial risks. Treasury management is closely intertwined with financial risk management, particularly as a response to 'exchange-rate and interest-rate volatility in the wake of the internationalisation and deregulation of currency markets, the need to increase control of credit risk in increasingly competitive markets and the appearance of new financial instruments' (San-Jose, Iturralde & Maseda, 2008, p. 193). It is not just about minimising the financial costs, but also concerned with maximising returns on cash surpluses for the company to acquire the needed money in the desired currency at the right time (San-Jose, Iturralde & Maseda, 2008). Since the market and the risks involved are dynamic and subject to constant change, this specialised spectrum of services must be a continuing process of identification, analysis, evaluation, monitoring, communication, consultation and review for a timely effective decision-making.

***Reporting and analysis***

The reporting and analysis of general management and of all specialised management areas involves tasks of extracting large volume of data, identifying sources of data inconsistencies, developing a reporting and analytics framework to define business trends, risks and opportunities, performing ad hoc analysis and projections, preparing regular reports and executive presentations, as well as suggesting solutions and strategies to achieve business goals. This series of processes

requires complex relationship development and management, as they involve intensive communication and negotiation with the board and the management of various divisions.

For all the above examples at the middle level of the F&A value chain, the concerned management must be able to interpret the overall corporate vision and strategy and integrate it with their specialised areas of concern. Although there has been a great variety of software developed to facilitate the handling and standardisation of large volume of data, the interpretation and integration involves a considerable degree of tacit knowledge which is difficult and unlikely to be codified, and therefore still relies on the capability of management expertise. As a result of their broad scope of involvement, the personnel should have a variety of higher educational and professional backgrounds, and excellent personal skills. The personnel are expected to understand the culture and backbone of their company in addition to the industrial trend.

**Highest level: F&A strategy**

At the top of the pyramid, the formulation of F&A strategy constitutes the highest value-added to the company's margin. There are different scopes of strategy related to corporate finance and accounting, including tax and risk position, accounting policy and control, shareholder relations, divestitures of M&A projects (the sale, liquidation or spinoff of a corporate division or subsidiary), and external reporting (Sako, 2006). The core task is to analyse and interpret F&A information, particularly in the context of the corporate strategy, the company's competitors, industry and market. It concerns the top-level decision making, of both day-to-day matters and investment decisions. It is at this level that expertise is needed to realise how and why value is created within their company and industry, and determine how to drive and monitor performance, and to create value throughout the company.

### 5.2.3 Customer Contact Services

The series of customer contact processes involves handling of the communications between an organisation and its (prospective) customers via telephone, fax and increasingly the Internet tools, such as email, instant messaging and live chat, in areas like marketing, sales and servicing operations. In the wake of substantially

decreasing cost and increasing capacity of ICTs, organisations have taken advantage of scale economies by centralising all these previously separated and distributed functions into a unit called 'call centre' since the 1980s (Holland, 2003). Another term 'contact centre' has recently been adopted to encompass the wider range of services that this sector has increasingly offered through non-telephonic means. An illustrative value ladder of its processes is drawn in Figure 5.3, showing different types of customer contact and associated services it broadly provides.

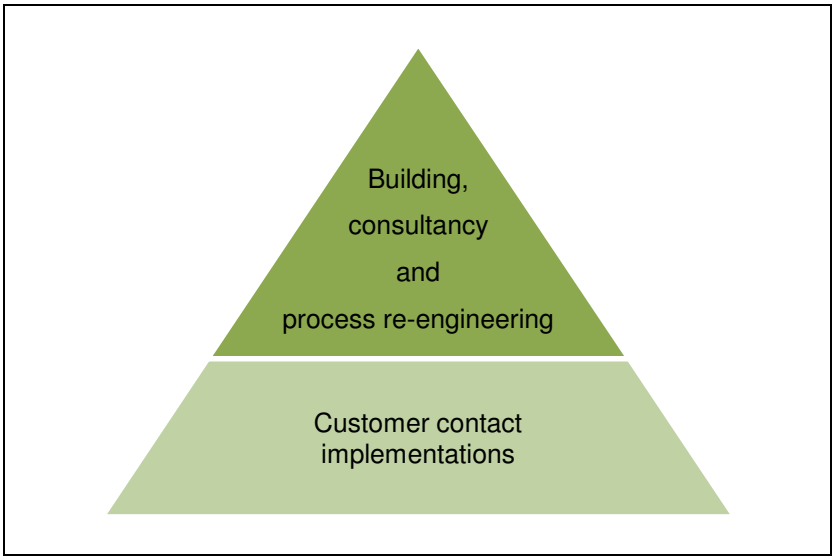



**Figure 5.3: Value Ladder of Customer Contact Services.**

### Lower value-added: Customer contact implementations

Customer contact or interaction implementations refer to the range of activities that are performed 'on the ground,' i.e. by customer service agents at a particular contact centre, using a choice of technological systems. The fundamental tools include the automated call distribution (ACD) system that receives customer inquiries and automatically routes them to the appropriate/available agent; the computer telephony integration (CTI) technique that integrates customer contact channels with computer systems which provide useful customer and product information to the agent; and the interactive voice response (IVR) system that helps customer telephony self service.

The specific tasks involved range from more routine ones like reservation/booking, general inquiry/helpdesk and bill payment, which are inbound contacts, to more proactive tasks such as debt collections, sales, customer

acquisition/retention, market research and lead generation, which are often outbound contacts. Contact centres nowadays are more active in engaging in a larger amount of outbound communications in order to turn themselves from a 'cost centre' to a 'profit centre'. Cross-selling is sometimes pursued during the processing of other activities like customer care and membership services, plus other financial services. Inquiries concerning IT and other technical issues usually require agents with deeper technological knowledge or relevant qualifications. Therefore, the handling of more specialised customer inquiries may pose a relatively higher value-added to the company's margin, also depending on which market end it is servicing.

**Higher value-added: Building, consultancy and process reengineering**

While some contact centre companies only do the above types of customer service deliveries, many are increasingly undertaking a broader spectrum of services, be it as an in-house call centre or a third-party service provider. An area of higher value-added services includes provision of independent consultancy in and strategic planning for the implementation, management, development and operation of contact centres, either for new start-ups or for performance improvement. It can be the design of complete contact centre solutions, from voice and data infrastructure to strategic technology selection and integration, such as customer relationship management (CRM) and workforce management applications, and from development and integration of contact centres to vendor selection, evaluation and management. It can also be advisory services on specialised areas, such as operational efficiency, customer experience, agent training and monitoring.

Consulting services in the scope of management and operations usually consist of assessments, benchmarking and metrics, consolidation studies, and business process re-engineering. Consulting in the area of marketing and customer experience usually constitutes branding integration, design of call guides and scripting, agent performance monitoring, sales and service process enhancement, and multi-channel integration (telephone, mail, web, email, TV, etc.). For example, KPIs, such as the time each agent spends on a specific activity and the length of the waiting time of each incoming call, are set up and assessed for further analysis and recommendations for efficiency improvement. There are also offerings of training modules for line managers,

trainers, coaches and agents, such as (cross-)sales techniques and accent and cultural awareness training.

Although the value hierarchy of customer contact services is much narrower and flatter than the other two previous sectors, firms may, in some cases, upgrade to expand their services provisioning to the CRM spectrum, which is the management of the whole customer lifecycle. This can be considered as an example of 'inter-sector upgrading' as termed by Humphrey and Schmitz (2002). Therefore, it is also vital to see how firms can upgrade to seek higher profit margins and efficiency through product, process or inter-chain/sector upgrading aside from functional upgrading.

### 5.2.4 Climbing Up the Value Ladder

The above sections have described the various service processes in the IT, F&A, and customer contact sectors in respect to their value-adding characteristics. Overall, the nature of the tasks from bottom to top of the value ladder tends to go from implement, support and maintain to plan, develop, integrate and govern. Towards the bottom are tasks that require less tacit knowledge and are more codifiable. On the other end, towards the top are tasks that require more tacit knowledge and are unfeasible to be codified (yet).

There are however not necessarily only two or three levels of value-added processes along any value chain of a particular sector. The pyramids shown in the previous sections are merely an arbitrary delineation for logical differentiation. Wider industry logic is applicable in that the value-added of any specific tasks is dependent on dynamic circumstances, for example, technological development, regulations, customer expectations and market conditions.

As firms and professionals attempt to move up, they need to acquire new capabilities, for instance, by linking to and learning from key producers/buyers in the global production system. By nurturing endowments that are difficult to imitate, they will become more capable of innovation, customisation and strategy formulation. In other words, as service firms climb up the value ladder, their focus will shift from mere data gathering to information analysis to knowledge creation.

However, since the knowledge required for tasks at the top value-added hierarchy is normally held in a tacit form, and is very difficult to acquire remotely or get codified, lower-tier producers may struggle to upgrade to knowledge-intensive processes. As the literature suggests, the nurturing of dynamic capabilities is contingent on various factors that the competitive advantage framework has analysed. In particular, at the top of the value chain, strategy formulation and architecture requires multidimensional skills to envision the wider picture of the entire organisation and even the whole industry. Such capabilities are more likely embedded in organisations and locations that have been leaders in the world economy.

## 5.3 Development Backgrounds of Hong Kong, Singapore and Mainland China in the Global Setting

The general value-adding dynamics of various services activities are in close interaction with the domestic and world economies. In this section, we shall examine the development backgrounds of Hong Kong, Singapore and Mainland China that have paved ways for the growth of their services industries. After discussing the impacts of the post-Mao reform, post-colonial industrialisation and economic transformation, we shall discuss for each their services development and international orientation of the various segments of ICT-enabled business services.

### 5.3.1 A Tale of Two City Economies: Hong Kong and Singapore in the Global Economy

Both Hong Kong and Singapore, as city-states, are 'unique historical and geographical realities' (Olds & Yeung, 2004, p. 507). They are represented and governed by the state in all of its roles, and 'have the political capacity and legitimacy to mobilise strategic resources to achieve (national) objectives that are otherwise unimaginable in non-city-state global cities' (Olds & Yeung, 2004, p. 508).[5] Both Hong Kong and Singapore are each contained within a fully urbanised and spatially constrained territorial unit, which is managed by unified level of government. With such a juxtaposed national-urban scale, they have 'virtually direct access to the global

[5] Despite its return to China since 1997, Hong Kong still maintains a very high degree of autonomy. Under the policy of 'one country, two systems', Hong Kong maintains its own legal system, police force, monetary system, customs policy, immigration policy, official languages, educational system, national sports teams, and delegates to international organisations and events, and other aspects, which are different or independent from the People's Republic of China. The PRC Government is responsible for the territory's defence and foreign affairs.

economy' (Olds & Yeung, 2004, p. 508). Lacking any natural resources of their own, they have also been actively involved in both global and regional inward and outward flows of people, capital, goods, services and information. Their economies are thus characterised by economic openness, free trade, dependence on but vulnerability to international markets, and specialisation in external-oriented services, such as banking and finance, telecommunications and tourism.

**Early industrialisation**

In the course of their development, several historical events happened and played an influential role in the two city-states' industrialisation. Hong Kong and Singapore both emerged as entrepôts between the Western countries and their neighbouring regions, in particular, Mainland China, and Malaysia and Indonesia, respectively (L. K. Wong, 1978; Young, 1994). Yet, Hong Kong witnessed the 1949 revolution in Mainland China, followed by the Chinese involvement in the Korean War resulting in the United Nations' embargo on trade with Mainland China; while Singapore experienced dramatic political change leading to its final independence from the Federation of Malaysia in 1965 (Dicken, 1987, p. 156). The loss of immediate hinterlands restrained the two city-states from continuing their entrepôt role in international trade, and stimulated innovative strategic responses to this crisis; but their responses were radically different.

Hong Kong achieved rapid growth in the industries of textile, clothing, electronics, plastics and other labour-intensive goods mainly for export during the 1950s and 1960s. The Chinese refugees escaping from the Civil War in Mainland China, brought along their capital, technical workers and factory expertise and re-routed existing machinery orders to the city (Young, 1992). Hong Kong's industrial success could also be attributed to the government's adoption of the 'positive non-intervention' economic approach, forming the systems of low taxation, lax labour laws, absence of government debt, free trade, and rule of law. Since then, China, Japan, the UK and the US have remained its largest trading partners.

In Singapore, by contrast, the loss of its substantial hinterland, Malaysia, triggered the post-Independence government to adopt maximalist policies, which it has persisted with since the 1960s. The government formulated and implemented policies in every aspect of economic activity, ranging from establishing industrial infrastructure

and investment to public housing and education (Lepoer, 1989; Young, 1992). The role of its developmental government and foreign direct investment (FDI) are the two predominant forces in the city-state's industrialisation and economic growth.

Singapore thereby developed large export-oriented manufacturing sectors but its transition from entrepôt to industrialised economy took place more than a decade after Hong Kong's (Young, 1994). The late 1960s saw the fostering of Singapore's industries under the government's ambitious large-scale programme of promoting industrial investment, developing industrial estates, and providing industrial financing and technical services (Lepoer, 1989; van Elkan, 1995; Chia, 2005). Singapore's industrial production grew at an average annual rate of nearly 18% during 1965-1973, while that of Hong Kong was 8.4%, compared to 5.1% in the industrialised Western countries as a whole (Dicken, 1987). While wearing apparel constituted the majority of Hong Kong's employment during that period, Singapore's dominant sector was electrical and electronic equipment.

In the course of these changes, FDI played (and is still playing) a fundamental role in Singapore's economic development strategy (Lecraw, 1985, p. 387). It made up around 90% of investment in the manufacturing sector and 20% of investment in the service sectors. In 1981, foreign firms constituted 59% of total manufacturing employment, 76% of total manufacturing output and 87% of direct exports in Singapore (Dicken, 1987, p. 154). They were mainly Dutch and British firms in industries like food, petroleum and chemicals.

In Hong Kong, on the other hand, manufacturing was the only major sector in which foreign investors did not predominate. FDI only accounted for 10% of the city's total manufacturing output and employment and approximately 17% of its total exports (Dicken, 1987, p. 155). Undeniably and more importantly, however, foreign firms had strong indirect influence on Hong Kong's manufacturing economy, since they acted as the major buying houses dominantly involved in subcontracting to domestic Chinese suppliers in Hong Kong. In a rather different way than Singapore, Hong Kong's domestic economy was tied into the international production and distribution networks of foreign manufacturing and retailing firms.

Either under direct or indirect foreign influence, the two city-states showed how their imperial heritage that provided them with a substantial source of capital had

helped their industrialisation. FDI and MNEs from Western economies had facilitated capital accumulation, although they meanwhile extracted the surpluses by 'exploitation' of the local suppliers and labour of their colonies.

**Economic restructuring**

By the late 1970s, Hong Kong's manufacturing has nonetheless begun to shrink in relative importance. With nearly three decades of industrial success, the city's labour costs were climbing while the limited size of its territory constrained further expansion of its domestic production. Meanwhile, the opening up of Mainland China and its consequent active engagement in international trade and investment have attracted Hong Kong's entrepreneurs to take advantage of the country's abundant supply of cheap labour and thus to massively transfer their manufacturing operations to the Mainland, particularly to its neighbouring Guangdong Province, forming a regional division of labour (Sit, 1998).

Hong Kong therefore concentrated on commercial and financial services, which are nonetheless robustly supported by its continuing re-export business and intensified ties with the Mainland (Tao & Wong, 2002). By 2007, manufacturing accounted for merely 2.5% of Hong Kong's GDP, while the share of its services sector in GDP rose to 92.3%, from 68.3% in 1980 (C&SD, 2010). In 2009, 88% of the total employment worked in the services sector, rising from less than 80% before 2001.

Singapore passed through the stage of growth of many of the same industries as Hong Kong but in a more compressed timeframe (Young, 1994). Compared to Hong Kong, Singapore's manufacturing has still maintained relative resilience in its overall economy. Unlike Hong Kong, Singapore does not have an 'economically benevolent hinterland' (Lam, 2000, p. 399), which would otherwise allow the city-state to swiftly relocate its labour-intensive manufacturing production. The mid-1970s began to see sharp growth of electronics in Singapore (Young, 1994). Some government authorities in the early 1980s had realised the need of upgrading the overall industrial structure and accelerating the shift from traditional low value-added manufacturing activities to capital-intensive, high-tech activities, such as electronics (van Elkan, 1995; Chia, 2005). By the late 1980s, Singapore had become one of the world's largest producers and exporters of disk drives and other related products including integrated circuits and telecommunications equipment (Lepoer, 1989). The

electronics sector accounted for around 31% of Singapore's manufacturing value-added in 2009 (SEDB, 2010), though this share had fallen from 40% in 2004 (K. G. Tan & Chen, 2005), partly because of the more rapid growth of other high value-added industries, including chemicals and pharmaceuticals.

It is important to point out that the value chain in Singapore's electronics industry extends beyond manufacturing to regional coordination and procurement activities, which have significantly supported the city-state's international trading hub status alongside other key economic activities (Yue, 2000). Further analysis of the impact of a strong electronics industry in relation to Singapore's services development will be presented in Chapter 6 with respect to the role of related industries in creating and sustaining competitive advantages.

Supported by a strong capital- and technology-intensive industrial base, Singapore has further diversified its economy to encompass high growth in the 'Infocomm' and professional services sectors[6], especially characterised by strong presence of over 4,000 MNC headquarters (SEDB, 2011). The services employment rose from 70.2% in 1999 to 77.1% in 2009; whilst manufacturing's share dropped from 21.7% to 15.7% (SingStat, 2010). In 2009, the services sector accounted for 65.5% of the total GDP, increasing from 59.3% in 1999. During this ten-year period, the share of GDP contributed by manufacturing activity slightly fell from 21.8% to 18.5%.

In Singapore, within the services sector, the largest contributor has been wholesale and retail trade, followed by financial services and business services, with the latter two showing a steady growth in terms of relative significance. Alongside its general commercial expertise, Singapore has also developed strong capabilities in urban planning, port and airport management, hotel management, engineering consultancy, and business support services (Yue, 2000). In Hong Kong, financial services, tourism, trading and logistics, and professional and other producer services have been identified as the four key industries (C&SD, 2011a).[7] Together they

[6] The Infocomm industry is composed of five segments: hardware, software, telecommunications services, IT services, content services (IDA Singapore, 2009).

[7] Financial services include banking, insurance and other financial services (e.g. stock brokerage, asset management, finance leasing and investment and holding companies). Tourism includes inbound tourism (retail trade, accommodation services, food and beverage services, cross-boundary passenger transport services and others), and outbound tourism (travel agency, reservation service and related

contributed more than 55% of value-added and around 47% of employment to the economy during 2005-2009. The specialisation in these particular services in the two city-states could be attributed to a number of factors, such as human capital and growth of related industries, which will be examined in Chapter 6 on their competitive advantages in fostering certain services clusters.

The influence of China on the two city-states' socio-economic transformation has been large and increasing but in different ways and degrees. China's role as Hong Kong's hinterland has re-emerged since the 1980s as the former gradually reconnected to the world economy. Notwithstanding levels of negotiation relationships with Mainland China, both Hong Kong and Singapore have increased cooperation with the country through, for example, bilateral trade agreements and (co-)investment projects in its various regions. The relationships between the three economies will be illustrated throughout the following chapters.

With deepening global and regional linkages, the two city-states have achieved top spots just after London, New York and Tokyo in many global city ranking studies, such as the world city network classification by the Globalization and World Cities (GaWC) Research Network (2011) and the Global Services Location Index (A.T. Kearney, 2009). Therefore, they are regarded highly integrated global cities that complement London and New York, as they largely serve the needs of advanced services for the Pacific Asia.

**International orientation of Hong Kong and Singapore's finance & accounting, information technology and customer contact services**

This section will look specifically at Hong Kong and Singapore's external demand and supply of the three types of services under study. The two city-states' trade in services has been exceptional, respectively equivalent to more than 60% and 90% of their GDP since 2007 (The World Bank, 2011b).[8] This clearly indicates their

activities, and cross-boundary passenger transport services). Trading and logistics include wholesale, import/export trade, freight transport and storage services, and postal and courier services. Professional and other producer services include legal, accounting auditing services; architecture and engineering activities, technical testing and analysis, scientific research and development, management and management consultancy activities; other professional services (e.g. information technology related services, advertising and specialised design services); and other producer services not classified as financial services, trading and logistics, tourism and professional services.

[8] Trade in services is the sum of service exports and imports divided by the value of GDP, all in current U.S. dollars.

significant involvement in international services flows relative to their home economy, compared to other high-income countries, such as the UK (18.7% in 2009) and the US (6.1%), owing to their small domestic market and thus need of engagement in external trade.

***Finance & accounting***

While both of Hong Kong and Singapore's total imports and exports of financial services have been constantly rising over the last decade, their exports of these services have shown an even more rapid growth (see Figure 5.4). Hong Kong's exports of financial services tremendously rose from US$4.4 billion in 2000 to more than US$12.6 billion in 2010; whereas Singapore also recorded a sharp increase from US$1.8 billion to nearly US$12.2 billion for the same period (United Nations, 2010). Meanwhile, financial services constituted nearly 12.4% of Hong Kong's total services exports in 2010, jumping from just 4.4% in 1980 (C&SD, 2012). The proportion of financial services in its total imports also climbed from 1.4% to 6.9%. Likewise, Singapore's export and import in financial services also recorded rising share (respectively increasing from 5.3% in 1998 to 7.9% in 2008, and from 1.2% to 2.4%) (SingStat, 2009). These figures point to the role of Hong Kong and Singapore as global and regional financial hubs, with their direct access to the global economy owing to their city-state status and historically evolved external orientation. Moreover, benefiting from the recent emergence of the East Asia region, they are able to serve both foreign investors looking for rising opportunities in the region, and indigenous MNCs within the region seeking international connections and resources.

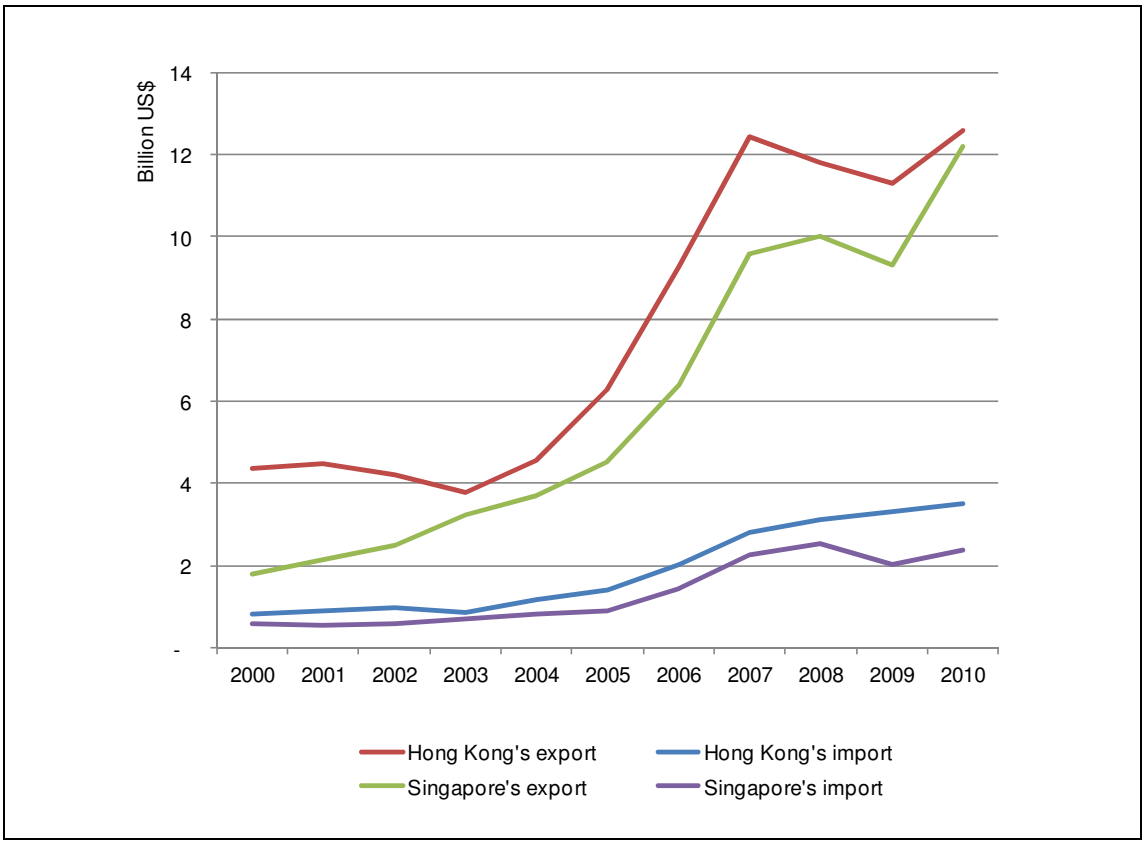



**Figure 5.4: Hong Kong and Singapore's Exports and Imports in Financial Services, 2000-2010.**

Source: data retrieved from the United Nations (2010).

The international status of the two city-states as global financial hubs is also clearly substantiated by the Global Financial Centres Index (GFCI)[9]. According to GFCI 8 and 9, Hong Kong has closed the gap with the top two, London and New York, by achieving just 10 points of rating behind (compared to 84 points behind in 2009) and having taken up the third place (Z/Yen Group & Qatar Financial Centre Authority, 2010, 2011). Singapore is also a very competitive contender for the fourth position, though still well behind London, New York and Hong Kong which control a large proportion of financial transactions (including approximately 70% of equity trading) (Z/Yen Group & Qatar Financial Centre Authority, 2011).

Although Hong Kong and Singapore have long been considered the most important Asian financial hubs, their positions always come behind London and New

[9] The Global Financial Centres Index (GFCI) has been developed by Z/Yen Group. The study was sponsored by City of London Corporation for GFCI 1-7 and by Qatar Financial Centre Authority for GFCI 8-9. The GFCI has assessed dozens of financial centres worldwide since 2007 and ranked them according to both external indices and responses to their survey targeting stakeholders of the international financial industry (Z/Yen Group, 2011).

York, as the two truly global centres. On one hand, their relationship with these centres (and perhaps Tokyo, though its role has faded) may be seen as complementary and mutually supportive. On the other, there is clearly an element of competitiveness, since while it still seems challenging for the two city-states to compete head-to-head with the other two leading global cities, the division of labour is continually being redefined.

At the national level, for financial services, the US and the UK have been the largest trading partners with Hong Kong in terms of both imports and exports. The US has represented roughly 20% of both the import and export of Hong Kong's financial services; while the UK accounted for an average of 17% of Hong Kong's export and 13% of its import of such services during 2000-2008. In addition, the supply from Singapore to Hong Kong has also increased from less than 10% in 2001 to more than 15% in 2008. Although China's relative share was much less than these primary trading partners, it has continued to increase its importance in recent years (rising from 1.4% in 2000 to 3.3% in 2008 for the city's export; from 2.8% to 5.6% for import). Indeed, more than half of Hong Kong's exports in accounting, auditing, bookkeeping and tax consulting services went to China during 2001-2008. The US accounted for 27% of these services from Hong Kong in 2008. China has constituted an average of 78% of Hong Kong's import of such services between 2000 and 2008. These and the above figures together suggest the large and rising inflow and outflow of F&A services between Hong Kong and its Mainland counterpart, alongside the traditional trading relationships with the advanced economies of the US and the UK.

In a similar manner, Singapore has exported a considerable proportion of financial services to Hong Kong (more than 10%, equivalent to one-thirds of the whole Asia region), the EU, and the US. China and India's relative share has been limited (merely around 1-2%) but is increasing in recent years. Similar observations could also be seen for its imports of these services. Its major import partners have been Hong Kong (accounting for half of Asia's total), the US, the EU and Japan; while the relative share of both the US and Japan tends to be falling. The city-state has traded financial and other business services significantly with Hong Kong, also evident in figures available from Singapore's Statistical Yearbook (SingStat, 2009), although the two city-states seem to have similar comparative advantage in these services. This corresponds to what the literature suggests: countries with similar levels of development and factor endowments take advantage of specialisation to enlarge

economies of scale that generate horizontal intra-industry trade (see, e.g., OECD, 2002b; Krugman & Obstfeld, 2006).

As the above figures show, while Singapore and Hong Kong have maintained substantial trading relationships with the conventional triad of the developed countries, the rapid rise of some neighbouring Asian economies has also contributed to the strengthening of the financial hub status of the two city-states, as they can gain mutual benefits through increasingly intensive material and non-material flows between each other.

***Information technology***

Such international exchanges, as discussed in Chapter 3, have been facilitated by the simultaneous development of ICTs. Therefore, Hong Kong and Singapore have also seen considerable growth in computer and information services. As Figure 5.5 shows, Singapore has recorded a sharp rise in export of these services (increased from US$0.2 billion in 2000 to US$1.8 billion in 2010). At a lesser extent, its import rose from US$0.2 billion to more than US$1.2 billion. Yet, compared to financial and business services (more than US$12 billion), Singapore has exported less computer and information services (SingStat, 2009). Singapore's computer and information services have been primarily sent to the US, the EU, Japan, Australia and China markets. Yet, the relative share of the EU has dropped vis-à-vis the rise of other emerging economies, such as South Korea and China. In particular, India's contribution has enormously climbed from only 0.2% in 2000 to more than 10% since 2004, proving the remarkable growth of its ITO industry.

Hong Kong, however, has generally imported and exported a smaller volume of computer and information services than Singapore (Figure 5.5). While Singapore has exported more of these services than it has imported internationally, Hong Kong has rather imported generally more than it has exported. Indeed, the foreign market has contributed more than 60% of the total revenue of Singapore's ICT industry since 2006, up from less than 50% before 2000 (SingStat, 2011). The stronger development of IT services in Singapore than Hong Kong is associated with the development trajectories of the two, as generally mentioned earlier in this section. In particular, Singapore has had a larger electronics sector than Hong Kong, probably assisting the

simultaneous growth of its IT services. Further discussion on such issues will be offered in the next chapter.

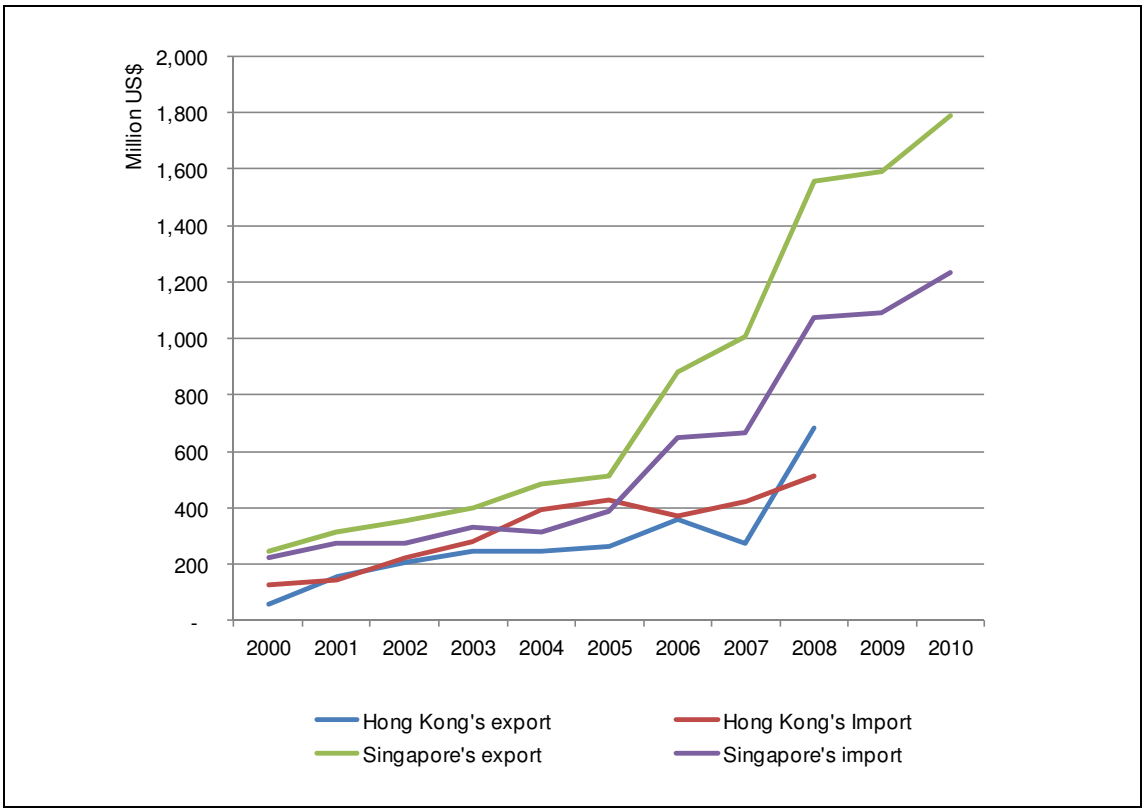



**Figure 5.5: Hong Kong and Singapore's Exports and Imports in Computer and Information Services, 2000-2010.**

Source: data retrieved from the United Nations (2010).

Note: Data for Hong Kong only available up to 2008.

The WTO services trade database for Hong Kong has a separate category of 'computer services' by partner country under the aggregated group of 'computer and information services', which is more directly related to the focus of this study (However, it is unfortunately unavailable for Singapore). China, the UK and the US have been the largest trading partners of Hong Kong's computer services, in terms of both import and export. The more obvious observation is the considerably growing share of China in Hong Kong's import and export of computer services, rising from below 10% to more than 25% during 2000-2007. China, surpassing the US and the UK, has then become the city-state's largest import partner in computer services. This further validates the earlier remark on the expanding role of China in Hong Kong's services offshoring development.

Despite Hong Kong and Singapore's growing trade in IT services, however, while a few of Indian cities are dramatically rising to the forefront of many global rankings in recent years, the two city-states seem to stay at the same positions and still behind London and New York. In particular, the IT services provided by India have drawn in enormous foreign investment and attracted a rapidly growing volume of international trade. Therefore, the two city-states appear to have experiences critically different from India in keeping pace with the dramatic global change in IT services, which will be further examined in the next two chapters.

***Customer contact***

As discussed in Section 5.2 on the value ladders of the three types of services, while F&A and IT services tend to have deeper value hierarchies, requiring relatively more complex factor criteria; the customer contact sector tends to be characterised by less sophisticated production requirements. Therefore, different from the previous two sectors analysed, the customer care services offered and demanded by Hong Kong and Singapore could have very different external orientation and implications for the upgrading prospects.

Customer care or contact centre services do not constitute a specific sub-category in the international services trade database. Yet, the Asian Contact Centre Industry Benchmark Study (callcentres.net, 2003) estimated that Hong Kong had roughly 360 call centres operated by about 300 organisations, which held approximately 10,000 seats. Singapore was also estimated to have about 325 call centres run by 250 organisations with roughly 10,000 seats as well. In general, the two city-states' contact centre market might be comparable to other emerging Asian economies, such as Malaysia and Thailand, respectively having 12,000 and 11,000 seats; but clearly much smaller than other larger countries, such as China (38,000) and India (96,000). These other Asian countries are likely to have further expanded their activity since 2003 when the survey was conducted, while Hong Kong and Singapore which are now considered mature call centre markets with limited growth potential stood still by comparison.

The same survey meanwhile found that 31% of Hong Kong's call centres were servicing other countries. Among those providing such services to more than one country, their major client locations were in China, Singapore, Malaysia, the

Philippines, Australia, New Zealand, the US and the UK. Likewise, according to that survey, the same percentage (31%) of Singapore's call centres were also supplying their services abroad. Their major clients were from Malaysia, Hong Kong, China, Australia, New Zealand and the US. It was observed that many contact centres in these two cities were providing in-house customer care services to their parent companies or headquarters to cater for their regional market needs and for multilingual requirements in their global and regional markets. This finding on the small size and limited growth potential of the two city-states' contact centres seems to suggest that scale economies are of limited relevance to them. However, wherever there is external demand, the two city-states' contact centres can serve not only regional clients, but also those in the First World, suggesting their multilingual and international servicing expertise. In other words, their customer services supplied overseas tend to take on higher value-added segments of the value chain.

**Summary**

This section on Hong Kong and Singapore's economic trajectories, particularly focusing on their services development, has suggested that financial and other business services have made a steadily expanding contribution to the two city-state economies. In particular, their F&A sector has seen progressive upgrading, particularly in Hong Kong, as demonstrated by its growth in trade and global financial centre status. The IT services of Singapore have also constituted more innovation-driven processes; whilst Hong Kong's IT services seem to have experienced certain constraints on expansion, especially compared to the rapid rise of India. The contact centres in both Hong Kong and Singapore are generally limited in international scale. However, since their markets are more mature, they tend to be focused on highly specialised spectrum of customers that could derive higher value-added, instead of massive production runs.

Differentiated from the two global cities of London and New York, Hong Kong and Singapore's main role in advanced business services, though still strongly linked to the advanced Western economies, has become that of leaders for the Asia-Pacific region in key corporate management, strategy-setting, coordination and financial activities, through the active participation of multinationals based in the cities (Enright, 2000). These headquarter functions in turn have generated rising demand for

advanced managerial skills and sophisticated support services, such as legal, accounting and consultancy services, thus providing highly beneficial stimulus and spillover to the local economy. The growing trade in financial and business management services between Hong Kong and Singapore also points to the increasing importance of regional partnerships to exploit each other's competitive advantages. The emergence of large economies in the region, particularly China and India, has further provided ample opportunities for the two city-states in supplying higher value-added services to these countries and sourcing low-cost services from them to achieve more efficient division of labour. We shall further look at Hong Kong and Singapore's specific competitive advantages in the ICT-enabled business services, and their intensifying relationships with China and other fast-growing countries in the next two chapters.

### 5.3.2 The Rising Dragon: China's Emergence since the Post-Mao Reforms

China's economic system is very different from that of Singapore, Hong Kong or other capitalist economies. As a large 'socialist market' nation-state,[10] China is a huge territorial unit with varied levels of urbanisation across regions, governed by the strong central government in Beijing but also managed by multiple levels of governments whose powers are nonetheless delegated by the former. China's economy has been undergoing gradual reforms since the late 1970s but this market transition process is yet to complete (Rawski, 1999; Chow, 2007, 2010). The post-Mao reforms have been characterised by 'gradual', 'pragmatic' and 'experimental' (Sachs & Woo, 1994; Lin, 1999; Chow, 2010).

From the then Chinese leader and reform architect Deng Xiaoping's emphasis on economic construction as the central objective of the Communist Party of China through to the current regime's justification of its policy shift away from central planning and state ownership towards 'a Chinese-style socialist market economy' (Woo, 2009), the country's socio-economic development has remained under the 'guidance' of the central government. Despite continued decentralisation of some of the power to local governments, it is unlikely for the Chinese economy to resemble all the features of a market economy owing to the local governments' strong allocative power leading to planning decisions based on administrative considerations (including

[10] The need to restructure the socialist core of China's economy as a 'socialist market economy' was first realised by the Chinese leaders in the early 1990s (R. H. Myers, 1995).

pursuit of promotion by seeking to maximise GDP, as Chien (2008) found, rather than purely economic ones (Wong, 1987; Howell, 2006).

In reaction to the increasing flexibility of the global production system, the rising demand of advanced country firms and consumers, and the technological improvements in transportation and communications, China has taken advantage of its abundant supply of low-wage labour, the influx of foreign investment, and so on, to become the world's industrial powerhouse (Yusuf, Nabeshima & Perkins, 2007; Ye, 2009).

In this section, against the backdrop of the dynamic global economy, we shall examine the country's development trajectory in the past few decades during which critical economic reforms and transformation have taken place and influenced the recent shift towards services in the country. Looking into its inward investment and trade in services, we shall show China's improving international position in the value chains of different services sectors, in particular of the three types under study.

**Post-Mao Opening-up and Increasing Integration with the World Economy**

The period of 1949-70 witnessed China's 'self-imposed isolation' as it adopted the leap-forward, heavy-industry-oriented development strategy in an attempt to produce capital goods and military materials as rapidly as possible for a self-contained industrial economy (Yang & Fang, 2003; Yu & Nijkamp, 2009). At this stage, the country's linkage with the international economy was minimal. Its growth was held back by socialist institutions in which central planning and state and collective ownership dominated, as resources were inefficiently allocated and used.

During the late 1970s, the first wave of China's economic reforms started gradually in the agricultural, industrial, fiscal, financial, banking and labour systems. Rather than beginning with the macro-policy environment, China's economic reform started with 'the delegation of autonomy and profit-sharing with micro-management units' (Lin, Cai & Li, 2003, p. 340). It has helped improve the incentive mechanism, create more new resources, allocate resources to previously suppressed sectors, particularly the labour-intensive industries, and thus increase productivity.

Alongside the reform and privatisation of state-owned enterprises (SOEs), and the removal of barriers to foreign trade and investment, the transfer of workers from low-productivity agriculture, which was heavily subsidised during pre-reform period, to higher-productivity industry, especially the export-oriented, labour-intensive manufacturing sector, has released the country's comparative advantage and attracted an influx of foreign capital (Sachs & Woo, 1994). As an experimental measure, FDI was first permitted in the four 'Special Economic Zones' (SEZs) set up in Guangdong and Fujian Provinces in 1978, initially aiming at investment of non-resident Chinese from Hong Kong and Taiwan (Tseng & Zebregs, 2002; Ye, 2009). The SEZ concept has subsequently extended to some other coastal regions opened to FDI in the 1980s and even across different parts of the Mainland after the policy was proven successful. Foreign investors in these and other types of designated zones (for example, Economic and Technological Development Zones, and Software Parks/Export Bases) are offered tax-related privileges (Chien, 2008; Ye, 2009). Other special preferential treatments include allowing the involvement of foreign investment in infrastructure projects and operation in tertiary industries, the establishment of branches of foreign banks, and land leasing in the designated zones, yet primarily through joint venture partnerships. More on the designated zones for specific services activity will be discussed in Sections 6.4.1 and 6.6.1 in the next chapter.

The surge of foreign investment, predominantly from Hong Kong and Taiwan, followed by Japan, the US and other advanced economies, has led to a deepened international division of labour, with China occupying the lower value-added, labour-intensive production of goods, ranging from garments, footwear and consumer electronics to machinery, transportation equipment and many others. Inward foreign capital has flooded primarily into the industrial sectors, but increasingly flowed also into projects that comprise higher technology and are R&D-related since the mid-1990s. These R&D investments are mainly focused on technology-intensive industries such as ICT, automotive and chemicals, and concentrated in a small number of locations, i.e. the conventional growth poles, including Beijing and Shanghai (McCann, 2009).

**Overall Services Development and Trade**

The expanding private entrepreneurial activity in China following the post-Mao reforms has triggered dramatic growth of domestic commercial activities, such as retail trade and catering. However, up until the recent decade, the external orientation of its services sectors was relatively limited, partly due to the much more restrictive market access of foreign investors to some of these sectors and the policy inclination towards industrial development, alongside the infant institutions and infrastructure.

Services have recently become one of the Chinese government's development priorities, as emphasised in both of its 11th (2006-2010) and 12th (2011-2015) Five-Year Plans (Central People's Government, 2006; China Economic Net, 2011). It aims to incorporate the development of the services industry with the national strategy of upgrading its industrial structure, lifting domestic consumption, expanding employment and strengthening its services trade (Ren, 2011). Services contributed 43% of China's GDP in 2009, rising from 24% in 1978, as compared to the significant declining share of the primary industry (from 28% to 10%) and the slight fall of manufacturing (from 44% to 40%) (NBS China, 2010). A similar trend is also observed in sectoral employment, with the services industry's share soaring from 12% to 34% during the same period of time.

The amount of FDI flowing into China's service sectors is also mounting, particularly thanks to its continuous efforts to implement its WTO commitments to services liberalisation. China's inward FDI in services grew by three times between 2000 and 2009, as compared to the manufacturing FDI's growth rate of 81% (The World Bank, 2010b). By the first quarter of 2011, the actually utilised FDI in services has grown to 47.4% of the national total, exceeding manufacturing's 45.3%. The computer application services sector is one of the largest recipients alongside other sectors such as distribution services, real estate and transport services (MOFCOM, 2010).

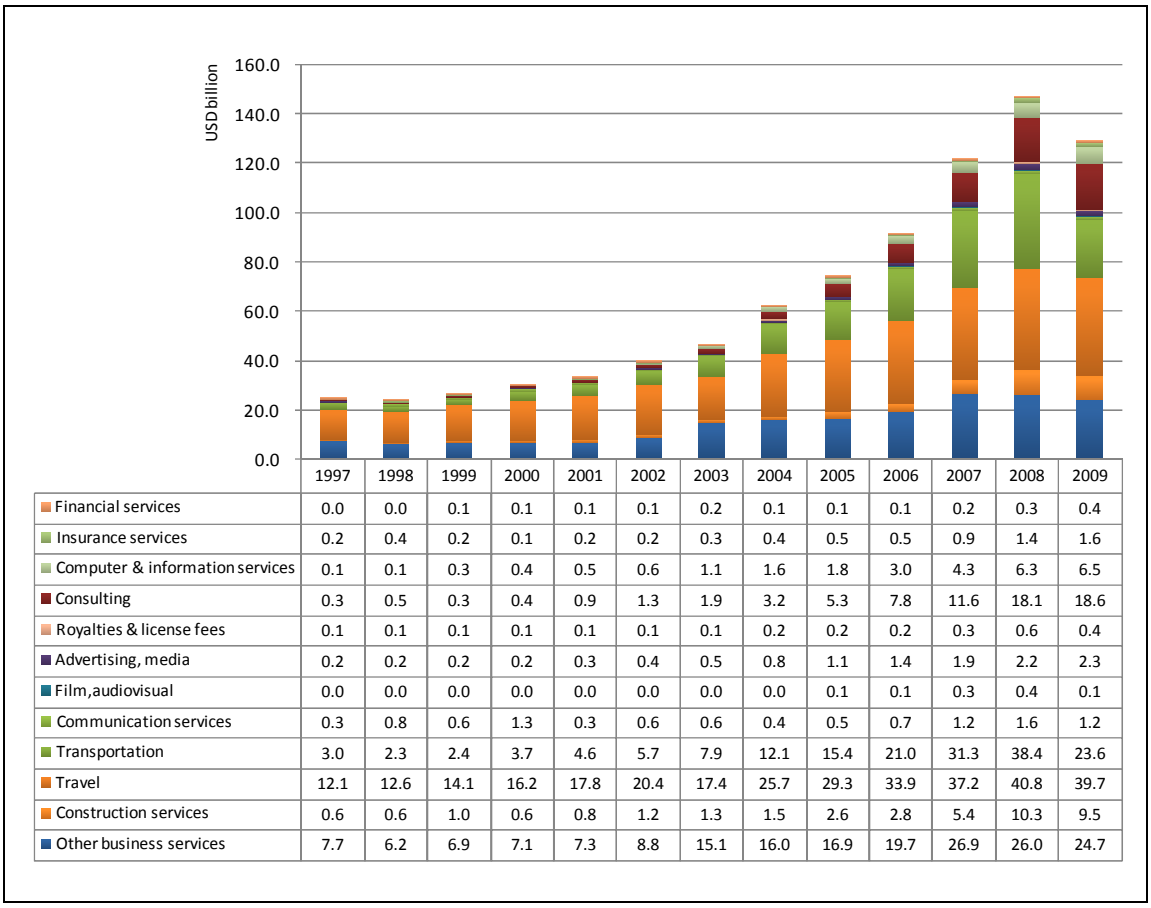
Compared with Hong Kong and Singapore which are essentially external-oriented, China's trade in services has been much more limited in terms of contribution to overall GDP (5.8% in 2009) (The World Bank, 2011b). Yet, the volume of both its import and export in services has been rapidly rising (respectively from US$277 in 1997 to US$1,582 in 2009, and from US$245 to US$1,286) (MOFCOM, 2011a).

China's enlarging role in international services flows can also be evident in its rising share of the world's overall trade volumes (from 1.9% in 1997 to 3.9% in 2008 for export, and from 2.1% to 4.6% for import). As we can see, China's development in services has just started from a low position but is in a rapid process of catch-up overall.

**As an Offshore Supplier of Various Services**

The growth trend of some of China's services sectors tends to imply a changing picture of its engagement in services trade as a supplier in the global network. In 2009, China's services outsourcing enterprises signed nearly US$15 billion of offshore outsourcing agreements, equivalent to 75% of the total value of all the outsourcing contracts, and up 154% from the previous year (International Business Daily, 2010). They also executed US$10 billion of such international contracts in 2009 (73% of all the outsourcing contracts). These numbers suggest the continued robust demand for China's offshore outsourcing processes.

Also with regard to the country's exports of services, the three largest contributors have been tourism (30.9% in 2009), transportation (19.2%), and other business services (18.4%) (see Figure 5.6). Meanwhile, the country's computer and information services (jumping from 0.3% in 1997 to 5.1% in 2009) and its consultancy services (from 1.4% to 14.5%) have also recorded the largest growth of contribution to export in overall services during the past decade. The sharp rise of China's supply of consultancy services abroad seems to be related to its increasing involvement in engineering and infrastructure construction in other developing countries, such as those in Africa and Central Asia. It may also be attributed to the increasing need of foreign investors to seek a deeper understanding of the vibrant Chinese local market in order to fully exploit the huge investment potential. Either case points to the mounting demand for China's investment-related services that have grown beyond single transactions of usual offshoring, which may imply relatively sustainable prospects for the country's service suppliers.




| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Financial services | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.3 | 0.4 |
| Insurance services | 0.2 | 0.4 | 0.2 | 0.1 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.5 | 0.9 | 1.4 | 1.6 |
| Computer & information services | 0.1 | 0.1 | 0.3 | 0.4 | 0.5 | 0.6 | 1.1 | 1.6 | 1.8 | 3.0 | 4.3 | 6.3 | 6.5 |
| Consulting | 0.3 | 0.5 | 0.3 | 0.4 | 0.9 | 1.3 | 1.9 | 3.2 | 5.3 | 7.8 | 11.6 | 18.1 | 18.6 |
| Royalties & license fees | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.6 | 0.4 |
| Advertising, media | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.4 | 0.5 | 0.8 | 1.1 | 1.4 | 1.9 | 2.2 | 2.3 |
| Film,audiovisual | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.3 | 0.4 | 0.1 |
| Communication services | 0.3 | 0.8 | 0.6 | 1.3 | 0.3 | 0.6 | 0.6 | 0.4 | 0.5 | 0.7 | 1.2 | 1.6 | 1.2 |
| Transportation | 3.0 | 2.3 | 2.4 | 3.7 | 4.6 | 5.7 | 7.9 | 12.1 | 15.4 | 21.0 | 31.3 | 38.4 | 23.6 |
| Travel | 12.1 | 12.6 | 14.1 | 16.2 | 17.8 | 20.4 | 17.4 | 25.7 | 29.3 | 33.9 | 37.2 | 40.8 | 39.7 |
| Construction services | 0.6 | 0.6 | 1.0 | 0.6 | 0.8 | 1.2 | 1.3 | 1.5 | 2.6 | 2.8 | 5.4 | 10.3 | 9.5 |
| Other business services | 7.7 | 6.2 | 6.9 | 7.1 | 7.3 | 8.8 | 15.1 | 16.0 | 16.9 | 19.7 | 26.9 | 26.0 | 24.7 |

**Figure 5.6: China's Exports in Services by Sector, 1997-2009.**

Source: data retrieved from MOFCOM (2011b).

With respect to the specific sectors under study, the figures of trade in services show that China's export in 'other business services' has jumped from US$7.7 billion in 1997 to US$24.7 billion in 2009 (MOFCOM, 2011b). That of computer and information services has also risen from merely US$0.1 billion to US$6.5 billion during the same period. Financial services, however, only recorded a minimal amount of export during the late 1990s but have gradually expanded and recorded US$0.4 billion worth of export in 2009. The constraints to China's financial services tend to include the institutional limitations, for example, regulatory restrictions, inadequate capabilities and lower quality of domestic suppliers. Generally speaking, the growth trend tends to correspond to the changing feasibility of codification and the regulatory liberalisation. We shall look into the country's different forces in affecting the offshorability of particular services and capabilities of suppliers in the next chapter.

By broad type of outsourcing services, ITO has been the biggest segment in the country, comprising nearly 70% of the total value of all contracts; whilst BPO has

constituted about 23% (CCIIP, CEIBS & CSORC, 2008, pp. 10-11). Within the ITO market, system integration, hardware product support and maintenance, and custom software development are the top three segments, respectively accounting for 23.6%, 18.1% and 14.4% of the total in 2007. As discussed in Section 5.2 on the value ladders of the IT services, system integration tends to derive higher value-added among these various segments that dominate China's ITO market. However, we should be aware that in some cases system integration and custom software development can be disintegrated into a number of modules to codify and standardise the whole process. Therefore, further qualitative evidence is required, as will be analysed in the next two chapters. Product support and maintenance services nonetheless constitute relatively lower value-added, as they require limited levels of specialised and tacit knowledge.

The segments of human resources (excluding training) (28.8%), finance and accounting (20.1%), and customer care (19.2%) have constituted the largest share of the overall BPO market. However, according to the Asian Contact Centre Industry Benchmark Study (callcentres.net, 2003), during that survey period, the international exposure of China's contact centre industry was still limited. Only about 20% of the country's call centres were servicing overseas markets, which were primarily Hong Kong, Singapore, Malaysia, Australia and the US. The international orientation of China's contact centre sector has however probably increased in a large extent compared to several years back. While the Chinese language and cultural affinity with neighbouring markets are convincing reasons for organisations in the East Asia region to use contact centres in China (Bailor, 2006); the drivers for those from English-speaking or non-Chinese-dominant countries, such as Australia and the US, outside the region to seek Chinese service is expected to be different from those for India. Since language skills can be a barrier to entry for Chinese contact centres to these markets, offshore clients may choose them to serve the Chinese communities there or deal with China-related customers that need some local knowledge from that country.

China's ITO and BPO services are primarily supplied to the US, Japan and Hong Kong markets. According to the Ministry of Commerce, in 2009, the amount of agreements signed between Chinese companies and companies based in these three economies totalled US$7.9 billion, accounting for nearly 40% of all the contracts (International Business Daily, 2010). The value of such contracts from these three origins indeed rose from US$2.9 billion in 2008, although their share dropped from

about 49% (see Table 5.1 for the 2008 figures) (CCIIP, CEIBS & CSORC, 2008). The amount of agreements already executed for these three markets increased from US$2.4 billion in 2008 to US$5.8 billion in 2009, although their share fell from 51% to 29%. This probably indicates the increasing diversification of the country's outsourcing markets as more countries see the rising prospects in China and Chinese suppliers build up their profiles.

**Table 5.1: Top 10 Country Origins of China's Offshore Services Outsourcing Business, 2008.**

| Country | Value of signed contracts (US$'000) | Share (%) | Value of implemented contracts (US$'000) | Share (%) |
|---|---|---|---|---|
| Japan | 1,069,260 | 18.3 | 971,583 | 20.7 |
| US | 1,079,580 | 18.5 | 909,345 | 19.4 |
| Hong Kong | 698,354 | 12.0 | 512,922 | 10.9 |
| Taiwan | 180,367 | 3.1 | 154,044 | 3.3 |
| UK | 147,233 | 2.5 | 148,569 | 3.2 |
| Germany | 146,701 | 2.5 | 146,902 | 3.1 |
| Singapore | 97,744 | 1.7 | 129,825 | 2.8 |
| Korea | 125,758 | 2.2 | 68,191 | 1.5 |
| Netherlands | 240,380 | 4.1 | 57,505 | 1.2 |
| France | 37,002 | 0.6 | 51,362 | 1.1 |
| **Total** | **3,822,379** | **65.5** | **3,150,248** | **67.2** |

Source: CCIIP, CEIBS and CSORC (2008, p. 12).

### 5.3.3 Summary

This section has shown the development trajectories of Hong Kong, Singapore and China, and particularly their relative positions in the value chains of ICT-enabled business services. China has been undergoing a market transition since some decades ago, thus opening up greater opportunities of services trade. The country has nonetheless started from a low position, although gathering momentum in recent years. In general, it is offering relatively low value-added services in many segments, in spite of specialisation in some higher value-added areas. Its ITO tends to have achieved comparatively more progress, however, than other business services that aim to serve overseas markets. In addition, the Chinese contact centres generally serve Chinese language markets, such as Taiwan and Hong Kong, or locations with close

cultural and historical proximity in the East and Southeast Asia region, such as Japan and South Korea.

Indeed, the criteria in skills, institutional frameworks and infrastructure, as well as the cost structure, for each of the services sectors at different levels of their value ladders are qualitatively different. For instance, the barriers to entry for financial services at the international level are more restrictive in regulatory terms than those for IT services. The varied institutional settings in different countries also tend to constrain the ease of flows of financial services; while IT processes particularly those at the lower end can be transferred more easily across borders due to the long history of computer system standardisation. Therefore, it is understandable that China has supplied only very limited financial services abroad, both absolutely and compared to Hong Kong and Singapore, whose financial institutions have long met international standards and expectations.

As this section has shown, Hong Kong and Singapore are comparatively stronger in their financial and business services than IT services, as they have recorded much larger volume of trade in the former group of services in terms of both supply and demand in the world economy. They have not just traded with major First World powers, like the UK and the US, but also responded to the increasing demand from the rising economies in the region for both higher value-added ICT-enabled services and lower-cost ones. It is equally important to notice that there has been substantial trade in these services between Hong Kong and Singapore themselves. This is likely due to the increasing cooperation between their firms in the region that has driven higher demand for regional and local expertise from these city-states. We shall further examine the firm strategies in regional cooperation in Chapter 7.

## 5.4 Conclusions

In this chapter, we have attempted to understand the value hierarchies of the various ICT-enabled business services chosen for the present study, including finance and accounting, information technology, and customer contact services. We have shown how different characteristics of specific services are associated with skill requirements that contribute to higher or lower value-added.

Overall, with particular examples of the various services sectors at each arbitrary value-added level, we have demonstrated that tasks at the bottom of the value ladder are generally routinised and codified, and thus require much less domain knowledge. In contrast, processes towards the top of the value ladder require intensive tacit knowledge and multidimensional skills that are difficult to be transferred across space. We shall however bear in mind that there is no rigid boundary between the types of services and between the value ladders exemplified in Section 5.2; while changing global settings and local circumstances may alter their skill requirements and value contributions by, for example, further disintegrating the processes and thus releasing previous constraints. Although the value ladders are dynamic across sectors and contingent on temporal and spatial contexts, in general, functions that are associated with corporate decision-making and strategic management without doubt entail higher value-added, in contrast to low value-added tasks that are repetitive and standardised.

Having learnt the qualitative differences between the various types of services, we continued to look into the development trajectories of the three economies, Hong Kong, Singapore and China, particularly in different services sectors throughout the past few decades. This has provided us with a clear understanding of the relative positions of these economies in the dynamic global economy. The services development paths and trade figures have shown that Hong Kong and Singapore have been actively engaged in the international trade in financial and other business services in terms of both import and export. In comparison, Singapore's IT services have been more export-oriented than Hong Kong. Nonetheless, both city-states have developed intensive trading partnerships not only with the conventional triad of the Global North, but also increasing with the emerging markets particularly in the Asia region, further strengthening their role as the key global financial and business hubs.

As China continues to open up its market and improve its business environment, overseas clients are increasingly looking into the opportunities in the country. Its services sectors have also progressively expanded. Particularly with regard to supply, China's IT services have been more internationally oriented than its F&A services. Yet, the demand for the country's customer contact services has been less externally driven, compared to the two city-states; nonetheless it is gradually growing to cater for more regional needs. China's services generally are at a comparatively

lower end, although some of its export-oriented services seem to have been progressively and eagerly developed in some specialised, higher value-added segments.

Overall, this chapter has addresses the evolving development paths of the three economies under study, and presented the dynamics of the value ladders of our case sectors, both of which together are anticipated to influence the locational and firm strategies and constraints in moving up the value chain. After these descriptive observations, we shall analyse in the coming chapter how various forces have shaped the competitive advantages in determining the three economies' positions in the services GVC.

# Chapter 6 Competitive Advantages of Mainland China, Hong Kong and Singapore in ICT-enabled Business Services

## 6.1 Introduction

The preceding chapter has examined the dynamic value ladders of the three sets of ICT-enabled business services in relation to the overall development backgrounds of Hong Kong, Singapore and Mainland China in the regime of rising services offshoring. This chapter aims to examine and compare the competitive advantages of the three economies, which have shaped their preceding and ongoing development of the various services in response to the changing exogenous and endogenous circumstances. The Porterian competitive advantage framework, as reviewed and discussed in Chapter 2, is adopted to guide the discussion and analysis, given that it is able to conceive the fundamental aspects of development affecting whether and how a location achieves and sustains competitiveness in a particular industry. The dynamic and intertwining forces of factor conditions, demand conditions, related and supporting industries, firm structure and rivalry, alongside the role of the government will be examined. We shall particularly show these facets through the lens of the development of specific ICT-enabled business services in the three economies. This chapter will take a meso-level perspective for the analysis, treating the factors of change in national/regional terms.

For the factor conditions in Section 6.2, we shall focus on ICT infrastructure and human/knowledge capital as the major areas of concern, since these are particularly influential for the development of ICT-driven business services. Section 6.3 will examine the domestic demand conditions for these services, particularly of those three sectors under study. Although external demands are relevant and will be generally touched on, this chapter does not attempt to project or assess the actual demand of such offshored services, which will be further dealt with in the next chapter particularly using the firm-level evidence. Section 6.4 will examine the trajectories of industries that are related to and supporting those three selected sets of services, as their healthy growth is expected to benefit the development of the latter. These supporting and auxiliary industries indeed involve a very wide range of sectors in the economies because ICT-enabled business services are unbundled corporate functions

that are required by most sectors. The firm size, structure and rivalry of the selected sectors in the three economies will be examined in Section 6.5. Section 6.6 will consider the government's role in facilitating and stimulating the circumstances of the preceding facets of competitive advantage. Throughout the discussion, we are also concerned about the geographical variations particularly for China, since it covers a substantial spatial scale and is indeed characterised by very uneven regional development.

## 6.2 Factor Conditions: ICT Infrastructure and Human Capital

To develop sustainable competitive advantages not only requires a match between industries and national factor endowments, but more complicated and important questions of *how efficiently and effectively (as well as where) the factors are deployed* (Porter, 1998, pp. 75-76). Such factors can broadly include human resources, physical resources, knowledge resources, capital resources and infrastructure. This section is to examine how well the factor conditions, including ICT infrastructure and human resources, in each of the three economies under investigation match with their progress in development of the various ICT-enabled business services.

### 6.2.1 ICT Infrastructure

As discussed in the literature review, ICTs have facilitated an expanding variety of business services to be moved to and performed in low-cost distant locations. Therefore, the supply conditions (access, quality and cost) of ICTs are among the most fundamental factors of production that influence a location's competitive advantages in various ICT-enabled business services.

Hong Kong and Singapore have developed outstanding ICT infrastructure and shown very high demand for cutting-edge ICTs. For example, there are more than 170 and 130 mobile cellular subscriptions for every hundred people in Hong Kong and Singapore, respectively - even higher than in the two leading high-income economies, the US and the UK (The World Bank, 2011b, 2011a). The enormous demand for advanced ICTs in both city-states is also met by the provision of high-quality services, as evident in, for instance, full mobile cellular network coverage (459 minutes/user/month for Hong Kong and 370 for Singapore), and superior international Internet bandwidth (nearly 561,000 bits/second/person and 22,800, respectively),

which are higher than the averages of high-income economies (330 minutes/user/month and about 19,500 bits/second/person) (The World Bank, 2011a).

Several indices have been developed by international organisations to track ICT development worldwide, for instance, the *Digital Opportunity Index* (DOI) in the World Summit on the Information Society (WSIS) by ITU and UNCTAD (2007)[11], the *ICT Development Index* (IDI) by ITU (2009, 2010)[12], and the *Networked Readiness Index* (NRI) by the World Economic Forum (WEF) and INSEAD (2011b)[13]. They generally measure countries' performance in ICT infrastructure, accessibility, cost, affordability, utilisation and quality, and some also include such social indicators as literacy, school enrolment, and political/regulatory environment. Both Singapore and Hong Kong have placed very high on these charts. The DOI 2005/06 ranked Singapore (scoring 0.72) and Hong Kong (0.70) respectively in fifth and eighth place. China (0.45) and India (0.31) respectively placed 77$^{th}$ and 124$^{th}$. In the ITU's IDI, Singapore has risen from 16$^{th}$ (4.83) to 14$^{th}$ (6.95) between 2002 and 2008, while Hong Kong maintained 11$^{th}$ position in 2008. Their positions have also been stable in the NRI since 2006. Singapore obtained second just after Sweden in 2010/11, leading Asia and the world in ICT readiness; while Hong Kong placed 12$^{th}$.

In spite of their higher living costs as compared to developing regions, Hong Kong and Singapore's superior infrastructure is however not necessarily pricey to access, thanks in part to their liberalised and competitive market conditions. The costs of their various ICT services are merely a very small fraction of the overall living

[11] Details of the methodology of the Digital Opportunity Index (DOI) can be found in ITU and UNCTAD (2007). The DOI was designed as a tool for tracking progress in bridging the digital divide and the implementation of the outcomes of the World Summit on the Information Society (WSIS). It has a focus on the adoption of new technologies, such as broadband and mobile Internet. The DOI is a composite index, expressing scores between 0 and 1, which are directly comparable between countries and between years.

[12] The ICT Development Index (IDI) is aimed to measure (a) the development of ICT in countries and relative to other countries (i.e. track ICT progress *over time*); (b) the level of advancement of ICT in *all* countries; (c) the *digital divide*, i.e. differences among countries with different levels of ICT development; and (d) the *development potential* of ICT or the extent to which countries can make use of ICT to enhance growth and development, based on available capabilities and skills. The IDI is a composite index, comprising 11 indicators. The 2009 edition compares 154 countries over the 2002-2007 period, while the 2010 edition compares 159 countries between 2002 and 2008. (ITU, 2009, 2010).

[13] The Network Readiness Index (NRI) includes factors driving networked readiness, which is the capacity of countries. The NRI comprises three subindexes that measure the environment for ICT, together with the main stakeholders' readiness and usage. The final NRI score is a simple average of the three composing subindex scores, while each subindex's score is a simple average of those of the composing pillars. (WEF, 2011a)

expenses in the cities. The ITU's IDI compares ICT price basket values for different locations, which includes the access cost of fixed phone line, mobile cellular and fixed broadband Internet as a ratio of GNI per capita. Hong Kong's 2009 ICT price basket value is just 0.26%, while Singapore's is 0.33% (ITU, 2010). Indeed, the two city economies offer the lowest relative ICT service prices amongst other economies including Macao SAR, Kuwait, Luxembourg, the US, Denmark, Norway, the UK and Iceland.

Unlike Hong Kong and Singapore, China has largely (and dramatically) developed its ICT infrastructure within the last decade. Although the country places 36$^{th}$ in the Network Readiness Index and is lagging behind many developed regions, it has been among the most improved countries (WEF, 2011a). Its individual and government readiness has been encouraging, whereas usage of ICTs is also widespread among businesses. For instance, China's telephone lines (24%) and Internet users (29%) are more than the averages of lower-middle income countries (7% and 10% respectively), although lagging far behind advanced economies (45% and 72% respectively). Its mobile phone usage (412 minutes/user/month) is however higher than the high-income country average (330 minutes/user/month), suggesting its huge ICT demand potential. The accessibility and quality of China's ICT infrastructure is therefore generally better than most of the lower-middle income economies.

China's continuous progress is also confirmed by the ITU's survey. Its position in the IDI has climbed from 90$^{th}$ to 79$^{th}$ between 2002 and 2008 (ITU, 2009, 2010). The expanding demand reinforced by its rapid economic development and the widening supply and improving quality fostered by a growing ICT industry have continued to support the advancement of the country's ICT infrastructure. China, like other developing countries, has used advanced technologies to leapfrog, for example, shifting directly to broadband Internet access without a large installed base of dial-up Internet users (ITU & UNCTAD, 2007, p. 57). On the other side, although Chinese businesses are relatively quick at adopting new technologies and have acquired a certain degree of innovation capability, the country has not had ready access to the latest technologies developed in advanced economies, as the WEF (2011a) points out.

Geographically, ICT infrastructure is indeed concentrated in more rapidly growing urbanised regions within the country. The eastern region, which spans the

growth poles of Shanghai, Beijing, Shenzhen and Guangzhou, has seen more than 90% of individual PC ownership, nearly 70% of household PC ownership, and over 50% of Internet users (Chinese Academy of Engineering "12th Five" Informatisation Planning Special Group, 2009). The eastern region therefore has achieved a level of informatisation close to the international standard. On the contrary, the central and western regions remain weak in their ICT infrastructure, as they merely have 30-50% of individual PC ownership, 10-20% of household PC ownership, and 10-30% of Internet users among their population.

The provision of advanced ICT infrastructure, such as fast Internet access and secure data storage, is nevertheless the basic factor advantage for any ICT-enabled business services. Rather than merely deploying readily available ICTs in industries, sophisticated approaches to integration are required to satisfy their unique needs and thus produce difficult-to-imitate products/services. Chinese suppliers, for instance, have taken the opportunity to develop content in its local language and character sets (ITU, 2009, p. 29). However, the need is far more than simply adapting ICT products and services to operate in different languages and use different character sets; rather, suppliers need to align more broadly with the laws, cultures and customs of the countries in which these products and services are sold (WEF, 2011a).

Continued efforts in improving the quality and nurturing the innovation capabilities of its own ICT industry, rather than merely directly adopting new technologies from traditional pioneer countries such as the US, is more important and could help form advanced factor advantage. In this logic, the country would enjoy first-mover advantage and be capable of efficiently deploying new ICTs that are customised for specialised areas of business. In particular, the NRI report warns that, Hong Kong seems to be less successful than other economies in the region at generating innovation. Compared to its scores in other NRI components, the city's 'businesses rank a comparatively low 49 for their capacity to innovate and produce only 21.27 local patent applications per million population ($55^{th}$)', in spite of ability to quickly adopt cutting-edge technology in relatively complex ways (WEF, 2011a, p. 24).

In addition, the various indicators have demonstrated that China's ICT access, usage and quality are generally better than India's; yet, the latter's development in

ICT-enabled services offshoring has prospered ahead of the former. This might point to the significance of constraints in China for factors other than the simple provision and quality of physical infrastructure. For example, China has not achieved significant improvement in its environment component, as it is comparatively time-consuming and bureaucratic to start a business in the country, and its corporate taxation is among the highest in the world, as the WEF (2011a) suggests.

Nonetheless, China has attempted better cross-sector and spatial integration of ICT deployment in businesses. In banking and finance, for instance, the 29 centralised data application systems, including the information management system of Renminbi (Chinese currency) cross-border transactions and the payment system of electronic commerce, have started operating online (*China Information Almanac* Editorial, 2009). The Treasury Information Processing System (TIPS) and the Treasury Centralized Balancing System (TCBS) have respectively extended to 28 provinces (districts/*qu* and cities/*shi*) and 5 provinces (cities/*shi*).

In general, Hong Kong and Singapore's ICT infrastructure has been world-renowned and formed a solid pillar to support the development of their ICT-driven business services. China, although lagging behind in many of the ICT indicators compared with high-income economies, has been progressively improving, particularly pushed by its rising domestic demand and the advancing facilities in its rapidly urbanised areas. Nonetheless, to create and nurture advanced/specialised factor advantage, it is important to have the support of a strong ICT industry as well as by the private businesses and public sector that would initiate sophisticated demand, and thus the potential for interaction between these actors, forming the factor-creating mechanisms. These interacting facets of competitive advantage will be examined in the remaining sections.

### 6.2.2 Supply of a Highly-educated Labour Force

Whereas ICT infrastructure has formed the fundamental backdrop for services globalisation, this phenomenon has called into question the role of human capital in influencing a location's competitive advantages in various ICT-enabled business services industries. While a consistent supply of highly-educated workers serves as the basic factor advantage, its relevance and effect in different countries and sectors are expected to vary.

The total number of Chinese higher education graduates has been sharply expanding. It was reported that, in 2009, 6.1 million students would graduate from the Chinese universities, an increase from 5.6 million in 2008 and nearly six times the number in 2000 (E. Wu, 2009). The Chinese government is increasingly investing in education and training in the hope of improving the skills and abilities of its labour force. For instance, programmes called 'Project 211' launched at the Ninth Five-Year Plan in 1995 and 'Project 985' launched in 1998 and its second phase in 2004 have aimed at training high-level elite to support the national strategy for social and economic development, and developing several world-class universities in China (China Education Center, 2010). Some Chinese universities in the more prosperous eastern part are developing rapidly and becoming world-renowned, as evident in *The Times Higher Education* QS World Rankings 2010 that places six universities in Mainland China among the top 200 universities in the world (THE, 2011).

In face of an increasingly robust global talent competition, the Chinese government and domestic enterprises have been greatly concerned about the country's external brain drain. A 2009 survey by the global consulting firm Gallup found that 20% of the university-educated Chinese respondents would choose permanent emigration if they had the opportunity to do so, as compared to 6% of Chinese overall (Crabtree, 2009). According to another study by the Chinese Academy of Social Sciences, only 275,000, out of the 1.06 million (26%) Chinese students who went abroad to study since 1978 have returned (Ewing, 2007).

On the other side, those who do return *after* gaining some years of work experience in host countries, benefiting from exploration in the Western business or research environment, may offer substantially greater long-term advantage to their home countries than if they had returned home immediately after graduation. In any case, as a result of its recent economic exuberance and the current global economic crisis, China may be witnessing a new wave of well-educated returnees (Insight China, 2009). Indeed, the Chinese government has been eager to attract both highly qualified foreigners and repatriates (Mahroum, 2000). In early 2009, it issued the 'Thousands of People Plan' to target high-level talents in fields such as (but not limited to) science, engineering and corporate management, by offering various incentives, for example, exemption from the household registration or *hukou* system,[14] provision of attractive

[14] The household registration (*hukou*) system in China established in the late 1950s classifies each

working conditions, and financial support for scientific research or production and business activities.

Aside from the general picture, the relative intraprovincial labour movements within the eastern, central and western areas (F. Cai, Wang & Du, 2002) and the increasing interregional flows from the western and central regions to the eastern region (Fan, 2008) provide clues on the regional scope of China's labour market and economic concentration. China's major metropolises have attained the largest concentration of higher education institutions and students, thus securing an enormous supply of graduates. Of the country's nearly 2,000 higher education institutions, the 21 designated outsourcing model cities have constituted more than 40% of the total number of students enrolled in 2007.[15] At the regional level, the Bohai Rim and Yangtze regions have respectively accounted for more than 22% and 15%. Shandong Province in Bohai and Jiangsu Province in Yangtze have produced the largest share of university graduates (respectively with 8.5% and 8.3%). At the city level, there were nearly 568,000 students (3.0%) registered in Beijing's 83 higher education institutions, whereas Shanghai had 60 of such schools with about 485,000 students (2.6%). Meanwhile, Guangzhou had 687,000 students (3.6%) enrolled in its 63 institutions.

Some of the most developed second-order cities have been training a substantial mass of students, for example, Xian with 3.3% and Chengdu with 2.9%. Yet, despite its outstanding economic growth and location on the southeast coast, Shenzhen has only eight higher education institutions, cultivating merely 0.3% of the total student mass in the country. The point is that effective labour markets in China are rather regional in scope, especially for highly-educated people who are increasingly mobile, so what matters is the available supply of graduates within the

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person as a rural or an urban resident, and determines legitimate residence of Chinese citizens. It is a major means of controlling population mobility and determining eligibility for state-provided services and welfare. *Hukou* conversion is conditional and tight. It was initially intended to prevent 'undesirable' rural-to-urban migration. Since the economic reforms in the late 1970s, an inflow of rural migrant workers has been allowed into the cities to meet labour demands in the booming export industries and urban services. These rural migrants cannot however change their registered status, and thus are denied access to subsidised housing and other benefits available to those with urban registration. Recently, *hukou* system reform has been initiated, primarily by local governments that intend to break through constraints to local development and urban expansion. Progress has however been limited, as, for example, merely migrants from neighbouring rural areas are allowed to change to urban registration by giving up their rights to rural land use in exchange of access to some urban welfare, and it has become easier to apply for *hukou* alternation in smaller towns which have negligible state-subsidised benefits and tend not to attract rural migrants. (F. Cai, 2011; K. W. Chan, 2011)

[15] Since data on the graduate numbers is not available for every city concerned, the number of students enrolled is obtained as a suitable alternative.

region, rather than the locality. For instance, many service workers did not originally have a Shenzhen *hukou* nor were they graduated from the Shenzhen universities, but indeed moved from other Guangdong cities or neighbouring areas to seek white-collar work in the city; while some of such work at higher ranks is even filled by Hong Kong residents who either have a second home in or commute frequently to the Mainland.

In relation to the seemingly more footloose labour factor, an internal brain drain has also been observed in China. In the past, the *hukou* system has imposed strong influence on restricting the internal migration, particularly that of rural-urban. In recent years, due to relaxation of the policy and some local adjustment to invite target groups of talent, a *de facto* mobility is increasingly granted to highly-educated individuals, although some large metropolises, especially Beijing, are still quite restrictive in granting permanent residency to migrants (Wang, 2004; Fan, 2008). For example, skilled workers, who are in many cases rural-urban migrants and graduated from universities in the cities, can apply for and easily obtain a temporary or even permanent *hukou* if they find a local job and their employers are qualified and willing to sponsor them (Wang, 2004; Li & Florida, 2006). Meanwhile, some cities have formulated policies that offer preference and flexibility in *hukou* registration and relocation.

However, higher-tier cities are not without problems. Although their magnetic effect on inward migration has been widely agreed, the trend of such strong primate urbanisation may be changing. Locations growing at fast rates, such as Tianjin, Dalian, Nanjing and Wuxi, proximate to the super-large metropolises of Beijing, Shanghai and Guangzhou, may benefit from absorbing a considerable mass of talented migrants. In recent years, the skyrocketing living costs, particularly the housing prices, in the three first-tier cores of 'Bei-Shang-Guang' seem to have triggered 'reverse' migration of white-collar workers to second- and sometimes third-tier cities (Y. Zhang & Zhu, 2010). They are so far young graduates, mostly originally from the rural, denoted as 'ant tribe' (*yi zu*) who dream of a better life in big cities but struggle with low-paid jobs and live in poor quality accommodation at the city periphery (Wang & Dong, 2010). Although the reverse migration is still of limited scale and largely confined to cities adjacent to 'Bei-Shang-Guang', it may provide some hints that these lower-order locations can grab the chance to make use of the retained and incoming human capital to develop their competitive advantages in certain services segments.

In Hong Kong, there are eight universities funded by the University Grants Committee (UGC), a non-statutory advisory committee responsible for advising the government on the development and funding needs of higher education institutions. At present, there are also three self-funded higher education institutions and more than 20 sub-degree institutions[16]. The overall number of students enrolled in tertiary education has steadily increased from 223,700 in 2005/06 to 301,200 in 2010/11 (C&SD, 2011b). This is in part because the government has intended to increase the educational attainment of the workforce and maintain the supply of skilled labour in the face of changing economic needs, particularly by expanding the sub-degree prospects. The percentage of economically-active residents aged 15 or above who has attained post-secondary qualifications (including degree and non-degree courses) has gradually risen from 22.8% in 2005 to 25.5% in 2010 (C&SD, 2011b). Yet, if the market is to expand and thus demands more well-educated workers, the limited domestic production of young graduates will potentially create a significant obstacle to such growth.

In Singapore, as of 2009, nearly 40% of the resident labour force have acquired higher education qualifications, i.e. a diploma degree or above (Manpower Research and Statistics Department, 2010). Of these, two-thirds are degree graduates, the share of which has jumped from just below 15% of the total in 1999 to 27% after 10 years. Interestingly, nearly half of these degree holders (46%) obtained their highest qualification from overseas higher education institutions. Singapore's universities have been contributing to an expanding size of graduates, which increased from less than 9,400 in 1999 to nearly 11,500 in 2008 (Ministry of Education, 2009). Moreover, to maintain a constant supply of labour, partly in consideration of the extraordinarily low birth rate (about 1% in 2009) and partly because of its economic growth ambitions, Singapore has always been 'importing' foreign labour, particularly those to fill positions in the banking, financial and IT sectors in recent years (Chng, 2000). Therefore, in spite of the low natural population growth, Singapore has shown that taking advantage of foreign workers and inward investments could also be an option for driving economic growth.

With regard to quality, the Hong Kong and Singapore universities have been outstanding. The *Times Higher Education* university rankings place four of the Hong

[16] Sub-degree programmes include associate degrees, higher diplomas, professional diplomas and other post-secondary programmes of equivalent standard.

Kong universities and two of the Singapore universities among the top 200 in the world (THE, 2011). In addition to domestic students, these institutions are able to attract overseas young talent. Yet, there is still a question of how to retain the foreign talent after they graduate. The governments of Hong Kong and Singapore, as well as of China, have put forward policies to facilitate the admission of skilled professionals from abroad in order to break through the constraints of declining birth rates and an ageing population. These measures will be discussed in Section 6.6 on the role of the government.

Overall, while China has been supplying a rapidly growing young skilled workforce, it is still the more thriving cities in the eastern region that remain the dominant source of the talented job candidates demanded by firms in the information-driven and knowledge-based services sectors. Both Hong Kong and Singapore have experienced a limited supply of domestic graduates but attempted to expand their workforce's higher education attainment through offering a wider range of tertiary education prospects as well as attracting talent from abroad.

### 6.2.3 Technical Knowledge, Skills and Employability

While securing a steady supply of well-educated workers offers the basic factor advantage for a knowledge economy, the specific skills be they technical or (inter-)personal are even more important to cultivating sustainable competitive advantages that are difficult for competitors to imitate.

Speaking of specialised technical knowledge, at the national level, China has a much higher proportion of graduates with a degree in science and technology (53% in 2000), as compared to the averages of Asia (32%), Europe (28%) and North America (18%) (Machin & Petrongolo, 2007). Despite the comparatively large availability of scientific and technological job candidates, varied views still exist among commentators overseeing the relationship between higher education and economic growth in China. The lack of qualified faculty and courses in finance, management and IT to satisfy the mounting white-collar demand has been reported (Ewing, 2007). Yet, the disciplines of engineering and management comprises the largest share of graduates in 2008, respectively constituting about 36% and 19% of the national total. The share of science graduates is however merely about 5%, while a similar proportion is observed in the economics discipline which generally provides

courses on professional F&A and other related areas of specialties. All this may serve partial indications of the phenomenon of skill mismatch. It would however be risky to put too much emphasis on the acquisition of technical skills at the expense of general education, as Machin and Petrongolo warn (2007).

In addition to technical knowledge, in order to communicate with clients, colleagues and customers who may be based overseas, proficiency in English and other foreign languages is one of the considerations for the location choice of operations of foreign business. Compared to India, the English skills of Chinese labour are often considered a potential obstacle to widening the country's offshoring business (Agrawal, Farrell & Remes, 2003; Farrell & Grant, 2005; Offshoring Times, 2006). Yet, the population capable of speaking English is constantly increasing given the rising awareness of the government and the people (Furniss, 2003; Coonan, 2009). Variations between regions and cities however exist. The eastern coast and the first-tier cities generally possess more English-speaking graduates than the interior regions and lower-tier cities. A China Workplace English Benchmarks study[17] finds that Shanghai has highest language requirements in all the three job types surveyed (sales/marketing, finance and human resources), compared to the other three cities (Beijing, Guangzhou and Chongqing) (British Embassy/Consulate General, 2009). Yet, surprisingly, Guangzhou has the lowest benchmark for the finance sector.

In China, however, English language proficiency may be a less important contributing requirement for knowledge-based services development as compared to the Indian case, since the country has other linguistic advantages in dealing with companies from high-income East Asian economies, like Japan, South Korea, Taiwan and Hong Kong. Southeast China including Guangdong and Fujian Provinces are capable of dealing with businesses from Hong Kong and Taiwan not only due to their

[17] In early 2003, the Cultural and Educational Section of the British Embassy/Consulate General launched the Workplace English Campaign in collaboration with the China BULATS Network agents and 68 client companies. The campaign aims to heighten public awareness of the importance of English and to raise the awareness of the necessity for a good standard of English in the workplace. By conducting a series of BULATS tests throughout Beijing, Shanghai, Guangzhou, Chongqing and some nearby cities, the Workplace English Benchmarks are established as guidelines reflecting the minimum level of English required at the workplace. Three job types (sales and marketing professionals; finance professionals; and human resources management professionals) found in a wide range of companies were selected for benchmarking across five sectors (hotel and catering; information technologies; international trade/purchase; manufacturing and engineering; and financial Service). In each company, a number of candidates, representative for each job type, were tested. Generally, selected participants had been working in the company for at least one year and met the minimum language requirement for their positions. (British Embassy/Consulate General, 2009)

historical ties and close economic linkages but also their abilities in speaking Cantonese, a dialect spoken in Hong Kong, Macau, Guangdong and some neighbouring regions, and Hokkien or Minnan, a dialect widely spoken in Fujian, Taiwan and some SE Asian countries.

More discussed recently is the importance of Japanese and Korean language abilities in helping China attract offshore tasks from Japan and South Korea. A roughly estimated two million Chinese speak Japanese and/or Korean (Deutsche Bank Research, 2009). The Northeast region has acquired a higher concentration of work from those two countries, due to closer proximity in terms of not only physical distance, but also cultural and economic ties developed historically (Furniss, 2003). Dalian has been one of the most cited locations for receiving Japanese orders. The city had seen about 40 years of Japanese occupation during the first half of the 20th century. Dalian University of Foreign Languages, formerly Dalian School of Japanese Language, was originally founded in 1964 to teach Japanese language. Taking advantage of the large Japanese-speaking population in Northeast China, many Japanese-funded enterprises have set up in Dalian since the open door policy in 1978. Meanwhile, Chinese characters (known as *Kanji* in Japan) are still used in Japanese writing (Deutsche Bank Research, 2009); whereas South Koreans having completed secondary education can read a Chinese newspaper (Furniss, 2003). All this alongside the low cost advantage has contributed to China's being the logical option for the two East Asian countries' offshore work.

As compared with offshored manufacturing functions, soft skills are more emphasised for the service tasks that get offshored, due to the more intense handling of relationships and large volumes of information. While lower-level service workers are basically required to have good personalities, work enthusiasm and communication skills; managers have to possess managerial expertise to supervise and monitor the processes. While some argue that the general Chinese graduates lack critical and creative thinking due to the limitations of the traditional Chinese pedagogical style, others may counter argue that there is actually a rather good representation of entrepreneurial spirits and activities in the Chinese private sector. Where the bottleneck for Chinese business growth might lie is in a shortage of competent middle managers, capable of linking the established management policy and the activities of subordinates (Verburg, 1996; Farrell & Grant, 2005; Fallows, 2009). They are

expected to possess modern managerial skills alongside concrete technical skills like accounting and finance. With a more open economy where there has been higher presence of MNCs and professionals, the first-tier cities like Shanghai and Shenzhen generally have acquired a more outward business and management outlook, which could become an advanced advantage factor for performing and exporting higher value-added services.

In addition to increasing language training awareness, to fix the skills/employability mismatch, firms have provided in-house training to their staff, while an expanding number of specialised training institutions have been set up in China. The in-house and outsourced training specifically targeting the business and IT services labour indeed has been one of the stimulating strategies proposed by the Chinese government in their recent services outsourcing growth agenda. According to the CCIIP, CEIBS and CSORC (2008), Jiangsu (22%), Liaoning (13%), Shaanxi (11%), Shanghai (10%), Beijing (9%) are the areas with the highest share of staff newly hired by the outsourcing enterprises after training (see Table 6.1). A more distinctive observation is that in Beijing, Guangdong, Shanghai and Zhejiang numbers of staff undertaking training within enterprises are between 4.5 and 17 times higher than those that at external training institutions, apparently reflecting the scale of resources devoted by the private business sector to in-house staff training. In Jiangsu (24%), Liaoning (13%), Shandong and Shaanxi (both 16%), however, the specialised institutions have contributed a significantly higher share of outsourcing-oriented trained staff. This could be because enterprises in the first set of areas are likely to be significantly larger, and hence able to provide better resources for in-house training. Or, it could be that, in the second set of areas, stronger local government sponsorship has enabled the development of better external training facilities.

In brief, while the swiftly expanding pool of skilled workers has offered the basic factor advantage for the Chinese services industry, the importance of specialised know-how and personal qualities would without doubt add certain difficult-to-replicate advantage for specific services sectors, such as the availability of sufficient Japanese/Korean-speaking population for the contact centre sector, and the managerial-cum-technical skills up to the international standard for professional services targeting transnational clients.

**Table 6.1: China's Services Outsourcing Human Resources Training, 2008.**

| Province/ Municipality | Employed by outsourcing enterprises after training | | Enterprise training | | Training institutions | |
|---|---|---|---|---|---|---|
| | persons | *% share* | persons | *% share* | persons | *% share* |
| **National Total** | **99,645** | ***(100.00)*** | **68,623** | ***(100.00)*** | **31,022** | ***(100.00)*** |
| **Bohai Rim Region** | **33,038** | **(33.16)** | **23,011** | ***(33.53)*** | **10,027** | ***(32.32)*** |
| Beijing | 9,116 | *(9.15)* | 8,620 | *(12.56)* | 496 | *(1.60)* |
| Tianjin | 1,864 | *(1.87)* | 1,405 | *(2.05)* | 459 | *(1.48)* |
| Liaoning | 12,797 | *(12.84)* | 8,697 | *(12.67)* | 4,100 | *(13.22)* |
| Shandong | 9,142 | *(9.17)* | 4,170 | *(6.08)* | 4,972 | *(16.03)* |
| Hebei | 119 | *(0.12)* | 119 | *(0.17)* | -- | *(0.00)* |
| **YRD Region** | **35,686** | ***(35.81)*** | **25,920** | ***(37.77)*** | **9,766** | ***(31.48)*** |
| Shanghai | 9,611 | *(9.65)* | 7,853 | *(11.44)* | 1,758 | *(5.67)* |
| Jiangsu | 21,835 | *(21.91)* | 14,457 | *(21.07)* | 7,378 | *(23.78)* |
| Zhejiang | 4,240 | *(4.26)* | 3,610 | *(5.26)* | 630 | *(2.03)* |
| **Guangdong (PRD Region)** | **2,928** | ***(2.94)*** | **2,592** | ***(3.78)*** | **336** | ***(1.08)*** |

Source: compiled from CCIIP, CEIBS and CSORC (2008, pp. 55-56).

Note: -- data unavailable

For Hong Kong, the disciplines of business and management (24% of the total graduates of UGC-funded undergraduate programmes), engineering and technology (19%), together with sciences (16%) have been the three most significant areas of graduate production (University Grants Committee, 2010). In fact, Hong Kong's higher education is witnessing continuous privatisation, particularly fuelled by the provision of sub-degree and continuing education programmes on a self-financing basis (D. Chan & Ng, 2008; Wan, 2011). Therefore, on one side, the steadily considerable supply of graduates of the aforementioned specific training areas could meet the demand for skilled workers in the expanding ICT-enabled services economy. On the other, the low or stagnant population growth rate in recent years might still pose a potential problem of labour supply in Hong Kong, especially shown by the declining domestic student enrolment in both primary and secondary education in recent years (C&SD, 2011b).

In Singapore, a considerable mass of degree holding labour force graduated locally and abroad from the fields of business and administration (32%) and engineering sciences (23%) (Manpower Research and Statistics Department, 2011). Since the concerned data of these two city-states are not compatible for precise

comparisons, we shall only emphasise that the highly-educated workforce of both has specialised in areas of business, management, engineering and technology.

In addition to technical training, language abilities and employability of the general highly-educated workforce are also vital to nurturing knowledge services clusters. In Hong Kong, English is not only one of the official languages, but also widely used and its importance emphasised in the business arena. Most of the universities and post-secondary institutions (as well as roughly one-fourth of the secondary schools) adopt English as the medium of instruction. In addition to English and the most commonly spoken Cantonese dialect, other Chinese dialects such as Mandarin, Shanghainese and Chiu-Chow can also be heard in Hong Kong. Seeing the growing economic opportunities in China, the early career Hong Kong people have attempted to equip themselves with better Mandarin abilities. A longitudinal survey by the government has shown that the performance score in Mandarin proficiency by 2003 graduates gained a sharp increase, compared to that of class of 1998 (Education and Manpower Bureau, 2006).

However, employers' views on the language abilities of employees have varied. Some reports point out employers' anxiety over the difficulties in hiring staff capable of fluent English in Hong Kong (Lau, 2009). A study by the Hong Kong General Chamber of Commerce (2003) shows that employers perceive language skills (both English and Mandarin) are the most urgent area to be improved among the city's job candidates.

Singapore likewise adopts English as one of the official languages, but as compared to Hong Kong it is much more widely used among the public, in part due to the presence of a more multi-racial population. A variety of other languages are also spoken in the city-state, including Mandarin, Malay, Tamil and other Chinese dialects. Therefore, Singapore does not seem to have a problem with language abilities, although the 'standard' of English has caused concern, owing to the emergence of localised forms of English, as in other Asian or non-native English-speaking countries (Bolton, 2008). Compared to China and even Hong Kong, Singapore is nonetheless a more multi-ethnic, multi-lingual and multi-cultural society, which may help the city-state develop a more outward-looking approach to stimulating economic growth.

Aside from language skills, concerns have been raised over the personal qualities of younger workers. Some observers point to the less satisfying work attitude of young Singaporeans, compared to immigrant workers (e.g. A. Wong, 2010). Meanwhile, although people in Hong Kong have been praised for their hardworking trait that contributed to the city's rapid industrialisation in the 1980s and 1990s, the younger generation has been criticised by some employers for their lack of motivation, sense of commitment and work enthusiasm. The business sector-based study by HKGCC (2003) again points out that knowledge of the system of Mainland China and study/work attitudes are the other two top key areas that need to be strengthened among young people in Hong Kong.

### 6.2.4 Summary

Overall, China's factor conditions in ICTs and knowledge/human capital resources have generally contributed to its fast-escalating potential in ICT-enabled services supply. Although the country is still lagging behind developed countries in terms of these aspects, its growth poles in the coastal region, particularly Beijing and Shanghai, have developed rapidly and successfully drawn in high-quality talent for their fast-growing business services sectors. For lower-end services, other lower-tier cities generally generate an 'inexhaustible' supply of low-cost graduate workers.

Unlike China, the limited growth of population in Hong Kong and Singapore has directed their services development from labour-intensive to capital-driven processes. The small domestic graduate supply has also been compensated by increasing efforts to allure foreign talent as well as by taking advantage of their relatively multi-lingual and multi-cultural environment and specialised technical and market knowledge. As examined, the ICT infrastructure of both city-states is of superior quality and accessibility. The extent to which these factor advantages are able to offer sustainable competitiveness for higher value-added processes in the various ICT-enabled business services is still contingent on the effective working with other facets of competitive advantage.

## 6.3 Demand Conditions

The significance of home demand, as discussed in Chapter 2, lies in its quality and sophistication as much as its quantity. Domestic demand can come from local

firms, including SMEs and home-grown MNCs, the FDI subsidiaries of foreign MNCs, and/or the public sector. Demand from clients who are more exposed to the international business environment tends to be more specific and sophisticated, thus more likely pushing suppliers in the local market to improve their services quality, for example, by investing in more specialised factor endowment and by exploring more innovative ways of business undertaking. The following sub-sections will examine the presence (or lack) of such quality consumers in the economies of China, Hong Kong and Singapore.

### 6.3.1 China

Until the recent few years, the home demand for ICT-driven business services in China had been relatively confined to low-end, cost-sensitive ones, with the effect that third-party specialised ITO/BPO suppliers were also limited in both number and scale. Now the country's domestic demand for ICT-enabled services outsourcing is rapidly growing, and there have been gradual changes in the sophistication and quality requirements of the Chinese consumer. The increasing presence of foreign-invested enterprises (FIEs)[18] as a result of the liberalising economic policies and greater opportunities in the Chinese market has increasingly affected the local demand for all types of products and services. The number of registered FIEs has jumped from about 242,300 in 2004 to more than 434,200 in 2009 (NBS China, 2006, 2010).

The geographical concentration of foreign investment in China has been very distinctive. Guangdong, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Beijing, Liaoning and Tianjin in the eastern part are the top nine provinces and municipalities that have attracted most of the foreign investment, representing more than 75% of the national total in terms of both units of FIEs and amount of investment. The agglomeration effect is most obvious in the conventional first tier cities. For instance, the Pudong district of Shanghai has attracted 13,000 FIEs from over 100 countries and regions, 300 of which are Fortune 500 companies (MOFCOM, 2010). Furthermore, the more sophisticated domestic demand at a large extent comes from these enterprises which in turn are more likely to deal with other international suppliers with whom they

[18] Foreign-invested enterprises (FIEs) are enterprises established with foreign investment, including that from Hong Kong SAR, Macau SAR and Taiwan, following the registration status of enterprises by industrial and commercial administration agencies. The types include joint-venture enterprises, cooperative enterprises, sole investment enterprises and share-holding corporations.

have already built up relationships rather than sign with new domestic vendors (OffshoreOutsourcing2China, 2009).

Especially witnessing the recent global economic crisis, the government and industry are keener to stimulate domestic demand, in the hope of stabilising the services outsourcing development and opening up the rather 'underdeveloped' internal market (Wang, 2007; He, 2008). In supplement to the generic growth of the private sector, procurement by the central and local governments may act as a catalyst. Indeed, most of the local governments and state-owned enterprises are primarily served by domestic service providers, who as a result may have an edge over foreign MNCs, either as a preferential choice by the government, or as a requirement by the public procurement regulations or guidelines in certain industries. These domestic suppliers are however facing the problems of limited economies of scale and insufficient experience of managing large-scale projects (KPMG China, 2009). Yet, partly because of political and regulatory factors, as well as their mere recent start of reform and business restructuring, many large Chinese organisations, mainly SOEs, still maintain an inefficient in-house structure.

In the private sector, finance, IT, manufacturing and telecommunications industries have shown the highest degree of acceptance of services outsourcing (CSIP (MII), CSIA & China Software and Information Service Outsourcing Industry Alliance, 2008). These industries mainly focus on outsourcing their technical support and software development functions, as well as the data centre and call centre functions within their business operations.

**Information technology**

Many indigenous companies in China are not yet sophisticated users of IT, and thus tend to require their software applications to be customised (Tschang & Xue, 2005). Small and medium enterprises (SMEs) are becoming a major source of demand for IT services. In 2001, nearly half of SMEs had not been computerised to any degree, and merely 4% had adopted IT applications in their business. Many Chinese enterprises, including SOEs, have not had a good understanding of their own business processes, and have been constrained by small IT budgets and weak internal IT staff. These enterprises therefore increasingly demand strong customer support, Chinese

characteristic products and services that are linguistically- and culturally-fit (UKTI & CBBC, 2011b).

The Chinese banking industry, for instance, has spent a very small amount on IT solutions (USD 894 million in 2008) considering the size of its asset base (USD 7.9 trillion) (UKTI & CBBC, 2011b). Its IT expenditure is however growing faster than the broader software market, with an estimated CAGR of 19.2% during 2009-2010. Another illustration is the growing need of indigenous F&A management software as accounting methods in China differ from other parts of the world (McManus, Li & Moitra, 2007). All this demand from domestic companies nonetheless remains primarily for low-end application software development. On the contrary, foreign MNCs like SAP from Germany and Oracle from the US are generally dominating the high-end market, such as customer relationship management (CRM) and supply chain management (SCM) segments (McManus, Li & Moitra, 2007).

The general situation is however changing. As mentioned in Section 6.2, ICT usage in the business sector of China has been progressing. For instance, ICT penetration in the business sector of China is similar to that of India, as shown in the NRI's business usage indicators, including the firm-level technology absorption (China's score: 4.9; India: 5.3) and the extent of business Internet use (both 5.1). By the end of 2008, China's software sector generated RMB 757.2 billion (USD 118.5 billion) of business revenue, an increase of 29.8% from the previous year (UKTI & CBBC, 2011b). The Chinese government is meanwhile very keen to insulate the country from the security problem which it sees as inherent in using commercial (US) software; to gain a share of the very large market; and to ensure that China has its own 'technology base' (Tschang & Xue, 2005). In so doing, the policy is to build up strengths in strategic areas such as Linux, middleware and security software, and electronic government systems. All this will potentially create some new sources and increase the sophistication of domestic demand.

**Finance & accounting**

At present, traditional forms of accounting and audit services dominate the accounting services market in China, contributing 75% of the total income compared to 15% from consultancy services (HKTDC, 2005). The Chinese SOEs' system reform and restructuring, listing on the stock markets, mergers and acquisitions, and

reshuffling and reintegration have triggered a huge demand for financial auditing and professional consulting services performed by accounting firms and certified public accountants (CPAs). In addition, the mass of Chinese enterprises have also increasingly engaged in overseas investment and financing, cross-border mergers and acquisitions, factory and office set-ups abroad (CICPA, 2006). The accounting sector has therefore played an increasingly important role in the supervision, inspection and specialised financial auditing of the companies across the country in order to standardise the management and legitimate the business of these enterprises. To reflect the evolving economic and institutional changes, the Chinese authority has implemented a series of reform to the country's accounting regulations and practices since the 1990s.[19] For instance, Shil, Das and Pramanik (2009) note that, on 1st January, 2007, more than 1,100 Chinese companies shifted to new accounting standards as required by these reforms. Indeed, the Asian countries' accounting systems are found to be increasingly harmonising with international practices, especially with the Anglo-Saxon model (Ding, 2000; Beke, 2010). However, while the requirement for domestic firms to establish the appropriate financial reporting systems entails a surge in demand for F&A services, some warn that the country actually falls short of 300,000 qualified accountants and will potentially require a further three million over the coming years to match its current economic growth pace (Shil, Das & Pramanik, 2009).

However, the higher-end segments of accounting and related consulting services are basically controlled by multinational giants, such as McKinsey, Boston, Goldman Sachs, KPMG and Deloitte. Most of the listed foreign and Chinese corporations, as well as companies wanting to get listed, prefer using the 'Big Four' accounting firms (PricewaterhouseCoopers (PwC), Deloitte Touche Tohmatsu, Ernst & Young, and KPMG). As Chinese clients are becoming more engaged with these international accounting and consultancy conglomerates, they have gained knowledge of the workings of the industry, and thus become more specific and demanding with their requirements and needs (HKTDC, 2005). The improving demand sophistication

[19] The principal characteristics of accounting in China today trace back to the founding of the People's Republic of China in 1949. After decades of reforms, new accounting rules have had to be developed for newly privatised companies, other independent limited liability companies, and foreign establishments such as joint ventures. A series of reform has been applied to the accounting standards in China since the early 1990s, including amendments to the Accounting Law, the issuance of Accounting Standards for Business Enterprises (ASBE) by the Ministry of Finance, and the establishment of the Chinese Institute of Certified Public Accountants (CICPA) and the Chinese Association of Certified Public Auditors (CACPA). The Chinese accounting practices are said to be gradually generally aligned with international accounting practices. (Choi & Meek, 2011)

of larger Chinese enterprises has also indirectly pushed the consolidation of domestic accounting firms. Yet, competition between small- and medium-sized accounting firms in China is still fierce, partly because of the government-imposed restrictions on the service charges in the accounting sector, and partly because of the low barriers to entry for new but small local start-ups.

The Chinese financial sector is also witnessing significant growing demand, which has been prompted by the increasing range and complexity of services offered, the rising urbanisation and SMEs, the continued improvement in infrastructure, and the emergence of affluent consumers in the country (SmithStreetSolutions, 2010). There is a rising need of risk management as well as financial auditing and control. Moreover, the rise of online shopping, digital entertainment, electronic passenger tickets, telecom top-up services has created growing demand for third-party payment services, including online payments and mobile payments (SmithStreetSolutions, 2010). The growth of the financial industry itself and the general Chinese enterprises has driven further horizontal unbundling of financial corporate functions. Nonetheless, international investors entering China often use a combination of advisers. Most generally prefer using multinational providers where it is feasible to do so; however, when they need specialist knowledge or local contacts and/or are required by regulations, they choose local firms (UKTI & CBBC, 2011a).

**Customer contact**

The customer contact industry in China does not have a long history. Self-built call centres first thrived in the telecommunications and finance sectors around the year 2000 (Wang, 2010). Influenced by the global outsourcing trend, demand has progressively emerged in the domestic contact centre outsourcing market, giving birth to a sharply rising number of local third-party (and cooperative) contact centres. However, a predominant share of contact centres are in-house/self-built (around 90% in 2006), pointing to the infant stage of outsourcing customer services in China (Y. Cai & Yuan, 2007). The major clients of third-party providers include large foreign-invested or joint venture enterprises, some large SOEs which have started outsourcing (such as credit card business of the banking industry, and telesales of the telecom industry), as well as SMEs which are still building up their scale of operation (Y. Cai & Yuan, 2007). In addition to the traditional customer telephony services, telephone

marketing and e-commerce have become emerging segments of the Chinese contact centre industry. However, constrained by the limited network bandwidth, video conferencing and other emerging advanced applications seem to remain underdeveloped.

**Geographical distribution**

With regard to regional differences, the YRD region with five designated model cities has a dominant share of the value of outsourcing contracts signed and implemented (both offshore and internal), accounting for more than 65% in 2008 (see Table 6.2). With a lesser scale, the Bohai Rim region with four model cities represents more than 21% of the total value of all implemented contracts. The two model cities in the PRD region make up approximately 4%. In the YRD region, which has been strongly developing its services outsourcing industry, Shanghai is no longer the single dominant core in that region, as other cities including Wuxi, Suzhou and Nanjing have made very strong progress. Unlike the relatively balanced growth there, the Bohai region is characterised by the strong domination of Beijing, which alone represents more than two-third of the regional total, although Dalian and Tianjin still attain a strong position in the region. Meanwhile, Xian, Chengdu and Changsha are the growth cores within the central western region. Since there are only two model cities in the PRD region, it is not sensible to make any intra-regional comparison based on the data. Yet, compared widely with all other model cities, the pair in the PRD show less robust growth than their northern counterparts like Shanghai and Beijing.

In general, while the domestic demand for the various ICT-enabled business services in China has been relatively less sophisticated, the situation is changing as Chinese consumers and enterprises are interacting more closely with the international market and global players, and thus becoming more specific with their requirements. A firm ownership hierarchy (i.e. foreign affiliates and MNCs vs. domestic SMEs) and regional variations (i.e. coastal core regions vs. interior peripheral regions) however remain.

**Table 6.2: Share of Outsourcing Contract Values in Model Cities, 2008.**

| (million USD) | Value of signed contracts | *% share* | Value of implemented contracts | *% share* |
|---|---|---|---|---|
| **All 20 Model Cities** | **5,387** | ***100.00*** | **4,393** | ***100.00*** |
| **Bohai Rim Region** | **980** | ***18.19*** | **929** | ***21.15*** |
| Beijing | 508 | *9.43* | 640 | *14.57* |
| Tianjin | 204 | *3.79* | 64 | *1.46* |
| Dalian | 182 | *3.38* | 142 | *3.23* |
| Jinan | 86 | *1.60* | 83 | *1.89* |
| **Yangtze River Delta Region** | **3,721** | ***69.07*** | **2,913** | ***66.31*** |
| Shanghai | 1,254 | *23.28* | 903 | *20.56* |
| Nanjing | 796 | *14.78* | 510 | *11.61* |
| Hangzhou | 235 | *4.36* | 210 | *4.78* |
| Suzhou | 495 | *9.19* | 550 | *12.52* |
| Wuxi | 941 | *17.47* | 740 | *16.84* |
| **Pearl River Delta Region** | **217** | ***4.03*** | **179** | ***4.07*** |
| Shenzhen | 65 | *1.21* | 29 | *0.66* |
| Guangzhou | 152 | *2.82* | 150 | *3.41* |
| **Other Regions** | **469** | ***8.71*** | **372** | ***8.47*** |
| Harbin | 22 | *0.41* | 20 | *0.46* |
| Daqing | 6 | *0.11* | 2 | *0.05* |
| Chongqing | 4 | *0.07* | 2 | *0.05* |
| Wuhan | 16 | *0.30* | 30 | *0.68* |
| Chengdu | 113 | *2.10* | 57 | *1.30* |
| Xian | 146 | *2.71* | 130 | *2.96* |
| Hefei | 20 | *0.37* | 11 | *0.25* |
| Nanchang | 5 | *0.09* | 16 | *0.36* |
| Changsha | 137 | *2.54* | 104 | *2.37* |

Source: compiled from CCIIP, CEIBS and CSORC (2008, p. 97).

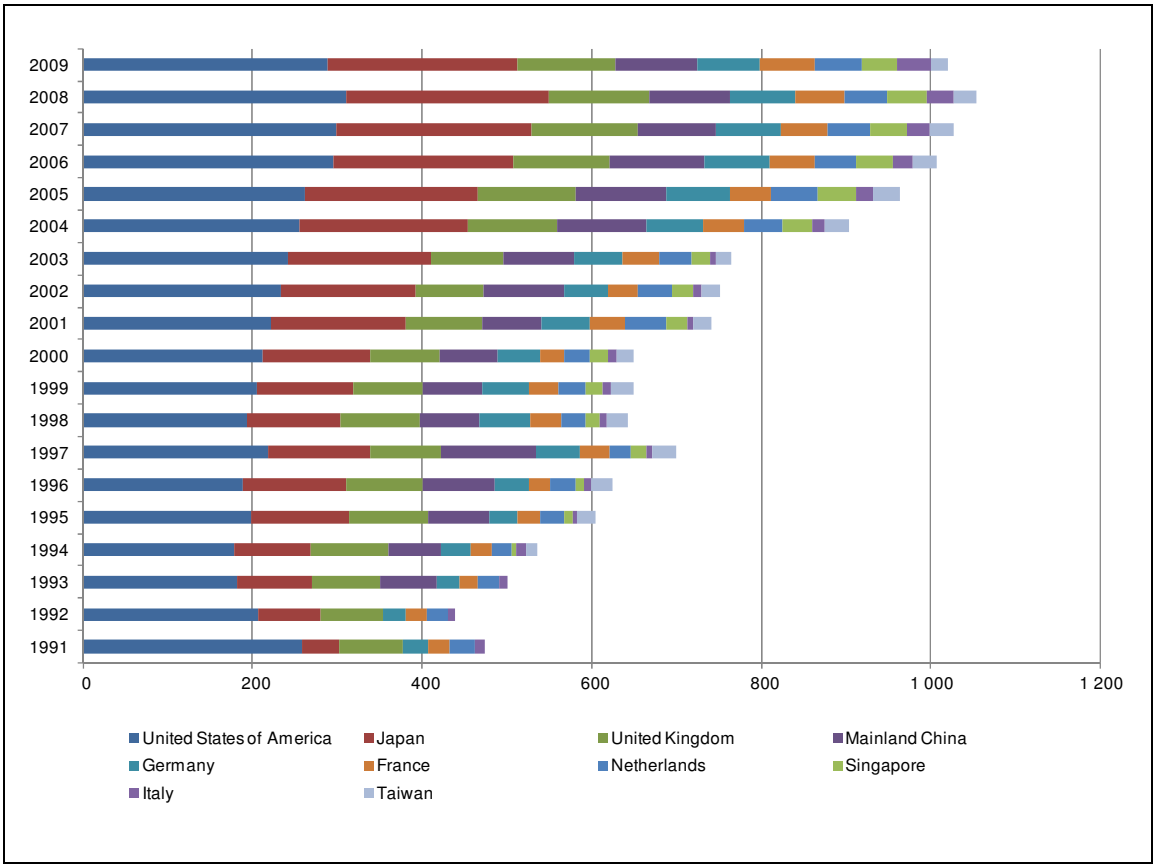
### 6.3.2 Hong Kong and Singapore

Similar to if not more so than China, Hong Kong and Singapore have been under great influence of MNCs, due (in their case) to a century-long economic openness. The strong presence of foreign and home-grown MNCs with dense global linkages has provided important sources of sophisticated demand. By 2009, there were about 1,250 regional headquarters (RHQs), 2,330 regional offices and more than 2,500 local offices in Hong Kong representing their parent companies located outside the city, resulting in a rough total of over 6,000 foreign MNCs operating there (C&SD, 2011c).

The major lines of business of Hong Kong-based RHQs are wholesale, retail and import/export trades, business services, and transport and related services. The US, Japan, the UK, and Mainland China are the four most important origins of these RHQs established in Hong Kong; while other European and Asian countries make a considerable contribution, for example, Germany, France, the Netherlands, Switzerland, Singapore, Italy and Australia (see Figure 6.1). In particular, the relative dominance of the US and the UK has diminished, while Japan, Singapore and Italy have gained higher shares during the past few years. Therefore, the generally increasing number of RHQs (despite periodic declines during 1997-2000 and 2008-2009 largely due to the 1997 Asian economic crisis and the recent global economic downturn) and the fairly diversified share of different origins have indicated the significance of Hong Kong as the commanding and management nodes of these MNCs in the broader Asia Pacific (and particularly the Greater China) region.

Similarly, Singapore is characterised by a high concentration of MNCs. Of the roughly 7,000 MNCs, about 60% of varied geographies, industries and sizes have established headquarters functions in the city-state (SEDB, 2007). Under its HQ Programme, which offers tax incentives or grants to eligible companies that use Singapore as an international or regional base, the Singapore Economic Development Board has awarded HQ status to a total of 415 recipients by 2006 since the scheme began in 1986. All this headquarter investment creates demand for advanced managerial skills and sophisticated support services. Such agglomerations of global players as both foreign and domestic buyers could hence boost the local demand and help create a strong and trend-setting domestic market for both Hong Kong and Singapore.

**Figure 6.1: Number of Regional Headquarters in Hong Kong by Country/Territory of Location of the Parent Company.**




Source: data retrieved from C&SD (2011c).

## Information technology

In Hong Kong, most of the hardware service providers are distributors of big international computer companies, and the largest ones combine services provision with software development and consultancy (HKTDC, 2009d). Software service suppliers in Hong Kong can generally be categorised as follows:

- Value-added resellers
- Custom software developers / software houses
- System and network integrators
- Electronic data processing departments
- Information system consultants, and
- Hardware manufacturers who also design operating systems.

In line with the role of ICTs as a key infrastructural enabler for firms, the growth of IT services has been dependent on intermediate demand from other sectors

of the economy. More domestic companies in various sectors have outsourced, as demonstrated by the 5% increase in the number of IT employees (1,118) between 2008 and 2010 in IT products and services suppliers, with reference to the Vocational Training Council 2010 manpower survey (Education Bureau, 2011b). The major vertical industries buying IT services in Hong Kong are banking and finance; shipping, freight forwarding and logistics; as well as trading and transportation, all of which are indeed among the most important pillars of Hong Kong's economy. Domestic firms demand local installation and monitoring services which enable them to use the same computer systems in their overseas subsidiaries as in their headquarters so that a high degree of international standard is guaranteed (HKTDC, 2009d). In addition, around 90% of the government's new projects have been outsourced (Education Bureau, 2011b).

Meanwhile, Singapore is a top IT services hub in the region. The city-state accommodates more than 80 of the top 100 international software companies. The share of the IT services segment out of its whole infocomm sector jumped from 23% to 35% in terms of nominal value-added over the period of 1998-2008 (MTI Singapore, 2009a). Major examples of activities in the IT services sector include IT consultancy and software development, data processing and hosting related activities, as well as computer facility management and integration. However, unlike other infocomm segments, IT services have been most export-oriented, with nearly 40% of its value-added derived from export receipts.

**Finance & accounting**

The finance sector in both Hong Kong and Singapore undertakes a very wide variety of services, ranging from retail and wholesale banking, foreign exchange, and stock trading, to insurance, private equity, fund and wealth management, amongst others. Private equity firms in Hong Kong, for example, are highly export-oriented and commonly engaged in such investment strategies as venture capital, leveraged buyouts, growth capital, and distressed investment (HKTDC, 2010). In fact, Hong Kong is the largest private equity centre in Asia, managing about 29% of the total capital pool in the region. Benefiting from Mainland China's increasing focus on venture capital investment in the region, Hong Kong's private equity sector is rapidly developing their venture capital fund-raising activities themed with Mainland-related investment.

Meanwhile, the fund management business comprises assets management, advisory business and other private banking activities. Many firms intending to engage in these investment activities would also set up a local affiliate or even a regional office in the city. According to a survey conducted by the Securities and Futures Commission, 76.5% of the assets managed in the city were invested in Asia, including within Hong Kong itself, Mainland China, Japan and other Asian countries (HKTDC, 2009b). There has been an increasing demand for a broader range of investment products, ranging from low-risk bonds or money market funds to more sophisticated REITs (real estate investment trusts) and hedge funds products.

In accounting services, major services provided by CPA firms include statutory audit services, tax advisory, company listing, corporate finance, company secretarial, liquidation and due diligence services (HKTDC, 2008a). Non-CPA firms offer services like bookkeeping, general accounting services, year-end financial reporting, tax filing and company secretarial work. In addition to servicing domestic clients, Hong Kong's accounting firms have their major source of demand also from Mainland-related investment, including: (1) MNCs mostly from Europe and the US needing a full range of advisory services; (2) Sino-foreign joint-venture enterprises for statutory audit and investment-related advisory services; (3) Hong Kong-listed Mainland enterprises for IPO-related services; and (4) Mainland enterprises expanding overseas for advice on overseas establishment (including Hong Kong) and arranging overseas credit facilities/listings services (HKTDC, 2008a). Yet, it is observed that the majority of Hong Kong-listed companies generally sign with the 'Big Four' accounting and financial advisory giants; while smaller accounting firms mainly serve non-listed local companies.

Likewise, there is strong demand by Singapore's various industries for its professional services. The Input-Output Tables show that 67% of the sector's output is purchased as intermediate inputs mainly by wholesale and retail trade, manufacturing, other business services, and financial services (MTI Singapore, 2009b). As an international financial centre like Hong Kong, growth of the city-state's financial sector has been broad-based too, with brokerage, treasury and advisory-related services being the largest contributors, alongside the foreign exchange and equity markets among others (Contact Singapore, 2010).

The growth of the sector has nonetheless become more externally oriented over the years. In 2000, over 85% of the output of legal and accountancy services was consumed domestically. However, foreign demand has since then become increasingly influential in driving the growth of the sector. In particular, export receipts for accounting services recorded nearly 40% growth on a CAGR basis during 2000-2008, compared to less than 10% growth between 1995 and 2000.

**Customer contact**

The domestic demand for customer contact services in Hong Kong and Singapore is now relatively mature. It has started shifting from traditional telephony services to Internet protocol-based systems which combine telephony with unified communications using the fast broadband Internet. This transition, combined with the above-average levels of ICT services, has enabled an increase in the uptake of professional services like financial analysis in these two city economies (Ramakrishnan, 2011). In other words, the changing demand conditions have also led to a geographical shift of lower-end contact centre services to neighbouring regions; while the customer care services sector within the cities has become more CRM-driven.

Overall, the general pattern of domestic demand conditions is that China's services sectors are gradually developing, with the huge domestic demand potential but severe regional disparities. Hong Kong and Singapore are witnessing growing demand for their more specialised, higher value-added segments, especially driven by long-established foreign MNCs from the advanced economies alongside those from the newly emerging markets in the region which are keen to build up some global linkage through those two city-states. Owing to the presence of a very wide range of client organisations and consumers, who have developed intensive global connections, we could observe a very complex composition of domestic demand for the various business services in the two cities.

## 6.4 Supporting and Related Industries

To help develop a location's competitive advantages in particular economic activities, domestic supporting and related industries should ideally be competitive global players so that they are producing inputs that are widely applied and important to internationalisation and even innovation. In return, large, growing or trend-setting

home demand stimulates the growth and deepening of auxiliary industries; whereas the set of specialised factors are transferrable to these industries as well. With regard to the three types of services under study, their complementary industries indeed cover a variety of activities ranging from manufacturing to trade and logistics to other business functions, forming extensive forward, backward and auxiliary connections with other industries. The emergence of industrial clusters where related industries and other associated organisations, such as universities, research institutes and government agencies, would offer the competitive edge for particular types of knowledge-intensive production which requires effective networking relationships supported by the frequent exchanges of information and knowledge among these actors.

### 6.4.1 China

China's logistics and trade industry has contributed about 20% to the country's GDP in recent years, and is expected to enjoy spectacular growth, with the support of its immense manufacturing base (Z. Yang, 2006). The ICT industry has meanwhile become the largest manufacturing sector within the Chinese economy. China has gradually upgraded to expand its production activities to encompass relatively more skill- and technology-intensive processing of ICT intermediate products (Amighini, 2004). Such development is mainly attributed to continuous splitting-up of the value chain, increasing inward FDI in those sectors, and the country's growing integration with the GVC. Over time, a handful of home-grown ICT MNCs have emerged to become globally competitive players, including Haier, Lenovo, Huawei, and ZTE (Zhong Xing Telecommunication Equipment), although a vast majority of Chinese enterprises remain small in scale and domestically focused. Strong development in the ICT industry tends to help integration with the country's ICT-enabled services. It is also likely to enhance the country's linkage with the global production networks and so hopefully with the lead firms for more intensive knowledge transfer, which is not merely limited to ICT manufacturing but also increasingly engaging other ICT-related services.

However, a potential obstacle is that an overemphasis on ICT manufacturing may attract key factors (e.g. human resources and investment of the highest quality and most sophistication) away from the ICT services sector, probably delaying if not stopping its development. Another viewpoint by some observers is that if the IT

manufacturing industry is able to develop higher-value products that are globally competitive, it will eventually help uplift the constraints facing the indigenous IT services sector as the latter may take advantage of the global linkages established by its manufacturing counterpart to offer services embedded in these IT products to offshore markets. However, at present, a competitive edge in pursuing high-order activities still remains scant especially among Chinese domestic producers. For instance, despite rapid growth in revenues from design and manufacturing, the domestic design capability of China's IC industry still lags behind other markets (The International Finance Corporation, 2005).

In spite of increasing liberalisation after the accession into the WTO and the rising amount of large-scale infrastructural projects, commonly recognised problems hindering the development of China's supplier networks include inconsistent ICT accessibility and unstable energy supply outside economic zones; insufficient integration of transport, IT, warehousing and distribution facilities; large infrastructural and institutional variations not only between coastal and interior regions but also among provinces and cities; as well as the inefficiency of SOEs, though of declining dominance (Jiang & Prater, 2002; Logistics Today, 2004).

With respect to the finance sector, notwithstanding its recent spectacular (but so far largely domestic) growth, the Chinese financial market is still relatively shallow as measured in relation to nominal GDP, compared to those in advanced economies (Hansakul, Dyck & Kern, 2009). While bank loans to non-financial sectors have taken up a dominant share of the bank-dominated financial industry, equity and bond issuance plays a secondary role (Huang, Saich & Steinfeld, 2005; Hansakul, Dyck & Kern, 2009). Moreover, financial intermediation remains disproportionately dominated by state banks and bank loans are directed towards SOEs, causing complaints from the private sector, especially SMEs, about capital shortage (Huang, Saich & Steinfeld, 2005). As a result of the deepening financial reform, such inefficiency has gradually been improving while the industry is also diversifying its product offerings, although the market functioning is still under tight political interference as part of state policy.

At regional level, there is a hierarchical differentiation, in relation to provision of higher-end services, involving coastal versus interior regions and first-tier versus lower-tier cities. Firms with a comparatively higher level of capability are

concentrated in large metropolises, therefore forming a close supporting network for related economic activities. In particular, inter-provincial services specialisation has been observed. Within the Bohai and Yangtze regions, Beijing, Shanghai and, to a lesser extent, Tianjin have been highly focused on transportation and communications, finance, and high-tech services, according to the location quotient analysis by Zhang (2009). It is however difficult to identify which types of high-end (and low-end) activities within these sectors are agglomerated around particular cities, due to the lack of disaggregated sub-sectoral data.

A general consensus is that upgrading of different cities and regions would have to be based on existing specialisations, rather than developing a new one from scratch. The Chinese outsourcing model cities' governments have outlined certain 'key sectors' as the focus of their future services outsourcing development (CCIIP, CEIBS & CSORC, 2008). A list of these 'key sectors' proposed by selected model cities is provided in Appendix IX. Beijing, for instance, is intended to focus on information, R&D and other business services; Shenzhen attempts to specialise in product R&D, logistics and supply chain management services, and so on. On one hand, most of these services areas seem lacking distinguished features and have very broad coverage. On the other hand, if the types of activities recommended are too specific and limited to highly selective areas, it may lead to bias or inefficiency of resources allocation.

As discussed in Chapter 2, the formation of clusters with agglomeration of strong supplying and auxiliary industries is beneficial to a location's competitiveness, where all forms of knowledge are formally and informally exchanged, and where highly specialised skills, technologies and infrastructure are shared, especially when such network relationship comes with close collaboration between innovative firms, universities, research institutes and government agencies in that specific locality. In view of the organic success of the Silicon Valley in the US and the increasing importance of the industrial cluster approach (Waits, 2000; Suehiro, 2009), central and local governments in China have been keen at building national-level and provincial-level economic development zones, high tech and software parks, and lately business services parks. One of the most successful cases is Zhongguancun (ZGC) in Beijing. Although it was not a government-designated zone at its initial growth stage, its later development has become government-driven, transforming from a simple market of computers and components to what has been called 'China's Silicon Valley'. ZGC has

seen the largest cluster of semiconductor, computer, and telecommunication firms in the country. In 2008, the business revenue of ZGC's Haidian District from services outsourcing (including both ITO and BPO) reached RMB 6.8 billion, accounting for 80% of Beijing's total and one-third of the national total (Beijing Municipal Bureau of Commerce, 2009). More on China's economic clusters will be discussed in Section 6.6.1 on the government's role.

### 6.4.2 Hong Kong and Singapore

In Hong Kong and Singapore, a critical mass of supporting industries has emerged and close linkages between these diverse domestic industries have developed. From their manufacturing base and entrepôt role decades ago, they have developed strong logistics and trade activities thanks to their strategic locations, modern infrastructure and conducive business environment, despite limited and declining manufacturing within their territories. A World Bank survey on trade logistics that produces the Logistics Performance Index (LPI) has confirmed the supremacy of Singapore in global trade. The LPI is 'based on a worldwide survey of operators on the ground, providing feedback on the logistics 'friendliness' of the countries in which they operate and those with which they trade' (The World Bank, 2010a). From its 2010 global ranking, Singapore achieves 2$^{nd}$ in the list, after Germany; while Hong Kong and China respectively place 13$^{th}$ and 27$^{th}$. Major shippers and logistics service providers indeed have their regional headquarters and offices in Singapore (Economic Review Committee Working Group on Logistics, 2002). Among the traded commodities are high value-added products. In particular, electronics products, comprising office and data machines, telecommunications apparatus and electrical valves, formed more than half of Singapore's total non-oil exports (MTI Singapore, 2009c).

Despite the sharp decline in manufacturing production since the early 1980s, Hong Kong has witnessed a transformation towards a more commercially oriented centre which maintains a command role over production processes relocated to its Mainland counterparts. The city's role in the commercial component of trade and manufacturing-related activities has further strengthened thanks to the increasing sophistication of production networks in the region and to the expanding ties with the global trading networks. Among these trades is the increasingly important offshore

trade which covers the services of both merchanting and merchandising provided by Hong Kong companies for offshore transactions that involve goods transhipped via Hong Kong, or shipped directly without touching Hong Kong ground (HKTDC, 2009c). All this offshore trade has boosted further demand for support services which are based within Hong Kong itself. A HKTDC study has showed that Hong Kong companies involved in offshore trade prefer to obtain their related trade finance and insurance products in the city, and even increase their use of domestic business services, such as marketing, research, trade financing and quality control (Fung, 1998). Facing the increasing competition from other economies and rising costs, Hong Kong's trading firms attempt to turn to higher value-added services in addition to finding more competitive supply sources. They, for example, engage in quality inspection of the goods produced by the manufacturers for their overseas clients, and monitor production schedules to meet delivery. A recent government-commissioned report also suggests that Hong Kong should focus on headquarter operations and remote coordination of region-wide logistics (Strategic Access Limited, Hong Kong Logistics Development Council & HKTDC, 2009).

Both Hong Kong and Singapore have world-class transportation and infrastructure, contributing to their excellent global connectivity, as discussed in the preceding chapter and Section 6.2.1. Keen efforts have been put into new institutional set-ups, increasing integration of ICTs into the logistics and supply chain management infrastructure, and developing and upgrading efficient facilities. Indeed, these trade-related activities have been intimately supporting and supported by the finance and other business sectors. Singapore and Hong Kong have both become relatively mature international business and financial hubs. Hong Kong's financial markets and asset management, for example, have been growing strongly, with its business receipts indices increased from 48.8 in 2005 to 125 in 2007 (with the quarterly average of 2008 as 100). Singapore's finance sector has also seen strong growth. The city-state's assets under management grew 32% year on year to reach SGD 1.2 trillion by the end of 2007; whereas its total gross premiums for general insurance were also increased by 11% from 2006 to record SGD 6.1 billion (The Institute of Banking and Finance, 2010). Both the finance and trading sectors of the two city-states have performed more sophisticated activities compared with their other Asian counterparts, and are therefore not only able to maintain a supreme position in the regional competition, but also strive to be competitive global players comparable to London and New York.

Unlike the F&A sector that is healthily supported by a vast range of complementary commercial activities, the IT and contact centre services of Hong Kong and Singapore appear (at first glance) to have limited support from the local supplier networks. Within its territory, Hong Kong's IT equipment manufacturers maintain certain production and quality control of high value-added products, while labour-intensive processes like component insertion, plastics injection moulding and sheet metal working have long been moved to its Mainland counterpart (HKTDC, 2008b). Wherever production activities do exist, they rely heavily on imports of key components. Meanwhile, the headquarters and offices of Hong Kong's IT equipment industry are specialised in product design and development capability, whereas knowledge of world product trends and consumer preferences in different markets are also their edge. Examples of such high value-added and/or capital-intensive production in the electronics industry include integrated circuit (IC) packaging/testing, production of multi-layer printed circuit boards (PCBs), lead-frame bonding and PCB assembly by surface mount technology for high-value products (HKTDC, 2009a).

Although the manufacturing sector of Singapore is bigger than Hong Kong's, the activities are likewise oriented towards high value-added products and activities. Singapore's electronics industry has been globally competitive, and comprises a wide range of high-end activities, ranging from R&D, IC design and manufacturing, supply-chain management, logistics and distribution, to HQ activities. According to the Singapore Economic Development Board (2010), the city-state accounted for 11.2% of the global semiconductor output in 2009. While many of the world's top electronics manufacturing services (EMS) MNCs, such as Seagate and Hitachi, have significant presence, mainly undertaking design, high-value manufacturing, supply chain management and regional management; the domestic electronics sector also includes some large home-grown firms (for example, Chartered Semiconductor, Creative Technology, and Venture Corp.), as well as a range of competitive small-cap companies supplying components to the major producers (The U.S. Embassy in Singapore, 2004; SEDB, 2010). In spite of the structural decline in terms of share of total value-added in GDP, Singapore's electronics industry is attempting to develop higher-level capabilities by harnessing innovation and attracting human capital, in combination of the government's overall efforts in upgrading the skill-set of its workforce and maintaining a conducive business environment.

The telecommunications industry forming another vital part of the supplier networks is maintaining a competitive edge while undergoing structural change in both Hong Kong and Singapore. Their advanced telecom infrastructure has facilitated domestic and international communications in the form of voice or data. The *Global Information Technology Report 2009/10* by the World Economic Forum (2010) ranks Singapore second and Hong Kong eighth in its global Network Readiness Index, whilst China places 37$^{th}$. While Hong Kong-headquartered Hutchison Whampoa has been expanding worldwide its 3G networks, many other operators have also invested in Asia, including India, Indonesia, the Philippines, Taiwan and Australia. Likewise, the telecom industry of Singapore also comprises important players, ranging from product developers and network equipment providers to telecom operators, data centres and application developers (SEDB, 2009). Therefore, the presence of globally competitive ICT suppliers often offers the related services industries immediate access to cutting-edge technologies and equipment.

Indeed, sustainable growth of the IT, finance and accounting, and customer contact services sectors is mutually beneficial to nurturing of each other's competitiveness in a particular location. The strong financial and professional services in the two city-states are able to cater for the other sectors' more specific requirements by offering them sophisticated services. Vice versa, a competitive ICT or customer contact services industry can be supportive for the growth of other business services, as they provide high-quality services critical to the former to sustain their corporate functioning.

Moreover, since both Singapore and Hong Kong are small open economies with very limited geographical space, their supporting industries span over their boundaries to their hinterland, in the Johor-Singapore-Riau Growth Triangle and the PRD region, respectively. The supporting industries located across their own territories and hinterlands have shaped into economic clusters that help sustain the regional competitiveness given the combination of their respective competitive advantages in certain segments of production and business, and a favourable institutional and regulatory framework. For instance, the electronics and other manufacturing industries in the PRD region, particularly in Shenzhen and Dongguan, with a majority of their production facilities invested by Hong Kong (and Taiwan), have been intimately integrated as a vital supplier network for Hong Kong's economy. However, worries

and hesitations about the formation of a globally competitive cluster in the form of sustainable cross-boundary 'co-petition' (the co-existence of cooperation/collaboration and competition) are never in short, such as for Singapore due to potential economic and political conflicts at the state level, and for Hong Kong as a result of inter-city competition and a lack of development coordination.

Nevertheless, the two city-states have notably developed internationally-competitive clusters of the various ICT-enabled business services comprising both MNCs and SMEs with vibrant global linkages. Their well-established trading and business links evolved from their long, critical manufacturing and trading histories have shaped the formation of world-renowned financial and business clusters in the two city economies. They are capable of providing higher-end functions to support the development of each other as well as other auxiliary industries not only within their territories but also in their immediate growth regions. Although much lagging behind and having a different trajectory of development, China has developed some pockets of services clusters in its economically-advanced regions on the east coast, which have been benefited from their advancing ICT manufacturing and trading industries.

## 6.5 Firm Size, Structure and Rivalry

In addition to the above three facets, local conditions affect the management structure, working morale and interactions between companies, including the sources and pressures from rivals, which in turn can have potential impact on the development of capabilities and competitiveness. Although less rivalry is suggested to be better for an industry's early growth in the short run, more rivalry in the long run is desirable for creating pressure for firms to improve or innovate beyond basic advantages. There is however never a one-for-all formula concerning firm strategy and structure for any particular industry or location. In this section, we concentrate on analysing the firm size, structure and rivalry, while firm strategies in the various selected sectors will be examined in the next chapter focusing on the firm-level perceptions of upgrading.

For the smaller organisations, that have dominated the three types of ICT-related services in China, Hong Kong and Singapore, in terms of number of entities, rather than total revenue, their firm structure is relatively simple and management more centralised due to a lack of economies of scale and standardisation of tasks. Despite some studies showing that Chinese businesses still operate through extended

families, the structure of enterprises (especially those of larger scale) has largely been transforming towards Western practice. The larger organisations are more hierarchical, but quite varied types of organisational structure are deployed within each industry.

Compared to the average services firm sizes in China (e.g. 15 workers in Beijing's IT services sector, and 10 in its business services sector (NBS China, 2008)), that of outsourcing providers in the model cities, which seems much bigger (at 168, according to CCIIP, CEIBS and CSORC (2008)), appears to reflect a generally larger operating scale than a typical Chinese service enterprise.[20] Nonetheless, the Chinese service suppliers are typically smaller than their Indian counterparts, with the latter's longer history of growth.

Other industry-focused surveys and studies have also shown the smaller scale of Chinese service providers. According to the cross-country *Contact Centre Industry Benchmarking Study* by callcentres.net (2004), for example, the contact centre seats in China totalled 49,000 in 2004 and averaged 93 per organisation; while the respective figures for India were 172,000 and nearly 660. In addition, the contact centres in China with 50 seats or less are estimated to make up more than 80% of the total market, compared to just over 70% in India (see Figure 6.2). Only about 6% of those in China had more than 100 seats, while nearly 20% of India's did. Although it is expected that the Chinese contact centre industry is booming lately by the developing and indeed exploding domestic market, its average service level measured by the average number of seats serving the population with a penetration rate of 0.003% is strikingly below Hong Kong's 0.17% and Singapore's 0.33%, suggests that there is a huge potential for the Chinese customer contact market to be exploited (Kriss, 2005). Another recent survey conducted by a Chinese contact centre services platform showed that, by the end of 2008, Mainland China had a total of 396,000 contact centre seats (including both in-house and outsourced), up from 340,000 in 2007 (CTI Forum, 2009), a much larger number estimated compared to the other survey mentioned above. The outsourcing sector accounted for less than 10% of the total number of seats but about 17% of the total market size (CTI Forum, 2008), perhaps reflecting the relatively higher cost efficiency of the third-party suppliers. Nonetheless, the current Chinese

[20] While the numbers in the Report on China's Services Outsourcing Development does not differentiate between sub-sectors of these service providers, the employment and establishment numbers in the Tertiary Industry Statistical Yearbook include those do and do not take part in specialised outsourcing activities.

customer contact market is still underserved given its huge population, not mentioning the overseas demand.

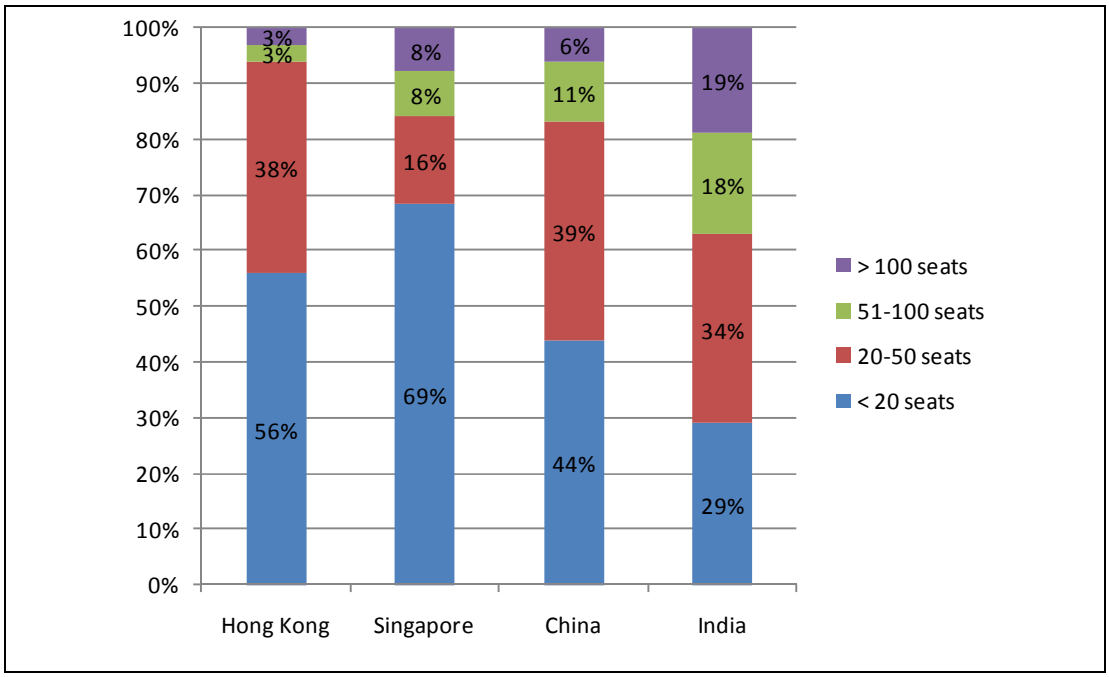



**Figure 6.2: Scale of Operation of Contact Centres in Selected Asian Economies, 2003.**

Source: data retrieved from callcentres.net (2003).

In the accounting sector, similarly, there are currently just over 85,000 CPAs and 7,700 CPA entities in China (CICPA, 2010). However, there are only seven of these establishments with 300 or more CPAs (three of which are the headquarters of the foreign-invested 'Big Four' MNCs), while 48 have 100 or more. In terms of revenue, there are only over 100 ones with annual income exceeding RMB 20 million. Therefore, albeit the fast-growing domestic market, continued SOE reforms and expanding private sector, the accounting sector is still transforming not at a pace fast enough to cater for the mounting and changing needs in the country, as will be illustrated later on.

Another facet concerning firm structure and rivalry has been the increasing involvement of foreign investment in the Chinese services industries, although barriers to entry are still high and even closed to foreign investors in certain areas involving sensitive information exchange (such as press and publication), and public utilities (such as postal services and telecommunications). The Chinese government allows and even encourages foreign companies to invest in the form of services outsourcing

provisioning to undertake system application management and maintenance, IT support management, banking back-office services, financial settlement, human resource services, software development, call centres, data processing, ITO and BPO services (Ministry of Commerce & National Development and Reform Commission, 2007). In the finance sector, however, foreign investment in certain segments is still restricted. Examples of such segments include, according to the *Catalogue for the Guidance of Foreign Investment Industries (Amended in 2007)*, securities, securities investment fund management companies, futures, and life insurance. In the accounting sector, foreign companies can invest only in cooperation with Chinese partner and in the form of partnership.

It is understood that wholly foreign-owned enterprises and Sino-foreign joint ventures operate on a larger scale and have better resources to draw upon. Especially when many segments of the Chinese market have been opened up to FDI since the WTO accession, and more foreign investors, most likely those who have been doing business for a longer time in the country, begin to take their entities under sole or major stake control. Therefore, foreign domination may seem a threat to the country's infant services sectors.

One of the challenges arisen from the increasing influence of foreign enterprises in China is that they are performing higher value-added businesses vis-à-vis Mainland Chinese companies' lower-end tasks. In the accounting sector, for example, the 'Big Four' global giants have dominated the revenue share of the Chinese market since their set-ups in the early 1990s, although they are still affiliated with local, high-performing CPA firms. Table 6.3 shows the scale of operations of the 'Big Four' accounting firms. As discussed in Section 6.3.1 on China's domestic demand, the indigenous accounting firms, especially those of small and medium size, primarily depend on traditional audit services of financial statements for source of income, while higher-end non-audit services are dominated by big firms which are capable of dealing with the booming listing-related services (CICPA, 2006). Therefore, a clear rivalry pattern is displayed: while the 'Big Four' and the few large domestic CPA firms are competing with each other, taking advantage of their national networks, for serving (to-be) listed and large corporations; smaller local accounting firms are mainly focused on the SME markets, often within their respective provinces and even cities, due to their limited network spans and restrictive interprovincial transactions.

**Table 6.3: The 'Big Four' Global Accounting Firms in China.**

| | Total no. of CPAs (incl. branches) | Total no. of other staff | No. of branches | Year of approved operation | Reported no. of major clients (2008) | Head office location | No. of CPAs at HO | No. of other staff at HO |
|---|---|---|---|---|---|---|---|---|
| **Deloitte** | 734 | 4,120 | 6 | 1993 | 1,345 | Shanghai | 311 | 1,594 |
| **Ernst & Young** | 920 | 3,572 | 7 | 1996 | 631 | Beijing | 270 | 1,144 |
| **KPMG** | 678 | 4,152 | 3 | 1992 | 977 (in 2007) | Beijing | 309 | 1,475 |
| **PwC** | 699 | 4,285 | 9 | 1992 | 3,009 | Shanghai | 281 | 1,416 |

Source: data compiled from CICPA (2010).

Regardless of the influx of foreign brands, a handful of home-grown MNCs, especially in the IT industry (rather than the accounting or the customer contact sectors), have drawn increasing attention from the media and academia. The Chinese government has also been eager to nurture more national champions by all possible types of initiatives. Lists of top 10 and 100 services outsourcing and IT (mostly software) enterprises have been frequently released. In the software industry, for instance, there is a steep gradient differentiating the top 100 enterprises in terms of revenue (see Figure 6.3). The software business of the largest corporate, Huawei, accounts for more than 27% of the combined revenue of all the top 100 Chinese enterprises, followed by ZTE with more than 12% of market share. The enterprises ranked third to sixth however constitute only about 15% together. Those from seventh to 16$^{th}$ represent less than 2% each; while from 17$^{th}$ onwards the share of each enterprise drops to less than 1%, as reflected by the very long tail in the distribution graph. This generally shows that Chinese enterprises still need to improve their capabilities to a much greater extent in performing high-value segments. Moreover, these leading companies are mostly headquartered in the largest metropolises, although not only operating there, reflecting again the specialisation pattern of higher-end activities in these economic hubs.

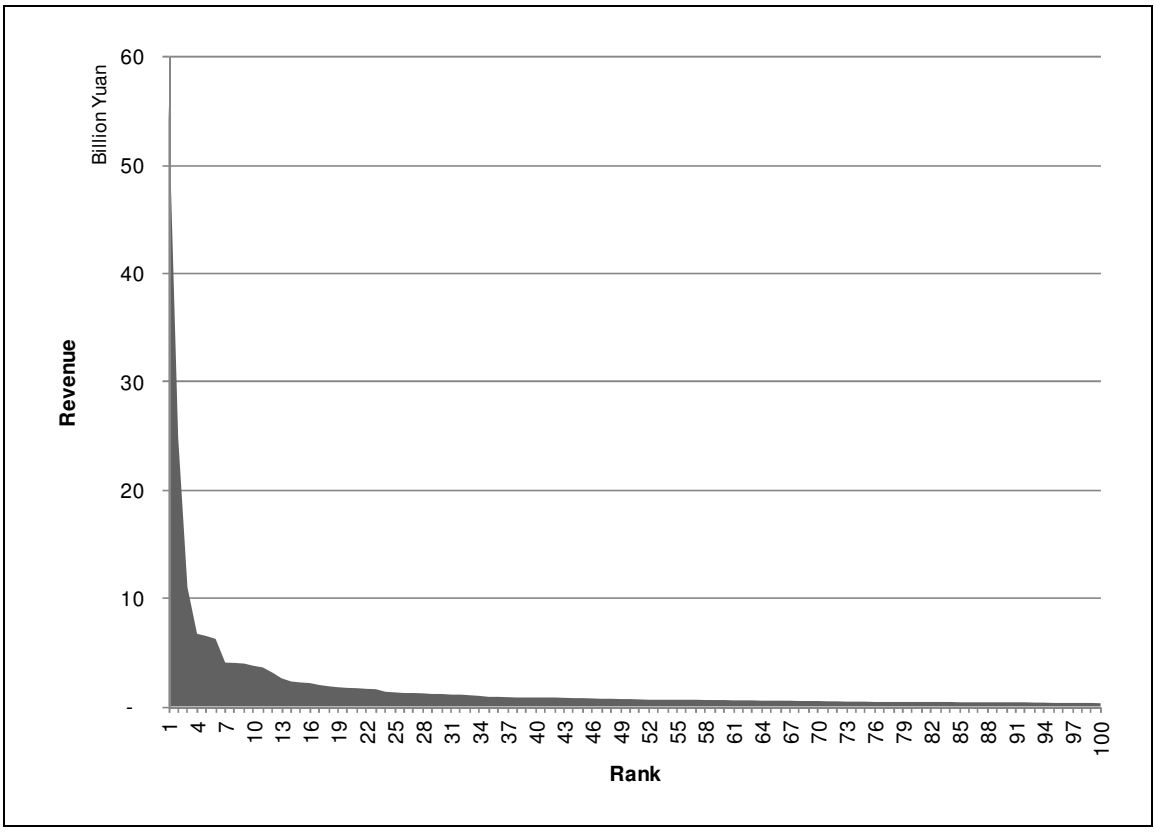



**Figure 6.3: Revenue Distribution of Top 100 Chinese Software Enterprises, 2009.**

Source: ranking and revenue figures derived from China Software and Services Outsourcing Network (2009).

In Hong Kong, the vast bulk of establishments in the finance (except banking) and IT sectors (more than 95%) comprise less than 100 staff, though they contribute only less than 50% of the total value-added in their respective sector (C&SD, 2009b). Similarly, more than 90% of Singapore's IT service firms have less than 10 employees (SingStat, 2008). There are 4,670 entities in the IT services sector, with an average staff size of eight (SingStat, 2008). Each establishment contributes an average of SGD 684,000 (approximately USD 500,000) of value-added. Hong Kong also has a comparable amount of IT service establishments (about 4,770 by end of the same year), with an average of only seven persons in each entity (C&SD, 2009b). They contribute an average of HKD 2,952,000 (approximately USD 380,000) of value-added.

Hong Kong's finance and insurance sector generally has a mean of 10-11 persons working in an establishment (C&SD, 2009b), and was witnessing an increasing trend before the global economic crisis broke out in 2008. Singapore's finance and insurance sector comprises an average of only three persons per entity

(SingStat, 2007). Rigid comparisons between the two cities should be avoided here, in consideration of differences in sampling method and definition.

Meanwhile, Hong Kong's accounting sector consists of more than 2,800 establishments, 99% of which have less than 50 staff (C&SD, 2009b). Yet, the other six entities with 500 or more employees, including those of the 'Big Four', contribute nearly 40% of the total number of persons engaged and more than 65% of the total value-added in the city's accounting industry, reflecting their extra-large scale of operation even compared with firms in the other industries of equivalent size (e.g. 37% of total value-added in the finance industry by entities with 500 staff or more). Although with a smaller number of establishments than Hong Kong, Singapore's accounting sector includes the 'Big Four' global accounting firms, seven medium-sized and 571 small accounting firms (Leng & Accounting and Corporate Regulatory Authority, 2008). About three-fourths of the small accounting entities are sole-proprietorship. Despite a small share of establishment numbers, the 'Big Four' enjoy 74% of the audit market share of listed companies, as compared to 24% and 2% respectively of SME accounting firms. Unlike the Mainland Chinese accounting industry, Singapore's smaller accounting entities have undertaken a larger share of non-audit services, which constitute 44% of their revenue, showing a comparatively diversified source of income.

Regardless of the common fact of small average employment size throughout many services sectors (largely because their establishments mostly serve local customers face-to-face), contact centres generally have higher average headcounts due to the required economies of scale in this sector, especially for third-party customer services. In Hong Kong, although the number of call centre establishments dropped from 80 in 2006 to 60 in 2009, the number of persons engaged in these activities has slightly increased from 2,110 to 2,320, and indeed the average staff size rose from 26 to 39 per entity (C&SD, 2009a). This perhaps reflects a consolidation trend undergoing in the city's contact centre sector, given the mixed phenomenon discussed previously that more Hong Kong companies are moving and outsourcing their back-office and contact centre functions to South China, despite a handful considering relocating back again due to considerations of cultural incompatibility and soaring cost in that part of the Mainland. However, these government survey figures only refer to third-party call centres that perform message delivery services, taxi and lorry call centre services,

telemarketing services, telephone answering services, telephone call centre operation, telephone enquiry services, and voice mailbox services.

As mentioned in Section 5.3.1 on the international orientation of Hong Kong and Singapore's business services, the callcentres.net (2003) industry survey estimated Hong Kong constituted about 360 contact centres with roughly 10,000 seats (with an average headcount of 28), while Singapore had about 325 centres also with approximately 10,000 seats (with an average headcount of 31). The figures provided by this survey broadly cover all the establishments, including both in-house and stand-alone centres, which are engaged in all types of customer contact not just restricted to telephony services listed in the Hong Kong government's survey but also including web-based and other kinds of inbound and outbound communications. Therefore, the latter survey's figures tend to be larger, and nonetheless the average establishment size of both survey results is similar.

Overall, the hierarchy between larger MNCs and smaller SMEs is also evident in terms of firm size and structure of the various IT and business services sectors in all the three economies. However, smaller firms rather than competing based on scale economies or organic expansion could leverage specialised expertise and other strategies to focus on specific segments. Indeed, rivalries at the firm level are not only local but also increasingly global in scope. Smaller domestic accounting firms have found it more and more challenging in competing with each other, not mentioning with the accounting giants. Therefore, indigenous firms with limited resources tend to focus on specialised segments of services rather than competing based on scale economies; while large international firms tend to be capable of scaling up their operation to widen service offerings. However, both types of firms of different size and structure in the various services sectors are attempting certain globally- as well as locally-oriented strategies in order to survive and grow in the increasingly complex global economic network. The firm strategies will be further examined in Chapter 7.

## 6.6 The Role of the Government

The government's role in the development of a location's competitive advantages (including freeing up competition and not over-regulating) should be to influence the other four determinants in the Porterian model. In fostering the growth of ICT-enabled business services, particularly their outsourcing and offshoring, Mainland

China, Hong Kong and Singapore have witnessed varied degrees of government influence, given their different state types and trajectories as discussed in Chapter 5.

### 6.6.1 China

The involvement of the government in economic development has been remarkable in China, as discussed in Chapter 5. Strong direct support from the central as well as local governments has been recently committed to the services outsourcing industry. At the national level, albeit several large stimulus programmes for the IT and high-tech industries in the past two decades, such as the Torch Program approved in 1988, the central policy specifically on the development of services outsourcing was first officially set off in the 11$^{th}$ Five-Year Plan (2006-2010), among other national socio-economic strategies. A list of the national decrees relating to developing the IT and services outsourcing industries is provided in Appendix X. The central government has considered the services outsourcing industry, including the high-tech sectors, as the bedrock for China to boost its global competitiveness. The Ministry of Commerce has then commenced the 'Qian Bai Shi' (Thousand Hundred Ten) Project – aiming at establishing 10 services outsourcing base cities with international competitiveness, facilitating 100 world-recognised MNCs to outsource service processes to China, and nurturing 1000 large to medium-sized services outsourcing suppliers with international qualifications, in order for the value of total services exports to quadruple ('*fan liang fan*') the 2005 figure. Above all, the macroeconomic plan outlines the related strategic framework and guiding principles, defines the specific industrial development goals, augments the government propaganda, and puts the services outsourcing agenda in place in external trade negotiations. A summary of the national policies and initiatives on the development of services outsourcing industry is included in Appendix XI, while bearing in mind many details in the policies and regulations embraced, and growing with time.

The Chinese policies have focused on improving factor creation. They include the development of modern infrastructure and the nurturing of well-educated, skilled human resources. Monetary subsidies, for example, are given to enterprises and institutions that have involved in training and/or employment relevant to services outsourcing. Other educational improvements have also been in place, such as increasing students' opportunity to join overseas exchange programmes, and

improving universities' facilities and networking with research institutes and the business sector.

With regard to infrastructure provision, the establishment of high-tech, software and business parks is characteristic in China's contemporary development. The concept is primarily based on the desire to develop the clustering effect that is expected to stimulate the growth of a targeted group of supporting and auxiliary industries, which will then spread the beneficial impact to the surrounding regions. The first of such kinds was the establishment of software parks since the 1990s. In 2001, the Chinese government launched 11 national-level software industrial bases in Beijing, Shanghai, Dalian, Jinan, Xian, Nanjing, Changsha, Chengdu, Hangzhou, Guangzhou and Zhuhai (Zhao, Watanabe & Griffy-Brown, 2009). Based on an export-oriented growth strategy, six of these sites were selected as software export bases in 2003. All of these parks, among the others established later, feature well-constructed infrastructure, preferential support policies, a better supply of suitable talent, a closer network between universities, research institutes and enterprises, and thus a more conducive business environment, compared with areas outside the parks. Cities with national-level software and high-tech parks have later been assigned as the model cities of services outsourcing. Other cities are also very keen to develop these types of specialised parks and seek the 'national' status for securing more resources from the central government. Some provincial and city governments sometimes offer extra financial incentives on top of the central funding in an attempt to attract more high-profile corporations to compete with their 'rivalry' neighbours. Therefore, critiques have urged the local governments to realise the distinctive characteristics, in other words, the competitive advantages, of individual cities, rather than just imitating other successful locations.

Although the Chinese government is not directly involved in managing firm-level competition, its external agreements and internal regulations and policies indeed have affected the strategy and rivalry conditions. Increased standards and supervision have been imposed on the industry in the hope of raising the firm performance. The qualification as a services outsourcing enterprise is confined within a set of standards based on such aspects as staff proportion of college graduates, business growth stability and share of the income of services outsourcing business. They are also encouraged, with financial incentives, to acquire international standard certifications,

such as CMM and ISO, which is likely to help ensure overseas clients' confidence in their services. In addition, the Chinese government's decision to finally issue IMT-2000/3G licenses by early 2009 and to restructure the market to increase competition between wired/wireless services operators may drive mobile broadband and further increase its penetration levels in other ICT areas (ITU & UNCTAD, 2007, p. 29).

The accession to the WTO and continually liberalising regulations on foreign investment have further stimulated China's economic rise but at the same time triggered keener rivalry in the domestic market. In the accounting sector, for instance, although the international big accounting firms are required to partner with domestic companies, they are able to take up the majority of business, especially that at the high end, and outcompete many of the Chinese enterprises, even the largest ones. On the other hand, more competition, not just in the accounting industry but also many other industries, should in fact, pressure the companies to improve beyond simple cost advantages. Their strategic choice will therefore be very vital in their future development.

As seen from above (and the policy measures summarised in the appendices), the central government has been actively supporting the development of the services outsourcing industry through financial, infrastructural and regulatory means. While the range of its policies looks all-rounded, there are concerns that the lengthy lists of these measures, adding together with additional local incentives, might require time-consuming interpretation and thus a longer decision-making process by companies.

Aside from the policy-oriented strategy, direct consumption by the government has been increased in an attempt to stimulate domestic demand for IT and business services. In 2005, government procurement accounted for about 12% of the total software market in China (ChinaLabs, 2006). Indeed, it is expected that, as the focus of the government's ICT investment is shifting from basic software to electronic government application, the ratio of domestic software will continue to rise to a higher level. In particular, the central government has issued a decree entitled 'Guidelines on Encouraging Government Authorities and Enterprises to Outsource in an Effort to Promote the Outsourcing Industry' in 2009 (CCIIP, 2010). According to it, relevant departments should further enforce the government procurement effects by outsourcing to 'professional companies' such functions as IT consulting, operation and

maintenance, software development and deployment, testing, data processing, system integration, training and leasing where these do not involve any 'secrets'. They are also encouraged to actively study the feasibility of disintegrating the existing IT and related service divisions from their functional departments, and reintegrating those functions with service suppliers using various forms of outsourcing.

### 6.6.2 Hong Kong and Singapore

Government procurement from third-party service providers has long been practised in Hong Kong and Singapore. In Hong Kong, the Office of the Government Chief Information Officer (OGCIO) was established in 2004, which seeks to leverage the private sector's expertise and best practice to improve service delivery and rationalise the management of the government's IT projects (Li, 2006). By 2006, about 90% of OGCIO's IT projects were implemented through outsourcing, equivalent to 95% of the total contract value. In Singapore, nearly 13% of its total domestic intermediate IT output are supplied to the city-state government, as indicated in the 2000 Input-Output Tables (see Table 6.4); while 30% of the total intermediate output of other business and technical services produced by domestic producers are acquired by the government as well. In fact, with the coming of digital age, the governments are expected to demand more sophisticated IT projects to keep their technological capacity up-to-date.

**Table 6.4: Singapore Government's Purchases of Intermediate Output from Domestic Production of Selected Services, 2000.**

| Types of services | SGD million | % share of total intermediate output |
|---|---|---|
| Banks & finance companies | 7.2 | 0.07% |
| Accounting & secretarial services | 28.2 | 3.09% |
| Information technology | 553.2 | 12.67% |
| Other business & technical services | 1119.2 | 30.26% |

Source: retrieved from SingStat (2000).

To improve their factor conditions particularly in human resources, both the Hong Kong and Singapore governments have put forward schemes to attract foreign talent. In Hong Kong, professionals satisfying certain age, education and skill requirements are allowed to enter even without a prior job offer under the 'Admission

of Talents Scheme', besides a similar scheme especially for those from Mainland China called the 'Admission of Mainland Professionals' (Abella & Ducanes, 2008). In Singapore, foreign professionals who want to work or do business in Singapore and are able to command a monthly basic salary of more than SGD 2,500 are issued 'Employment Passes'. These high-skilled immigrants are given more privileges, such as the right to bring their families and the opportunity to become permanent residents after a short stay.

In parallel to attracting more talent from abroad, the two governments are keen at improving the quality of their domestic workers to suit the changing market needs. In addition to the basic education, for instance, Singapore has established a national credentialing system called the Workforce Skills Qualifications (Singapore Workforce Development Agency, 2011). It trains, develops, assesses and recognises individuals for competencies the cover employability skills, occupational skills and knowledge, as well as industry skills and knowledge that companies are looking for. Likewise, Hong Kong has also set up the Qualifications Framework which aims to help its labour force set clear goals and directions for continuous learning to obtain quality-assured qualifications (Education Bureau, 2011a). Specification of Competency Standards are formulated by the respective industries to represent the industry benchmarks for the skills, knowledge and attributes required to perform a job at a certain level. Meanwhile, the Enterprise Resource Planning Centre set up by the Hong Kong Productivity Council provides training, consulting and a software platform for its subscribers (ESCAP, 2007).

Specifically realising the opportunity of business process outsourcing and albeit its maturing advanced services industry, the Singapore government has attempted to 'repackage' the BPO agenda into its policy initiatives. Unlike India and China which obviously have comparative advantages of cost and economies of scale, Singapore has a different focus. As Deputy Prime Minister Mr. Lee Hsien Loong in his 2004 Budget Statement puts it, 'Singapore is not a competitive location for call centres, but we are an attractive site for support centres hosting higher-end activities, particularly for financial institutions' (H. L. Lee, Deputy Prime Minister and Minister for Finance, 2004, p. 6). Rather at a smaller scale than China, the city-state has put forward some direct initiatives to develop the BPO industry. Among these is a SGD 12 million budget by the Infocomm Development Authority of Singapore (IDA), covering

development of training programmes targeting infocomm professionals, as well as seeding of company projects on innovation of their BPO service delivery and R&D on outsourcing technologies (IDA Singapore, 2004b). One of the high-end niches emphasised in the city-state is the business continuity and disaster recovery (BC/DR) industry. The IDA, together with the industry and the Information Technology Standards Committee, have established the standard on BC/DR service providers. Certificates of achievement are awarded to service providers which have met the stringent requirements in the BC/DR standard.

Instead of merely seeing India and China as competitors, Singapore has attempted to leverage the cost and scale advantages of the two large nations among other emerging countries. The government agency has been proactively assisting in channelling investment to development projects in China. For instance, a joint venture has been formed between the Chinese Consortium led by Tianjin TEDA Investment Holding Co. Ltd and the Singapore Consortium led by the Keppel Group to develop the Tianjin Eco-city in the Tianjin Binhai New Area (Singapore Business Federation, 2009). The modern township will include a business park to attract global clean technology and green R&D companies, as well as high value-added services including BPO companies. Singapore's Minister of State for Trade and Industry Mr. Lee Yi Shyan, during his visit to the Suzhou Industrial Park (SIP) in 2008, also suggested that 'China-Singapore Suzhou Development Co. Ltd, with its experience in urban planning, sustainable development and park management, should join hands with Singapore firms to lead development in Chinese cities, starting with Jiangsu cities outside Suzhou' (MTI Singapore, 2008). This statement has indeed demonstrated the strategic thinking of the Singapore government in face of the rising opportunity in China. Another speech by Mrs. Lim Hwee Hua, Minister, Prime Minister's Office and Second Minister for Finance and Transport, at the sixth Singapore-Zhejiang Economic and Trade Council meeting, has further elaborated the role the city-state attempts to play in China's rise: 'We want to step up the promotion of trade flows through Singapore by helping Zhejiang traders to open up new markets in Southeast Asia and beyond' (International Enterprise Singapore, 2010). Better connectivity with the fast-growing regions has also been attempted by further improving inter-country ICT infrastructure. The launch of a USD 100 million submarine fibre optics cable linking between Singapore and the Indian city of Chennai, for example, is expected to enhance

emerging business synergies between the two Asian countries, particularly in the areas of shared services and BPO (IDA Singapore, 2004a).

Different from Mainland China and Singapore, Hong Kong has not put forward any explicit policy agenda on the so-called ITO, BPO or KPO sector. With a 'big market, small government' macro-economic approach in mind, the Hong Kong government has generally focused on providing a favourable business environment, rather than formulating selective industrial initiatives. Indeed, non-/pseudo-government public organisations, such as the Hong Kong Trade Development Council and the Hong Kong General Chamber of Commerce, have been actively engaged in helping and coordinating the private sector for external investment opportunities.

In terms of infrastructure, Cyberport and the Hong Kong Science Park have been developed as strategic hubs bringing together clusters of both indigenous and foreign IT companies and professional talents (HKTDC, 2009d). In addition, the Radio Frequency Identification (RFID) Centre was launched in 2008 to promote the use of electronic product code and RFID in different industries, such as manufacturing, logistic and retailing (HKTDC, 2009d). This aims to boost operational efficiency and enhance the economic competitiveness of Hong Kong in the global marketplace.

Furthermore, the city's recent macro policy orientation has turned to cooperation and integration with Mainland China. In particular, the Closer Economic Partnership Agreement (CEPA) between Hong Kong and Mainland China is the first free trade agreement ever concluded between their governments, with the main text signed in June 2003 (Trade and Industry Department, 2008). The agreed liberalisation measures of various continuous phases have provided a window of opportunity for Hong Kong businesses to gain greater access to the Mainland market. With regard to accounting services, for example, in addition to China's WTO liberalisation, smaller accounting firms from Hong Kong are offered an option of applying for a Temporary Audit Business Permit with a validity period of two years, compared to the half-yearly renewal basis for non-CEPA beneficiaries. In addition, the mutual exemption of a number of subjects of Hong Kong and Mainland China's qualification examination programmes in the accounting sector is aimed at facilitating their accountants to acquire professional qualification in both locations. Another example is that, qualified Hong Kong and Mainland securities companies which satisfy the requirements for

establishing subsidiaries can set up joint venture securities investment advisory companies in Guangdong Province to undertake the designated services.

Apart from but generally under the framework of the CEPA, the Hong Kong government has also established a number of cooperation and collaboration channels between Mainland China and Hong Kong. Among these, the Hong Kong/Guangdong Expert Group on Co-operation in Informatisation (EGCI) was established in 2006 (Mak, 2006). Of the main areas of cooperation, one is to strengthen cooperation between the software industry of the two sides so as to exploit the outsourcing market and expanding their software export. Below the provincial level, collaboration projects have also been implemented, for example, the strategic partnership agreement between the Hong Kong Cyberport and Shenzhen Hi-Tech Industrial Park signed in 2004. More recently, to explore opportunities of developing services industries for both the PRD and Hong Kong, a letter of intent on cooperation was jointly signed by the governments of Guangdong Province, Shenzhen and Hong Kong to promote the development of modern service industries in Qianhai, a coastal frontier of Shenzhen's Nanshan District (Tsang, 2010, p. 24). In his 2010-11 Budget speech, the Financial Secretary Hon. Mr. John Tsang stated that the present consensus of the project is that 'the Shenzhen Municipal Government will assume the leading role in developing and managing Qianhai, and the SAR Government will render advice on planning and policy formulation' (Tsang, 2010, p. 24).

### 6.6.3 Summary

Overall, this section has shown a clear distinction between the government roles of the three locations. China as a fast-growing developing country, like India, has been making very strong efforts in seeking industrial upgrading in general and developing its services outsourcing industry in particular. Both the central and local governments have implemented a mix of fiscal and non-fiscal incentives to boost domestic suppliers' capabilities and attract foreign investment to the targeted industries. In contrast, with a much higher maturity of business services sectors, Singapore and especially Hong Kong have seen comparatively limited or indirect government influences in driving services development. The two city-states have focused on specialised high-end services, and on improving the quality of their production factors, particularly human resources, and the regional cooperation.

## 6.7 Conclusions

In this chapter, we have examined the various facets of competitive advantages of China, Hong Kong and Singapore in respect to their development of ICT-enabled business services. ICT infrastructure and human resources, particularly in terms of quality, are among the most crucial production factors of these services that are information-based and knowledge-driven, as also reviewed in Chapters 2 and 3. Showing the ICT provision and accessibility, and the supply and quality of skilled labour force, we have observed that the two city-states' factor conditions have been of high quality, while China has significantly improved the creation of its production factors, although the quality consistency remains a critical issue for all the three economies.

With decades of economic transformation to a services-oriented economy, the two city-states have seen strong presence of global lead firms alongside thousands of SMEs, particularly in the finance and other professional services sectors, that together have formed a dense network of production not just locally or regionally but also globally. These organisations with intensive international exposure have posed sophisticated demand for domestic business services, thus further enhancing the clustering effect on auxiliary industries, such as trading, logistics and other business services, and contributing to the two city economies' global business hub status.

While China's home demand has been rapidly growing, it is generally lagging behind in terms of sophistication. Yet, the demand for certain services segments is becoming more specific as the Chinese clients are growing in terms of affluence and international market expertise. The tremendous rise of foreign-invested and indigenous MNCs in the country has helped the clustering of some services industries in particular fast-growing regions, such as Beijing and Shanghai. While second-tier locations, such as Tianjin, Chongqing and Dalian, tend to lack the high-quality factors of production, demand and agglomerated industries, they are generally able to draw on their cost and location advantages to nurture competitiveness in certain specialised niches of services.

A hierarchical relation between global MNCs and domestic SMEs has been clearly evident in all the three economies, resulting in the specific attributes of the firm size, structure and rivalry in the various services sectors. Although it is difficult for smaller firms to directly compete with global giants, they can indeed be focused on

certain specialised segments in which they have developed deep domain knowledge and local networks. As the global production networks become more complex, firms do not just compete based on scale of operations but also need flexible management and different spatial levels of networking that would help them meet the changing market conditions. International collaborations, contributing to tacit and market relevant knowledge, thus offering a higher-order, specialised factor of production, increasingly form a key part of firm strategies (as well as at government and institutional levels), which will be examined in the next chapter.

All these aspects of domestic conditions are affected by and affecting the role of the respective governments. The two city-states, having a unitary level of government, are more concentrated on sustaining their IT and advanced business services by improving the quality of the various production factors, particularly their human resources, and developing more intensive cooperative regional networks particularly with the fast-growing neighbours, such as China and India. In contrast, China, with various spatial levels of governments, has eagerly attempted to take advantage of the services offshoring opportunity to push the national growth strategy to the forefront. The central government has put forward a series of policy measures targeting the various IT and business services industries. They involve both fiscal and non-fiscal incentives to improve the services workforce, provide better ICT infrastructure, boost domestic demand, nurture local enterprises to supply competitive services to overseas clients, reform the market structure and improve industry standards, as well as attract foreign investors to invest in certain services sectors. These policies have further been interpreted by local governments pursuing their own visions by competing for more state resources and outside investment. Some regions and cities, such as those in the eastern coast, have been successful in developing particular services segments, such as IT services in Beijing and financial services in Shanghai, thanks not just to the strong support of their municipal governments but also to the superior conditions of the other four facets of competitive advantage as discussed above.

In view of these dynamic conditions, firms face increasingly complex choice of growth and need to develop strategies that are suitable for the specific circumstances in their particular industry and location. In the next chapter, we shall look into the firm-level undertakings of the various ICT-enabled business services, and their

strategies to nurture competitive advantages not just for survival but more importantly for moving up the value chain. All these firm-level conditions are closely intertwining with the dynamic sources of competitive advantage examined in this chapter.

Based on the theory and the understanding of the locational competitive advantages, firms in the three economies are therefore expected to respond dynamically to the strengths and weaknesses of their home bases and to the growth trajectories of their industries. Some conditions may matter more to certain sectors, while some may be more affected by other conditions. For instance, Chinese companies may want more coherent government policies due to the weaker institutional setting in the country; while Hong Kong and Singapore may view other aspects more relevant. So firms' perceptions of the competitive conditions and formulation of strategies are expected to vary between sectors and locations.

# Chapter 7 Firm-level Undertakings and Capabilities Development Strategies

## 7.1 Introduction

We have shown the dynamic value ladders of various ICT-enabled business services and the relative positions of China, Hong Kong and Singapore in the global services production system from a macro perspective in Chapter 5. We have also examined at the meso level in Chapter 6 the key forces of competitive advantage of these three economies in particular respect to their services development. This chapter is going to examine from the micro (firm) perspective the actual undertakings of services offshoring and the capabilities, constraints and strategic choice of the three economies by analysing and comparing both the first-hand survey results and the archival industry and research materials. The next section (7.2) on Hong Kong and Singapore will first identify the patterns of services offshoring in terms of both supply and demand. Based on such observations, we will continue to see what and why certain service processes remain sticky in both city-states, and what is available for outsourcing to neighbouring countries. We shall then elaborate their 'between-shoring' capabilities which have been and will continue to be critical to their upgrading through the global services value chain. These capabilities include the building of relationships and trust, and the global and regional partner and cultural networks. We shall move on to discuss what strategic choice the firms have made and how the human resources and innovative capability constraints could potentially hamper such efforts.

Different from Hong Kong and Singapore, China has started just recently from a low position but is keen to rapidly catch up with the development of IT and advanced business services. In Section 7.3.1, we shall first identify different major links that the Chinese suppliers have built up to connect to their offshore clients, which will give insights into how they have managed to take advantage of these links to engage in the global services offshoring arena and the inclination and shortfalls of each type of link. We shall then examine how the human resources and institutional barriers could potentially hinder the progress of Chinese suppliers to develop critical capabilities for further upgrading. Notwithstanding such constraints, stakeholders of

the country's services industry have attempted to acquire better capabilities and move up through various strategies, including manufacturising service processes to improve process capabilities, promoting self-motivated innovation to enhance its market position, and seeking strategic support through corporate-institute-government cooperation. In addition to all these observations on GVC links, upgrading constraints and strategies, we shall examine in Section 7.3.4 the geographical variations of such services development pattern across the country, as well as the resultant spatial division of labour. We shall finally consider the relationships between China, Hong Kong and Singapore with regard to services sourcing in Section 7.4; while Section 7.5 concludes the major findings and arguments of this chapter.

## 7.2 Hong Kong and Singapore

### 7.2.1 Patterns of Demand and Supply in Services Offshoring

Before discussing the potentials and constraints of upgrading through the global services value chain, we shall here identify the factual patterns of the two city-states, selling what to whom and buying what from whom, based on our observations from the published trade and company data and from the original survey, as well as other research studies.

With the spatial division of labour in a mix of particular service processes, Hong Kong and Singapore have served as both suppliers and purchasers in the global services chain. Even though they generally produce at a lower cost than First World countries, they have supplied not just to the latter based on the comparative cheapness, but also to other Southern economies thanks to the relative high quality of their services. Survey-based reports by, for example, A.T. Kearney (2007, 2009), PricewaterhouseCoopers (2005) and the Economist Intelligence Unit (2006) have constantly rated the pair amongst the top destinations for services outsourcing and offshoring. Another study on 280 Asia-based firms also illustrated that, although China was their first choice of location, most of them would still choose more developed hubs like Singapore and Hong Kong based on different motives beyond cost-saving (KPMG, 2010). In our survey, General Manager of the Enterprise Business Solution Division of IT-HKG-2 illustrated this, reporting that his company was offering turnkey system integration solutions that continued to support IT-HKG-2's Hong Kong-originated business partners who had China start-ups via their Hong Kong

headquarters or Mainland affiliates or a third party. Examples include provision of maintenance services to the Chengdu office of a Hong Kong-listed company, and of database software to the CRM project of the Guangzhou IT subsidiary of a Hong Kong conglomerate ([IT-HKG-2], 2010).

In terms of their role as purchasers, the two city-states have not only demanded relatively high-end services from advanced countries, but also sent out routine tasks to cheaper regions. They then focus on core functions that require more complex technical and management knowledge and decision-making capabilities so as to maintain their competitiveness facing the rising global competition (Rosenthal, 2005; Zheng, 2009). An example for the former type of trade flow is enterprise resource planning (ERP) application and advice. Common examples of the more routine tasks include data entry, software programming and call centre services. Zheng (2009) also reported that many Hong Kong operating financial companies, for example, HSBC, Bank of East Asia, Hang Seng and UBS, have relocated such service processes as electronic data processing, customer services and software development to certain Chinese cities, like Guangzhou and Shanghai. Other types of services shifted to the Mainland counterparts involve basic design, printing and data entry services that require intensive labour but low levels of skills.

A study by Frost & Sullivan shows that the total value of IT imports into Hong Kong, including both offshore outsourcing and offshore subsidiaries, accounted for about 7.6% of the city's 2003 GDP (Rosenthal, 2005). This figure was even higher than for the developed countries surveyed, such as the US, the UK and Japan. The exceptionally large percentage is primarily due to the city's small open economy implying denser direct connections with the global economy.

Our original survey has also demonstrated the particular processes bought from and supplied to overseas by the respondent firms operating in the two city-states, as summarised in Table 7.1. This gives us some specific examples of the processes Hong Kong service firms have supplied and bought from overseas. In general, on the one hand, they provide higher-end services, such as system development and specialised consultancy services, to lower-cost or neighbouring countries; while supply relatively cheaper ones to developed regions. On the other hand, they source cheaper

routine services, such as data entry and IT programming, from low-cost regions; while buy more specialised ones from developed economies.

**Table 7.1: Hong Kong and Singapore's Demand and Supply of Service Processes.***

| Organisation | Type(s) of processes acquired from abroad | Supplier location(s) | Type(s) of processes supplied abroad | Client location(s) |
|---|---|---|---|---|
| ***Hong Kong*** | | | | |
| IT-HKG-1 | ◆ Enterprise resource planning (ERP) application and advice | ◆ Australia | ◆ Considering a more integrative model of IT services across the Asia region | ◆ Singapore, Malaysia and Mainland China (affiliates) |
| IT-HKG-2 | ◆ High-end software and IT services<br>◆ Software development (mainly programming) and turnkey projects | ◆ US<br>◆ Mainland China | ◆ Turnkey system integration<br>◆ Software and IT support | ◆ Mainland China<br>◆ Thailand and Taiwan (affiliates) |
| IT-HKG-3 | ◆ 3rd party outsourcing of webhosting and email services, and call forwarding services (latter terminated) | ◆ US | ◆ Website design services | ◆ Mainland China and Taiwan |
| IT-HKG-4 | ◆ Data entry | ◆ Mainland China | ◆ System development and technical support | ◆ Mainland China |
| IT-HKG-5 | ◆ IT programming | ◆ Mainland China | ◆ Consultancy service on technical design and business domain knowledge | ◆ India (Co-operative partner) |
| IT-HKG-6 | ◆ Software and IT services | ◆ Malaysia (Recently relocated as HQ from HK. Use captive R&D, production and call centre services from there)<br>◆ Mainland China | ◆ N/A | ◆ N/A |

| | | | | |
|---|---|---|---|---|
| SI-HKG-1 | ◆ IT outsourcing via a local vendor who has further offshored the processes | ◆ Mainland China and Singapore | ◆ N/A | ◆ N/A |
| FA-HKG-1 | ◆ Call centre (terminated) | ◆ Mainland China (Guangzhou and Shenzhen) | ◆ Electronic payment services | ◆ Asia Pacific region |
| FA-HKG-3 | ◆ IT programming, application systems, and call centre services | ◆ Singapore and Mainland China | ◆ Application systems services | ◆ Singapore and Canada (affiliates) |
| FA-HKG-4 | ◆ 3rd party outsourcing of IT services<br>◆ Call centre (terminated) | ◆ Mainland China | ◆ Financial services | ◆ Mainland China |
| FA-HKG-5 | ◆ Total outsourcing of F&A services | ◆ Thailand and Malaysia (with group companies) | ◆ N/A | ◆ N/A |
| ***Singapore*** | | | | |
| FA-SGP-1 | ◆ Software programming via a local vendor | ◆ Mainland China | ◆ IT systems support from HQ<br>◆ Accounting and corporate secretarial services via subsidiaries | ◆ Hong Kong and Malaysia (affiliates) |
| CC-SGP-1 | ◆ IT services (data entry) – an one-off project without continuity | ◆ Philippines | ◆ Planned to supply customer service & IT support | ◆ USA and UK |

Notes:

* Types of services that are sent to and/or bought from overseas locations as described by survey respondents. The list only shows particular examples that are regarded as more relevant to our discussion in this section, so the total number of companies listed does not match with that of participating firms, while some of the questionnaire respondents did not mention any specific processes.

N/A Not specifically mentioned by survey respondents.

Source: author's survey.

The occurrence of this kind of new international division of labour (NIDoL) within services has contributed to the increasing feasibility of decoupling and instantaneous recoupling of processes across geographical and organisational spans, as discussed in Chapter 2. With the ever-advancing technologies and management strategies, such decoupling and recoupling processes could be managed through

management structure, training and monitoring. For instance, with regards to his company's recent relocation of their contact centre from Hong Kong to Shenzhen, Head of FA-HKG-2's Business Optimization Center insisted that,

> It is even not necessary to maintain the contact with high-end customers within own company. The whole range of contact centre services can be moved to low-cost locations, as agents there can be trained through intensive training programmes to cater for different needs of the company. For example, highly educated workers can be hired to serve highly-valued customers, while they can be trained and monitored intensively, as nowadays technology allows real-time monitoring. If some cases cannot be handled by the agents, the call can instantly be passed to their supervisors or managers so that the customers do not have to wait or get disappointed. *(Translated from personal interview by author conducted in Cantonese in June 2008)*

The above comments have illustrated a general view that even the demand from highly valued customers could be catered for by disaggregation and reorganisation of the processes. Therefore, it is not merely about intensive training of the company's customer care handlers, but also proactive processes of planning and monitoring.

From observation of the two city-states' demand and supply of offshore services, we could imagine a simplified model of services trade flows that illustrates the between-shoring role of the pair (Figure 7.1). As well as direct flows back and forth between advanced countries, like the UK and the US, and Southern economies, like China, this includes two-way flows between the two city-states and both sets of trade partner. This might be understood simply in terms of the conventional theory of comparative advantage, with the two city economies selling comparatively cheap goods and services to more developed countries, whereas they also supply products and services of relatively higher quality to less developed countries.

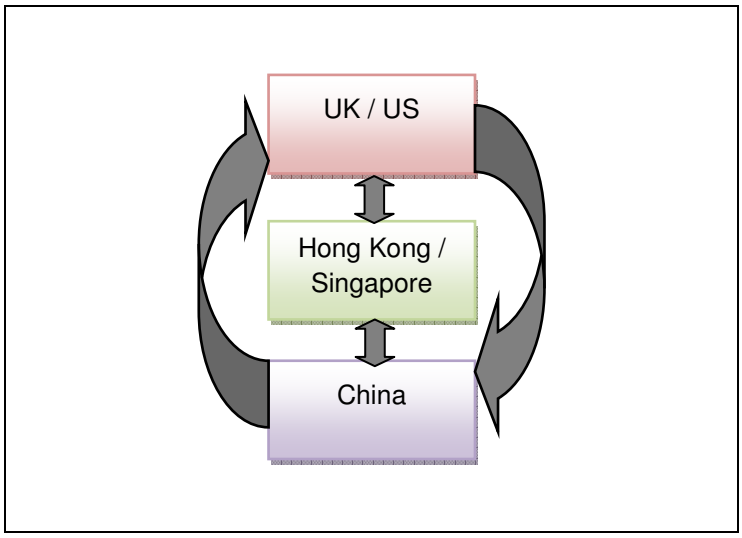



**Figure 7.1: Model of Services Trade Flows.**

But, unlike India or China which fulfil simpler offshoring roles, Hong Kong and Singapore have other crucial capabilities (elaborated in Section 7.2.3) enabling them to play an important mediating role for particular processes, adding substantial value through their engagement (HKTDC, 2005; United Press International, 2006; Meyer, 2008). The same firms could engage in both upstream and downstream of transactions, offering intermediation between lower-tier and higher-tier economies inside and outside the East Asia region.

One might doubt the sustainability of this mediating function since both the supplier and end-user would try to bypass the middleman in order to reduce the transaction cost given the improved ease of communication and transport. Therefore, we shall also address the question whether the bridging role of Hong Kong and Singapore remains necessary along the global services chain, and if they are competing based upon functions more than mere mediation.

One such function observed across a number of cases involves the 're-processing' within these two city-states of simpler services produced offshore by lower skilled labour in low-cost regions and brought back for further value-adding processing, before being sold on to client firms in the city or overseas. IT-HKG-2, for instance, acquired software programming services from its Mainland Chinese partners and added processes of system integration and quality management for their regional clients in such locations as Taiwan, Thailand and Mainland China. Another case is that the Hong Kong operating bank FA-HKG-3 obtained such processes as IT

programming and application systems from Singapore and Mainland China and provided the application system services back to its Singapore and Canada affiliates. We shall look more in-depth into this question in Sections 7.2.3 and 7.2.4, respectively in relation to between-shoring capabilities and upgrading.

### 7.2.2 No Hollowing Out: Current Limits of Offshoring

There are different risks involved in offshoring and outsourcing, especially given the differences in firm scale, sourcing model and resources availability. The empirical literature has shown that such risks could lie in the rotating of onshore resources, consistency in the provision and quality of infrastructure, geopolitical conditions, IP and data security vulnerability, over-dependency on the partner and loss of control (e.g. Chissick & Doshi, 2004; Wadhwa, Arora & Khurana, 2005; Aron & Liu, 2006; Das Aundhe & Mathew, 2009). The concerns over these potential risks have hampered some firms from sending out processes that they consider vulnerable to such risks but crucial to their core business. As a result, although some high-end processes are now offshorable and outsourceable with the strategy of decoupling and recoupling, Hong Kong and Singapore have maintained functions that are strategic to corporate interests due to the city-states having generally lower risks and better risk-mitigation capabilities.

For instance, although agreeing that offshoring contact centre services could definitely minimise the company's operating costs, particularly the start-up investment involved, FA-HKG-1 had terminated its use of two third-party contact centres in Guangdong since 2007. FA-HKG-1's CEO pointed out that the decision was due to the recent economic crisis and consideration of cost efficiency, as the prices of local service providers had been getting more competitive (although they might also have service centres located in other regions) while they would prefer having a local contact point offering them easier control on updates of content and quality of their services.

In addition to the cost concerns arising from changing economic conditions, the level of knowledge involved in the business processes helps to define the limits of services offshoring. As illustrated in Chapter 5 on the respective sectoral value chains, the 'chain' goes from transaction-dominated to judgment-intensive to strategically decisive when it moves from its lowest end to its highest end. CEO of FA-SGP-1, a company providing financial, accounting and corporate services, accentuated that they

were doing a knowledge business rather than in the BPO arena because the two fields have different cost structures. Matching the functions of his company with the value hierarchy portrayed in Chapter 5 for the F&A sector, it has occupied the middle range of processes that require thorough understanding of governance, risk, processes and controls in order to perform intensive communication and negotiation with the board and the management of various divisions.

For their core business, i.e. corporate support services, the CEO did not see what could be offshored or outsourced as it was not commoditised but soft skills-based and indeed knowledge-based; thus, proximity to clients is vital. The interviewee further elaborated that, in the F&A sector, firstly, electronic documentation had not yet been popularised as the logistical cost would probably be higher than the cheapness offered. Secondly, laws of different countries for cross-border business had not yet been aligned. Even if there would be improved legislation, technology and coordination between countries, Asia tended to be more politically and culturally fragmented than North America and Europe where common markets had been formed.

The senior management of IT-HKG-1 also shared the same concern. When considering the possibility of increasing geographical recoupling of service processes, the informant raised questions about challenges in taxation and data security: 'For example, there is a Chinese ISP who wants to put their file server in our company. Is it possible? Because the file server saves much local Chinese information…' *(Translated from personal interview by author conducted in Cantonese in August 2009).*

Apart from the above questions, there are also quality and communication issues. Giving out a specific task that was previously carried out within, the firm should have a particular level of expectation in terms of the service delivery by its supplier. To ensure the quality of such service delivery, both the buyer and supplier usually have regular contacts before and throughout the processes, the intensity of which is even higher if close inspection and quality management are influential to the outcome.

The surveyed firms nonetheless expressed the view that they needed to spend extra time to fix problems arising from mismatched expectations. Discussing the programming work sent out to the Mainland counterparts, Managing Director of IT-HKG-5 was disappointed that 'they do not follow strictly according to our

requirements in terms of the standard and convention, the required functionalities and features, and the check-out/check-in procedure. And some programmes are developed without testing.' This respondent clearly stated that 'our company's policy is not to outsource a complete set of work to our outsourcing partners. We outsource part of the programming work, but still are responsible for referent study, design and quality assurance.'

The comments by our informants have further reflected not only the limits of services offshoring in actual situations, but also the areas of which Singapore and Hong Kong have maintained strengths that help mitigate the potential risks firms are facing and thus improve their status in the GVC.

From the demand and supply patterns observed, we have distinguished the between-shoring role of Hong Kong and Singapore in the rise of global services sourcing. The following sections will see how the pair have further developed their between-shoring capabilities by leveraging well-established regional networks to capitalise on the scale and cost advantage of their neighbouring emerging countries, as well as global networks to make use of the foreign investment and MNCs' networks to penetrate into the First World markets.

### 7.2.3 Between-Shoring Capabilities

As mentioned in the end of Section 7.2.1, Singapore and Hong Kong have played a key mediating role along the services GVC. This section is going to provide evidence on their between-shoring capabilities that could facilitate not only such intermediary functions but also potentially create new opportunities to move to the higher end. The two city-states have developed and sustained strong capabilities in relationships and networking by building upon their world-renowned legal and financial systems, infrastructure and pro-business governments (Schenk, 2002; Sim*, et al.*, 2003). These capabilities have contributed to the formation of extensive as well as intensive links to the services GVC. In the following sub-sections, we shall present two interrelated attributes that are most relevant to the pair's acquisition of between-shoring capabilities.

**Relationships and trust building**

Seeking to compete in international markets tends to entail deep interlocking of producers (Humphrey & Schmitz, 1998). The rise of arms-length transactions and e-commerce has pointed to the importance of long-term interactive relationships based on trust, communication, satisfaction, and cooperation, in addition to services quality (Grover, Myun Joong & Teng, 1996; Cobb, 2003). Owing to the abstract nature of most service products, the development of trust is particularly important within service industries, as Coulter and Coulter (2003) suggest. Trust should therefore be extended for sustaining such interdependence and cooperation between firms, which depend not merely on social identity, but also on sanctions, such as effective legal systems, and reputation mechanisms (Humphrey & Schmitz, 1998), such as online feedback forums.

Firms based in Hong Kong and Singapore have capitalised on the well-established political and economic infrastructure in their cities, as discussed in Chapter 6 on the competitive advantages of the pair, to build up integrity among their communities of clients, suppliers and partners. In our survey, the firms emphasised the importance of solid relationships to sustaining their reputation and thus source of supplies and receipts. General Manager of IT-HKG-2 stressed that his company had been working with three to four Mainland Chinese suppliers with whom they had longer collaborative histories. These interdependent relationships had helped both sides develop mutual understandings and ensure quality consistency. The respondent also expressed that the cost effectiveness would depend on close client-supplier relationships as shared culture and professionalism would develop based upon yearlong cooperation which could facilitate the two sides to know each other's expectations. Although the build-up of trust seems to help reduce the cost and risk involved in transactions, risk still varies distinctly as the form of a relationship varies (Sheppard & Sherman, 1998). Such relational forms could lie in shared socio-cultural identity, asymmetrical authority status, reciprocity between individuals and market cost-benefit comparisons. In general, trust is accepting the risks associated with the type and depth of the interdependence inherent in a given relationship.

Since the type and depth of the interdependence inherent in a given relationship affects the level of trust and thus the acceptance level of risks, nurturing sustainable relationships with clients and partners has become strategic to competing

in the increasingly fierce market. The business direction of another firm IT-HKG-4 had transformed from 'project base with maintenance income' into a service-oriented business model derived from 'strategic partnership with customer with long-term outsourcing service engagement,' 'repeated sales of software license with IP right plus recurring maintenance income' and 'recurring transaction subscription income from electronic service platform' ([IT-HKG-4], 2010).

To strengthen their interlocking capability, IT-HKG-1 forged a business alliance with TCS, one of Asia's largest global software and services solutions corporate, 'to provide value-added services and a broad range of industry-specific solutions to [IT-HKG-1's] customers in the Asia Pacific region' ([IT-HKG-1's parent group], 2003, p. 12). The partnership was hoped to bring in the software consulting and project management capabilities of TCS to strengthen '[IT-HKG-1's] capability of delivering total solutions to its customers across the region,' and to 'enhance its brand recognition among industry peers.' The establishment of such external alliances is very common in the industry as firms hope to share the capabilities, reduce the risks and improve competitive advantages. Like many IT service suppliers, to secure the supply of high-end systems, IT-HKG-2 had also formed alliance and reseller relationships with major global vendors, such as Sun, Oracle and EMC ([IT-HKG-2], 2007).

Dyer and Singh (1998, p. 662) explain that competitive advantages of partnerships could be generated by the formation of alliances based on: (1) investments in relation-specific assets; (2) substantial knowledge exchange; (3) the combining of complementary, but scarce, resources or capabilities, which results in the joint creation of unique new products, services or technologies; and (4) lower transaction costs than competitor alliances owing to more effective governance mechanisms. Therefore, nurturing long-term relationships is not just about risks and costs, but could concern the creation of new opportunities and profits.

Hong Kong and Singapore firms have leveraged the integrity and trust earned from the long histories of their cities being the middlemen in both global and regional production networks. In their study on the coordination in inter-firm business relationships Hong Kong Chinese, Mainland Chinese and Western actors, Trimarchi and Tamaschke (2004) have found that some Mainland producers directed inquiries from the Western buyers to the Hong Kong intermediaries who would then facilitate

the interactions, as the Western buyers had good relationships with the Hong Kong counterparts or found it easier to conduct the business via Hong Kong, rather than deal directly with the Mainland sellers due to the difficulties involved in the Mainland production. One of their case respondents explained in this way: '(We) meet customers from overseas at the Canton Fair and Shanghai. But sometimes customers have a (good) relationship with (HKI)… because they only know (us) as a contact at the fair' (Trimarchi & Tamaschke, 2004, p. 345). This further illustrates that simply meeting potential clients at a trade fair or any other similar platforms is insufficient to establish a relationship directly, without a matchmaker like those from Hong Kong or Singapore whom they have learned to trust.

Although their neighbouring developing countries are developing closer relationships with the clients, such intermediary advantage of the two city-states over others tends to continue to support their growth and upgrading potential, as building trust takes time and involves substantial investments in inter-firm relationships (Trimarchi & Tamaschke, 2004), while public agencies also increasingly become strategic for fostering trust (Humphrey & Schmitz, 1998). Examples of such sanctions and agencies include certifications and accolades for industry stakeholders, and widening of related training programmes for professionals, among others, as exemplified in Chapter 6.

**Global and regional partner and cultural networks**

While inter-firm relationships are not simply bilateral, developing close links to partner and cultural networks is increasingly vital to the building of long-term multilayer relationships. A deeply interconnected web of relationships also provides trusted sources (Sheppard & Sherman, 1998; Branzei, Vertinsky & Camp Ii, 2007). Their strong coordination capabilities have enhanced Hong Kong and Singapore's command role in the regional corporate networks (Perry, Yeung & Poon, 1998; Enright, 2000; Yeung, Poon & Perry, 2001; Meyer, 2008). Their continuously growing producer services have attracted global firms to use them as their Asian operation headquarters, which has positioned the pair as partners with London and New York.

In addition to the conducive political and economic infrastructure, Hong Kong and Singapore have been able to develop dense and extensive links with the global and regional business networks by taking advantage of their distinctive bi-cultural and bi-

lingual (if not *multi-lingual*) capabilities. With long colonial histories, Hong Kong and Singapore gained an opportunity in grasping the English language ability and Western culture. Meanwhile, immigrants from China accounted for a majority of the postwar population of both (Young, 1992). At the present time, the Chinese ethnics make up 75% of Singapore's total population and 95% of Hong Kong's. In both city-states, efforts have been intensified to improve the standard of English, already as one of their official languages, and to encourage the use of the Mandarin dialect of Chinese, as discussed in Chapter 6. The two city-states' Western management culture, combining with their Chinese cultural affinity and disapora networks, has helped the creation of multi-level cultural networks at both regional and global scales.

In our survey, it was reported that several Mainland Chinese government departments have chosen IT-HKG-4 because they 'could apply their experience in serving Hong Kong Government to Mainland China, as [IT-HKG-4's] experiences in helping the Government of Hong Kong and many enterprises transform from traditional tendering to electronic tendering are very valuable,' as stated in a testimonial from China National Tendering Center of Machinery & Electronic Equipment, State Economic and Trade Commission P.R.C. ([IT-HKG-4], 2002).

The two city-states have possessed language and cultural capabilities that are compatible with both international standards and the Chinese culture. In combination of this and well-established regional networks, they could capitalise on the scale and cost advantage of their neighbouring emerging countries, and MNCs' networks and investment to penetrate into the First World markets. From the regional perspective, Managing Director of IT-HKG-5 pointed out that having outsourced some programming work to Mainland China had helped the company absorb the potential fluctuation of labour demand so that they could 'manage [their] resources better and find the better local talent rather than recruit people with less than average quality to meet immediate needs of some urgent projects.'

Meanwhile, in the business of software development, IT-HKG-2 would either outsource a whole project, such as application programming, with the Hong Kong operation being responsible just for inspection and quality assurance, or seek human resources support for their own software development in the Mainland China operations with the Hong Kong headquarters keeping charge of the overall

management. These services are then not merely supplied to Mainland China and Hong Kong, but to the company's regional operations in Thailand and Taiwan as well. These two outsourcing/offshoring models typically illustrate not only the command role of Hong Kong, but also how the companies take advantage of China's low-cost but still skilled labour to support their regional business. The GM of IT-HKG-2 also suggested that the partnership between Hong Kong (specialising in management) and South China (providing stable labour resources) could even boost opportunities in face of competition from other rising economies.

More recently, the Singapore-based firm FA-SGP-1 had proposed the acquisition of another accounting firm to set up a wholly foreign owned enterprise (WFOE) in Shanghai with branches in five other Chinese cities, which was believed to form a 'strategic thrust to expand its geographical footprint in the Asia-Pacific region' and the new WFOE would 'benefit from the cross-selling of services from its other offices in the region' ([FA-SGP-1], 2010). According to FA-SGP-1's CEO, entering the China market could be foreseeable and profitable but would certainly need to leverage the capabilities of its headquarters and other regional offices to seize business opportunities from overseas customers to be based or operating in China.

From a wider point of view, the firms have also taken advantage of their parent companies' extensive geographical networks to enhance their forward and backward linkages to the GVC. IT-HKG-1, for instance, hoped to 'continue to capitalise on the company's position as the IT arm of Hong Kong conglomerate [IT-HKG-1's parent group] […] to expand into India, the Philippines, Thailand, Australia, Korea and Japan' (Menon, 2000). The desire to gain further access to international markets has reflected the company's greater knowledge and confidence in market and relationship decisions, while such networks are dynamic over space and time (Coviello & Munro, 1997). FA-HKG-5 also made use of the finance and accounting services from the group companies in Thailand and Malaysia that are under the same holding Hong Kong-based conglomerate.

All these examples support a general observation that the strong intermediary connections of Hong Kong and Singapore to global and regional networks operate not simply in a linear backward and forward manner, but in a very complex and multi-dimensional fashion. The relationship capabilities have decisively offered the two city-

states competitive advantages in better understanding clients' requirements and the demand-supply dynamics in the GVC.

### 7.2.4 Upgrading by Focusing on and Strengthening KIBS

It is generally agreed (in the literature and by our respondents) that Hong Kong and Singapore have already developed into an information-based economy and are both moving towards a knowledge-based one. Such upgrading involves the transition from emphasising acquisition of knowledge to answer questions of who, when, what, and/or where to acquiring the capabilities to understand truths and beliefs, perspectives and concepts, judgments and expectations, know-how and know-why (Stenmark, 2002). Therefore, the pursuit of knowledge-intensive business services (KIBS) demands a much higher degree of personal exchange, relationship building and trust, because the knowledge required is tacit and therefore highly dependent on the context where it is produced (González-López, 2007). With the above between-shoring capabilities, the two city-states could take advantage of their intermediary role to adopt strategies to go through the upgrading path towards KIBS.

Many service firms in Hong Kong and Singapore have moved up the chain from simple offerings to more information-based and progressively to knowledge-demanding deliveries (Kam & Singh, 2004; Meyer, 2008). Among survey respondents an example is IT-HKG-1, established in the 1950s and evolved from an electric typewriter and copier supplier in the 1960s, to an office automation specialist in the 1970s, a networking solutions vendor in the 80s, and into an expert in enterprise IT solutions during the 90s. To upgrade to the next level and meet the new challenges ahead, IT-HKG-1 was currently attempting a new strategic business focus, i.e. SaaS (software as a service). SaaS is a software distribution model in which applications are hosted by a service provider and deployed over a network, typically the Internet. This service model has been increasingly popular, as bandwidth and storage became ever more inexpensive and abundant and processors increasingly powerful, and offers simpler deployment, reducing customer acquisition costs and providing a more flexible delivery of business solutions.

IT-HKG-2 also attempted to increase their service capacity and cut back 'box-moving', which is a model traditionally pursued by resellers of hardware and software who would merely push their products to the customers. To strategically shift from this

business model involves developing deeper understandings of the capabilities both of the products they offer and of the needs of their customers. In the case of IT-HKG-2, the 'software division' (headed by the interviewee) was reformed into a renewed unit 'enterprise business solution' focusing on total solution services. After the transformation, they would bundle the software to suit their customers after thorough assessments of the latter's requirements, instead of isolated transactions of different software products. With more complex solutions needed, firms would be engaged in higher risks and more overseas services, due to increased sophistication and more extensive spatial and organisational webs of stakeholders, but also gain greater experience and learning opportunities (Wadhwa, Arora & Khurana, 2005; Jensen, 2009).

Take another case from our survey as an example. IT-HKG-5 targeted IT consultancy study and project management services as their core business. The former category of services included IT strategic planning services to help clients 'define long-term IT strategies that would align with their business goals and help them cater for the changing business and customers' requirements necessary to sustain long-term competitive advantage.' Project management services involve a wider range of undertakings, for example, project scheduling, project reporting, change management, budget control, project resources planning and monitoring, supervision of design and implementation of computer systems, quality checking and assurance on project deliverables, as well as other consultancy practices.

These examples and viewpoints are consistent with the two city-states' moving not simply to a services-oriented economy, but indeed to a knowledge-driven one. As discussed in Chapter 2 and Chapter 5, the shift from information- to knowledge-based services entails different requirements of skills and knowledge. To move up the value chain where KIBS are positioned and where at present First World countries have dominated, the acquisition and application of intensive tacit knowledge, such as the capability to create a new corporate strategy and to plan and monitor an IT architecture, rather than merely codified knowledge is involved. The particular types of services that the firms were attempting to intensify as listed above, such as project management and business solutions, entail a high degree of expert judgments, know-how and know-why (Stenmark, 2002), and a co-production process intimately

involving their clients, rather than a mere one-directional transfer of the knowledge in question (Muller & Doloreux, 2009).

Since such knowledge required by KIBS is highly contextual, it is embedded in close interdependent relationships and thus not easily duplicable, unlike codified knowledge, and so that the value derived from the processes using this knowledge is protected at least for a period of time that is significant enough for the firm to be willing to invest in developing such skills and knowledge. As both a user and a creator of tacit knowledge, KIBS not simply have innovative influence on how other businesses get access to key expertise, but are indeed innovators and drivers of development (Muller & Doloreux, 2009). Moreover, such development is not just about product innovation, but also process innovation of businesses (Kotabe & Murray, 1990; Ettlie & Reza, 1992). Therefore, the between-shoring capabilities of relationship and network building that Hong Kong and Singapore have been able to develop and capitalise are critical to the growth of their KIBS.

### 7.2.5 Potential Constraints on Upgrading

In spite of the capabilities and upgrading outlook just discussed, there are critical constraints that could hamper Hong Kong and Singapore from moving up to a stronger position on the global value chain. Amongst all other obstacles that have been widely discussed in the literature (Chung, 2007; Liu, 2007; Shankari, 2008), in view of the nature of KIBS, we shall look into two of such constraints that are nonetheless interrelated and most relevant to our study – broadly categorised as (1) availability of quality human resources, and (2) innovation capability.

As previously discussed in Chapter 6 on the human resources of the two city-states, their labour force has been praised for their high qualifications, language abilities and management skills compatible with both the Western and Chinese cultures. However, from the businessmen's point of view, rather than over-praising the qualities of the local workers, it is necessary to look closely at particular aspects of human assets that need to be strategically improved in order to further raise their competitiveness.

In brief, the skilled workers in the two locations have been relatively well-equipped with technical knowledge, but have not yet sufficiently acquired all of the

contextual skills to meet the needs of KIBS. Our survey respondents pointed out that the development of 'soft' skills would be very crucial to future business sustainability. Project Manager of the Hong Kong public sector institution SI-HKG-1 warned that the education system was not good enough to suit the needs of innovative work in the high tech industries. The respondent from IT-HKG-1 also believed that improving the values, work attitude, credibility and world vision of employees should be one of the fundamental issues for the administration of Hong Kong so as to sustain the ongoing competitiveness of the city's skilled labour force.

The CEO of FA-SGP-1 was meanwhile concerned about the reluctance of the workers to change. Likewise, IT-HKG-4's CEO was aware that stagnant skill sets of the current service delivery team could limit the upgrading potential of the company. While the demographic problems of aging population and a shrinking size of young labour force have formed structural setbacks to the human resources development of both city-states, the constraints in the 'soft' sides tend to potentially threaten their upgrading efforts, rather than the problem of infrastructure or technicality, as a number of the interviewees expressed.

To tackle the above problems, one of the considerations is to attract repatriates that have worked overseas and expertise with significant work experience in MNCs, both foreign and domestic, so that their valuable knowledge can be transferred into the local entrepreneurial and innovation system. However, a few survey respondents criticised that the government had not done enough to attract people who went abroad to study or work to come back, nor to support start-ups in high tech and innovative sectors, which has considerably created an obstacle to the city's technological development. There has also been criticism over the relative lack of collaboration between industry and the universities or public research institutes, resulting in a bottleneck in the innovative capabilities development (Kam & Singh, 2004).

Although it is difficult to assess and compare whether the governments of the two city-states have done adequately with regards to attracting foreign expertise and nurturing local talent, it is generally agreed that closer collaboration between the public R&D sector and the private sector could help to bridge the gaps in the local innovation system (Dongier & Sudan, 2009; Okamoto, 2009). To this end, suggestions and

initiatives to improve the capabilities of each side in the various aspects, including overseas expansion, self-motivated innovation development, undertakings of higher value-added services, are not in short. Whereas urging the governments to improve the education system and human resources development strategies to suit the needs of a knowledge-based economy, the companies have also implemented various types of training and recruitment programmes to sustain their firm-level human resources capabilities. Examples from the survey participating firms included IT-HKG-4's in-house Mandarin courses and Management Development Program for a selected group of managers across different business units to uplift the management quality, as well as IT-HKG-2's Six Sigma staff training and competency-based and research-validated assessment tool for leader development.

In brief, enhancing the collaborative work between enterprises, institutions and the government tends to bring out a more comprehensive strategic plan for the development of society. As firms attempt to engage in higher value-added services, they need to intensify knowledge content that is more dynamic and dependent on the nurturing of human capital, relationships and innovative capabilities in the global and regional networks. In general, Hong Kong and Singapore have succeeded in deploying their 'between-shoring capabilities' in high-value services, and specialising in niche KIBS, while facing increasing challenges particularly in areas of human resources and indigenous innovation.

## 7.3 China

Since China has opened up its door in the late 1970s, the country has increasingly connected with other parts of the world, not merely with its immediate Asian region, as demonstrated in the previous section about Hong Kong and Singapore's mounting interdependence with the country, but also with other regions beyond Asia. Indeed, such connectedness is more than just commodity trade, although this is still the predominant part of China's export, since the country's services industries are progressively expanding with regards to both domestic market and overseas engagement, and this has attracted much attention in the global and regional offshoring playing fields (e.g. Aggarwal & Pandey, 2004; de Filippo, Hou & Ip, 2005; Deloitte Research, 2007; van Welsum & Xu, 2007; Tholons, 2010). Moreover, it is not

merely trade connectedness with the outside world, but also increasing non-trade connectivity.

Section 7.3.1 is going to delineate the different channels that service suppliers in China use to connect with overseas clients and partners and thus to plug into the global services chain. There will also be general observations on the thickness of each type of links with regards to the suppliers' capabilities of client relationships building. In Section 7.3.2, we shall go on to consider two most relevant issues that could potentially hold back China's upgrading in advanced services, i.e. human resources and institutional barriers. Section 7.3.3 will then bring the discussion further to consider the Chinese service suppliers' capabilities acquisition and upgrading strategies. We shall critically unpack how and why the suppliers attempt manufacturising service processes, self-motivated innovation, and they seek strategic inter-firm and institutional support. Built upon these discussions on the country's overall strengths, weaknesses and strategies, we shall further examine the geographical discrepancies and thus the locational dynamics of offshoring and outsourcing of IT and advanced business services.

### 7.3.1 Offshore Supply of Chinese Services and Links to the Global Services Chain

By answering the basic question of who service suppliers in China actually serve, with what and how, in terms of service process orders from overseas clients, we shall develop the analysis a step forward to examine these players' links to the global services chain, as well as the inclination and shortfalls of these channels. As existing academic and practitioner research has shown, and the previous chapters have mentioned, we have seen a growing array of service processes being offshored to China. These range from basic jobs such as testing of software applications, processing of insurance claims and mortgage loans, to more technically advanced IT jobs (The Economist, 2006; Fannin, 2010; Tholons, 2010). Specifically, as seen in Table 7.1 earlier in this chapter, the firms in the two city-states Singapore and Hong Kong demanded routine processes from the country, for example, data entry, software programming and call centre services. Table 7.2 below further presents what specific types of processes the survey participating firms from China have supplied to their offshore clients.

**Table 7.2: Types of Service Processes Supplied by the Survey Respondents from China.**

| Company | HQ/operating location(s) | Type(s) of processes supplied abroad | Client location(s) |
|---|---|---|---|
| BPO/IT/CC-CHN-C1 | ◆ Beijing<br>◆ Shanghai<br>◆ Kunshan<br>◆ Guangzhou | ◆ Whole range of third-party BPO, e.g. document digitisation, data management, call centre, F&A outsourcing | ◆ US<br>◆ Japan |
| IT-CHN-1 | ◆ Beijing<br>◆ Japan | ◆ Application software development for the Japanese market<br>◆ System disk-based technology consulting and services | ◆ Japan<br>◆ US |
| IT-CHN-2 | ◆ Beijing<br>◆ Chengdu | ◆ F&A, info management, supply chain management, safety monitoring, IT support, ERP system development and maintenance, plus call centre for US<br>◆ Data entry for Japan | ◆ US<br>◆ Japan |
| FA-CHN-2 | ◆ Guangzhou | ◆ Bookkeeping, auditing, accounting, tax and commercial consultancy, asset valuation | ◆ Primarily to affiliates set up by foreign companies (from Europe, N. America and Asia) |
| FA-CHN-3 | ◆ Shanghai | ◆ Accounting and tax consultancy, enterprise business industrial and commercial registration service, finance training | ◆ Hong Kong (SMEs)<br>◆ Affiliates set up in Shanghai by companies from US, Japan, Korea and Australia |
| CC-CHN-1 | ◆ Beijing | ◆ Voice and non-voice customer calls handling | ◆ Japan<br>◆ Korea<br>◆ Hong Kong<br>◆ Taiwan |
| CC-CHN-2 | ◆ Huizhou in Guangdong | ◆ Customer contact services | ◆ Philippines<br>◆ Other SE Asia countries (planned) |

Source: author's survey.

This is consistent with prior research in showing that China has close links to the East Asia region, and is also trying to reach out to Western markets, particularly in North America, but also in Europe. Some commentators (L. Tan, 2007; Zarrella, 2010) have suggested that, unlike India, China's growth in services outsourcing has been primarily built upon its developed links with neighbouring Asian economies, in particular with Japan and Korea, though now seeking to diversify into the markets of Western Europe and the US. China's comparatively stronger links with other East Asian countries are particularly due to the former's language compatibility and established links of manufactured commodities trade with the latter; whilst India's

offshoring success is largely based on its English ability and historic connection with the UK and the US.

Looking more closely at China's overseas services trade we can identify a number of distinct channels through which the country has been able to connect itself to the services GVC. We have identified five important ways which service suppliers in China have made use of to provide services to offshore clients. These are presented in Figure 7.2, which shows both the different relationships involved between of China operating suppliers with stakeholders and offshore end users, and how these relationships are developed domestically and offshore. However, such types of GVC links are never fixed but dynamic. Each of them will now be discussed in turn.

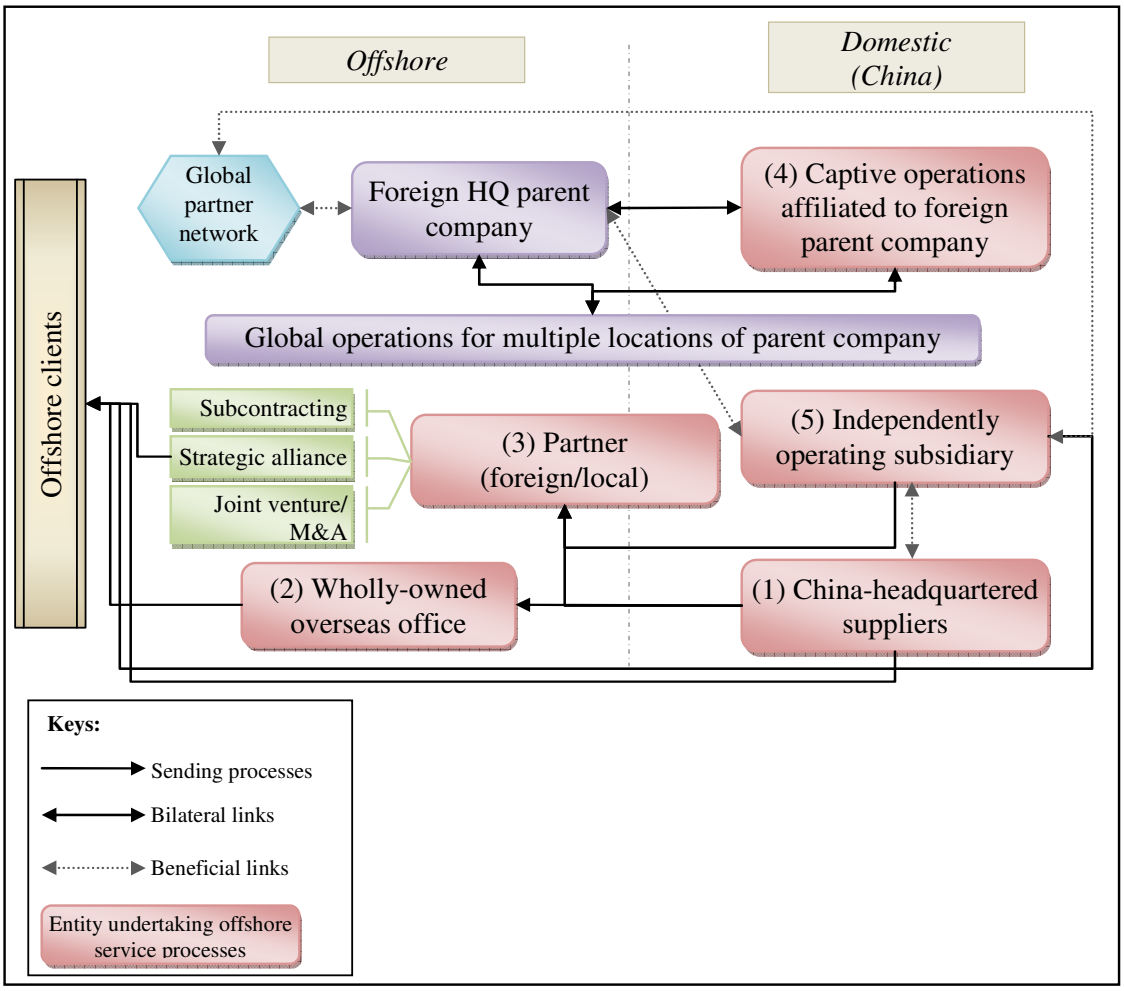



**Figure 7.2: Links to Offshore Clients of China-based Service Suppliers.**

### (1) Direct client links by China-based suppliers

With adequate capacity and developed connections to specific overseas markets, some suppliers take orders directly from offshore clients. In some cases, socio-cultural networks have facilitated establishment of business connections with offshore markets, particularly those with a large Chinese ethnic community or diasporas (Vespa, 2008; Du*, et al.*, 2009; Abbott*, et al.*, 2010). In a survey of 305 companies across the Asia Pacific, KPMG reported that most Hong Kong firms outsourced to China (61%) as well as within the city (86%), with just 4% going to India (KPMG & Economist Intelligence Unit, 2006). In the case of Singapore, the figures are more balanced, with 57% outsourcing to others in the city-state, 50% to India, and 40% to China. Yet, this might indicate the growing interrelationship between China and Hong Kong, and between China and Singapore, in terms of services sourcing. In our survey, according to Manager of FA-CHN-2, his company won the tender from Siemens Hong Kong for the latter's Guangzhou business in 2004. Another case in our survey is the Hong Kong-based electronic payment company FA-HKG-1's use of contact centres in Guangzhou and Shenzhen due to the language capabilities of these two Chinese cities.

Having direct links to offshore clients is however not just about client-vendor relationships, but actually involves a network of other direct and indirect relationships, as well as varied cross-cultural situations in terms of geography and corporate (Abbott*, et al.*, 2010). While Chinese suppliers are keen on maintaining long-term relationships with their clients, some offshore clients might only adopt a one-off transaction or short-term sourcing model to leapfrog between cheap locations to take advantage of their immediately accessible low-cost skilled labour. Therefore, at the present stage, seeking direct links to the GVC remains very challenging for many Chinese service suppliers that are predominantly small in scale and do not have the resources to develop deep relationships with overseas clients (Qu & Brocklehurst, 2003; Jarvenpaa & Mao, 2008), as they lack the experience to deal with the sophisticated demand from international clients. The CEO of BPO/IT/CC-CHN-C1, a BPO corporation with operations in Beijing, Shanghai, Kunshan and Guangzhou, and mainly serving Japan and the US in terms of overseas markets, alertly pointed out,

> In China, the software outsourcing enterprises that do well have the support of the same success factors. For example, hiSoft Technology's success relies on dealing directly with end users. Yet, most ITO companies cannot build up direct contact with the end users but only come into contact with such MNCs as IBM and Microsoft who serve the end users. This is the direct reason limiting a lot of outsourcing companies from growing bigger. *(Translated from a magazine interview by Analysys International, 2008)*

Some entrepreneurs and commentators believe, that by serving the expanding domestic market and learning from such experience, Chinese suppliers will be able to transfer their developed capability and move on to serve the more demanding overseas clients (e.g. Furniss, 2003; Wang, 2007). As discussed in Chapter 6, however, China's domestic services outsourcing market is still in its infancy and dominated by simple standardised processes, due to the recent start of corporate restructuring of domestic firms, particularly SOEs which have traditionally dominated the economy but maintained most of their processes in-house (CCIIP, CEIBS & CSORC, 2008; Tripathi, 2010).

Nevertheless, there have recently been observations about the increasingly sophisticated nature of Chinese consumers and important institutional reforms in certain industry sectors (Li, 2004; Jeffries, 2011; Atsmon*, et al.*, 2012), which will enable further decoupling of previously internalised processes, as will be further discussed in Section 7.3.3 on the existing institutional barriers.

As the relatively affluent middle class expands and domestic consumers have increasingly sophisticated demand in terms of both value and quality, the production is also getting more complex in order to satisfy the increasingly dynamic local needs (Sleigh & von Lewinski, 2006). Moreover, although the basic network infrastructure (re)construction of the vast number of Chinese government bodies has been completed, the information application systems remain largely isolated across departments; therefore, there is a huge demand for technological integration through the Internet and mobile networks in order to improve information sharing, according to an interview

with CTO Mr. Fung of Uwaysoft Beijing conducted by the China Software and Services Outsourcing Network (2010).

These progressive changes seem to offer optimism over the competitive advantages developed from home-grown demand for IT and advanced business services. The promisingly more sophisticated domestic market will likely trigger fiercer competition among service providers in China, both foreign-invested and domestically-owned, and therefore innovations to cater for the more dynamic needs of customers, pushing the suppliers to move from race-to-bottom to quality-based competition.

**(2) Overseas office wholly owned by China-headquartered firm**

To acquire a more direct reach to offshore clients or even end users, some Chinese domestic firms have adopted the strategy commonly phased as 'Going Out' (*zou qu chu* in Mandarin) to set up offices and/or R&D centres in major international markets (International Business Institute Research Group, 2007). For instance, four of the Guangzhou-based leading software enterprises have set up foreign R&D establishments in Japan and Hong Kong (Nanfang Daily Online, 2008). Another example is iSoftStone, a Beijing-headquartered ITO and BPO vendor founded in 2001. Having secured a few rounds of international venture capital investment, the company has established more than 10 offshore offices across Japan, Korea, the USA and Western Europe, with over 9,000 employees worldwide (iSoftStone Holdings Ltd., 2008; China Economic Weekly, 2009; Xiao, Yu & Gao, 2010).

The establishment of contact offices is aimed at maintaining close local contacts with (potential) clients and partner firms, the latter of whom would take orders from their local clients and sometimes further decouple and outsource the processes to China operating suppliers. Having a R&D centre in major overseas markets also seems a viable and ideal way for Chinese suppliers not merely to capitalise on global technology and talent resources which the country currently lacks, but also to obtain important local market information and analysis to tailor make solutions for offshore clients.

As one of the marketing functions, having a local presence tends to be a practical starting point for firms from emerging economies to serve offshore clients.

While requiring very high levels of commitment in terms of management and resources, this form of market entry offers the fullest means of participating in the market, and avoids the possible communication and conflict problems arising from partnership types of approach (Keegan & Schlegelmilch, 1999). The proximity and ease of access to business support would not only develop better understandings of the local customers' demands and preferences, but also build up some depth of client relationships in terms of integrity and trust (Qu & Brocklehurst, 2003), facilitating the provision of tailor-made services for overseas clients.

In our survey, Beijing-based IT-CHN-1 has set up a wholly-owned subsidiary in Japan which basically bid for tenders offered by large Japanese organisations and then sent orders to their Chinese centres for processing, according to their Vice-President. After the Chinese side of IT-CHN-1 completed various stages of R&D processes and submitted the finished processes back to the Japanese side, the latter would complete quality control tests. The Vice-President shared his views on the role and importance of their Japanese subsidiary in this way:

> Our company primarily relies upon our Japanese subsidiary and our senior staff members always go to Japan to conduct an extensive range of R&D activities, collecting and analysing information in Japan. Based on their analyses and reports, we strategise our business directions. *(Translated from telephone interview by author conducted in Mandarin in September 2009)*

From the client perspective, the comments by FA-HKG-1's CEO that a local contact point would be preferred might also well illustrate some of the offshore clients' views over the balance between offshore services delivery and local needs. Therefore, firms like CC-CHN-1 expressed that they aimed 'to maintain a physical presence in each country in order to understand the local market and perform to exceed expectations.'

### (3) Cooperation and partnership with foreign or local firms

Cooperating and partnering with another firm could range from joint venture, (partial) merger and acquisition (M&A), strategic alliance, to subcontracting. Each of these forms of cooperation involves varied levels of risks, legal binding and financial

commitments. Rather than relying on organic growth or greenfield investment, large fast-growing service firms in China, with strong entrepreneurial agility, financial support and in many cases government support, have actively engaged in these types of partnerships domestically and abroad (S. S. Chan, 2005).

Joint ventures in the IT and business industries have started to grow in China. For instance, SAP has established a joint venture R&D centre with approximately 150 employees initially just for Chinese localisation of SAP R/3 for the domestic enterprise resource planning (ERP) market, but it has subsequently become a low-cost development facility for SAP Global (Qu & Brocklehurst, 2003). Yet, the joint venture model is not limited to initiations by foreign MNCs. Home-grown firms are also embarking on JVs with foreign or local partners. A recent example is that Pansoft, a Nasdaq-listed Jinan-based enterprise software service provider, would set up a JV with two Japanese companies in order to enter Japan's mobile software outsourcing market (Yan, 2010). According to the plan, the JV would help Japanese electronics giant Sharp Corporation test 3G mobile software in Jinan.

Recent years have also seen a rising number of M&A cases, particularly in the IT arena, in which Chinese suppliers are 'going out' to acquire target markets and resources (Huaqiao Financial Outsourcing Research Centre, 2010). In order to expand the Japanese outsourcing market of embedded software development, Beijing-headquartered Inspur Group executed a strategic merger with Japan-based Shinwa Software in 2006 (International Business Institute Research Group, 2007). Other examples include HiSoft Technology acquiring California-based Envisage Solutions in early 2007 for the Japanese embedded software development market and San Francisco-based Echo Lane in April 2010 for the cloud computing market (Devott, 2010). The formation of strategic partnerships is not just with companies based in China's more established offshore markets, but also potentially with fast-emerging ones in developing countries. Another Chinese IT company Beyondsoft initially hired advanced expertise from the Indian outsourcing industry but later successfully acquired a medium-sized Indian enterprise Eastern Software System (ESS) so as to acquire their relatively mature outsourcing management experience and human resources, which is in fact the first successful merger between China and India's software outsourcing industry (Wang, 2008).

Instead of requiring rigid legal binding and substantial financial commitment, strategic alliance is a popular alternative for firms to enter a formal relationship with another party to pursue a set of agreed upon goals or to meet a critical business need. For example, GDS, a Suzhou-headquartered ITO supplier, and the Japanese SoftBank Telecom Corp. formed a strategic alliance in 2008 to jointly develop new Chinese data centre services aimed at Japanese companies, and begin offering one-stop shopping for managed services integrated with international network services (Global Data Solutions Limited, 2010).

Local service suppliers can also obtain (part of) foreign buyers' orders distributed by agents operating in the overseas market or domestic export specialist companies, or further subcontracted by upper-tier foreign or home-based suppliers, given the increasing ease of fragmentation of service processes. Small or medium suppliers can usually make use of these middlemen to get access to foreign markets. Although subcontracting in many cases is merely about channeling orders, suppliers could potentially make use of the opportunity to further develop longer term relationships with their contractors. In our survey, for instance, BPO/IT/CC-CHN-C1 had carried out some processing tasks for a foreign government through a partnership with a third-party firm rather than getting the tender directly from that government body.

Although this type of linkage provides local service firms with an opportunity to sell abroad, the upper-tier contractors actually have complete control over the distribution and subcontracting decisions. Thus, lower-tier suppliers usually acquire limited knowledge of the overseas market and may not be able to gain significant learning from their exporting experience or easily break out of their lower-tier status. Although the focus of prior research on the learning process of lower-tier producers in the sub-subcontracting model was on industrial production (e.g. Lehtinen, 1999, 2001; Bräutigam, 2006), the logic of the attempt to climb up the chain seems to be relevant to services processing as well.

Yet, some domestic service firms remain optimistic about gaining business from the expanding market. For instance, one of our survey respondents from IT-CHN-1 expressed the view that if there were not the presence of a vast amount of service suppliers in China, offshore orders such as those from Japan would not have

been sent to the country at all. He continued to comment that it was not uncommon for different suppliers to be responsible for different areas of the same outsourced project; therefore, there was cooperation and competition at the same time. This point of view indeed helps illustrate that suppliers at different capability levels might be able to target a specific spectrum of the services chain, even including processes further subcontracted by domestic or foreign vendors. This task division of labour might hopefully form a more comprehensive production chain within the country.

Overall, these types of strategic cooperation and partnership tend to offer viable alternatives for Chinese firms to establish links to the global services chain. However, having set up an inter-firm partnership, the firms would need to carefully handle and nurture such relationships involving cross-boundary as well as cross-corporate cultures.

**(4) Captive operation affiliated to foreign parent company**

Foreign firms have set up captive operations in China to tap into the country's enormous pool of skilled labour force to serve their parent company or global/regional operations, in addition to servicing the huge domestic market. The country has witnessed a growing number of captive centres that perform more sophisticated IT and advanced service processes, particularly after its WTO accession. Before this, for certain sectors, such as information technology and accounting, foreign investors were initially restricted to the option of joint venture but later are allowed to have wholly-owned entities. Examples of the prominent MNCs that have set up captive centres include Microsoft, IBM, Siemens, Nortel, GE, GM, Pfizer, Accenture, and Cisco, that have set up R&D centres, located primarily around Shanghai, Beijing and Shenzhen, and spanning across verticals including software, automobile, pharmacy and telecom (ValueNotes: Sourcing Practice, 2006; XinhuaNet China View, 2006). Although many foreign-funded R&D centres are still focused on application technology, some also conduct basic R&D work and have served the regional and even global markets.

Such Hong Kong-based companies as SmarTone and PCCW have established customer care centres on the Mainland, particularly in Guangdong, to serve their Hong Kong and other regional customers (Hong Kong Economic Times, 2008). In our survey, IT-CHN-2, providing business processing services, was initially set up as its US-based parent group's back-office operations centre in China, and at IT-CHN-2's

initial stage of business, the company was providing a wide range of IT and back-office services to the US headquarters and the global operations of other locations over the world. It was later developed into an independently operating company which exemplifies the fifth category of links, to be described in the next sub-section.

While the captive sourcing model helps foreign MNCs maintain rigid control over their operations in the host country, the latter tends to be constrained from acquiring the desired management and technological skills, as well as knowledge in client relationships and exporting, as it seems to be against the MNC's interests. Although the power of the lead firm is dominant, relationships change over time and new innovation opportunities emerge for the host country and suppliers willing to make the required investment (Altenburg, Schmitz & Stamm, 2008). While the build-up of higher-level capabilities seems to be limited to non-strategic areas, the offshoring of service processes by global MNCs is no longer confined to routine activities, but also includes more knowledge-intensive ones. This is partly because of their desire to tap into emerging markets with great potential, and partly because they seek to absorb specialised expertise in the 'global race for talent' (Couto*, et al.*, 2007; Manning, Massini & Lewin, 2008; Lewin, Massini & Peeters, 2009).

Despite the captive mode of operation, the host country's other stakeholders may still benefit from the establishment of indirect links to the GVC and potential knowledge spillovers through embedded human networks and through its cooperation with domestic universities, research institutes and even local suppliers. The opportunities for upgrading by strategising this type of partnerships will be further examined in Section 7.3.4.

**(5) Independently operating subsidiary under a MNC parent**

An independent subsidiary benefits from the parent company's global and regional network. Such a subsidiary can be created organically, or through merger, acquisition, completely or partially spinning off from its parent, or a mix of such. In light of our focus on China's links to the GVC, the subsidiary's parent could be a foreign or Chinese MNC, or even a joint venture between both, while such MNC parent maintains some level of control, in terms of, for example, business incorporation, assignment of the subsidiary's board of directors, enunciation of its business purpose, and other bylaw provisions of control (Thompson & Thompson,

2010). Compared to captives, independently operating subsidiaries tend to offer a more flexible structure that helps develop goals and strategies adjustable to fast-changing market demand.

Recent examples could be cited. For instance, Beijing NTT Data is a wholly-owned subsidiary of NTT Data (Japan) and a leading company amongst all NTT Data Group's China subsidiaries. It was originally specialised in the Chinese domestic market but has changed its policy to focus on offshore business by leveraging the parent's resources and after gaining adequate industry experience (Liddell, 2008). In our survey, primarily serving Japan, IT-CHN-1 worked for clients from the US, though not committed to a large scale, through their holding company. In another case, CC-CHN-1 signed with Dell's APJ (the Asia-Pacific and Japan region) in 2008 to provide technical support services, therefore successfully enlarging the scope of operation between Dell and CC-CHN-1 as global partners.

In some cases, the firms had initially served as a captive operation for their foreign-headquartered parent company, but were subsequently spun off and developed into a third-party outsourcing supplier. As mentioned in the previous sub-section, in our survey, IT-CHN-2 originally served its US-headquartered parent company and global operations of the latter. However, since its transformation into a stand-alone service provider, the company had expanded to cover more outsourced services for other international and domestic customers. Another famous example is the now global business and technology management MNC Genpact. Formerly known as GE Capital International Services (GECIS), Genpact began as GE's India-based global captive service unit (Bonasia, 2009). In 2005, it was spun off by GE and partially acquired by General Atlantic and Oak Hill Capital Partners as an independent business, currently with operations across 13 countries worldwide, including such Chinese cities as Dalian, Changchun, Shanghai and Beijing. However, Genpact retained GE as its major client constituting 42% of the former's total revenue.

There are many reasons for a parent company to spin off its business units, including but not limited to divestment from diversification, change in strategic direction, and seeking new areas of development that fall outside the main stream of the parent (Dahlstrand, 1997; Deloitte, 2010). If, for example, the subsidiary has expertise with a new type of technology, they may choose to leverage their parent's

manufacturing and distribution capabilities (Luo, 2001; Parhankangas & Arenius, 2003). The trajectory of subsidiary firms like IT-CHN-1 and IT-CHN-2 has suggested how the services provisioning of China has expanded and such category of suppliers could capitalise on their parent's resources to tap into overseas markets.

To sum up, this section has discussed the various types of links to the global services chain by the host country, i.e. China in the present study. We have seen that these GVC links tend to offer the receiving country promising windows to grasp possible upgrading opportunities. Even though smaller domestic suppliers might not be able, for example, to set up directly controlled overseas subsidiary for the establishment of local contacts, the range of GVC links still could provide different types of enterprises choice of connections with overseas clients. Yet, one should bear in mind that there are also a number of external factors that could determine whether a supplier can develop a particular type of link, which include host country market factors, political and socio-cultural factors, economic infrastructure, trade barriers, and home country factors (Ekeledo & Sivakumar, 1998). In relation to services offshoring, for example, suppliers are more likely to adopt entry modes that require high resource commitment when the cultural gap between their domestic market and the overseas market is negligible. They may also need to establish an export subsidiary in a targeted offshore market with weak marketing infrastructure, for instance, when there is no good local agent or when distributors are already committed to other firms.

### 7.3.2 Internal Barriers: Human Resources and Institutional Settings

In spite of the available channels for Chinese suppliers to link to the global value chain in services for acquiring desired learning experience, there are indeed a number of barriers that could hamper the country from moving up towards a better competitive position in the global economy, for example, human resources, institutional, technological and management weaknesses. While some of these aspects have been briefly discussed in the previous sections, we shall focus on two of them, i.e. the human resources and institutional constraints, which tend to be most relevant to the country's services development and upgrading.

**Human resources constraints**

Unlike manufacturing where the standard of the final product tends to be easily predictable before purchase, the outcome of a service task, as discussed in the section on Hong Kong and Singapore, depends heavily on aspects of the performance of the labour that are less predictable. Therefore, to successfully develop services and move up to higher value-added processes, the quality of the labour force in performing such work is a crucial factor. Building on the earlier discussion in Chapter 6 of the significance of labour supply, skills and employability for China's competitive advantages in the services industry, this section analyses from the firm-level perspective the constraints on availability of such human assets.

With regards to human resources development, there have been heated debates over education-job-skill mismatches not just in China but also in other parts of the world. While some people argue that the knowledge taught in colleges and universities is not relevant to the changing job market requirements, others believe that the greater problem, in relation to higher-end services, is the lack of candidates with adequate contextual knowledge (rather than simply technical skills). Concerning the labour skill requirements, CEO of BPO/IT/CC-CHN-C1 explained that because their frontline staff did not need to have any direct communication with their client firms, the company would hire workers having completed three years of junior college education followed by practical training. The company's Chief Information Officer (CIO) also illustrated,

> We make sure that we have the right people to do the right job. Let me tell you a story. At one time, I visited a client of ours, and I walked into their office. I saw a girl doing the key punching… the invoice into the computer system. So I asked our client, who's the CFO for that enterprise, what the girl's education background was. Guess what he answered: He told me she graduated from a top 2 university. […] I asked him, "Does she do this all day long?" His answer is yes. So I told him, "I bet you $100. In three months from now, when I visit you again, that girl won't be here." Actually, that is the biggest problem facing companies in China, especially foreign multinationals, because just as routine as that,

> not necessarily all because of the compensation, but because the type of work is not rewarding. They don't have the right people to do the right job. So at [BPO/IT/CC-CHN-C1] when we use the process to simplify jobs, and make it so simple, we could afford to hire people with less education background to do the job, for example, vocational schools, technical schools. These people are more stable and the job to them is more satisfying, and at the end of the day, they would stay longer with us. *(Transcribed from online podcast interview by C. Wu, CFO China, Shanghai, January 2008)*

The story told above points to several critical issues of HR development and deployment facing entrepreneurs in China. At first glance, it appears to be a mismatch between education and jobs. As the above interview quotation illustrates, there seems to be a problem in the country that university graduates are hired to perform repetitive tasks in the business services fields, which likely causes low motivation and thus high turnover rates. The annual employee turnover even in some of the big businesses could sometimes reach 30% in China, while in the USA 11% turnover is considered too costly because of the expense of recruitment and training, according to the China Market Research Group (Rein, 2010a).

However, on one hand, in spite of the increasingly large supply of university graduates, executives including most of our Chinese survey respondents have complained that their biggest challenge for growth in China is recruiting and retaining talent. One of our interviewees further elaborated that 'We often say that China has an abundant supply of educated labour or talents. But over time, when they leave universities or colleges, they are not immediately ready for their work.' Although the inadequate immediate workability of graduates is not a unique problem merely for China, some commentators have suggested the Chinese education system, which is characterised by, for instance, early selection of major subject, examination-oriented teaching, learning by rote and limited classroom interaction, has hindered the development of real-world and innovative skills of Chinese students (Rein, 2010b; Wadhwa, 2010a). On the other hand, this could be a skill-job mismatch in that the knowledge and skills acquired in the college are not used in the job (Allen & van der Velden, 2001; Wolbers, 2003).

As examined in Chapter 6 on the human assets of China, as well as Hong Kong and Singapore, all the three economies have experienced certain constraints in this area of development. In China, although the overall supply of university graduates is rising significantly in recent years, the employability in terms of their international exposure and contextual knowledge tends to require considerable improvement. In contrast, the two city-states' workers are generally regarded attractive with regards to their soft skills, such as project management skills and international experience, but the supply of such highly skilled workers is falling short compared to the rapid growth in the services industry.

Turning back to China, the reality could be more complicated as its service jobs might still be reasonably higher paid, as compared to other alternatives that university graduates could get, especially when they are not willing to work for low wages in blue collar positions (Rein, 2010a). In this case, even though they are not satisfied with the job nature, they tend to remain working on repetitive tasks for the stable income and work environment. Nonetheless, prior studies on developing country labour force capabilities usually emphasised technical and language skills in the human resources mismatch debate (e.g. Low, 1998; Heckman, 2003). But our survey has found that the employers were equally aware of the moral qualities of their staff, for example, integrity in handling sensitive data. As a result, highly skilled workers are still needed to handle irregular management and urgent matters. Since such soft skills and personalities as good moral attitudes are difficult to prove before deployment, highly-educated candidates are usually assumed to be more employable compared to those from lower education backgrounds.

Furthermore, the case in which BPO/IT/CC-CHN-C1 deployed the assemblisation way of processing data, such as inputting customers' personal information on credit card application forms, could actually help preserve confidentiality and ensure data security. On one hand, the increasing adoption of advanced technology in the service processes seems to make the character of individual workers less relevant. On the other, the firms might tend to avoid relying on their employees for precision and rather treat them like machines. This strategy of manufacturising service processes will be further elaborated in Section 7.3.3.

From the education and skills perspective, these human resources issues are however not just a distinction of higher educated (university graduates) versus lower educated (vocational or college graduates). There are differences between top universities (such as those listed as the national key universities by the central government) and lower rank or even 'excluded' ones. Such variation is more noticeable when comparing with the geographical distribution of higher education institutes and graduates, as well as between different kinds of jobs even within the same sector, as examined in Chapter 6. The impact of geographical discrepancies on the country's division of labour will be further discussed in Section 7.3.5.

**Institutional barriers**

In addition to its human resources constraints, China's upgrading potential may be hampered by its institutional barriers. A World Bank study has suggested that

> [China's] current bottlenecks in the institutional reform process, combined with certain aspects of national industrial policy, today encourage an enterprise-level corporate structure that severely limits the manner by which Chinese firms compete globally, the extent to which they can upgrade, and the likelihood that they will challenge the multinational firms currently exerting the greatest control over globally networked production. (Steinfeld, 2002, p. 4)

Here we shall focus on some of the most important characteristics shaping today's China market system that are relevant to the development of its IT and business services, including inefficiency in the Chinese financial system and local market fragmentation.

Some of the Chinese service suppliers in our survey raised concerns over limited financial support not only from the government but also from the domestic financial lending system. Regardless of continued reforms, the problem of China's financial system has frequently been documented in the literature and media (Li, 2004; Ge & Qiu, 2007; Batson, 2010; Oxford Analytica, 2010; Poncet, Steingress & Vandenbussche, 2010). It has been dominated by banks, while state-owned banks control most of the market share. Despite the central government's recent implementation of regulations on banks to make loans based on commercial criteria,

the problem of bias towards large firms with some political connections still persists, which might be more apparent in the services industry, as evident in a study by Firth, *et al.* (2009).

Nevertheless, China has been seeing rapid changes at many levels. Not only there are recently signs of a shift towards market-based financial transactions (Boyreau-Debray & Wei, 2005), wider sources of risk capital seem to offer fund for private enterprises and start-ups (Tripathi, 2010), particularly those in the fast-growing sectors, such as IT, R&D, green tech and pharmacy. Yet, most of such investment comes from international venture capital firms and investment banks, or from state-driven top-down R&D funding; while the domestic system of venture funding is still underdeveloped (Kevin Lee, 2010; Maidment, 2010).

Added to the above distortion might be the creation of national (or regional) champions. By deliberately selecting a list of 'champions', the government tends to foster national oligopolists or monopolists that are large vertically-integrated business groups that encompass industries from upstream to down, dominating the home market and capitalising on state support to expand in the global market (Steinfeld, 2002; Cimoli, Dosi & Stiglitz, 2009). This not only could potentially widen the gap between leading enterprises and private SMEs and start-ups by limiting private enterprises to compete on purely market terms, but also could stimulate the duplication of entities of 'national' pillar industries in virtually every province and municipality, as the national policy is passed on to individual local governments to carry out (Steinfeld, 2002). In September 2010, for example, the State Council approved the Principle entitled 'The State Council's decision on accelerating the nurturing and development of strategic emerging industries'. Following the announcement, 29 provinces and cities across the country have introduced their individual strategic plans for emerging industries, most of which are however found identical in terms of policy needs. Such copycat policy approach could potentially result in many locally duplicated industrial structures (Geng, 2010), and thus discouragement of appropriate local policy and long-term local sustainable development (Chien, 2008).

The last (but not least) institutional issue to which we shall draw attention is local protectionism and market fragmentation. One of our Shanghai-based survey respondents from the F&A sector pointed out that it would be difficult for the Chinese

local accounting firms to do cross-provincial business. This is not only because they lack the type of nationwide networks that the 'Big Four' accounting and consultancy giants have established primarily through M&As, but also due to the geographical and institutional differences between regions and provinces. Indeed, though Chinese-style decentralisation was intended to better suit practices to local circumstances, an outcome has been growth of 'buy local' rules to protect local producers (i.e. within the particular municipality) and biased regulatory enforcement for outsiders seeking to enter the local market (Yin & Cai, 2001; Steinfeld, 2002). Such administration-driven local boundaries create an additional obstacle for domestic suppliers seeking to develop a nationwide capacity, particularly if they lack a strong financial and political background.

Overall, while there are growing opportunities for China to develop its services industry and offshore markets, via various forms of GVC linkage; policy-makers and enterprises soon need to address the potential constraints with regards to human resources and institutional issues examined above. To overcome such barriers, firms have pointed out and adopted various strategies to develop their capabilities and upgrading potential, as will be analysed in the following section, drawing both from our survey and other documentary materials.

### 7.3.3 From Extending Capabilities to Acquiring Capabilities, and Strategies for Upgrading

In face of the combination of expanding opportunities and fast-developing competitive advantages, with the various growth barriers discussed in the previous sections and in Chapter 6, China has attempted to move up through the services chain by first extending its present capabilities and then developing new ones. Chinese suppliers have adopted various planning and processing strategies, particularly the manufacturisation approach to processing services work, so as to broaden their current scope of performing lower-level functions. With wider spans of services work, they tend to be able to develop more specialised industrial expertise and extend such capacity to acquire new areas of capabilities, particularly by emphasising self-motivated innovation through strategic corporate-institute-government partnerships.

**Manufacturising service processes to improve process capabilities**

To plug into the global services chain, Chinese service suppliers have taken advantage of the ever-advancing technologies that facilitate the reshaping of corporate structures to manufacturise service processes that previously required complex capabilities that they might not have acquired.

It has been common in the contact centre industry to adopt advanced ICTs, as illustrated by the case of CC-CHN-1 who hoped to take advantage of expertise in the conception of scripts and automated customer dialogue to optimise human interaction and leverage automation for low value tasks. Marketing Director of BPO/IT/CC-CHN-C1 further described how the company had 'manufacturised' or 'assemblised' the processing of, for example, insurance claims and credit card applications in great detail:

> When documents in image form from different fields, different customers and different categories enter [BPO/IT/CC-CHN-C1's] processing centres, the system will automatically split and minimise the information to the field level, place the tasks into a "work pool" for further determination, and package the job based on the type. Operators are to click to apply for job packages, each only doing one part, such as name, address and telephone number, and then transmit back to the "work pool" where the production end of the system will promptly combine all the information into one table distributed to customers. Unlike the single assembly line of manufacturing, the biggest advantage of this service processing system is the parallel production. If a document has 100 field spaces, the system can even automatically split it into 100 work packages, while 100 individuals input at the same time. The completion of such a document only takes a few seconds. Even if there is a delay by an individual, other operators will quickly apply for the package, which can make sure the whole production line will not be stopped. The system will also automatically adjust priority according to the customer's request on timing. Each operation has two people working simultaneously, while the system automatically compares the results. In case of difference, it

> will be passed to a third operator to check to avoid errors. *(Translated from magazine interview by Li, 2007)*

In other words, the functions or part of the functions of a division of the client enterprise are outsourced, and the third-party service provider is to perform repetitive tasks on a continuous basis, rather than isolated transactions. BPO/IT/CC-CHN-C1 explained that they had used a business model similar to factories in Dongguan, with such elements as several shifts round the clock and the clock in/out system for staff attendance. In the case of financial service processing, instead of having one worker processing the whole invoice, the service provider would assign, with the use of automation technology, several employees to collaborate, each focusing on a piece of the information. All this would combine to result in faster speed and much shorter processing cycle time, thus resembling a virtual assembly line of mass production. They emphasised the use of technology for *simplifying*, *standardising* and *mass producing* their clients' processing needs, and claimed to be a 'giant data factory' (Analysys International, 2008).

Yet, the decision makers have also realised the challenges in further moving up to higher value-added work, as what they are focused on is to standardise the tasks which is in the opposite direction to the practice of more sophisticated processes that could bring them higher value in receipt. As expressed by CEO of BPO/IT/CC-CHN-C1 in our interview,

> Our emphasis is to standardise the services. The more value-added, the higher skill sets you need, and the less standardisation the job would be. We have to work out… the right approach to the higher value-added services. That's the key challenge for us. *(Transcribed from telephone interview by author conducted in English in September 2009)*

The above comment has illustrated the choice between price competition and quality upgrading. It is however not merely about the processing task itself but indeed concerned with the rising sophistication at the strategic level. The increasing adoption of automation and assemblisation of service processes also interestingly reflects the process of 'deskilling' labour as observed and conceptualised by Braverman (1974) with regards to the work of the worker not just being done by machinery, but also the

worker being controlled as if he or she is part of the machine. Such 'deskilling' process is not simply an outcome of machinery automation, but more importantly a result of the changing nature of management in larger corporations. The assembly-line version of processing documents as described above has clearly illustrated how each act in the work process was designed precisely with a set of tasks and routine rules by management, while the thinking process was removed from work.

The strategy of manufacturising service processes tends to be feasible and cost-effective to meet the just-in-time demand from clients, given the limited resources of developing countries and the increasing competition from other fast-emerging players. Yet, for such strategic assemblisation to be designed and put in place, rather than mere adoption of a certain piece of technology, expertise capable of overseeing integrative technologies and enterprise architecture management is required. Such expertise however tends to remain sticky to a handful of global cities predominantly located in First World countries, despite the rapid rise of some major Third World cities in the recent decade. Therefore, for developing countries including China to meaningfully move to a higher ground and achieve sustainable upgrading, it is vital for their firms and people to take good control of the strategic part of work in the global shift of services production.

**Self-motivated innovation**

Strategies like manufacturising service processes could help suppliers extend their current capabilities to carry out a wider scope of functions. The expanding capacity would then facilitate their understanding of the processes involved in various service sectors, thus providing opportunities for them to develop specialised industrial expertise. To achieve higher value-added, suppliers could subsequently acquire new capabilities and engage in self-motivated development. IT-CHN-1's VP was aware and expressed,

> There are definitely some constraints because offshore services outsourcing is controlled by other people. Few products are self-motivated development. Most are based on the clients' demands and requirements. We are only to help our clients complete the tasks. There is the system design and execution to be finished by the client side. We are just responsible for the downstream of the

> whole software production chain. *(Translated from telephone interview by* author *conducted in Mandarin in September 2009)*

To grasp more critical experience in higher value-added processes, the company had also been trying to do some detailed design, which was considered to be helpful in nurturing their staff and acquiring important experience. As entering the domestic market, IT-CHN-1 would perform self-designed/developed products and provide them to clients. Their VP was optimistic that,

> Throughout this process of development and service provision, our workers will be nurtured. With these nurtured personnel and our acquired experience and skills in self-motivated product development, we can transfer these capabilities to our overall services outsourcing business… to provide better services to overseas clients. This could be our new opportunity that I would expect in the coming future. *(Translated from telephone interview by author conducted in Mandarin in 2009)*

By proactively analysing information on the client markets, albeit not necessarily being physically proximate to them, the service providers could initiate, design and make products that could meet the fast-changing taste of consumers in more sophisticated markets (Cornish, 1997; Ramarapu, Timmerman & Ramarapu, 1999).

A brief look at the famous Indian BPO company OfficeTiger could facilitate us to understand how a developing country supplier has grown into a global corporation with several thousand employees worldwide today. Although OfficeTiger was founded by two Americans who were educated in the US and had international work experience in the banking industry, the company had grown from scratch by setting up in Chennai in 1999 and hiring well-educated hard working Indians (Kripalani, 2005; Warrier, 2006). OfficeTiger was capable of envisioning the rising demand for BPO from the West, and even more so after being acquired by R R Donnelly and Sons, a giant US firm, consequently allowing the former access to a global network of over 600 offices and a huge human resources base.

The Indian experience has been inspiring. In fact, there has been growing cooperation between China and India at both institutional and firm levels (Sekhar, 2005). Seeing the exploding Chinese domestic market, giant Indian vendor firms such as TCS, Infosys and Wipro planned to shift at least 10% of their new outsourcing projects to the Chinese cities of Dalian and Chengdu (Mishra & Iyer, 2010). An increasing number of Indian players has indeed been attracted by the fast-expanding domestic market in China. Their entry to China is also based on visions that the latter will offer capabilities to supplement what India lacks, such as a great supply of Japanese and Korean-speaking skilled workers to cater to the two markets that Indian suppliers now aim to open up after their success in the US and Western Europe.

Although many innovations performed by Chinese domestic enterprises and start-ups tend to be merely copycatting Western technologies, these are beginning to change as the people involved become more entrepreneurial, beginning to truly innovate and commercialising their ideas into new products (Denlinger, 2010; Wadhwa, 2010a).

As mentioned in Section 7.3.1 (1), the diasporic networks have been influential in the economic progression of fast-emerging countries. In the case of India, not only its diaspora, long-established successfully in the US, has contributed to the flow of talent back-and-forth between India and the US, but also the reverse diaspora returning to India has been fuelling the boom of the IT and business services industries in the country. For China, returnees after gaining significant managerial and technological experience in the Western world have become entrepreneurs themselves or occupied senior management positions in large domestic businesses. They have played a growing role in transferring knowledge to locals about 'how to build world-class companies and how to innovate' (Wadhwa, 2010b).

In addition to product innovation, process innovation is another approach for Chinese enterprises to move up the value chain. The strategic disaggregation and reorganisation of processes not only enables cheaper and larger-scale service deliveries, but also improves flexibility and sophistication for a given amount of human input. The manufacturisation of service tasks by BPO/IT/CC-CHN-C1 illustrated in the previous sub-section could therefore be viewed as an illustration of process innovation, as the company sought to develop an efficient financial processing system. In so doing,

the firm undertakes critical process review and adjustment, and realises a limitation or weakness in a particular process or procedure that may hinder the firm from meeting the fast-moving market demand and achieving robust development (Barras, 1986; Ettlie & Reza, 1992; Davenport, 1993). Thereby, the management attempts to recreate and improve it instantaneously, typically through adopting advanced information technology.

**Strategic corporate-institute-government partnerships**

In spite of the desire to upgrade through innovation, many domestic Chinese firms have limited capacity in realistically pursuing the above two possible routes to move up the value chains among others. To overcome such resource constraints, as described in Section 7.3.1, some Chinese suppliers have cooperated with other foreign and local firms via various inter-firm cooperation approaches, including joint venture, M&A, subcontracting and strategic alliance, to mutually strengthen their competitiveness. Meanwhile, already presented in Chapter 6 are the government policies on services outsourcing that are intended to offer local suppliers financial and institutional support. But here we shall assess why such corporate-institute-government cooperations are practical and how they could help improve the capabilities of Chinese players.

Take R&D as an example. For China, although it might initially be the push by the government policy in the hope of acquiring foreign technology and expertise and the need for adaption to local production process, alongside the usual cost advantage, foreign MNCs have increasingly set up large-scale R&D centres in the country (Gassmann & Han, 2004). These facilities not merely serve the national market, but also progressively engage in the wider regional market and product R&D. The study by Chen (2008) also argues that, due to the fast-expanding and increasingly dynamic market in China that desires more quality products at lower prices, the shortened product life-cycle has forced MNCs to upgrade their R&D facilities in China.

In addition, notwithstanding its tight control in the captive model, the captive centres of foreign MNCs normally do not work within closed walls in the host country. Instead, they increasingly embed their research in the local innovation systems through joint-research labs, joint-research projects, and internship programmes (Chen, 2008). The increasing cooperation between the domestic universities and the MNCs seems to

create an opportunity of informal knowledge spillover through embedded human networks and through the establishment of new technology communities (Chen, 2008, p. 639).

As services outsourcing prospects grow in China, service providers that are going global are actively seeking global delivery capabilities (Tripathi, 2010). Due to their current limited global reach, they are looking for foreign partners that can help them deliver services. While the Chinese vendors are keen to seek outsourcing work from and cooperation with large foreign MNCs, including those India-based, such as IBM, Infosys and TCS (Ribeiro, 2007; Wang, 2008), larger firms have also been actively engaged in M&As, as discussed in Section 7.3.1 (3), in order to achieve the learning and leverage strategy. The following CEO's comments would make clear the current challenges and possible strategies for Chinese service suppliers to move up the value chain:

> Going after the international market, there're two challenges, maybe three… Number one would be client relationship. In the last few years, our client relationships, mostly in China, or the region… we need to work hard… higher-level relationship… overseas… Secondly, language would be a challenge. Although it hasn't been yet for us, we have to… to climb up the value chain, we have to handle some more complicated processes, which may require us to have dialogues with the clients, so that will pose a big challenge to our staff. Their language abilities… Thirdly, the processes in China, even for MNCs China operations, are different from other countries, so we need to develop and build expertise in those areas, as we shift our market focus to overseas. […] what we are going to do is we will not work or tackle these challenges all by ourselves… that's why we want to do that mergers and acquisitions with people who have already had this kind of relationship, already understood the processes, already mastered the languages. That will help us avoid those outside investments… investment in time and resources. *(Transcribed from telephone interview by author conducted in English in September 2009)*

It is however common that those firms that have already developed certain capabilities especially concerning the links to the global market and offshore clients are usually larger in scale and MNCs. In terms of inter-firm partnership, these larger firms operating transnationally in turn would normally prefer to join firms of similar size or with adequate supplementary capabilities, be they domestically-based or foreign-owned.

In relation to this observation, firms in our survey pointed out that the lack of in-depth understandings of the market and their potential clients has prevented them from getting more complex work from foreign buyers. They demanded some intermediation from related government bodies and industry associations, both at home and abroad, to bridge local suppliers with overseas clients. This is because they found it difficult to get up-to-date market information and keep constant close contact with (potential) clients due to their limited capabilities. These coordinating institutions, for instance, the Ministry of Commerce, the Ministry of Information Industry, the China Software Industry Association, and other high tech development zone- or software park-based organisations, tend to have more resources in developing contacts and relationships with overseas investors and clients.

In our interview, Vice-President of IT-CHN-1 cautioned that 'enterprises may not be able to grasp the scattered information comprehensively themselves, so these associations can help collect and provide such information to them,' and these public agencies could serve as a bridge to guide enterprises to work following the direction of the government policies as they normally have direct contacts with the government bodies. Vice-Dean of SI-CHN-1, a government-supported research and training institution, explained,

> [We are] providing an interface for business between overseas services outsourcers and our Chinese recipients. These Chinese recipients are getting eager to know more about the requirements of the outsourcers; whereas the North American, European and Japanese outsourcers are trying to communicate more with and proposing their requirements to the Chinese service suppliers. *(Translated from personal interview by author conducted in Mandarin in September 2009)*

SI-CHN-1 was established in 2006 under the leadership and financial assistance of the Ministry of Commerce, Shanghai Municipal Government, and Pudong New District Committee and Government. The Institution is headquartered in the designated high tech Zhangjiang development zone in Shanghai, and has training divisions across the Yangtze River Delta region. It is specialised in both research and workforce training in six major areas, including software and IT, biomedicine, modern agriculture, financial services, science and technology entrepreneurship, and creative culture. With the push of the government, there have been a growing number of such institutions being set up across the major economic regions in the country. Other examples include Beijing Association of Sourcing Service headquartered in Beijing's Zhongguancun Software Park, China Call Center & BPO Association with offices in Beijing and Shanghai, and Chengdu Association of Sourcing Service.

Notwithstanding the expanding number of these kinds of services outsourcing-related institutions, what the firms generally expected would be stronger coordinating efforts between and among the related government bodies and associations. This is understandable given the sheer scale of the country, with layers of government hierarchies, each possibly putting forward different policies, although which might not be in totally contrasting directions. While these supporting institutions were usually initiated by the government, they could also be set up by the private sector after gaining the approval, institutional backup and funding by the government.

In the case of SI-CHN-1, the Vice-Dean asserted that they had extensive contacts with government departments, service suppliers, universities, research institutes and the like. On one hand, their work was focused on human resources development, including new-comers and on-the-job training of personnel specialised in services outsourcing and R&D, and research projects on HR development in services outsourcing in China. On the other hand, they had cooperative efforts with enterprises both domestically and abroad. For example, they hoped to provide an effective platform for European firms or outsourcers and China-based suppliers by holding such programmes as annual forums. They were nonetheless aware that these types of promotion and training efforts had not had a long history in China and remained in the process of acquiring experience. Indeed, the sheer scale and systematic organisation of Infosys' training institution in India was comparable to the size of Beijing's Tsinghua University.

In general, China have not had equivalent workforce-development practices, which might be a worrying sign for the country to moving on to higher value-added work, despite the continual upgrading of its infrastructure, universities and research facilities (Wadhwa, 2010a). Comparatively, India has succeeded at building an innovation and R&D capability, with its private sector proactively re-educating its skilled workforce.

### 7.3.4 Geographical Variations and Spatial Division of Labour

The above analysis has shown some indications of discrepancies across different spatial levels. We can generally identify the following key aspects of internal geographical unevenness with regards to China's development of the services industry in general and offshoring/outsourcing in particular. The geographical unevenness is not only concerned with the contrasts between coastal and interior areas of the country, but also the agglomeration economies available in specific city-regions. Such discrepancies are also observed across different sectors pertaining to their uneven development in different geographical areas.

First, the links between China and other countries do not span evenly across the country. Northeast China is inclined to have closer connections with Japan and Korea, while Taiwan and Hong Kong are inclined to the southern part. This is due to their different historical and cultural affinity, as discussed in Chapter 6 as well as earlier in this chapter. Moreover, while it is obvious that ITO and BPO are concentrated in the coastal regions, such imbalance is even more noticeable at key growth poles in the country. Beijing, for instance, has contributed 30% of the total Chinese outsourcing revenue, of which nearly half comes from Japan and about 45% from the US and Europe (Verma, 2009). This is related to the next aspect as follows on the regional discrepancy within the country.

Second, the GVC links described earlier in Section 7.3.1 are not evenly spread across the country, but instead fall stronger upon key nodes. There is a differentiation between upper-tier and lower-tier regions and cities. As discussed in Chapter 6, while the major cities like Beijing, Shenzhen and Shanghai have a clear first-mover advantage (Sun & Wen, 2007), second-tier cities including those officially nominated as the national outsourcing bases, such as Dalian, Guangzhou and Tianjin, are also developing rapidly based on their unique competitive advantages (Geoff, 2007; Ian,

2007). This latter group of locations, albeit lacking the remarkable agglomeration effects that the first-tier cities enjoy, have still attracted a considerable number of service suppliers to set up large-scale operating centres. Some of our survey respondents pointed out that, while they could take advantage of the large pool of skilled labour force in lower-tier cities, such as Kunshan and Chengdu, to improve the capacity of processing lower value-added labour-intensive work, it was also a strategy to balance out the rising cost of maintaining the headquarters in Beijing and the like.

Although the trend of services business spreading to lower-tier cities seems promising, there is still a deep discrimination among this group of cities. Cities close to the first-tier regions, such as Suzhou and Kunshan, and those already established themselves as some of the most populous cities in the country, such as Chongqing and Chengdu, have leveraged a mix of factors to develop their IT and business services in recent years. For example, Chengdu, capital of the interior Sichuan province, has developed new air, road and rail connections to tie the city to both coastal China and the rest of the world (Kotkin, 2010). Boosted by the new infrastructure and facilities, alongside its substantial supply of young skilled graduates, among other factors, the city has allured an increasing concentration of IT firms such as Dell, NEC and Cisco.

With a large-scale operating centre in Kunshan that currently housed more than 2,000 staff, the CEO of BPO/IT/CC-CHN-C1 commented,

> This Kunshan site will be very critical to our growth in the next few years because Kunshan is strategically located next to Shanghai. However, the cost there is much lower than Shanghai. We have had a detailed study, and hope we will be able to accommodate ten thousand staff in a few years' time. […] Actually [the government of] Kunshan is more supportive compared to the big cities. *(Transcribed from telephone interview by author conducted in English in September 2009)*

However, without the environmental advantages as their counterparts, other second-tier cities located inland and less developed, such as Daqing, Changsha and Hefei, which are nonetheless also designated as 'national outsourcing bases', are much less connected to the global services chain. The services industry of Hebei Province, for instance, accounted for only 7.6% of the provincial total FDI in receipt, as

compared to the national average of 31.6% (Jianguo Zhang & Wan, 2008). Foreign investments into its banking, insurance, technology, health and other sectors even remain blank. What is more confusing is that the designated services outsourcing base cities and even those not (yet) nominated have been making claims to be among of the country's most promising hubs, such as, for software development or biopharmaceutical R&D. While some of them are truly competitive in what they have declared, others are merely in the early stage of development.

Yet, these other lower-tier cities with weak GVC links are expected to build up their services sectors by grasping the prospects that more and more IT and routine corporate functions will be outsourced from large enterprises in their strong manufacturing and heavy industrial base. Daqing, for example, attempts to focus on service processes outsourced from their immense petroleum engineering base (Jianguo Zhang & Wan, 2008).

In general, we have seen that each major region has its own competitive advantages, potentials and constraints. Since we did not undertake an in-depth individual investigation into and compare each region and city, we could not conclude which of them should make which particular strategic choice of capabilities creation and re-creation for a route up the value chain. We have however clearly pointed out that the first-tier cities including Shanghai, Beijing and Shenzhen have developed to an extent that they should focus on serving as a window between China and other parts of the world, and playing as a leader in driving the upgrading process of the country. In doing so, there has been a trend that lower value-added routine service processes in different sectors have been shifted to lower-tier cities around these key nodes as well as to interior metropolises like Chengdu and Chongqing.

In addition, although there has been a strong push by the central government to develop the services outsourcing industry, and many local governments have enthusiastically responded to the former's policy initiatives, we could not yet conclude such policies have driven any critical long-term success in the country and different regions' capabilities development, and we could neither prove whether the potential result of local copycat policies and infrastructure development would hamper the upgrading progress.

On the whole, we have examined the various possible channels that Chinese suppliers could take advantage of to develop links to the global services chain. These range from direct to indirect and from foreign to domestic-directed relationships, with varied levels of resource commitment. Weaknesses in human assets development and institutional structures might however create significant barriers to developing desired GVC links and providing higher value-added services to more sophisticated overseas clients. In view of the growing IT and advanced business services demand, Chinese service suppliers have attempted to extend their present capabilities to encompass a wider scope of service offerings, based upon which they tend to be able to develop more specialised expertise. By further realising the new areas of capabilities, they could potentially upgrade to higher-end functions through self-motivated innovation and strategic partnerships with other policy and industrial stakeholders. Nonetheless, throughout the discussion on the GVC links and potential constraints, we have noticed strong spatial unevenness in China's services development trajectory, which has been further assessed in the above section. To summarise, these geographical variations could be observed in relation to global and regional connectivity, supply of skilled labour, and concentration of industries, institutions, foreign and domestic MNCs.

## 7.4 Links between China, Hong Kong and Singapore

We have discussed firm-level services offshoring activities, together with upgrading potentials, constraints and strategic choices in turn for Hong Kong, Singapore and China in the last two major sections. We shall now consider the relationships between the three economies through the lens of services offshoring in the global value chain. Although certain first-tier Chinese cities are growing very rapidly to catch up with other global cities, Hong Kong and Singapore as comparatively mature global cities in the Asia region could still provide significant linkage and learning resources for China. A report by KPMG on China's emerging role in global outsourcing has clearly highlighted the relationship between Hong Kong and Mainland China:

> Chinese vendors are beginning to tap the international business hub of Hong Kong to bring in business from banks, insurance companies and law firms. Hong Kong offers several key advantages, as an avenue for raising funds, a hub for project

> management and a centre of management support offering understanding of international business requirements and expectations. There is also an opportunity for Chinese vendors to provide lower-cost back office support to other local Hong Kong companies. (KPMG, 2009, p. 16)

This indicates that Hong Kong as well as Singapore not only remain an attraction to Mainland China in terms of the two city states' concentration of both MNCs and vibrant SMEs with close links to the global production network. The two economies also offer important support for Mainland Chinese enterprises that are keen to grasp the enormous opportunities in both foreign and domestic markets but still lacking sufficient understanding of efficient business models that can work for both 'worlds'.

Hong Kong and Mainland China, especially the Pearl River Delta region, have been working in a model labelled as 'front shop, back factory' since the 1980s, in which the former had transferred most of its labour-intensive manufacturing work to Mainland sites and has increasingly specialised in advanced producer services, whereas Mainland China has strived for its industrialisation thanks partly to a substantial amount of FDI from Hong Kong (Sit, 1998). At the present stage of the global shifts in services, the Hong Kong-PRD region has again shown another version of 'front shop, back factory' in which Hong Kong is focused on the higher value-added knowledge-intensive service processes, while the Mainland counterpart works as a giant 'data factory'. A recent study by Zhang (2010) has illustrated the cooperative model of Hong Kong and Shenzhen in the software industry, in which the former with more than 700 software firms gets orders and sends the development tasks to their 200 plus branches in Shenzhen. However, this cooperation model is not static, and could change radically if Hong Kong fails to capitalise on its competitive advantages to achieve further upgrading, and the Mainland counterparts who have been catching up at an astonishing rate take-over higher-value jobs originally done in the city.

It is not surprising that Hong Kong has a closer connection with Mainland China, compared to Singapore, due to their increasing integration in almost every aspect of life particularly after the return of sovereignty in 1997. For illustration, Hong Kong accounted for nearly 30% of China's overall service exports in 2006 (MOFCOM,

2008). The city with the European Union, the US and Japan contributed more than half of China's service imports too.

Although Singapore is not a natural integral part of China, the city-state has been attempting bilateral free trade agreements and other cooperation initiatives with different levels of governments of China, just as it has also done so with other economies in the world, such as India, Australia, Japan and the US (Qureshi & te Velde, 2008). Singapore has, for instance, targeted certain regions in China to implement a joint venture approach to investment in high-tech areas. As mentioned in Section 6.6.2, the city-state has invested heavily in the Yangtze Delta region. In particular, the China-Singapore Suzhou Industrial Park (CSSIP) project was approved in 1994 and strongly supported by both governments, with the establishment of the jointly controlled China-Singapore SIP Development Corporation (CSS) (Wen & Wei, 2009). 'Learning from Singapore's experience' is the most important aspect of the CSSIP project. China also hopes to globalise its economy and attract foreign investment through joint efforts with Singapore which to Beijing represents a successful model of state-led development and could serve as a suitable reference for the nation.

China's huge domestic market and a large pool of cheap but well-educated labour force in turn could offer effective opportunities for the two city-states which have limited resources in terms of these two particular aspects, notwithstanding different cooperation models the pair might adopt. In turn, Chinese suppliers tend to require the mediating functions provided by Hong Kong and Singapore in order to get better access to the overseas resources and markets, and catch up with India. This could be due to several possible reasons. The vast variations across regions and provinces in China seem to confuse many foreign investors when selecting an optimal location for service deliveries. The Chinese financial and currency system at the present stage also tends to create institutional barriers to cross-border transactions, even though the Chinese government has been keen to put forward steady reforms. In addition, the relatively inefficient legal system, particularly the IP protection laws, might also hinder the direct resource commitment of overseas clients. The lack of project management skills could also trigger demand for intermediation by more capable firms not only in first-tier Chinese cities, but also emerging global cities possessing well-established trade and cultural links with China.

One may doubt whether the 'between-shoring' intermediate capability is more than just a short term advantage for the two city-states as the end users and the suppliers will try to bypass them in order to save the cost. Although China, with further opening up, is expected to be catching up rapidly and diversifying its sources of investment, we still should not miss the key point that during the process of intermediation, significant value is added to the service or product by the mediator who provides the information and knowledge both ends lack, for example, the understanding of international business relationships as just mentioned. Therefore, by nurturing long-term relationships, lock-in effect that helps repeated transactions and strategic partnerships could be created.

In addition, they should become an 'advanced' economy in their own right that possesses the command function in the global production network. In theory, however, the core is always doing innovation. Such 'novel' things initially available only as tacit knowledge would later be codified as lower-end work and shifted to lower-tier locations, while the core continues to develop new tacit knowledge that bears higher value-added in the global value chain. Therefore, by upgrading, it not only means to be able to deploy skills and perform services previously monopolised by higher-tier locations, it also means to move to become innovators of new things and skills in the location's own right, i.e. to create new tacit knowledge and produce new products that are new to the markets.

## 7.5 Conclusions

This chapter has examined from the micro/firm perspective the actual undertakings of services offshoring in the three East Asian economies, as well as their upgrading potentials, constraints and strategic choices. For Hong Kong and Singapore, the 'between-shoring' model has illustrated their relative position in the global services chain and how they could develop capabilities for further upgrading to higher value-added work. With vital intermediary assets, including relationship and trust building, and global and regional partner and cultural networks, the two city-states are able to focus on developing and strengthening KIBS. They however need to engage in proactive improvement in their human resources, particularly the development of 'soft' skills of their labour force, and in their innovative capabilities in order to sustain such capabilities.

In China, as in many other developing economies, there has been a distinctive hierarchy of firms of different ownership structures and market origins, ranging from wholly foreign-owned MNCs to SMEs. Chinese suppliers have accordingly made use of various different channels to link to the global services chain, to tap into both overseas client markets and wider investment opportunities. However, the rising potential of services offshoring for them might be constrained by various shortcomings in the country's human resources pool and institutional settings, for example, the lack of management and technological expertise oriented to more sophisticated international clients and the complicated institutional barriers to inter-provincial transactions. In addition, there are large geographical disparities across the country in terms of progress of services development, links to the global services chain and capabilities acquisition.

In view of these great opportunities alongside the constraints, Chinese service suppliers have attempted to develop capabilities and improve their positions in the global production network through different strategies. These include the adoption of manufacturising service processes, the realisation of self-motivated innovation and increased cooperation between different levels of stakeholders. In some cases, the sophistication of a work task tends to be reduced due to the increased decoupling and automation. Yet it is sophistication at the strategic level in relation to overall planning and management of the production chain that is key to upgrading towards a higher position in the value chain.

While both India and China are currently very popular destinations for offshored services, India's development is about a decade ahead in terms of the scale of operation, extent of client size and location, and turnover. Yet, China has recently been attempting to catch up. Even though there is to a certain extent keen competition between the two giant countries, they indeed have different focus of growth. For instance, India started with IT work outsourced particularly from the US, whereas China's initial source came from neighbouring economies, such as Japan, Taiwan and Hong Kong. In addition, China and India have begun pursuing more active cooperation, at government, institution and firm levels. While the Indian experience can serve as an inspiration for China, both of them could also benefit by leveraging each other's competitive advantages. More on the comparison between China and India in services offshoring will be presented in the next chapter.

With the increasingly intensive linkage between countries and regions, the three economies in the present study have also developed closer relationships with one another pertinent to ICT-enabled business services flows. Hong Kong firms and institutions have further transformed the 'front shop, back factory' model first applied in assembly manufacturing in the 1980s and 1990s to tap into the cheap labour resources in the Mainland counterpart. In particular, due to the physical, cultural and linguistic proximity, the Pearl River Delta region has served the domestic firms' need to low-cost back-office functions, while the latter has also supported advanced business services and rising financial investment opportunities to the Mainland enterprises. Albeit not as a natural integral part of China, Singapore has likewise taken advantage of its strong global and regional connectivity capabilities, as well as its ethnical and cultural linkage with China, to offer a wider range of advanced services and collaboration investment opportunities with both Chinese enterprises and public bodies. Therefore, the widening and deepening interrelationships between countries, governments and firms in various aspects of business transactions and investments tend to mutually strengthen the competitive advantages of both sides along with the continuously fiercer competition.

All these dynamics have shown the upgrading possibilities and constraints for China, Hong Kong and Singapore. In particular, the elements of trust-based relationships, language, culture and market relevant knowledge are critical to upgrading to higher-value knowledge-intensive services. We shall in the next chapter seek cross-location and cross-sector comparisons from our empirical findings and discussion, draw important insights into the nurturing of process and relational capabilities of those Asian economies based on regional advantages, and consider the wider geographic implications of these.

# Chapter 8 Summary, Comparative Insights, Wider Geographic Implications, and Recommendations

## 8.1 Introduction

This chapter will conclude the whole research study with summaries and reflections of the research process and major findings, followed by some recommendations for future research. In Section 8.2, we shall first revisit the aims and briefly review the research process. We shall then highlight the key results and discussions, and relate them to the wider global context. In particular, cross-location and cross-sector analytical comparisons will be summarised so that the firm strategies could be mapped on the urban hierarchical patterns of ICT-enabled services in China, Hong Kong and Singapore. This will lead us to the key ideas of the importance of nurturing process and relational capabilities based on regional advantages, which include not only geographic proximity, but also relate to cultural and language ties between home and host countries. Section 8.3.1 will discuss the limitations of this study. In Section 8.3.2, we shall then highlight the relevance of these notions to other actors of the wider context. Based on the discussions, implications and limitations of this study, some recommendations will be put forward in Section 8.3.3 in order to guide future research to work and set priorities on some of the most critical and urgent issues related to the growing complexity of the international division of labour and those facing the development of the Global South.

## 8.2 Summary of Findings and Discussions

The objective of the present study was to examine the upgrading paths, constraints and strategic choice for capabilities development of three particular economies, China, Hong Kong and Singapore, in face of the rise of cross-border sourcing of ICT-enabled business services across the globe and in East Asia. It was aimed at filling in the gap for studies of developing countries and services sectors in relation to the increasingly multidimensional services flows between countries and regions of varied development trajectories, and their catch-up attempts. As the researcher engaged in these contexts and with the survey firms/participants, and the stakeholders of various types in the concerned locations, ranging from the service

firms (suppliers and buyers) to supporting intuitions to associated government bodies, view, act and react in the dynamics of ICT-enabled business services globalisation, as well as interact with each other at different spatial/organisational levels, the phenomenon is socially constructed, embedded and embodied by the actors whose experience is asymmetrically shared through varied power relations. For instance, in order to move up the value chain, Chinese firms in the finance sector need to pursue a deep understanding of the global market and of the internationally recognised standards, rather than merely improve technical skills in performing financial functions. Their engagement in this context is also affected by the national regulations and other institutional factors. In consideration of the intrinsically constructivist nature of the study topic and its scope, this cross-location and cross-sector comparative case study adopted a contextual and qualitative approach.

The phenomenon of offshoring of ICT-enabled business services was examined within a framework built upon global value chain, competitive advantage and capabilities development, extended beyond the manufacturing context to which these theoretical strands were previously applied. We have contributed to the theoretical conceptualisation by showing that, although services have some distinctive attributes from manufacturing, the concepts concerning the pursuit of quality, linkage/network and upgrading remain relevant to an understanding of the globalisation of services. When there are differences, these primarily concern the nature of services characterised by culturally embedded and embodied elements of production, including language, trust and market relevant tacit knowledge.

Methodologically, in fulfilling the aims of the research, we adopted a strategy of triangulation to engage multiple data sources and methods, which particularly facilitated our understanding of when and why there are differences between places and sectors. A mix of data and material from government reports and announcements, industry surveys and interviews, news and commentary, and two sets of original surveys respectively targeting at service firms and supporting institutions were gathered and analysed to assess the multiple views and practices of different actors. The observations and findings were then presented systematically into three levels of analysis - macro, meso and micro.

The macro-meso-micro levels of investigation have offered a multi-facet but integrated understanding of the phenomenon. The macro level in Chapter 5 discussed the wider value-adding logic of the three selected services sectors (information technology, finance and accounting, and customer contact services) and the three economies' services development in the global economic setting. The meso level in Chapter 6 examined the competitive advantages of China, Hong Kong and Singapore in ICT-enabled business services, with a particular emphasis on those three sectors, from their respective national perspective. The micro level in Chapter 7 analysed the firm-level undertakings and perceptions of offshoring of the three specific sectors, as well as the specific strategic choice and constraints faced by organisations of the respective economies.

In the global production system, different locations produce commodities and services based on their comparative and competitive advantages, contributing in distinctive and uneven ways to the value chain. Advancements in technology and in management practices of global firms have brought about continued deepening of task and spatial division of labour. Together with continuous improvements in such factor conditions as human capital and institutional setting – as well as other facets of competitive advantage – this has enabled fast-emerging countries in the Global South to engage in fields where they were previously unable to produce. This was first evident in the global shifts in manufacturing decades ago, when industrial processes were relocated to low-cost developing regions, some of which have subsequently built up significant capabilities to move on to higher-value functions and even developed into a knowledge-oriented economy, such as the 'Four Asian Tigers' (Singapore, Hong Kong, Taiwan and South Korea). But its extension to services was not generally expected.

The recent dramatic shifts of ICT-enabled services to offshore locations from higher-income economies have, however, shown another great opportunity for the former to improve their value chain positions. On one hand, it appears that developing countries' labour, institutions and other factors have historically been shaped merely to suit the needs of developed countries, in particular of their MNCs. On the other hand, the relationship between the Global South and North is now indeed increasingly interdependent (Dicken, 2011). Accordingly, Southern locations can take advantage of

the offshoring opportunity to link, leverage and learn with their Northern counterparts, and thus develop competitiveness in their own right (Mathews, 2002, 2003).

This study has attempted a cross-location, cross-sector case pattern approach. Table 8.1 summarises the comparative aspects of the undertakings, competitive (dis)advantages, capabilities development and strategic choice of upgrading of firms in the three specific sets of services based in the three East Asian economies. While no rigid contrasts between these sectors and locations were observed, the key results and the most indicative examples pointed to the different characteristics and requirements of engaging in these activities in different locations.

**Table 8.1: Summary of Cross-Location and Cross-Sector Comparisons.**

| | **Information Technology** | **Finance & Accounting** | **Customer Contact** |
|---|---|---|---|
| **Major processes supplied** (examples) | **HKG/SGP**: Higher-end, more sophisticated services to neighbouring lower-income countries, e.g. China and Malaysia; relatively cheaper, regionally oriented services to high-income countries, e.g. UK, US, Japan and Australia | | |
| | ■ Turnkey system integration solutions, SaaS, enterprise business solutions, design | ■ Corporate secretarial, market advice and securities; electronic payment services | ■ Customer services for high-end customer spectrums (but relatively limited supply abroad) |
| | **CHN**: Lower-cost, lower-end, more standardised services to, e.g. US, Hong Kong, South Korea and Japan | | |
| | ■ Programming/ coding; general IT support; ERP system development & maintenance | ■ Data entry/ digitisation; bookkeeping/ auditing; tax/ commercial consultancy | ■ Voice-based call centre functions; regional markets based on language/cultural proximity |
| **Major processes sourced** (the types under each category the firms generally demand) (examples) | ■ **HKG/SGP**: Higher-end, more sophisticated services from high-income countries, e.g. UK, US, Japan and Australia; lower-end, routine services from neighbouring low-cost countries, e.g. China, India and the Philippines | | |
| | ■ **CHN**: Generally higher-end, more sophisticated services from abroad, e.g. US, HK and Japan | | |
| | ■ Lower-end: software development (mainly programming and testing)<br>■ Higher-end: ERP application and advice | ■ Lower-end: electronic data processing<br>■ Higher-end: global financial services (e.g. securities, venture capital, consultancy) | ■ Lower-end: Inbound calls for general enquiries and service support; outbound calls for telemarketing; automated dialogues<br>■ Higher-end: CRM application and advice |
| Key aspects of **competitive (dis)advantages** | **HKG/SGP**: Highly-qualified service workers, but subject to limited future supply due to substantially low birth rates; good quality ICT infrastructure; generally lacking innovative expertise comparable to Global North; sophisticated home demand; long history and strong presence of MNCs and vibrant SMEs, and hence intense global/regional business connections; mature auxiliary industries esp. trading, logistics, business/professional services; government incentives to strengthen regional/global networking | | |

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|---|---|---|---|
| | ■ Project management expertise | ■ Dense linkages to other regional and global financial markets<br>■ Long-established international practice and standard<br>■ Financial market offerings much less sophisticated than London and New York | ■ Good language abilities to cater for both international and regional demand<br>■ Comparatively high costs of operation leading to limited economies of scale to carry out traditionally labour-intensive call centre functions |
| | **CHN**: Abundant supply of low-cost fairly/highly-educated labour; constantly improving provision but still less favourable quality of ICT; rapidly growing mass of MNCs but wide variations of quality among local suppliers (mostly of limited international expertise), bureaucratic structure of some indigenous MNCs and SOEs that are still under transitional reform; possible support from long-established commodities trade links; keen government incentives to boost services development and regional/global connections; certain inter-provincial institutional distortions probably causing difficulties in cross-region transactions/business development; substantial geographical discrepancies: the best factors are concentrated in coastal regions or specially designated economic zones | | |
| | ■ Foreign R&D investment may help its domestic IT sector link to and leverage the GVC<br>■ Governments'/SOEs' information application systems remained largely isolated → huge demand for future tech integration<br>■ Copycat technologies → IT innovation system different from West? | ■ Restricted cross-border financial/currency transactions<br>■ Different market expectations between domestic and overseas, e.g. bank-dominated financial market, subject to uncertainties from future institutional reform<br>■ Restrictions on price-setting by accounting firms → indirect, untransparent cost competition | ■ Advantage of language and cultural proximity to provide services to neighbouring markets<br>■ Use of non-voice tools limited by bandwidth<br>■ Some regulations may hinder the adoption of integrative web tools to develop/enhance international customer contact experience, e.g. social networking media |
| **Relational capabilities**<br>▪ Trust/relationship<br>▪ Culture/language<br>▪ Regional links | ■ **HKG/SGP**: 'Between-shoring' intermediation: offering management and technological expertise as well as long-established international integrity to provide links between the East Asia region and other parts of the world<br>■ **CHN**: Desire to nurture more international expertise and overseas market knowledge, while able to offer incoming investors local knowledge<br>■ **HKG/SGP/CHN:** Taking opportunities to partner with other firms to strengthen networking and cross-border capacity; riding on and combining the competitive advantages of other Southern corporations, e.g. Indian ITO/BPO firms | | |

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|---|---|---|---|
| | ■ HKG/SGP: offering project management and design expertise to link between Chinese/Asian domestic suppliers and foreign/HKG/SGP clients<br>■ CHN: suppliers to establish offshore R&D centres through, e.g. raising international venture capital investment, and/or strategic partnerships | ■ CHN: offering local knowledge with regard to finance and accounting regulations and circumstances in China to meet the needs of foreign investors<br>■ HKG/SGP firms entering Chinese market by taking advantage of their international credibility to help foreign investors in China and/or Chinese companies to reach out | ■ Chinese suppliers cater for Chinese ethnic communities in other countries in the region<br>■ Labour-intensive scalable customer contact services located low-cost regions, e.g. China, while HKG/SGP focusing on high-end spectrum and CRM functions, together integrated using advanced real-time ICT links |
| **Varied choice of upgrading paths** (examples) | ■ From horizontal processes to vertical domain specialisation, esp. for Chinese suppliers starting with lower-value, routine services<br>■ Cross-function/sector upgrading | | |
| | ■ Total enterprise solutions<br>■ Product as a service: SaaS/cloud computing<br>■ Specialised, high-speed, high-capacity network services for, e.g. financial industry, esp. high-frequency trading (HFT) | ■ Consultancy for foreign firms<br>• HKG/SGP: taking advantage of deep understandings of international and regional business for intermediation between global/regional investors<br>• CHN: taking advantage of understandings of local circumstances, e.g. regulations, culture, business convention, to offer locally-embedded, advisory services for incoming investors<br>■ Innovating new financial products<br>• HKG/SGP: to meet the demand for the Chinese and Asian markets<br>• CHN: to reach out for raising fund and develop RMB trade | ■ Transform from traditional call centre functions to:<br>• Cross-sales through better use of customer information<br>• integrative contact centres offering Internet-based voice/non-voice interactive services<br>• CRM: taking advantage of the availability of customer data to engage in data mining, analysis and strategic advice for relationship management |

Notes:
HKG Hong Kong
SGP Singapore
CHN Mainland China

### 8.2.1 Services Development Trajectories and Competitiveness of Hong Kong, Singapore and China

With rapid industrialisation since the mid-20th century, Hong Kong and Singapore have developed into high-income global city hubs in the region. The two city-states have gradually restructured and become specialised in certain higher-value functions, such as trade and logistics, financial and other professional services. They no longer compete just based on cost advantage, as they have established particular capabilities, including growing international experience and networks, enabling them to move up the value chain. The success of these two economies and the other 'Asian Tigers' in early industrialisation and subsequent transformation into a knowledge-oriented economy has shown a possible upgrading route for other Southern countries. However, the pair are facing a range of constraints to further upgrading.

As highlighted in Table 8.1, Hong Kong and Singapore have witnessed constraints in human capital and developing indigenous innovation (at varied degrees). In particular, due to their exceptionally low birth rates, the quantitative supply of their future graduates from home sources is restricted. Therefore, their government policies have emphasised attracting foreign talent and improving the quality of their labour force. Although the two city-states' innovativeness in ICT-enabled services (especially indigenous ability to innovate new/radical products/processes) is weaker than that of their Western counterparts, they have been capable of creating and regenerating promising new offerings based on the intensive networks established with their global and regional partners. Through technology transfer, for example, firms based in these cities have achieved good adaptation, rather than making from scratch, to suit the requirements of their overseas and local clients. Their capabilities in adaptation and integration are particularly demonstrated by their strong abilities in serving a wide variety of market spectrums and clients from different regions (both the Western core economies and the developing Southern regions) and with diverse requirements.

We have observed that such strengths partly lie in the strong presence of various business service clusters of various kinds comprising both world-renowned MNEs and vibrant indigenous SMEs (although Singapore still tends to be more dominated by foreign firms). Equally important, the two cities have constituted a substantial mass of highly-educated workforce and sophisticated business/individual

consumers. All these have supported and strengthened their 'between-shoring' capabilities by sustaining long-established close and shaping new inter-organisational and inter-personal relationships in the global and regional networks, which this study has identified as crucial. The growing complexity in the reshuffling of the value chain processes has further increased the need of intermediation among networks and spots in the global production system. Such trust-based relationships, together with the aforementioned clusters and business experience, in addition to other historical and cultural factors, have provided sources of much of the tacit knowledge that firms in the two cities possess and that is difficult to be replicated by competitors. Responding to and enjoying the existing locational competitive advantages, various stakeholders, including firms, the government, supporting institutions and individual workers, need to make certain strategic choice in order to focus on aspects that will bring about the greatest potential for their capability development.

Unlike Hong Kong or Singapore, China's vast economic system is still undergoing a long transformation to market orientation, and remains under strong influence by the central government despite decentralisation of some political and economic power to local authorities. China's success as the world's manufacturing powerhouse since its progressive reforms launched from the late 1970s has been primarily built upon the country's vast cheap labour supply, through continuously liberalising economic and trade system, and the government's keen FDI incentives. Since the turn of the millennium, China has been striving for a more services-oriented economy through more intensified linkage to the global services value chain by strengthening its supplier role in various ICT-enabled business services.

The huge geographic extent of China inherently implies massive discrepancies not only between urban and rural areas, but also between different regions. We have discussed the competitive advantages and disadvantages of the country and its regional differences specifically with regard to ICT-enabled business services development, as highlighted in Table 8.1. In general, China (especially its coastal parts) has witnessed dramatic improvements in the supply of highly-educated workforce and ICT infrastructure, institutional support, domestic services demand backed by the growing affluent middle-class population, and the variety and agglomeration of globally-competitive foreign and indigenous MNCs. In particular, the country has taken advantage of its regional language and cultural proximity to

gradually establish links to clients, suppliers, partners and even industry institutions in some high-income Asian economies, such as Japan, South Korea, Taiwan, Hong Kong and Singapore, amongst other foreign countries. However, it still faces critical constraints not only related to its intrinsic regional disparities, but also concerning the quality and sophistication of these home conditions that are influential to the acquisition of capabilities for higher-end services development.

Further observations on China's geographical hierarchies are summarised below:

### 8.2.2 China's Spatial Hierarchies in the Services Value Chain

There are primarily four types of hierarchies that are associated with China's development of ICT-enabled business services. These are concerned with the spatial division of labour between higher- and lower-tier cities within a region, the geographical orientation of regional client-supplier linkage, the differences between various types of firms, and the regional distortions largely brought about by some political biases. Further analytical understandings could be sought by mapping the latter three hierarchical on the urban differences.

**Spatial division of labour in ICT-enabled business services**

The conventional first-tier Chinese cities, Shanghai, Beijing, Guangzhou and Shenzhen have robustly developed their ICT-enabled business services to an extent that they now have arguably gained global city status. Among themselves, each is specialised in certain parts of the services value chain. With a more worldwide and nationwide business scope, Shanghai, for instance, has focused on financial and other professional services; while Beijing's IT services have been outstanding. Lower-tier cities, especially those proximate to the first-tier cities, such as Tianjin, Hangzhou and Kunshan, are able to offer critical cost differentials, as compared to their more developed counterparts.

Therefore, albeit less competitive advantage in terms of quality and sophistication, these secondary cities have been able to link to the global services production network through the MNEs headquartered in those first-tier cities and perform low-cost routinised tasks that are transmitted back to the former and their

overseas clients via ICT links. The first-tier cities have also been benefited from shifting more routine processes to these lower-cost locations and able to focus on higher-value core competence.

**Supra- and sub-national regional client-supplier linkage**

Some Chinese cities specialised in services outsourcing/offshoring have been characterised by certain regional orientation based on the linkage patterns of their overseas partners. While first-tier cities, particularly Beijing and Shanghai, offer services to a wider geographical span, ranging from the West to closer regional clients; certain provincial regions and lower-tier cities are more narrowly focused. Guangzhou and Shenzhen, for example, have extended the close relationship with their traditional client origins, including Hong Kong and Taiwan, by further offering cross-border standardised services. The Bohai Rim region, including Dalian, has also been doing a substantial volume of services business with Japan and South Korea.

**Firm types and urban distribution**

The different types of firms involved in the supply of offshore services in China range from foreign MNEs, indigenous MNEs, domestic SMEs and SOEs, to a few hybrid types that have mixed ownership, such as Sino-foreign joint ventures. Even though they offer different value-added services, they generally demand the same resource pool, particularly graduates as service workers. Better quality ones are more likely to be attracted by resourceful MNEs than local SMEs. Moreover, the former also possess better capabilities to absorb and make good use of these production factors. As a result, there is a clear hierarchy of the types of firms undertaking higher to lower value-added tasks.

The pattern of firms corresponds to that of the urban tiers, with MNEs typically headquartered in first-tier regions/cities with a wider network of operating centres in other lower-tier cities and domestic service SMEs usually focused on their local origins. By leveraging the differentials in labour costs and resource bases across different regions in the country, larger suppliers are able to optimise certain spatial and organisational division of labour within China so as to develop a whole chain of offerings for different varieties of clients to sustain their process capabilities. Smaller

suppliers have usually connected to the global services chain via their MNE counterparts, although organic start-ups have also happened.

**Regional political distortions**

However, the existence of regional political distortions on the local development plan and cross-provincial business transactions has resulted in great constraints to service firms, particularly those of limited resources, unable to overcome such geo-political biases by themselves. In brief, in order to align with the central government's growth strategies and compete with other regions/cities, some local governments in China have formulated identical policy measures and even put forward certain over-ambitious incentives to attract investors, some of which however do not fit to, and thus have a perverse impact on, their competitive advantages. In association with this problem, firms that lack the resources to establish national presence may meanwhile find it difficult to perform cross-provincial business for other clients outside their own regions largely due to the presence of biased local industry policies that discriminate against these 'outsiders'. In particular, suppliers based in the inner parts of the country have generally been restricted to serving their immediate regions, primarily due to their limited choice of links to the other regions and the outside world. In contrast, in the coastal metropolises with a wide variety of MNCs and better infrastructure, even smaller firms would be more likely to develop better capacities to offer flexible and scalable services to offshore clients.

The regional division of labour is also applicable to Hong Kong and Singapore, although the geographical patterns generally spill across the border into their immediate hinterlands, i.e. the Pearl River Delta region in South China, and Johor in Malaysia and Riau in Indonesia, respectively. The regional hierarchy of production and consumption is no longer confined to manufacturing processes but has spread to the redistribution of ICT-enabled business services. In brief, the two city-states provide higher-value functions to and demand lower-value processes from their hinterlands.

### 8.2.3 Interaction between Firm Strategies and Locational/Sectoral Characteristics

In response to the obstacles and the above sticky hierarchical patterns, the service firms in the three economies have realised some key strategies to fit in with

their locational/sectoral characteristics. They are mainly concerned with improving the production process and linking with other competent stakeholders (not just firms but also supporting institutions like research institutes and industry associations). These strategies include: manufacturising service processes, developing indigenous innovation, establishing partnerships and networks, and strengthening KIBS by nurturing process and relational capabilities. They will be summarised and mapped on the locational, sectoral and firm characteristics, as below. Some indicative examples are also shown in Table 8.1.

**Strengthening KIBS through relational capabilities**

The production of knowledge-intensive business services (KIBS) involves the use and re-creation of tacit knowledge which is in turn highly dependent on the context where it is produced. In other words, it requires the acquirer, first, to get into the inside core where the specific kind of tacit knowledge is created and circulated, and second, to be capable of acquiring and constructing the idea from a relevant learning mechanism (such as a demonstrator's advice or sharing between participants in a discussion forum). The acquirer therefore typically needs to engage in a high degree of personal exchange, relationship and trust building to enable working together with insiders to shape the context for application and transfer of the desired knowledge. Owing to these elements' emphasis on linkage and network, relational capabilities are particularly important for firms seeking to develop KIBS. Relational capabilities refer to the capabilities to interact with other organisations, which help the firm's knowledge access and transfer with relevant effects on company growth and innovativeness (Lorenzoni & Lipparini, 1999). The firm with its partners shape and deliberately design how they link with each other so as to (re-)deploy and integrate knowledge residing both inside and outside their own boundaries. Inter-locational (intra-organisational, e.g. subsidiary) and inter-organisational (e.g. alliance and joint venture) relationships and networks demonstrate where and how to obtain the source of experience through which solutions are crafted and capabilities developed (Äyväri & Moller, 2008).

In view of this sophistication of performing KIBS, firstly, we have observed that cultural networks are vital to developing relational capabilities. This is evident in the continued significance of the role of intermediation by Hong Kong and Singapore

firms, characterised as involving 'between-shoring' capabilities in this study. China meanwhile has benefited from its dense ties with neighbouring countries, such as Hong Kong, Taiwan, Singapore, South Korea and Japan, via language, ethnic and cultural proximity. This regional tie is in contrast to the linkage pattern of India, as will further be discussed later in this chapter. In addition, supra-national regional links are associated with the geography of sub-national regions. For example, Northeast China has closer connection with Japan and South Korea, which have served as its primary client countries; while South China is more culturally and economically associated with Taiwan and Hong Kong.

Secondly, intermediation via establishment of partnerships and/or local presence can be done at firm and/or institutional levels, which in turn is closely related to the characteristics of the firms concerned, such as their size, ownership type and sector. More formal inter-firm relationships, including joint venture, subcontracting, strategic alliance and M&A, have been formed to capitalise on both sides' competitiveness. Some firms have obtained international venture capital for establishing offshore offices or R&D centres to get access to local market information and knowledge assets. Such corporate expansion however more often happens within larger corporations, or through the strong network of the parent company. These networking strategies can further be facilitated by intermediation via the government and other supporting institutions in the country, especially where the business culture is still weak. In addition, there has been increasing cooperation among Southern corporations, aiming to expand their geographic footprint in the region and to achieve brand recognition. Joint development in economic zones between different governments and even between governments and private companies has also become increasingly popular.

By taking advantage of long-established cultural and ethnic ties, and mobilising these types of global/regional partnerships and networking, Hong Kong and Singapore service firms and institutions have gained critical relational capabilities. The evolving relationships between these two city-states and Mainland China, for instance, have become more mature and involved different levels of networks, including inter-firm partnerships, inter-government trade and investment arrangements, and even joint ventures between government-led and private corporations. Firms in the two cities have strengthened and specialised in niche KIBS, such as project management and

corporate solution consultancy. With changing business and technological circumstances, some service firms have focused on certain strategic areas to cater for the new demands of overseas clients by providing them with more complex, tailor-made solutions. Some software companies, for example, have extended to SaaS (software as a service) in order to offer more flexible, cost-effective services to customers who are becoming increasingly demanding.

Building upon stronger relational capabilities, with increasing sophistication of its domestic market, home-grown players and institutional support, China has progressively achieved more complex connection to the global value chain, which helps its suppliers develop a deeper understanding of their target markets, including the changing taste and requirements of the potential customers. They are therefore gradually engaged in more indigenous innovation to make products that not only suit the local needs but may also be adapted to the regional and perhaps global markets.

**Manufacturising service processes to improve process capabilities**

Manufacturisation refers to the decoupling of complex information processes into modules for flexible management and reintegration, thus increasing the economies of scale and scope. It combines the advantages of both Fordism and the just-in-time approach, i.e. mass production plus flexibility, as it enables real-time supply and real-time monitoring. The flexible reintegration of different components allows firms to meet fluctuations of demand and to cater for different spectrums of customers and markets, hence gaining experience in serving different ranges of clients from different industries and locations that could in turn broaden their opportunities. We have observed that Chinese service suppliers have taken advantage of advanced technologies to extend their current capabilities to perform tasks that they were previously incompetent at. Examples range from the adoption of computerised scripts and automated customer dialogue in contact centres to the seamless processing system used by the BPO sector to resemble manufacturing's just-in-time assembly line. More importantly, to achieve further cost-efficiency by simplifying, standardising and mass producing such service processes also reflects the changing management practice in larger firms that requires more sophisticated strategic architecture in (re-)designing the whole production process. By carving the complexity of business, firms can then cut into non-standardised markets and eventually move up the value chain.

In relation to the urban hierarchy, standardised services are diverted to lower-tier cities close to first-tier metropolises as important sources of receipts, investment and management. Meanwhile, first-tier cities focus on attracting high-value customers and investment, in turn subcontracting routine processes to lower-tier locations to optimise the advantage of spatial specialisation through the manufacturisation approach thanks to the availability of low-cost labour and infrastructure in these secondary locations. In China, the service linkages between first-tier and lower-tier cities are still primarily intra-provincial in nature and limited to the coastal regions. In other cases, large cities in the central area, such as Chongqing and Chengdu, benefit significantly from the strong development of their traditional industries and national research institutes.

**Synergy between KIBS and manufacturisation, and varied strategic choice**

Although the strategies emphasising KIBS and manufacturisation seem to be contrasting with each other at first glance, there is actually a close synergy between the two, which has not been thoroughly recognised in the literature. By starting with basic processes, manufacturisation allows firms to gain experience by serving across different industries and market/customer spectrums generating the increased economies of scope. Upgrading can then be achieved through moving from horizontal process extension to vertical domain specialisation when and where the firm is able to develop significant relational capabilities through deepening links to the GVC. Such transformation can be made possible through nurturing various KIBS-oriented firm strategies to create lock-in effects with their clients and suppliers and deepen spatial/organisational division of labour. This is not only evident in the Chinese case of the present study, but also has been achieved by large Indian suppliers who pursue the reengineering of business processes along the services value chain, with more processes being refined into specialised modules. This would therefore increase the complexity of services production and trade at the higher end, as more sophisticated design and architectural competences are required for this process redesign and reintegration.

In association with this interaction, upgrading is no longer limited to vertical uplift of functions, but becomes more dynamic. The cross-location and cross-sector cases made in this research have indicated the influence of path dependency and

sector-specific nature on the strategic choice for moving up the value chain (See Table 8.1 for some examples). Although, with regard to sector-specific attributes, for instance, the software sector is subject to industry regulations different from the accounting sector, we have observed that upgrading is not and should not be confined to progressing within the same sector as traditionally considered as, i.e., a vertical industry. In particular, if a sector's value ladder is initially very narrow, such as in the customer contact sector, service providers may improve their current positions via cross-sector upgrading. An illustration is the transformation from just providing routine call centre services to helping clients design and manage contact centres and to performing customer relationship management (CRM) that involves such higher value-added functions as customer data mining/analysis and integrative solutions. This nevertheless might involve extending current capabilities to new areas, which should therefore require careful adjustment and leverage strategies by, for example, acquiring needed competence through learning by working with strategic partners.

In another different approach, we have seen some suppliers, particularly those in the BPO sector, shifting from offering a broad scope of horizontal functions to focusing on a vertical domain. In doing so, they have gained substantial experience through intensive dealings with clients in specific sectors. For example, they began offering more specialised processing services to the financial industry after having closely worked with their clients for an extended period on designing and integrating the whole process into the normal running of the client firm.

In view of the dynamic business and technological circumstances, and increasing opportunities and challenges, firms at different levels may choose what capabilities to develop and how, in response to their own industry/business nature and location's competitive advantages. This is not just applicable to firms, be they MNEs or SMEs; indeed the results are also meaningful for policymakers, supporting institutions (including industry associations, education institutions, research centres and so on) and even service workers as individuals in China, Hong Kong and Singapore, as well as all these stakeholders in the wider developing world. In fact, these strategies are similar to the 'cost-quality-value strategy', the 'global footprints strategy' and the 'focused strategy' implemented by Indian service providers as observed by Chadee, Raman and Michailova (2011). By focusing on particular core competence, the Indian service providers were competing on value creation and value

addition based on quality. They also operated from multiple locations to enhance 'their flexibility in assessing their competitive landscape and in redeploying resources to address emerging threats and opportunities' (Chadee, Raman & Michailova, 2011, p. 210). In comparison, larger Indian suppliers building upon their English language abilities, established entrepreneurial networks and a decade's experience in serving the Western clients, especially some global players, have already been able to differentiate themselves from other competitors not only based on cost competition, but also on offering different spectrums of customers quality services that fit well with their cost and quality expectations. Although Hong Kong and Singapore service firms are generally competing based on quality, they are more specialised in niche services rather than scale offerings. Further similarities and differences between India and China will be discussed in Section 8.3.2.

Overall, the research findings and analyses fit well with the previous literature on GPNs and GVCs (see, for example, Ernst, 2002; Humphrey, 2004; Coe, Dicken & Hess, 2008b, 2008a; Saliola & Zanfei, 2009) that emphasise the 'network-specific embedded system' of knowledge diffusion between actors at different organisational/spatial levels, including lead firms/flagships and local suppliers (Ernst & Kim, 2002). Although the hierarchical and networked patterns as observed seem to suggest the (initial) dominance of large MNCs (primarily foreign-owned) and the resultant sticky situation the smaller players get trapped in, we believe the latter still have the opportunity to develop in their own right, particularly by taking advantage of relational capability based on quality, as many success stories of their like have shown.

## 8.3 Limitations, Implications and Recommendations

Despite systematic and careful research plans and analyses, there are certain limitations of the present study, which will be discussed in Section 8.3.1. Based on this study's findings and analyses, we shall then discuss some important empirical and comparative implications for different stakeholders and other developing countries in Section 8.3.2. We shall look at the differences and similarities between China and India. In addition, the implications for the rest of the East Asia region and other Southern economies will be considered. Section 8.3.3 will point to certain prospective future research avenues on researching services offshoring and the upgrading possibilities of the Global South.

### 8.3.1 Limitations of the Study

Despite the infeasibility of grasping the whole reality of the relationship between services offshoring and upgrading of the Global South, we have been able to reconstruct the most pertinent aspects to examine and comprehend the topic. However, the present research has some limitations in both empirical data and analysis, given the complexity of the contexts.

With regard to the collection of data, owing to the resource/time constraints and the global economic environment around the survey period (with particular reference to the economic crisis towards the end of 2008), the number of participating firms and institutions was relatively limited, although that did not affect the qualitative value of the material collected. Nonetheless, the research might have been more comprehensive if we could have established better liaisons with industry associations and other supporting institutions so that more of these stakeholders and their member firms might have been persuaded to participate in the research surveys. Another constraint is the absence and inconsistency of certain socio-economic statistical data, particularly in China, though this was anticipated in designing the research methodology. Hence, this study has taken an in-depth qualitative approach by triangulating and analysing the data gathered from multiple sources.

Regarding our empirical focus, while this study took a holistic view of the most relevant factors that have potential influence on the upgrading of the selected economies, it did not examine the extent of impact each factor has on particular areas of concern. For example, the influence of diaspora networks on each of the selected economies, and of the specific reforms of SOEs on China's services demand and supply were not included. It was not aimed to generate a detailed account of any single locations/regions within China, nor to compare or contrast any of them with one another on their development of various types of ICT-enabled business services. This is because we wanted to produce a comprehensive picture of the country's path and strategic choice of upgrading. While the economic trajectory of China was observed, we also selected particular metropolitan regions which have been more engaged in these activities with varied focus and levels of development. Although there were no rigid comparisons between each of them, their general relationships with the GVCs and certain economies in the East Asia region were shown.

Due to the small number of the customer contact service firms in both Hong Kong and Singapore, limited first-hand survey responses were obtained. However, industry reports and news material on this sector were analysed. As mentioned in the previous chapters, the domestic market of these city-states for customer contact services is relatively much smaller in scale and their overseas market engagement is rather limited to high-end spectrum than based on economies of scale, the latter pattern of which would otherwise require a high intensity of labour typically working on repetitive tasks, which generally does not align with the competitive advantages of both city economies.

While the present study considered the relationships between different actors, it offered limited observations on those between different levels of governments within China, and between different types of institutions. For example, how does the support required by different types of firms in different sectors match with the support provided by various types of institutions? To what extent which government bodies have offered support needed by which specific service sectors? Which particular policy or measure has distorted the development of which sector, and in what way? How much linkage has been developed between which particular institutions and which type(s) of service firms for reaching out to the overseas market?

Moreover, it seemed to be difficult, if not impossible, to compare specific firm strategies between the three economies, as they involved different types of firms, ranging from foreign-invested enterprises to government-linked corporations to domestic SMEs, implying diverse market focus requiring different geographical, organisational and institutional fits. However, when mapping the strategies of the service firms studied in this research on to the locational characteristics and sectoral characteristics, we were able to find the presence of different regional focuses based on their existing locational competitive (dis)advantages and existing asset bases.

Some of these limitations may be overcome by future research with a more refined scope of investigation, such as focusing on a particular type of firms and/or institutions. Some future avenues of research in this topic will be suggested in Section 8.3.3.

### 8.3.2 Implications for a Broader Array of Locations and Actors

Based on the findings and discussion in the present study (including its review of the existing literature on the Indian experience), some comparisons of the roles of China and India in ICT-enabled services offshoring will be offered in the following sub-section. We shall then extend our discussion to a wider geographic extent to suggest implications for other economies both elsewhere in the East Asia region and in other parts of the developing world.

**General comparisons between China and India**

As the world's largest populated developing countries, China and India have gained a lot of attention for their development trajectories. India was among the first regions to engage in the global shifts of these services and has now become the most successful host country. While China has traditionally been the world's industrial powerhouse since its opening up four decades ago, it is now striving for growth in higher-value services. Table 8.2 summarises the differences and similarities of these two fast-emerging nations in the key aspects of their development as an offshore service supplier location.

Although both China and India had attracted some attention from Western investors in the mid-1980s, India was more successful in riding on the opportunities of 'body shopping' and the Y2K problem, as mentioned in Chapter 3, thereby being able to acquire critical expertise in serving Anglo-Saxon clients. The success of Indian suppliers, probably around a decade ahead of China, is not a coincidence that just resulted from a 'sudden' IT demand from the West, but because of many other advantages that India has possessed and nurtured, and of a consequent trajectory differing from the path China has taken.

In general, both India and China have a large, expanding supply of highly-educated workforce, many with specialities in computing and engineering, offering substantial cost savings for overseas clients. Their governments have meanwhile put forward a series of policies and measures that are intended to improve the business environment in general and to facilitate the development of the ICT-enabled services outsourcing/offshoring industry specifically. Although lagging behind developed countries, the infrastructure and facilities in China and India are rapidly improving. In

particular, the development zones designated for high-tech industries and high-value services and the coastal areas in China are equipped with advanced ICT and transportation infrastructure.

**Table 8.2: General Comparisons between India and China in the Development of ICT-enabled Business Services.**

| | India | China |
|---|---|---|
| **Starting Point** | ◆ 1985: US-based Texas Instruments set up a small software service centre in Bangalore.<br>◆ Body shopping in 80s/90s: IT workers sent to client sites in the Western countries to work on one-off projects.<br>◆ Y2K problem triggered huge short-term demand, built up confidence in offshore service workers, Western companies began relocating low-end service processes (primarily IT programming and later call centre functions) to India and other developing countries with large English-speaking populations. | ◆ 1984: US-based Xerox collaborated with the Ministry of Aerospace Industry (PRC) to develop China's first software outsourcing team. But this was not capitalised into an on-going expansion effort.<br>◆ FDI: Local back-office services required by Western clients to support their Chinese manufacturing operations.<br>◆ Japanese companies realised the cost advantage of sending basic software programming/testing modules to Chinese suppliers.<br>◆ After 2000: Government's push to provide attractive financial incentives and develop services processing development zones to attract foreign investments in knowledge-intensive services. |
| **Human assets** | ✓ Good English abilities; modelling on Anglo-Saxon education system as a result of colonial influence.<br>✓ A substantial supply of high-tech human resources (computing, engineering, medicine) at a friction of cost.<br>✓ Diasporas and returnees from the US, the UK and other advanced economies, creating networks with overseas markets and strong entrepreneurship. | ✓ Poorer English abilities to communicate with international customers.<br>✓ A large supply of highly-educated IT and service workers.<br>× Mismatch between education/training and market expectations.<br>✓ Diasporas and returnees from Hong Kong, Taiwan, the US and Canada, creating strong support for overseas linkage. |
| **Labour supply problems** | × High attrition rates. Quality improvement of existing workforce cannot catch up with industry expansion.<br>× Double-digit rate of wage inflation, reducing cost differentials. | × Fairly high attrition rates.<br>× Sharp increase in wage levels in first-tier locations. |

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| **Cultural similarities/ differences** | × Problems of English accents and cultural/local knowledge, leading to dissatisfaction in customer services and backsourcing.<br>× Difficult to open up new markets in the East/SE Asia region due to language/cultural differences. | × Huge differences with Western culture, making it difficult to penetrate into their markets.<br>✓ Geographical, cultural and language proximities with many East/SE Asian economies, including Japan, South Korea, Taiwan, Singapore and Hong Kong. |
| **Strong government support** | ✓ Economic liberalisation and privatisation, esp. in telecomm industry.<br>✓ Formulated favourable policies since the early 1990s, e.g. the Information Technology Act 2000 (ITA-2000) and the Software Technology Park (STP) scheme.<br>✓ Set up software technology parks in various cities, e.g. Bangalore, Chennai, Hyderabad and Mumbai.<br>✓ Tax exemptions and other fiscal incentives for IT & ITES industries. | ✓ A wide range of incentives for the high-tech and services outsourcing sectors, e.g. temporary exemptions of business tax, subsidies for investments in human capital and R&D, and…<br>✓ Establishment of high-tech, software and services outsourcing parks, and economic zones.<br>✓ Business-minded local governments, facilitating FDI and high-tech development. |
| **Infrastructure** | ✓ Generally good provision of modern infrastructure and facilities in the development zones for IT and business services.<br>× Need to further improve electricity, telecommunication and transportation networks outside the development zones of major cities to facilitate and optimise the spatial division of labour within the country. | ✓ Generally good provision of modern infrastructure and facilities especially in the coastal regions and major cities in other areas.<br>× Need to further improve electricity, telecommunication and transportation networks in the interior regions to facilitate and optimise the spatial division of labour within the country. |
| **Political and Institutional system** | ✓ Industry reputation represented sophisticated institutions (esp. NASSCOM)<br>✓ Strong links with Indian diasporic communities<br>× Corruption, bureaucratic governments.<br>× Weak IP awareness and enforcement, but industrial IP protection law and other related policies are better defined and implemented. | × Lack of sophisticated institutions to represent industry reputation<br>× Weaker connection with Chinese expatriate communities abroad<br>× Corruption by some public authorities and bureaucratic procedures.<br>× Lack of IP awareness and weak enforcement. |
| **High delivery capabilities** | ✓ Reliable, high quality, India as an established global brand of services offshoring. | × Not yet establish a recognised global image with high-quality services delivery capabilities. |

| | | |
|---|---|---|
| **Corporate management** | ✓ Emphasise HR management and process control. | × Lack deep understandings of Western business management and process flows. Inconsistent quality standards. Limited experience in large-scale international outsourcing projects. |

Sources: author's summary from present study and literature, e.g. Kobayashi-Hillary (2005); Yu (2007); Lo and Liu (2009); Raman and Chadee (2011).

The most obvious difference that has separated their development trajectories in services offshoring is their varied colonial history, language and culture. India had been under the control of European colonial powers through trade and conquest since the 15th century. Amongst all, the British Empire had controlled almost all parts of India through the rule of the East India Company before 1858 and the British Raj between 1858 and 1947, imposing great impact on India's political, social and economic development (Roy, 2002). English has become the medium of instruction in colleges and tertiary institutions that follow the British education system. As a result, although dozens of languages and more than a thousand local dialects can be heard in the country, the fast-growing middle-class population generally have good English proficiency.

In comparison, observing their nation's defeat in the two Opium Wars (1839-1842 and 1856-1860) and being constantly subdivided by European powers during the 19th century through to the early 20th century, the Chinese elites eagerly pursued modern Western education in the domains of foreign languages, national defence and new techniques of industrial production (Hayhoe, 1989; Pepper, 1996; Maddison, 1998). Despite this effort, limited achievements had been made in science and technology in China, especially during the Cultural Revolution (1966-1976) which had brought the country's education to an almost standstill. In pursuit of economic modernisation, the post-Mao education policy has put priorities on training a skilled workforce and emphasised scientific and technical knowledge. As shown in this study, despite the expanding mass of Chinese graduates possessing a range of technical skills, their English abilities and other (inter-)personal qualities still have not met the expectations of employers particularly of foreign and large domestic companies. Hence, different from India, China has distinctive advantage to deal with East/SE Asian clients based in, for example, Japan, South Korea, Taiwan and Hong Kong, thanks to

their regional proximity in terms of history, ethnicity, language and culture. In particular, the historical links between China and Japan and between China and Korea have been a result of the spread of Chinese civilisation to these neighbouring countries through language, culture and religion since as early as the Han Dynasty, of the Chinese colonial conquest of the Korean peninsula during the postclassical era, and a result of the Japanese imperialism between 1895 and 1945 (Stearns*, et al.*, 2003).

Both China and India are criticised for high levels of corruption and bureaucracy (Bardhan, 2010; Transparency International, 2011).[21] There are also problems with intellectual property protection and data security, although some observers suggest India's regulations are generally better defined and implemented than China's. For instance, most of the Indian software firms have disaster recovery schemes to protect data and ensure business continuity, while many Chinese software firms lack knowledge about disaster recovery (Yu, 2007). Moreover, while all the larger Indian software firms have already acquired Capability Maturity Model (CMM) Level 5, and many others have been certified with other levels of CMM, ISO 9000 and other international standards; most of the Chinese suppliers have just raised awareness about formalisation of quality assurance and started rushing to go through the assessment process to acquire such certifications.[22] Indeed, because of the institutional, quality and other uncertainties involved in offshoring/outsourcing processes, obtaining internationally recognised certifications becomes an approach for developing country suppliers to convey trust to prospective clients. On the one hand, on top of firm/product brands and government regulations (such as mandatory information disclosure, product standards, and refund laws), developed country producers and sellers are generally benefitted from 'branded states' (Potoski & Prakash, 2009, p. 223), representing the overall reputation of the country's export goods/services based on long-established satisfaction, confidence and trust of customers. On the other hand, without strong firm/product brands and/or institutional settings, developing country products usually entail high transaction costs for their buyers as the latter face informational asymmetries and thus high costs in searching for quality

[21] According to the Corruption Perceptions Index, China places 75$^{th}$ (score: 3.6 out of 10) and India ranks 95$^{th}$ (3.1) in 2011 (Transparency International, 2011).

[22] According to India Brand Equity Foundation (2011), more than 85 global CMM Level 5 firms have a presence in India. According to CCIIP (2012), China has 38 software companies certified with CMM Level 5 and 23 CMM4 certified by the end of 2006.

providers/products because of considerable spatial, cultural and linguistic distances (Hudson & Jones, 2003; Potoski & Prakash, 2009).

Largely due to their richer experience in dealing with Anglo-Saxon clients and extensive diasporic networks, Indian service firms are generally characterised by better corporate management and more vibrant entrepreneurship, as compared to Chinese indigenous suppliers. While the former are highly aware of human resources management and process control; the latter tend to lack a deep understanding of Western business management and process flows. The smaller Chinese firms are typically falling short in experience in large-scale international outsourcing projects. However, the other side of this story could be that the Chinese suppliers do not rely wholly on Western clients who have dominated the setting of 'international' standards, as their focus in the short run is not on the Anglo-Saxon sphere of business but on the regional scope in Asia. East Asian (whether considered collectively or in national terms) and Western consumers clearly have different quality requirements. Their demands have different emphasis on and varied connection to individuality, family, community and social circles. For instance, even though generally regarded as demanding as other First World consumers, Japanese consumers' notion of quality does not necessarily correspond to Western criteria.

Overall, in spite of the common perception that India and China are competing with each other in the rising opportunities of offshoring of ICT-enabled services, the two countries' market positions and strategies are distinctive. Having developed as a global supplier with the capacity of a diverse chain of service processes, India has a greater focus on the Western economies, benefitted from its English language and colonial culture, although its larger players have started expanding into European and other emerging markets which nonetheless require them to establish closer proximity to these new clients by, for example, setting up local operations and hiring local expertise to transfer the market knowledge to the Indian headquarters (Gupta, 2006; Tiwari & Herstatt, 2009). On the other side, China is still an infant in the services offshoring/outsourcing industry, even though some of its indigenous MNCs are growing rapidly. The Chinese suppliers generally have a regional focus, such as the Japanese, Korean and other East/Southeast Asian markets, while attempting to diversify their sources of revenues by serving clients from other developed regions. This is primarily facilitated by its advantage in language, cultural and geographic

proximity. While some of the East Asian markets are generally easier to satisfy for Chinese suppliers, entering into these fast-growing markets, especially the advanced economies of Japan, Korea, Hong Kong and Singapore, also offer Chinese suppliers an alternate route to develop some transferable capabilities, and to get in touch with more demanding clients from the US and Western European markets who have operations in theses Asian hubs.

**Implications for the rest of the East Asia region and the Global South**

With expanding opportunities and rising complexity of services offshoring, a broader range of locations beyond India and the three economies in this study have evolved to provide offshore services via ICT links to clients across boundaries. Owing to the 'quality' elements that are critical to the performance and upgrading of knowledge-intensive services, host countries and suppliers are expected to comprehend their distinctive geographical, cultural and language advantages that would help them shape and nurture relationship-based trust and hopefully create lock-in effect. In particular, the present study has demonstrated that services offshoring could mean more than serving the traditional Western economies which have shaped the English-speaking regime in the business world. Not only customer contact services but also IT and other business services with specified local language requirements and communication needs could pose enormous demand for non-English language skills. In addition, while the Anglo-Saxon culture dominates the 'global' culture in both the consumer and business worlds, an understanding of regional and local customs and conventions remains a prerequisite for foreign investors who wish to enter certain sticky markets (that tend to be more resistant to Western/global culture) and a big challenge for offshore suppliers to provide business-to-business and business-to-customer services in a more customised approach (that is more likely to create higher value to clients).

Many of the East and Southeast Asian economies are characterised by multi-linguistic and multi-cultural populations. For instance, Chinese migrants have scattered and settled in these various countries since decades and even centuries ago. In addition to this attribute, many East/SE Asian countries had been under strong Western colonial influence through trade, conquest and military presence. For example, in the second half of the 20$^{th}$ century, the Dutch had controlled Indonesia, the French in Vietnam, the

British in Hong Kong, Burma, Malaysia and Singapore, and the Americans in the Philippines. Because of such colonial legacies, many of these post-colonies have modelled their institutional systems on and retained close economic and political ties with their former colonists. Therefore, many ASEAN countries theoretically could build upon these relational advantages to serve more demanding overseas clients in these First World countries. Unfortunately, their political and institutional weaknesses, alongside the lack of quality in various home conditions, such as human capital and ICT infrastructure, have created tremendous challenges for their service industries to directly link to the global value chain. For example, although recently recognised as a rapidly rising offshore location for customer contact and other BPO services especially for American clients, the Philippines is indeed dominated by foreign suppliers, while indigenous third-party vendors are few and have minimal overseas linkage (Beshouri, Farrell & Umezawa, 2005; Alava, 2006; Mitra, 2011). Generally speaking, at the current stage, most of these developing countries are still competing simply on cost advantage, while improving process capabilities through extending their economies of scale and scope may be a possible way to establish wider linkages with different varieties of clients and thus acquire more experiences in the international sourcing sphere.

Other regions that have become fast-emerging players outside Asia are Eastern Europe (e.g. Bulgaria, Estonia, Romania, Lithuania, Lithuania and the Czech Republic), Latin America (e.g. Chile, Mexico, Brazil and Argentina), the Middle East and Africa (e.g. Egypt, Jordan, Ghana, Tunisia, Mauritius, Morocco and South Africa) (A.T. Kearney, 2009). Recent years have seen a rapid surge of academic research on the growing engagement in services offshoring of these emerging economies, particularly those in Eastern Europe and Latin America in the English-language literature (e.g. Marin, 2006; Gereffi, Castillo & Fernandez-Stark, 2009; Gal, 2011; Hardy, Micek & Capik, 2011; López, Niembro & Ramos, 2011; Sass & Fifekova, 2011). Each of them has distinctive advantages that have drawn attention from foreign investors and clients, which do not necessarily lie in the English abilities of their graduate workers. In addition, owing to varied trajectories as a result of historical legacy and subsequent political and social progress, these emerging economies have capitalised on time zone, language and cultural proximity to supply broader varieties of offshore services to their primary client locations. For example, Latin American countries could provide Spanish-language services. Some Middle East and African

regions have a good supply of service workers capable of francophone, English and other European languages (Francois & Hoekman, 2010; Karthik & Rajpal, 2010), while with growing demographic and political importance Arabic language skills which are not widely available in outsourcing locations are typically sourced from within the Middle East and North Africa (Graddol, 2006; Khaireldin, 2010). The geographically limited supply of certain languages additionally reflects the parallel processes of regionalisation and globalisation. Furthermore, frequent political chaos and social unrest, institutional turmoil and infrastructural failing would undeniably lead to higher risks involved in offshore transactions and investments, and thus likely hinder the development of higher-end services.

Nevertheless, the demand for offshore services is becoming more dynamic and multidirectional, as it not only comes from the conventional core economies, but also from fast-emerging countries that have developed into a global power in their own right and are generating demand for lower-end processes in search of more efficient and effective geographical division of labour. They are not only looking for cost savings but also searching for different fits of locational advantages. One example is that many Indian IT/service MNCs have started offshoring some routine processes to other locations, such as the Philippines and China, to seek lower costs and to cater for regional demand. However, in the short run, due to the institutional and political constraints, many of these Southern economies would still remain concentrated in supplying routine tasks for their overseas clients. In the long run, if they are able to overcome these obstacles, they would have wider choice of linking to the global services value chain and improve their current positions. In the meantime, rather than jumping from low-end processes to the highest end to attempt directly at design and architectural functions for clients, it is more important for emerging economies to develop a progressive approach to push from the lower end to the higher end through understanding its own advantages in the global production system.

### 8.3.3 Recommendations for Future Research

While services offshoring and developing country upgrading and capabilities development cover a very wide range of potentially important and interesting topics, our study suggests a handful that need urgent attention and research priority. Global sourcing of ICT-enabled services involves client firms, service suppliers and other

stakeholders of varied scales. Thus, firstly, we are interested not only in the so-called lead firms and their dominant impact on the value chain and local suppliers, but also in the perspectives of smaller players, i.e. local suppliers (Ernst & Kim, 2002). Since they do not occupy static spots on the network, we need to assess and compare how firms are networked spatially and organisationally, including the breadth and depth of such networks and the dynamic relationships with one another. We also need to investigate how firms devote their resources to link with other organisations and locations, and how such linkage may help them acquire desired capabilities.

Secondly, in view of the emphasis on leverage and learning opportunities offered by linking to the global value chain, we need to know more about the mechanisms on learning and knowledge diffusion. At present, research on knowledge transfer via linking to the global production system has been occupied by case studies on manufacturing production (e.g. Blalock & Gertler, 2009; Saliola & Zanfei, 2009), while a limited part of the literature has been devoted to ICT-driven services. As moving up the value chain implies more intensive use of tacit knowledge which is embedded among (groups of) professionals, locally and culturally (Kogut & Zander, 1992; Bathelt, Malmberg & Maskell, 2004), the flows of people should be of critical concern for both policymakers and firms. Therefore, research will need to examine to what extent and how inter-firm and intra-firm labour transfers, as well as transnational migration of individuals, may lead to the transfer of knowledge. In relation to this, we need to further our understanding of the circumstances that can justify outsourcing/offshoring of more knowledge-intensive service processes, such as biopharmaceutical research, and how it is arranged affects knowledge diffusion.

Thirdly, while not examined in the present study, the relationships between different actors will need to be investigated in in-depth, separate research. For example, although some research has been conducted on certain Chinese locations which have been more engaged in services offshoring, such as Beijing, Shanghai and Dalian, in both English- and Chinese-language research communities (Klotz, 2004; Cong & Chen, 2007; Zhao, Watanabe & Griffy-Brown, 2009; Parthasarathy & Palavalli, 2010; Y. Yan & Cao, 2010), it would be worth assessing the competitiveness of specific cities or regions in particular areas of services development. In particular, the dynamic relationships between different supporting institutions, including government departments, quasi-government organisations, public/private education institutions,

research institutes, industry associations in general and in specific sectors and so on, at different spatial levels ranging from international, supra-national regional to local, are influential to the development of services in a particular location that is embedded in such complex institutional settings, alongside different ranges of firms, customers and service workers. It would therefore be useful to examine how the complex functioning of different types and levels of supporting institutions might help stimulate conditions favourable for business services growth.

Last but not least, to enrich our understanding of the upgrading trajectories of the Global South, further research will need to look into the role of lead firms from NIEs (such as South Korea, Hong Kong and Singapore) and emerging countries (such as India, China and Russia) in shaping the global services production system, their patterns of cooperation and competition, and their difference, if any, from the networks driven by Western MNCs. It will also be meaningful to assess whether the rise of such Southern MNCs matters to the national and regional business networks and organisations of their origins, and their potential contribution, if any, to the development of their smaller domestic counterparts. Moreover, although the present study has suggested the importance of regional proximity in terms of culture and language, one should not neglect the existence of micro-cultural differences within a region and even within a country, which might lead to certain extent of variations in firm strategies when foreign suppliers/investors intend to set up overseas.

## 8.4 Conclusions

This study has contributed to the literature on services offshoring and upgrading by offering an in-depth account of how the demand and supply of ICT-enabled business services in China, Hong Kong and Singapore have affected and been affected by their different competitive advantages and upgrading strategies within the global services value chain. The varied degrees of quality and sophistication of the range of conditions critical to the development of knowledge-intensive services have resulted in the different positions of the three economies and the different regions within China in the value chain of the three selected sectors. We have also shown the complex interaction between the urban hierarchy of services production and consumption, locational characteristics and firm strategies. The role of culture, language, trust and market knowledge has been crucial to outcomes of efforts to

progress from the lower end of the value chain to the higher end, as these 'quality' elements are required for the industry players to nurture process and relational capabilities. These dynamics have further brought about a synergy between two broad upgrading strategies, i.e. knowledge intensification (for KIBS) and manufacturisation. We have gained a conceptual understanding of how the latter could help firms, especially those lacking sophisticated conditions at the start, leverage horizontal process extension and develop flexible combination of offerings to cater for non-standardised markets and thus achieve higher value creation.

Based on the findings and discussions of the research, we have highlighted the implications of such relationship-based tacit knowledge in the wider geographic context. In particular, in the context of increasingly complex and multidirectional flows of services offshoring, and given the importance of language and culture in performing knowledge-intensive services, the global market is no longer just about serving English-speaking customers in the Western economies, which has been the basis of India's success. Elsewhere, the Global South can leverage their non-English language and cultural advantages to cater for growing demand from other parts of the world. This diversification is increasingly important, as other developed and emerging countries have gained an expanding share of economic and political influence in the world. All in all, with the distinctiveness of knowledge-intensive services, diverse strategic choice based on locational and sectoral characteristics would allow Southern economies and their stakeholders at different levels to ultimately move up the value ladder in their own right.

Future research will need to take into account the perspectives of smaller players in both developed and developing worlds, and the role of Southern MNCs in the global services production system. It is hoped that efforts will also be devoted to examining how knowledge and expertise are diffused across geographic and organisational spaces, including the learning mechanisms and flows of people involved in such potential transfer of knowledge in the ICT-driven services. In addition, more attention will need to be drawn to the dynamic relationships between different actors at various spatial levels within a country and from a regional/transnational comparative perspective.

# Appendices

## Appendix I Types and Examples of Documents Retrieved and Used

| Source | Type of documents | Examples |
|---|---|---|
| State and Municipal Governments | ▪ Officially designated websites | ▪ Beijing Association of Sourcing Service (BASS)<br>▪ *ChinaSourcing* (MOFCOM, n.d.)<br>▪ Dalian Software Parks (DLSP)<br>▪ Hong Kong Software Outsourcing Alliance (HKSOA)<br>▪ Hong Kong Trade Development Council (HKTDC)<br>▪ iDA Singapore<br>▪ Shanghai International Services Outsourcing Industry Park (ISOIP)<br>▪ SPRING Singapore<br>▪ Torch High Technology Industry Development Center |
| | ▪ Policy announcements | ▪ *China's Commitment to Business Services Upon Accession to the WTO*<br>▪ *Compilation of China's Services Outsourcing Policies 2009* (retrieved from *ChinaSourcing*) – with specific policies drafted by selected municipals<br>▪ *Mainland and Hong Kong Closer Economic Partnership Arrangement (CEPA)*<br>▪ *Shanghai's Service Industry Development Plan 2009-2012* |
| | ▪ Reports | ▪ *10th Serial Report on the Celebration for the 60th Anniversary of the Founding of New China* (NBS China, 2009)<br>▪ *Report on Development of China's Outsourcing 2008*, by CCIIP, CEIBS & CSORC<br>▪ *Research Report on the Development of Our City's Services Outsourcing* (Wuxi City People's Congress, 2009)<br>▪ *White Paper on China's Software and Information Service Outsourcing Industry* (CSIP (MII), CSIA & China Software and Information Service Outsourcing Industry Alliance, 2008) |
| Supporting Institutions | ▪ Reports | ▪ *ACRA Report Presented at the Public Accountants Conference* (Leng & |

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| | | Accounting and Corporate Regulatory Authority, 2008)<br>▪ *Hong Kong Industry Profiles* by HKTDC<br>▪ *Internal Management and Scaled Development of Accounting Firms - Third CICPA Forum Speech Series* (CICPA, 2006)<br>▪ *Japanese Offshore Outsourcing Market Research Report* (Japan Information Processing Development Corporation, 2009) |
| Public Media | ▪ News<br>▪ Commentaries | ▪ *Business Week*<br>▪ *Call Center Magazine*<br>▪ *Forbes*<br>▪ *Hong Kong Economic Times*<br>▪ *Offshoring Times*<br>▪ *The Standard* (Hong Kong)<br>▪ *The Straits* (Singapore)<br>▪ *The Wall Street Journal*<br>▪ *Xin Hua Net* (China) |
| | ▪ Interviews (Transcript/podcast) | ▪ Magazine interview with BPO/IT/CC-CHN-C1 President (Analysys International, 2008)<br>▪ Podcast interview with Executive Vice President of BPO/IT/CC-CHN-C1 (C. Wu, 2008) |

Note: Sort in alphabetic order.

## Appendix II List of Major Supporting Public and Private Sector-led Institutions in China, Hong Kong and Singapore

**China**

National:

1. 51CallCenter – Call centre and BPO industry news
2. China Council for International Investment Promotion (CCIIP)
3. China Service Outsourcing Research Center
4. ChinaSourcing (Internet Information Platform) – by Ministry of Commerce
5. The Chinese Institute of Certified Public Accountants (CICPA)
6. Torch High Technology Industry Development Center

Provincial/Municipal:

1. Beijing Association of Sourcing Service (BASS)
2. Beijing Call Centre Industry Base - Beijing Miyun Economic Development Zone
3. Beijing National Accounting Institute
4. Dalian Software Park
5. Guangdong Science Park
6. Guangdong Software Outsourcing Council
7. Shanghai International Services Outsourcing Industry Park (ISOIP) - by Shanghai Luwan District International Services Outsourcing Industry Development Promotion Lead Group
8. Shanghai National Accounting Institute
9. Shanghai Zhangjiang Institute for Innovation
10. Shenzhen Services Outsourcing Net - by Shenzhen Bureau of Trade and Industry
11. Suzhou Foreign Trade and Economic Cooperation Bureau (Suzhou Bureau of Commerce)
12. Tianjin Sourcing - by Tianjin Services Outsourcing Industry Development Promotion Lead Group, and Tianjin Commission Of Commerce

**Hong Kong**

1. Federation of Hong Kong Business Associations Worldwide
2. Federation of Hong Kong Industries
3. Hong Kong Association of Banks (HKAB)
4. Hong Kong Call Centre Association (HKCCA)
5. Hong Kong Cyberport
6. Hong Kong General Chamber of Commerce
7. Hong Kong Information Technology Federation
8. Hong Kong Institute of Certified Public Accountants
9. Hong Kong Science & Technology Park (HKSTP)
10. Hong Kong Software Outsourcing Alliance (HKSOA)
11. Hong Kong Trade Development Council (HKTDC)
12. Insurance Institute of Hong Kong (IIHK)
13. Invest Hong Kong

**Singapore**

1. Association of Financial Advisers (Singapore) (AFA(S))
2. Centre for Strategic Infocomm Technologies
3. Contact Centre Association of Singapore (CCAS)
4. Financial Planning Association of Singapore (FPAS)
5. General Insurance Association of Singapore (GIA)
6. Infocomm Development Authority of Singapore (IDA)
7. Infocomm Investments Pte Ltd (IIPL) - a wholly-owned subsidiary of IDA
8. Insurance and Financial Practitioners Association of Singapore
9. Singapore Business Federation
10. Singapore Chinese Chamber of Commerce & Industry
11. Singapore High Technology Association (SHTA)
12. Singapore International Chamber of Commerce (SICC)
13. SPRING Singapore
14. The Association of Banks in Singapore (ABS)
15. The Singapore Chamber of Commerce (Hong Kong)

Note: Sort in alphabetic order.

## Appendix III Information Sheet for Mainland China Firms

**Information on Research Project**
**研究项目资料**

**Project Title 项目名称**
Offshore Sourcing and Supply of IT and ICT-Enabled Services in East Asia
东亚地区离岸资讯科技及信息和通信技术带动的服务采购及供应

**Principal Investigator 主要研究员**
Miss Sancia Wai-San Wan, Department of Geography & Environment, London School of Economics and Political Science, UK

英国伦敦政治经济学院地理与环境系研究员温慧珊小姐

**Sponsorship 赞助**
Universities' China Committee in London 英国大学中国委员会研究资助

**Objectives and Scope 宗旨及范围**
This study is focused on three East Asian economies, namely, Mainland China, Hong Kong and Singapore, to conceptualise their development experiences from both user and supplier perspectives with respect to global sourcing of services. Three specific services sectors are selected. They are contact centres, information technology (IT), and finance and accounting (F&A). It attempts to find out in what ways and how far these fast-emerging countries have been going in the recent rise of global sourcing in particular of services processes.
This survey is aimed at analysing the perceptions of both user and supplier firms with respect to the dynamics of their use and provision of the three selected types of services, including their supply and demand, locational characteristics, changes over time, factors affecting their decisions, and future expectations.

本研究的重点在于东亚地区三个经济体 - 中国内地、香港和新加坡，从用户和供应商的角度以探讨他们离岸服务的发展经验，并集中探讨三个服务范畴 - 客户联络/ 呼叫中心、资讯科技、以及财务与会计。本研究的是找出实证探讨这些发展快速的国家地区，如何在现今迅速澎涨的离岸服务采购业扮演什么角色。
本调查的对象是私人服务业公司，目的是解构他们作为用户和供应商对于使用和供应上述三种服务范畴的各样看法，包括其需求和供应、位置特点、各种转变、决策因素及未来的期望。

**Procedures 程序**

- The questionnaire consists of five parts on five pages. They include Part I: Basic Company Information, Part II: Use and Supply of Offshore Services, Part III: Dynamic Offshoring Experiences as a Supplier, and Part IV: Business Prospects. Part V asking for your contact details is optional.
- 本问卷共有五页，由五个部份组成，包括第一部分：公司基本资料，第二部分：离岸服务的使用及提供，第三部分：作为离岸供应商的经验，以及第四部分：业务展望。第五部分有关您的联络资料是自愿性的。

- Upon completion, please return your questionnaire to Miss Sancia Wan by post at P.O. Box No. XXX, XXXXX Post Office, Hong Kong (self-addressed stamped envelope provided), or by fax at +852 xxxx-xxxx, or by email at xxxxx@lse.ac.uk before August 28, 2009.
- 完成问卷后，请于2009年8月28日前寄回香港XXXXX邮政信箱XXX号（已提供邮资已付信封），或传真至+852 xxxx-xxxx，或以附件发送电邮至xxxx @ lse.ac.uk。

**Definition of Terms 词汇**

| | |
|---|---|
| Offshore sourcing/ offshoring<br><br>离岸外包/离岸业务 | sourcing of particular goods or services from firms located outside the home country of your company, either from third-party organisations/firms in these places, or by setting up cooperative contracts with these organisations, or from foreign affiliates or branches with complete ownership – in this study, the relationship between Mainland China and Hong Kong is also considered "offshore" in consideration of the execution of the "One Country Two Systems" principle and their independent economic policies.<br><br>向位于贵公司本国以外地点的第三方机构/公司、或者通过设立合资关系的合同、或者以拥有全权的子公司或分支机构采购某些商品或服务 - 在这项研究中，由于考虑到执行「一国两制」原则和各自独立的经济政策，中国内地和香港的关系亦当作是「离岸」。 |
| Outsource<br><br>外判 | an economic activity or process being subcontracted to a third-party company<br><br>一种经济活动或过程被分包给第三方公司 |
| Captive<br><br>全资经营 | an entity solely owned by your company<br><br>一个由贵公司独资的实体 |
| Joint Venture<br><br>合资经营 | an entity formed between your company and at least one third-party company to undertake economic activity together<br><br>贵公司和至少一间第三方公司为一起进行某些经济活动而成立的一个实体 |

**Confidentiality 资料的保密**

All data collected from the surveys are subject to strict confidentiality measures and used for research purposes only. Unless approval is granted by the participants, their identities will be kept anonymous. Aggregated data from these surveys for the project will be disseminated in international publications and as part of the PhD thesis of the principal investigator. All questionnaires received will be carefully disposed upon completion of the whole research project.

研究员会采取严格措施，以确保调查获得的所有数据的保密并只作为研究用途。除非获得参与者的批准，他们的身份将保持匿名。从这些调查项目综合得出的数据将发表于国际刊物以及本研究员的博士论文。在整个研究项目完成后，所收回的调查问卷将妥善处理并弃置。

**Questions & Concerns 意见及疑问**

Should you have any comments or enquiries, please do not hesitate to contact Miss Sancia Wan:

如日后您对是项研究有任何查询或疑问，请与研究员温慧珊小姐联络：

| | Hong Kong 香港 | UK 英国 |
|---|---|---|
| Postal Address<br>邮政地址： | *P.O. Box No. XXX*<br>*XXXXX Post Office*<br>*Hong Kong*<br>香港 XXXXX<br>邮政信箱 XXX 号 | *Department of Geography & Environment*<br>*London School of Economics & Political Science*<br>*Houghton Street*<br>*London WC2A 2AE*<br>*United Kingdom* |
| Phone 电话： | *+852 xxxx-xxxx* | |
| Fax 传真： | *+852 xxxx-xxxxx* | |
| Email 电邮： | *xxxxx@lse.ac.uk* | |

Thank you very much for your time and support. If the English version of this Information Sheet does not conform to the Chinese version, the English version shall prevail.
非常感谢您宝贵的时间和支持。本资料的中英文本如有歧义，概以英文本为准。

## Appendix IV Information Sheet for Hong Kong and Singapore Firms

**Information on Research Project**

**Project Title**
Offshore Sourcing and Supply of IT and ICT-Enabled Services in East Asia

**Principal Investigator**
Miss Sancia Wai-San Wan, Department of Geography & Environment, London School of Economics and Political Science, United Kingdom

**Sponsorship**
Universities' China Committee in London Research Grant

**Objectives and Scope**
This study is focused on three East Asian economies, namely, Mainland China, Hong Kong and Singapore, to conceptualise their development experiences from both user and supplier perspectives with respect to global sourcing of services. Three specific services sectors are selected. They are contact centres, information technology (IT), and finance and accounting (F&A). It attempts to find out in what ways and how far these fast-emerging countries have been going in the recent rise of global sourcing in particular of services processes.
This survey is aimed at analysing the perceptions of both user and supplier firms with respect to the dynamics of their use and provision of the three selected types of services, including their supply and demand, locational characteristics, changes over time, factors affecting their decisions, and future expectations.

**Procedures**

- The questionnaire consists of five parts on five pages. They include Part I: Basic Company Information, Part II: Use and Supply of Offshore Services, Part III: Dynamic Offshoring Experiences as a User, Part IV: Dynamic Offshoring Experiences as a Supplier, and Part V: Business Prospects. Part VI asking for your contact details is optional.
- Upon completion, please return your questionnaire to Miss Sancia Wan by post at P.O. Box No. XXX, XXXXX Post Office, Hong Kong (self-addressed stamped envelope provided), or by fax at +852 xxxx-xxxx, or by email at xxxxx@lse.ac.uk before 7th October, 2009 (Wednesday).

**Definition of Terms**

| | |
|---|---|
| Offshore sourcing/ offshoring | sourcing of particular goods or services from firms located outside the home country of your company, either from third-party organisations/firms in these places, or by setting up cooperative contracts with these organisations, or from foreign affiliates or branches with complete ownership |
| Outsource | an economic activity or process being subcontracted to a third-party company |
| Captive | an entity solely owned by your company |
| Joint venture | an entity formed between your company and at least one third-party company to undertake economic activity together |

**Confidentiality**

All data collected from the surveys are subject to strict confidentiality measures and used for research purposes only. Unless approval is granted by the participants, their identities will be kept anonymous. Aggregated data from these surveys for the project will be disseminated in international publications and as part of the PhD thesis of the principal investigator. All questionnaires received will be carefully disposed upon completion of the whole research project.

**Questions & Concerns**

Should you have any comments or enquiries, please do not hesitate to contact Miss Sancia Wan:


| | Hong Kong | UK |
|---|---|---|
| Postal address: | *P.O. Box No. XXX*<br>*XXXXX Post Office*<br>*Hong Kong* | *Department of Geography & Environment*<br>*London School of Economics & Political Science*<br>*Houghton Street*<br>*London WC2A 2AE*<br>*United Kingdom* |
| Phone: | *+852 xxxx-xxxx* | |
| Fax: | *+852 xxxx-xxxx* | |
| Email: | *xxxxx@lse.ac.uk* | |


Thank you very much for your time and support.

# Appendix V Sample Copy of Semi-structured Questionnaire for Mainland China Firms

**Offshore Sourcing and Supply of IT and ICT-Enabled Services in East Asia**

**A Survey on Services Providers in Mainland China**

*Note: Please read the Information Sheet enclosed for your rights as a survey participant and the definition of terms.*

---

**Part I Basic Company Information**

| | |
|---|---|
| 1. Industry Sector | □ I.T. □ Business services (incl. contact centres) □ Accounting □ Banking & finance □ Others |
| 2. Location of Your Company | City: _____ |
| 3. Approximate No. of Employees | □ 1-50 □ 51-100 □ 101-500 □ More than 500 |
| 4. Location of Parent Company *(If different from above)* | Country: _____ City: _____ |

**Part II Use and Supply of Offshore Services**

1. Over the past 5 years, has your company provided any of the following three types of services to overseas clients and/or organisations? *(Put a ✓ in one box of each column as appropriate.)*

| | Information technology | Finance & accounting | Call/contact centre |
|---|---|---|---|
| a) Yes, and still providing | | | |
| b) Yes, but terminated | | | |
| c) No | | | |

2. Over the past 5 years, has your company sourced any of the following three types of services from overseas companies/affiliates? *(Put a ✓ in one box of each column as appropriate.)*

| | Information technology | Finance & accounting | Call/contact centre |
|---|---|---|---|
| a) Yes, and still using | | | |
| b) Yes, but terminated | | | |
| c) No | | | |

3. If you are not currently using/supplying the mentioned offshore services, do you have any **plan** to do so in the next 5 years? Could you suggest why or why not? *(Put a ✓ in <u>one</u> box of <u>each column</u> as appropriate.)*

| | Information technology | Finance & accounting | Call/contact centre |
|---|---|---|---|
| a) Yes, we plan to use | | | |
| b) Yes, we plan to supply | | | |
| c) No, we will not | | | |
| d) Maybe, we haven't decided | | | |

Why (not): _____

_____

4. With which county/ies does your company have business partnership regarding offshore sourcing (either buy or supply)? What types of processes do you source from and/or supply abroad?

| | Source from | | Supply to | |
|---|---|---|---|---|
| | Country/ies | Type(s) of processes | Country/ies | Type(s) of processes |
| a) Current | | | | |
| b) Plan | | | | |

5. How would you describe the service delivery model of your company with your overseas clients/suppliers (e.g. captive, joint venture, third-party – total outsourcing, HR outsourcing, cooperative outsourcing, etc.)?

_____

_____

6. Which sectors do most of your clients/suppliers belong to (e.g. IT, banking, manufacturing)?

_____

_____

**Part III Dynamic Offshoring Experiences as a Supplier**

1. How do you cooperate with your clients during negotiation, transition, operation and management?

_____

_____

2. Have there been any challenging times during the processes of negotiation, transition, operation and management that you would like to share?

_____

_____

3. How has your company developed in recent years, in terms of capabilities development, particularly regarding provision of services to overseas clients?

4. How do you consider the formal organisations or associations that are set up to promote the industry's interests? To what extent do you think they are able to help the development of the industry regarding services offshoring? What would you expect them to achieve?

5. What would you perceive the government's efforts in helping the industry in offshoring business?

6. How has your company managed to assure the demand of your clients for the quality of the workforce?

7. What attribute(s) of your home country do you think is/are most viable to help your offshore business?

8. What attribute(s) of your home country would you expect to improve?

9. What type(s) of risks are you aware that are particular to your industry and/or country in the process of offshoring? How do you think your company is able to control each type of such risks?

10. Considering the same level and same slice of spectrum of services supplied abroad, with whom do you think your company is competing? How would you describe and assess the level of competition?

**Part IV Business Prospects**

1. What are your company's visions with regard to capabilities development particularly for providing services abroad?

2. What would you expect to change in the next 5 years with regard to the use and/or supply of offshore services? (e.g. expanding/contracting business, developing new areas, focusing on particular areas, etc.)

3. What limits of ability do you think your company may face when trying to move up the value chain? What are you going to do with that?

4. What capacities and limits of offshoring do you think are specific to your sector? What might be changing?

**Part V Contact Information**

*It is optional for you to give the following information. However, if you agree, please provide the contact details of your company so that we could do some follow-ups.*

| | |
|---|---|
| a) Name of Your Company: | |
| b) Your Name: | c) Your Title: |
| d) Department: | e) Email address: |
| f) Tel. (country/area code): | g) Fax (country/area code): |
| h) Company Address: | |

∗ *End of Questionnaire* ∗

Thank you for completing this questionnaire.
Please return the questionnaire to us as instructed in the Information Sheet.

# Appendix VI Sample Copy of Semi-structured Questionnaire for Hong Kong and Singapore Firms

**Offshore Sourcing and Supply of IT and ICT-Enabled Services in East Asia**

**A Survey on Services Firms in Hong Kong and Singapore**

*Note: Read the Information Sheet enclosed for your rights as a survey participant and the definition of terms.*

---

**Part I Basic Company Information**

| | |
|---|---|
| 1. Industry Sector | □ I.T. □ Business services (incl. contact centres)<br>□ Accounting □ Banking & finance □ Others |
| 2. Location of Your Company | Country: _____ City: _____ |
| 3. Approximate No. of Employees | □ 1-50 □ 51-100 □ 101-500 □ More than 500 |
| 4. Location of Parent Company *(If different from above)* | Country: _____ City: _____ |

**Part II Use and Supply of Offshore Services**

1. Over the past 5 years, has your company provided any of the following three types of services to overseas clients and/or organisations? *(Put a ✓ in one box of each column as appropriate.)*

| | Information technology | Finance & accounting | Call/contact centre |
|---|---|---|---|
| a) Yes, and still providing | | | |
| b) Yes, but terminated | | | |
| c) No | | | |

2. Over the past 5 years, has your company sourced any of the following three types of services from overseas companies/affiliates? *(Put a ✓ in one box of each column as appropriate.)*

| | Information technology | Finance & accounting | Call/contact centre |
|---|---|---|---|
| a) Yes, and still using | | | |
| b) Yes, but terminated | | | |
| c) No | | | |

3. If you are not currently using/supplying the mentioned offshore services, do you have any plan to do so in the next 5 years? Could you suggest why or why not? *(Put a ✓ in <u>one</u> box of <u>each column</u> as appropriate.)*

| | Information technology | Finance & accounting | Call/contact centre |
|---|---|---|---|
| a) Yes, we plan to use | | | |
| b) Yes, we plan to supply | | | |
| c) No, we will not | | | |
| d) Maybe, we haven't decided | | | |

Why (not): _____

_____

4. With which county/ies does your company have business partnership regarding offshore sourcing (either buy or supply)? What types of processes do you source from and/or supply abroad?

| | Source from | | Supply to | |
|---|---|---|---|---|
| | Country/ies | Type(s) of processes | Country/ies | Type(s) of processes |
| a) Current | | | | |
| b) Plan | | | | |

5. How would you describe the service delivery model of your company with your overseas clients/suppliers (e.g. captive, joint venture, third-party – total outsourcing, HR outsourcing, cooperative outsourcing, etc.)?

_____

_____

6. Which sectors do most of your clients/suppliers belong to (e.g. IT, banking, manufacturing)?

_____

_____

**Part III Dynamic Offshoring Experiences as a User**

1. What was the human resource and organisational structure of the processes like in your company before they have been moved overseas?

_____

_____

2. What changes within your company have occurred since the shift, such as growth, cost savings, restructuring, or functional efficiency, etc.?

_____

_____

3. Are there any difficulties during the transition period and afterwards? What has been done to tackle them?

4. What are the criteria that your company would consider when selecting suppliers?

5. What are your expectations of the education and skills of workers working for your company in the offshore centre?

6. What is your company's policy to integrate your core functions with the processes that have been moved out?

7. What attribute(s) of the host country/ies would you perceive as most attractive/beneficial to your company?

8. What attribute(s) of the host country/ies would you perceive as least satisfactory?

9. What type(s) of risks are you aware that are particular to your industry and/or country in the process of offshoring? How do you think your company is able to control each type of such risks?

**Part IV Dynamic Offshoring Experiences as a Supplier**

1. To what extent do you think the formal organisations or associations that have been set up to promote your industry's interests can help its development regarding services offshoring (Please give examples)? What would you expect them to achieve?

2. What would you perceive your government's policies in helping your industry in offshoring business?

3. How has your company managed to meet the demand of your clients for the quality of the workforce?

4. What attribute(s) of your home region and city do you think is/are most viable to help your offshore business?

5. What attribute(s) of your home region and city would you expect to improve?

6. Considering the same level and same slice of spectrum of services supplied abroad, with whom do you think your company is competing? How would you describe and assess the level of competition?

7. What are your company's visions with regard to capabilities development particularly for providing services abroad?

8. What limits of ability do you think your company may face when trying to move up the value chain? What are you going to cope with that?

**Part V Business Prospects**

1. What would you expect to change in the next 5 years with regard to the use and/or supply of offshore services? (e.g. expanding/contracting business, developing new areas, focusing on particular areas, etc.)

2. What capacities and limits of offshoring do you think are specific to your sector? What might be changing?

**Part VI Contact Information**

*It is optional for you to give the following information. However, if you agree, please provide the contact details of your company so that we could do some follow-ups.*

| | |
|---|---|
| a) Name of Your Company: | |
| b) Your Name: | c) Your Title: |
| d) Department: | e) Email address: |
| f) Tel. (country/area code): | g) Fax (country/area code): |
| h) Company Address: | |

∗ *End of Questionnaire* ∗

Thank you for completing this questionnaire.

Please return the questionnaire to us as instructed in the Information Sheet.

## Appendix VII Brief Profile of Respondent Firms of the Firm-level Survey

| Company (Code) | HQ Location | Sector | Position(s) of Respondent(s) | Means | Duration* |
|---|---|---|---|---|---|
| **Mainland China** | | | | | |
| **BPO/IT/CC-CHN-C1** | Beijing | BPO/ IT/ CC | Chief Executive Officer<br>Marketing Director | Questionnaire<br>Telephone | 55 mins |
| **IT-CHN-1** | Beijing | IT | Vice President | Questionnaire<br>Telephone | 40 mins |
| **IT-CHN-2** | Beijing | IT | Marketing Manager | Questionnaire<br>Email follow-ups | N/A |
| **IT-CHN-3** | Beijing | IT | Manager | Questionnaire<br>Email follow-ups | N/A |
| **FA-CHN-1** | Shanghai | F&A | Manager & Partner | Questionnaire<br>Telephone | 37 mins |
| **FA-CHN-2** | Guangzhou | F&A | Manager | Questionnaire<br>Telephone | 52 mins |
| **FA-CHN-3** | Shanghai | F&A | Chief Executive Officer | Questionnaire<br>Telephone | 46 mins |
| **CC-CHN-1** | Beijing | CC | Chief Executive Officer | Questionnaire<br>Email follow-ups | N/A |
| **CC-CHN-2** | Huizhou | CC | General Manager | Questionnaire<br>Email follow-ups | N/A |
| **Hong Kong** | | | | | |
| **IT-HKG-1** | Hong Kong | IT | Strategic Marketing Director<br>Communications Manager | Face-to-face | 32 mins |
| **IT-HKG-2** | Hong Kong | IT | General Manager, Enterprise Business Solution Division | Telephone<br>Email follow-ups | 1 hr 20 mins |
| **IT-HKG-3** | Hong Kong | IT | IT Consultant | Face-to-face | 35 mins |
| **IT-HKG-4** | Hong Kong | IT | Chief Executive Officer | Questionnaire<br>Email follow-ups | N/A |
| **IT-HKG-5** | Hong Kong | IT | Managing Director | Questionnaire<br>Email follow-ups | N/A |
| **IT-HKG-6** | Hong Kong | IT | Executive Director | Questionnaire | N/A |
| **FA-HKG-1** | Hong Kong | F&A<br>IT | Chief Executive Officer | Telephone<br>Email follow-ups | 35 mins |
| **FA-HKG-2** | Hong Kong | F&A | Head of Business Optimization Center | Face-to-face | 48 mins |
| **FA-HKG-3** | Hong Kong | F&A | Anonymous | Questionnaire | N/A |
| **FA-HKG-4** | Hong Kong | F&A | Head of IT | Questionnaire | N/A |
| **FA-HKG-5** | Hong Kong | F&A | Director of Corporate Finance | Questionnaire | N/A |
| **FA-HKG-6** | Hong Kong | F&A | Executive Director | Emails | N/A |

| | | | | | |
|---|---|---|---|---|---|
| **CC-HKG-1** | Hong Kong | CC | General Manager | Telephone | 40 mins |
| **Singapore** | | | | | |
| **FA-SGP-1** | Singapore | F&A | Chief Executive Officer | Questionnaire Face-to-face | 45 mins |
| **FA-SGP-2** | Singapore | F&A | Vice President | Questionnaire | N/A |
| **FA-SGP-3** | Singapore | F&A | Anonymous | Questionnaire | N/A |
| **FA-SGP-4** | Singapore | F&A | Anonymous | Questionnaire | N/A |
| **CC-SGP-1** | Singapore | CC | Director | Questionnaire Email follow-ups | N/A |

Notes:
* For face-to-face and telephone interviews.
N/A Not applicable.

## Appendix VIII Brief Profile of Participating Institutions

| Institution (Code) | Location | Major Role | Position(s) of Respondent(s) | Means | Duration* |
|---|---|---|---|---|---|
| SI-CHN-1 | Shanghai | A government-facilitated institution aimed at post-graduate high-level career development: involving in HR training, internships, public information platform, research and consultation, innovation and entrepreneurships, and international exchange programmes. | Vice-Dean, and Post-doctoral Researcher | Face-to-face | 60 mins |
| SI-CHN-2 | Shanghai | Engages in higher education, and regional development research support. | Faculty Professor and Research Centre Director | Face-to-face | 45 mins |
| SI-CHN-3 | China | Aims to reinforce China's overall environment for technology innovation and promoting high-tech industrialisation, through cultivating tech-based SMEs, developing innovation clusters, and building an innovative environment. | Deputy Director of International Cooperation/ Policy Analyst and Economist | Emails | N/A |
| SI-HKG-1 | Hong Kong | Aims to propel Hong Kong towards a world-class hub for selected technologies by providing leading-edge office, laboratories and production facilities for scientists, technologists, entrepreneurs and enterprises to save development costs and time to market. | Project Manager, Projects and Facilities | Face-to-face and email follow-ups | 35 mins |
| SI-HKG-2 | Hong Kong | Responsible for attracting and facilitating FDI into Hong Kong by supporting overseas and Mainland companies to set up and expand business, and partnering with clients interested in doing business in the city. | Director, and Manager of Public Relations | Emails | N/A |
| SI-SGP-1 | Singapore | Aims to foster Singapore's infocomm industry development, and promotes sectoral transformation and people sector enrichment through infocomm. | Assistant Manager, Corporate & Marketing Communication | Emails | N/A |

Notes:
* For face-to-face and telephone interviews.
N/A Not applicable.

## Appendix IX 'Key Sectors' Proposed by Selected Model Cities as Focus of Future Services Outsourcing Development in China

| City | Key Sectors | City | Key Sectors |
|---|---|---|---|
| Beijing | ■ Information services<br>■ R&D services<br>■ Financial services<br>■ Business services | Shanghai | ■ Advanced technological services<br>■ Information technology<br>■ Business process outsourcing (BPO)<br>■ Animations, comics and creativity<br>■ Financial services<br>■ Bio-pharmaceutical R&D |
| Tianjin | ■ Software development<br>■ Financial back-office services<br>■ Pharmaceutical R&D<br>■ Logistics outsourcing<br>■ System maintenance<br>■ Finance<br>■ Administrative and human resources services<br>■ Customer service centres<br>■ Animations and comics<br>■ Industrial design | Nanjing | ■ Information technology<br>■ Mobile communications<br>■ Animation and comic production<br>■ Pharmaceutical R&D |
| Dalian | ■ Application and embedded software development<br>■ Shipping and logistics<br>■ Equipment manufacturing<br>■ Development and application of industrial design and management software<br>■ Financial services<br>■ Customer services<br>■ Logistics services<br>■ Telecommunications | Hangzhou | ■ Financial back-office services<br>■ Application software development<br>■ Hosted application management<br>■ Embedded software<br>■ Production of animations, comics and games<br>■ Telecom operations<br>■ Pharmaceutical R&D<br>■ Human resources |
| Shenzhen | ■ Software R&D and IT services<br>■ Financial services<br>■ Logistics and supply chain management services<br>■ Product R&D<br>■ Industrial and animation/comic design | Suzhou | ■ Software<br>■ R&D and design<br>■ Logistics<br>■ Animations, comics and creativity<br>■ Back-office data processing and information infrastructure |

| | | | |
|---|---|---|---|
| Guangzhou | ■ Software development<br>■ Telecom services<br>■ Data processing<br>■ Back-office services<br>■ Design and production of online games, animations and comics<br>■ Commissioned pharmaceutical R&D and processing<br>■ Third-party testing<br>■ Industrial design<br>■ Financial services<br>■ Modern logistics<br>■ Convention/exhibition services<br>■ Human resources | Wuxi | ■ Advanced technological services<br>■ Information technology<br>■ BPO<br>■ Animations, comics and creativity |
| Chongqing | ■ Communications software<br>■ Platform software<br>■ Embedded software<br>■ IT security software<br>■ Digital entertainment | Daqing | ■ Technical support and services for areas of oil mining involving, e.g. geophysical prospecting, well drilling and logging, and oil extraction |
| Xian | ■ Industry application software R&D<br>■ Embedded software R&D<br>■ Back-office IT technical support and BPO<br>■ Customer contact services centres<br>■ Data information services<br>■ Electronic commerce<br>■ Electronic transactions | Harbin | ■ Spatial geographical information<br>■ Call centres<br>■ Animations and comics<br>■ Information technology<br>■ Embedded software |

Source: modified from CCIIP, *et al.* (2008, pp. 101-102).

## Appendix X List of China's National Decrees Relating to Developing the IT and Services Outsourcing Industries (as of 2009)

| Name of policy | Decree |
|---|---|
| **Policy of the State Council:** | |
| Opinions of the State Council on Accelerating the Development of the Services Sector | SC [2007] No.7 |
| Notice of the State Council on the Implementation of Certain Complementary Policies Relating to Long-term Development Planning Memorandum for Science and Technology of PRC (2006-2020) | SC [2006] No.6 |
| Long and Medium Term Development Planning Memorandum for Science and Technology of PRC (2006-2020) | SC [2005] No.44 |
| The Action Plan for the Rejuvenation of the Software Industry | SC General Office Notice [2002] No.47 |
| Notice of the State Council on Printing and Distributing Several Policies for Encouraging the Development of Software and Integrated Circuit Industry | SC [2000] No.18 |
| Circular of the Ministry of Finance, the Ministry of Science and Technology of the People's Republic of China, Provisional Measures for Financial Management of Technical Innovation Fund for Science and Technology Type SMEs | SC General Office Notice [1999] No.47 |
| **Policy of Related Bureaus and Commissions:** | |
| Notice on Carrying out Pilot Supervision on Protective Tariff for Imports of International Outsourcing Business | General Administration of Customs and Ministry of Commerce |
| Several Opinions with Regard to Accelerating the Development of Outsourcing Industry and Promoting Employment of College Graduates | Ministry of Human Resources and Social Security and Ministry of Commence [2009] No. 123 |
| Suggestions over Offering Financial Support to Facilitate the Development of the Outsourcing Industry | People's Bank of China, Ministry of Commerce, Banking Regulatory Commission, Insurance Regulatory Commission, and State Administration of Foreign Exchange [2009] No. 284 |
| Guidelines on Encouraging Government Authorities and Enterprises to Outsource in an Effort to Promote the Outsourcing Industry | Ministry of Commerce, National Development and Reform Commission, Ministry of Science and Technology, Ministry of Industry and Information Technology, and Ministry of Commerce [2009] No. 200 |
| Circular of the Ministry of Commerce, the Ministry of Finance of the People's Republic of China, on managing the fund to Support the Development of Enterprises Taking up International Service Outsourcing Business | Ministry of Commerce, Ministry of Finance [2007] No.343 |
| Circular of the General Office of the Ministry of Commerce of the People's Republic of China, on Implementing the Statistical Report System of Service Outsourcing | Ministry of Commerce, Trade of Service Department [2007] No.12 |

| | |
|---|---|
| Circular of the Ministry of Commerce of the People's Republic of China, on Implementations of 'Ten-Hundred-Thousand' Service Outsourcing Program | Ministry of Commerce: [2006] No:556 |
| Circular of the Ministry of Commerce of the People's Republic of China, on Making Effects to Accomplish the Work of Enterprises Accreditation and Market Exploitation of Service Outsourcing Program | Investment Administration, Ministry of Commerce: [2006] No:110 |
| Circular of the Ministry of Commerce of the People's Republic of China, on Making Effects to Accomplish the Work of Talent Training in 'Ten-Hundred-Thousand' Service Outsourcing Program | Investment Administration, Ministry of Commerce: Letter [2006] No:111 |
| Circular of the Ministry of Commerce, the Ministry of Information Industry of the People's Republic of China, on Relevant Issues of Initiating the Accreditation Work on Cities of Service Outsourcing Base in China | Investment Administration, Ministry of Commerce: Letter [2006] No:102 |
| Guiding Opinions of the Ministry of Commerce, the Ministry of Information Industry, the Ministry of Education, the Ministry of Science and Technology, the Ministry of Finance, the General Administration of Customs, the State Administration of Taxation, the National Bureau of Statistics, the State Administration of Foreign Exchange of the People's Republic of China, on Developing the Export of Software and Relevant Information Service | Ministry of Commerce, Trade in Services, [2006], No.520 |
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| Circular Concerning the Relevant Issues of Software Exports | National Development and Reform Commission [2000], No.680 |

Note: SC refers to the State Council.

Source: modified from CCIIP (2008, 2010).

## Appendix XI Summary of China's National Policies and Initiatives on the Development of Services Outsourcing Industry (as of November, 2009)

a) Tax incentives:

   i. A 15% deduction on corporate income tax for advanced-technology service enterprises.
   ii. Education and training expenses on their employees with a ratio of no more than 8% of the total income are deducted before the calculation of corporate income tax. Such kind of expenses that exceed 8% will be deducted in the following financial years.
   iii. Sales taxes are exempted for accredited advanced-technology outsourcing enterprises.
   iv. Pilot supervision on protective tariff for imports of international outsourcing business will be carried out in ten cities, which are Shanghai, Dalian, Shenzhen, Nanjing, Suzhou, Wuxi, Harbin, Daqing, Xian and Changsha.

b) Encouragement of and support for professional training:

   i. Outsourcing companies will be offered a subsidy of up to 4,500 Yuan (USD 662) a year from the central bursary for every college graduate employed on a contract of at least one year.
   ii. The training institutions of such graduate will be awarded a 500 Yuan subsidy per person.
   iii. A fixed amount of 5 million Yuan will be offered to model cities, which have not received financial support from the government yet.
   iv. The Ministry of Education and Ministry of Commerce are to establish a training center for outsourcing talents, and to work out the industry code of conduct.
   v. The numbers of university and professional training institution graduates employed by outsourcing enterprises are published periodically.
   vi. The founding of enterprise-university alliance through exchange of business professionals and university lecturers is encouraged.

c) Encouragement of acquisition of international standard certifications

   i. Eligible outsourcing enterprises will be awarded up to 500 thousand Yuan as subsidies for obtaining each certification, including CMMI, CMM, PCMM, ISO27001/BS7799, ISO20000 and SAS70.

d) Campaign of branding and marketing:

   i. To create a "ChinaSourcing" national brand; and
   ii. To draw international attention to China's outsourcing enterprises, by initially listing the Top 10 leading and Top 100 growing enterprises as the window for international buyers to find out the country's delivery capacity and thereby order Chinese services.

e) Establishment of public service platforms:

   i. The Ministry of Commerce has set up a national-level public service website (http://chinasourcing.org.cn/) to information on services outsourcing, with the support of all model cities, transnational and domestic companies, and related institutions and research units.
   ii. China Development Bank, in cooperation with Ministry of Commerce, is to grant policy-based loans to the model cities for their construction of public service platform of technical support for technological R&D, quality assurance and testing, demonstration, validation, training, programme management and protection of intellectual property rights, and construction of infrastructure and investment environment.

f) Establishment of designated development zones and high tech/services parks:

   i. Central government financial support on loan interest is applicable for outsourcing infrastructure constructions in National-level Economic and Technological Development Zones in Central and Western China.

g) Provision of ICT infrastructure:

   i. A dedicated international telecommunication channel is to be set up for advancement of international telecommunication services in model cities.
   ii. Virtual networks and lines are to be built up through the utilisation of network advantages of the country's telecomm enterprises for outsourcing enterprises' exclusive use.
   iii. Telecom service provides are urged to classify outsourcing enterprises and parks as their important clients and provide them with high-quality and efficient services.

h) Financial service support for the industry:

   i. Encourage the banking industry to proactively develop innovative credit products in line with the demand characteristics of the service outsourcing industry, to pay full attention to monitoring their business cash flow and capital flow, and to research and promote business of secured loan on intangible assets, including proprietary knowledge and technology, licensing patents and copyrights;
   ii. Encourage the expansion of direct financing channels for service outsourcing enterprises via multiple ways: for example, domestic and overseas listings of qualified service outsourcing enterprises, investment from industrial investment funds, equity funds and venture investment enterprises, and use of corporate bonds, convertible bonds and other direct financing tools;
   iii. Improve the export credit insurance policy, reduce the medium- and long-term insurance rates for countries of lower risks, and develop innovate insurance product types; and
   iv. Improve foreign exchange management to facilitate the foreign balance of service outsourcing enterprises, encourage the use of Chinese Yuan as settlement currency among outsourcing enterprises in developing offshore services business, and to simplify the audit procedures of foreign exchange receipts, account opening and fund transfer.

i) Flexible working-hour system: The special working-hour system is applicable on approval for personnel of software development and technology R&D, senior management, and other staff who are unable to work under the standard working-hour system or who must work flexibly.

j) Improvement in the system of intellectual property rights protection:

   i. Establish intellectual property right complaint centre in base cities
   ii. Based on the special needs of the service outsourcing industry, all base cities are to further improve the system of laws and regulations of IP rights protection, formulate rules of secrecy for data services

*(Source: retrieved and translated from CCIIP, 2009, 2010)*

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