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Looking Beyond Global Value Chains in Capacity Development: The Case of the IT-Enabled Service (ITES) Sector in South Africa

Charlotte Keijser[a,*] and Michiko Iizuka[a]

[a]Maastricht Economic and Social Research Institute on Innovation and Technology (UNU-MERIT)/ Maastricht Graduate School of Governance (MGSoG), Boschstraat 24, 6211 AX Maastricht, The Netherlands.
E-mail: iizuka@merit.unu.edu

*E-mail: keijser@merit.unu.edu

Abstract This paper examines the role of learning avenues for capability development in the IT-enabled services in developing countries. It sheds light on the unexplored relationship between global value chain (GVC) learning and national innovation systems (NIS) in capability development. It explores learning avenues beyond GVCs, namely in local and regional value chains. Based on data collected from 47 interviews of IT-enabled service providers in South Africa, we find that NIS influences firms' capacity to access and adapt learning from GVCs, whereas the latter has the potential to strengthen NIS. Secondly, the majority of South African service providers in this sample do not participate in GVCs but participate in local and regional value chains instead, which are distinct yet important learning avenues and potential pathways for entering GVCs of IT-enabled services.

Cet article explore le rôle des axes d'apprentissage au-delà des chaînes de valeur mondiales (CVM) pour les entreprises des pays en développement, en mettant l'accent sur les capacités de gestion des ressources humaines et la spécialisation dans le secteur des services informatiques. En nous basant sur les données recueillies auprès de 44 entretiens de fournisseurs de services informatiques en Afrique du Sud, nous présentons deux résultats. Premièrement, le renforcement des capacités ne se limite pas à l'apprentissage dans les CVM, mais s'appuie également sur les ressources internes des entreprises et sur le système d'innovation local. Ensuite, la majorité des fournisseurs de services sud-africains participent aux chaînes de valeur locales et régionales, offrent des opportunités d'apprentissage supplémentaires et ouvrent des voies potentielles vers les chaînes de valeur mondiales. Ces résultats suggèrent une image plus nuancée du rôle des CVM dans l'apprentissage et dans la mise à niveau des capacités pour les entreprises des pays en développement.

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Introduction

The relocation of services to developing countries is considered the 'next wave in globalization' (Dossani and Kenney, 2007). The offshore outsourcing of information technology-enabled services (ITES) has created opportunities for firms in developing countries to insert themselves into global value chains (GVCs) of services without having to develop the full range of capabilities of the value chain (Gereffi and Fernandez-Stark, 2011). Understanding how firms in developing countries can integrate and successfully operate in GVCs has become an important subject, considering its potential for job creation, diversification and sophistication of exports, and as a significant learning avenue for upgrading capabilities (Gereffi and Fernandez-Stark, 2011). This study focuses on the latter by conducting an analysis of how firms in developing countries learn and build capabilities in value chains of ITES.

The increased interconnectedness of firms through GVCs has spurred debates about the role such transnational networks play in capability building. Integration in GVCs is perceived as a critical avenue for firms in developing countries to access knowledge to learn and innovate. This contrasts with the mainstream position in the literature on innovation systems (IS) that knowledge is spatially sticky and national linkages provide the foundation for learning (Ernst, 2002). Despite recent studies combining the literature on GVCs and IS (Morrison *et al,* 2008; Pietrobelli and Rabelotti, 2011; De Marchi *et al,* 2015), empirical evidence remains limited on how GVCs and IS affect capability development and how they may interact. Moreover, the literature has almost exclusively focused on the manufacturing sector, whereas learning trajectories in the service sector in developing countries – such as the ITES sector – remain understudied.

The extensive focus on GVCs, however, overlooks the fact that many domestic firms in developing countries, especially small- to medium-sized enterprises (SMEs), do not integrate into GVCs. Scholars suggest that local value chains (LVCs) and especially regional value chains (RVCs) have become increasingly important for developing countries due to the emergence of 'southern' end markets and the rise of south-to-south trade. They suggest that domestic firms in developing countries may be more likely to integrate into LVCs and RVCs, which could provide a stepping-stone into GVCs (Cattaneo *et al,* 2010; Bamber *et al,* 2014; Banga *et al,* 2015; Navas-Aleman, 2011). However, empirical evidence is lacking on whether and how LVCs and RVCs can provide pathways to capability development for fostering integration into GVCs.

The unique contribution of this paper is the analysis of capability building in GVCs and beyond, i.e. learning trajectories leading to capability building in LVCs and RVCs. In undertaking this, we consider potential interlinkages between learning opportunities arising from participation in GVCs, RVCs, and LVCs, as well as firm resources and national innovation systems (NIS). This allows for an analysis of the role of NIS in capability building in heterogeneous value chains, thereby shedding light on the understudied relationship between GVC learning and NIS in capability building. Considerable novelty also lies in applying the above analyses to a service context.

Previous studies on developing countries in the global ITES sector have focused predominantly on India and the Philippines – both leading offshore destinations (Dossani and Kenney, 2007; Lema, 2012). Limited research exists on African countries, yet in South Africa, Ghana, and Kenya the ITES sector is identified as an area for growth and development (Beerepoot and Keijser, 2015; Mann and Graham, 2015). This study draws on empirical data collected in South Africa, a country that has, in recent years, become an attractive offshore destination for ITES. Despite increasing global integration of South African-based ITES providers, many SMEs do not enter GVCs, opting instead to deliver services in the South African and regional (African) markets, thus connecting them to LVCs and RVCs. Therefore, South Africa provides an interesting case to study learning avenues for capability development for ITES providers in GVCs and beyond – namely LVCs and RVCs.

The next section reviews the literature on learning avenues as well as capabilities specific to ITES; section 'Methodology' outlines the methods, while section 'Overview of the South African IT-Enabled Services Sector' provides an overview of the ITES sector in South Africa. Section 'Heterogeneous Value Chains of IT-Enabled Services' describes the sample of firms within heterogeneous value chains, followed by section 'Learning Patterns of Firms in

Different Value Chains', which provides empirical results on learning patterns used for capability building. The main findings and their implications for NIS in promoting capacity development are discussed in section 'Discussion: Learning in heterogeneous value chains and implications for NIS', followed by concluding remarks.

Literature Review

Nowadays, firms need to continuously learn and upgrade their capabilities to remain competitive in a highly globalised economic landscape. Organisational learning – defined as the process of knowledge acquisition, knowledge assimilation, and knowledge exploitation (Cohen and Levinthal, 1990) – is recognised as central to building capabilities. This section, therefore, appraises literature on distinctive sources of learning: GVCs, RVCs, and LVCs; firm resources; and NIS. This is followed by a review of the literature on services, and specifically on IT-enabled services, to capture the specific capabilities necessary for ITES

Local, Regional, and Global Value Chain Learning

Studies have shown that internationalisation strategies of firms (e.g. learning by exporting, foreign direct investment (FDI), and supply chains) provide learning opportunities (Navaretti *et al,* 2004). The GVC literature, illustrating buyer and supplier interactions along the value chain, has been particularly useful in understanding learning- and capability-upgrading processes of suppliers in developing countries (Gereffi, 1999). Common learning channels in GVCs include knowledge transfer from the GVC lead firm through face-to-face interactions, specific trainings, and enforcement of standards (de Marchi *et al,* 2015). Central to these studies is the analysis of governance patterns that characterise the relationships among actors in the chain and the implications for knowledge transfers to local suppliers (Giuliani *et al,* 2005; Humphrey and Schmitz, 2002; Pietrobelli and Rabelotti, 2011). The focus in GVC studies has mainly been on lead firms and how they influence learning opportunities, whereas the capabilities of suppliers and their embeddedness in IS have received less attention (see Morrison *et al,* 2008; Pietrobelli and Rabelotti, 2011; De Marchi *et al,* 2015).

While the GVC approach generally assumes a positive effect of GVC participation for domestic firms in developing countries, studies also point out that less-capable firms, especially SMEs, fail to integrate into GVCs. Bamber *et al* (2014) stress the need for further data on the policy implications of GVCs for developing countries to ensure inclusive growth, and argue that value chains at a local or regional level may offer more likely prospects for firms in developing countries for building capability. LVCs and especially RVCs are increasingly considered potential springboards for domestic firms to move into GVCs. However, few studies have paid attention to these value chains of services resulting from increasing demand for higher quality services, a growing middle class, and increasing intra-regional trade in some emerging countries (Banga *et al,* 2015; Cattaneo *et al,* 2010; van Dijk and Trienekens, 2012). LVCs capture the chain of services within a country, RVCs embody chains of activities at the regional market level, while GVCs encompass chains at the global market level – that is, across two or more continents. RVCs differ from GVCs in that the service of a RVC is provided by a country within the region, often within trading blocs, rather than across continents (Bamber *et al,* 2014). Questions persist on how capabilities are developed within local and regional value chains, how these may differ from learning trajectories in GVCs, and how they may facilitate participation in GVCs in future.

The National Innovation System

The literature on IS highlights the formation of capabilities through inter-organisational linkages and the institutions that shape learning processes. Firms do not learn and innovate in isolation; rather, knowledge is produced and disseminated through interactions between actors (firms, consumers, universities, and public organisations) in the system. Previous literature on innovation has predominantly been bound to the nation state (see Freeman, 1995; Lundvall, 1992), and is currently referred to as 'national innovation systems' (NIS), but a focus on regional and sectoral systems has also emerged (Malerba, 2002). Literature on NIS stresses the importance of national linkages due to the interactive nature of learning, necessitating close interaction between co-located users and producers. Strong emphasis on learning within spatially bounded networks has also been criticised for over-territorialising the learning process and neglecting international networks. Ernst (2002) considers the neglect of the international dimension in NIS problematic because most developing countries lack a broad local knowledge base and depend on foreign sources of knowledge. He suggests that international linkages need to prepare the way for the development of a strong NIS (Ernst, 2002, p. 500). Simultaneously, GVC studies have been criticised for not paying sufficient attention to IS in which suppliers are embedded.

Recently, efforts have been made to reconcile both schools of literature. Pietrobelli and Rabelotti (2011) find that the nature of the IS affects the modes of governance of GVCs and, through this, the opportunity for firms to learn and innovate. Learning channels within and outside of GVCs (e.g. collective learning at the local level, imitation, learning from other non-GVC actors, etc.) were identified in a systemic review of the literature (De Marchi *et al,* 2015). Results, however, did not empirically demonstrate the ways that GVCs and NIS interact in capability building, or how GVC learning could strengthen NIS. This is important for drawing lessons on the design of NIS in developing countries conducive to learning in GVCs, especially since the concept of NIS was initially developed and is mainly applied to understanding developments in industrialised and advanced nations.

Firm Resources

According to the resource-based view, competitiveness derives from the creation of differentiated and firm-specific capabilities, which are determined by the bundling of resources and ability to make productive use of resources (Penrose, 1959). The knowledge base of a firm, composed of the background and experience of employees, is considered one of the most strategically important resources, and is discussed further in the literature on the knowledge-based view (Grant, 1996).

According to Cohen and Levinthal (1990), acquiring capabilities is very much dependent on firms' 'absorptive capacity'. In other words, a firm's knowledge base provides the foundation for understanding operations, recognising the value of new information, and creating new knowledge through interpreting and combining information (Cohen and Levinthal, 1990). The notion of absorptive capacity has been applied to the GVC and related literature. For instance, Ernst and Kim (2002) argue that suppliers need their own capabilities to internalise externally acquired knowledge in global production networks. This requires firms to take strategic decisions on individual and organisational learning, such as investing in recruitment of talented workers and development of training programmes to upgrade the existing (tacit) knowledge base. Furthermore, Lema (2012) sheds light on supplier learning in outsourcing relationships by integrating GVC and firm capabilities, showing that internal investments are an important determining factor.

The present study explores firm resources as they are expected to contribute to capability development directly and indirectly by influencing firms' ability to benefit from GVCs.

Capabilities Critical for IT-Enabled Services

Developing countries have increasingly become offshore destinations for ITES, referring to business services using information technology (IT) in the delivery process (Dossani and Kenney, 2007). They have been engaged in the provision of low-value and standardised services, such as data entry tasks; however, more knowledge-intensive business services (KIBS) (e.g. accounting, legal services, and marketing) are increasingly offshored (Massini and Miozzo, 2012).

Gereffi and Fernandez-Stark (2011) analyse offshoring through a GVC lens that connects ITES suppliers (hereafter 'providers') in developing countries to global buyers (hereafter 'clients') offshore. They identify three different segments of activities: information technology outsourcing (ITO), including IT infrastructure management, software development, and IT consulting; business processing outsourcing (BPO), including data processing, human resource management, and customer relationship management; and knowledge process outsourcing (KPO), including business consulting, marketing research, and legal processes. These segments range from low to high value-adding activities, encompassing standardised to more knowledge-intensive activities. In services, the human capital inputs (e.g. skills levels and work experience) are considered important determinants of value creation (Gereffi and Fernandez-Stark, 2011).

To compete in GVCs, firms in developing countries need to satisfy the service requirements of clients (see e.g. Feeny *et al,* 2005; Bharadwaj and Saxena, 2010; Lahiri *et al,* 2012). The ability of providers to respond to the client's day-to-day service requirements is referred as 'service-delivery competence' (Feeny *et al,* 2005). This is further defined as 'domain expertise', or the capability to apply and retain sufficient professional knowledge of the target service domain, such as understanding of its core function, industry, as well specifics and idiosyncrasies of the clients (adopted from Feeny *et al,* 2005). Such expertise demands skilled and trained manpower, and human resource management competence (HRMC), defined as the provider's ability to identify, acquire, and deploy HR (Bharadwaj and Saxena, 2010). This includes the ability to respond to the demand for skills, scale-up operations, recruiting and training, and career development. The above studies recognise that while other capabilities are important in the performance of ITES providers, management of HR and professional knowledge of the business process are fundamental for enhancing competitiveness.

This is in line with some features of KIBS (e.g. intangible nature of services, process orientation, and customer integration), which stress the importance of non-technological elements, such as skills, training activities, and new patterns of client interaction, as critical assets for innovation (den Hertog, 2000; Hipp and Grupp, 2005). According to Miles (2005), innovation in KIBS requires generic and sector-specific skills, including sector-specific knowledge about the industries and organisations of clients, as well as their processes. In fact, innovation in KIBS is typically linked to *satisfying client-specific demands,* thus demanding frequent and close interaction between provider and client (Miles, 2005; Hipp and Grupp, 2005).

Conceptual Framework

The aim of this study is to explore learning avenues used by ITES providers to build service-delivery competence – focusing on HRMC and domain expertise – that is critical to meeting value chain client requirements. Figure 1 depicts the framework, identifying possible avenues for knowledge sourcing from firm interactions with clients in value chains – GVCs, RVCs, LVCs – and from internal firm resources and the NIS. These learning avenues and their possible interlinkages (that determine firm learning) are explored. Apart from potential interlinkages between the NIS and GVCs at the firm level, a spillover effect of GVC participation to NIS is expected (dotted line).

Methodology

Employing a qualitative case study approach (Yin, 2014), we investigate the case of the South African ITES sector. The sector can be divided into captive[1] and third-party service providers (TPSPs). The latter generated 33% of employment (71,212 jobs), while the former created 67% (142,922 jobs); however, employment by TPSPs is growing (14 per cent increase from 2015 to 2016), whereas employment in captive arrangements has declined with 1 percent from the year 2015 to 2016. By the year 2016, 49 400 people were employed by TPSPs serving clients in the domestic market, and 26455 by TPSPs having clients offshore (BpeSA, 2017)[2]. Our study focuses on TPSPs for the following reasons: first, their ability to generate employment; second, the learning challenges, which are expected to be higher compared to captive arrangements; and third, the potential learning opportunities arising through interactions with client firms.

Semi-structured interviews were conducted with CEOs and managers of 47 TPSPs during multiple field visits (February–March 2015; January–April 2016; March 2017) in Cape Town (Western Cape region, 25), Johannesburg (Gauteng 13), and Durban (KwaZulu Natal, 9). Given the absence of a publicly available formal firm registry of this sector, firms were selected using

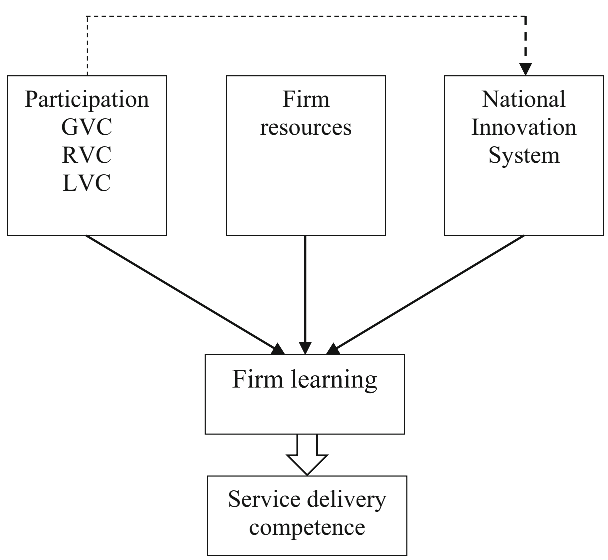

Figure 1: Potential learning avenues for capability development in ITES.
Source: Authors.

snowball sampling. In several instances, more than one representative from the same firm was interviewed – such as managers from operations and HR – to gain a more detailed overview of the firm by incorporating different perspectives. In addition, semi-structured interviews with 35 industry stakeholders (such as representatives from industry bodies, governmental organisations, training providers, client firms, captive ITES providers, industry consultants, academics) were conducted. To ensure confidentiality, individuals and organisations interviewed have been kept anonymous.

The firm interviews focused mainly on identifying capabilities critical to meet requirements of value chains, as well as sources of knowledge used to build or deepen such capabilities. Firm characteristics were also obtained (ownership, size, activities) and whether they provide services in the domestic market (LVC), markets in Sub-Sahara Africa (SSA) (RVC), or outside the continent, in offshore markets (GVC). Interview notes were coded using qualitative data analysis software Nvivo (QSR International, 2015) to identify the variety of learning channels. These were subsequently grouped under the learning mechanisms identified in the literature review: value chain (VC) learning (GVC, RVC, LVC), NIS, and firm resources. Stakeholder interviews were conducted to mainly understand the innovation system underpinning the development of the industry.

Overview of the South African IT-Enabled Services Sector

Since 2006, the South African government has prioritised the ITES sector for its potential to generate employment. The sector is relatively small but has expanded in recent years, particularly in response to increased demand from both the domestic and offshore markets. Growth in the domestic market is attributed to increased awareness of cost savings and improved efficiencies associated with outsourcing. Underpinning increased growth in offshore segments is the weakening of South Africa's currency (Rand), improved IT infrastructure, and various government incentives introduced to mitigate growth-inhibiting factors, such as the high cost of doing business, lack of required talent, investor support, marketing, and experience (Mashalaba *et al,* 2015). These incentives[3] include an operational grant to providers, conditioned upon actual jobs created via offshore clients, and the minimum required score for the Broad-Based Black Economic Empowerment (B-BBEE)[4] regulations (e.g. requiring at least 80% of employees to be youth). Talent development programmes were also provided to supplement the needed HR. While significant potential has been identified (Everest Group, 2008), outsourcing solutions provided by firms in South Africa to clients in the African region have not been captured in the current statistics.

In South Africa, business process outsourcing (BPO) is by far the largest segment, consisting of front office services (70%) – mainly customer relations services in call centres – and back-office services (30%), such as data processing and payroll processing. Activities in IT outsourcing (ITO) and knowledge processing outsourcing (KPO) are significantly smaller due to lack of skilled workers. Legal process outsourcing (LPO), a type of KPO, has recently been identified as a fast-growing niche with potential (BpeSA, 2016; Willcocks *et al,* 2015).

BPO usually involves low value-added standardised services; however, South Africa is relatively well positioned in high-quality, medium-cost contact centres and back-office services (Willcocks *et al,* 2015), demonstrating an advantage in high complexity (voice-focused) customer services and expertise in niches (e.g. financial services). This is due to the availability of professional knowledge and tangible and intangible skills, such as adaptability, leadership, English language competence with a neutral accent, and a customer-oriented service culture with cultural affinity to Western markets (IQ Business, 2014; Willcocks *et al,* 2015). Despite the competitive advantages in HR, demand for skills has outgrown the supply of labour in South Africa, and has resulted in a shortage of personnel, mainly at the managerial and supervisory levels, as well as a lack of specialists, such as quality assurers, trainers, information analysts, work force managers, and those with foreign language competence (Knowledge Executive, 2014; IQ Business, 2014). This puts a strain on firms and requires continuous investment in recruiting and training students from the education system as well as training and retaining existing employees to meet the growing demand for more complex skills (Knowledge Executive, 2014, Firm and industry stakeholder interviews, 2016).

To mitigate HR shortages, several human resource development programmes have been implemented. Examples include skill development strategies from the Rockefeller Foundation Impact Sourcing Academy, Business Process Enabling South Africa (BPeSA), and Harambee – all aimed at increasing the coordination between public and private stakeholders across the industry. Although above examples are mainly viewed positively, various respondents criticised the overall institutional support for the ITES sector for being targeted predominantly towards firms serving offshore markets, with only limited support for those in the domestic market (Firm and industry stakeholder interviews, 2016). Furthermore, improvement is still needed in sector-specific institutions for ITES, especially related to standardisation in skills training and certification. Existing accredited training programmes are insufficient to meet current HR needs in providing lower-management staff and specialists (IQ Business, 2014; Firm and industry stakeholder interviews, 2016).

Heterogeneous Value Chains of IT-Enabled Services

Close examination of the interviewed firms demonstrates their heterogeneous nature in terms of characteristics (ownership, size and service segments) and value chain participation. The location of the client signifies the end market of the service – hence giving rise to different value chains (local, regional, and global value chains). Service providers based in South Africa cater to domestic and offshore markets (mostly the UK and Australia), integrating them into LVCs and GVCs, respectively, and to markets in SSA (e.g. Kenya, Botswana, Mozambique), connecting them to RVCs. As can be seen in Table 1, various firms are engaged in multiple markets.

Firms in LVCs (13) are predominantly small (9) South African firms (10), involved mainly in BPO activities (customer services and back office) (8), with some diversifying into ITO (3) (software development and IT infrastructure management). Those operating only in GVCs (12) are mostly large (8), foreign-owned firms (9), operating in BPO (9) (mainly customer services), but with activities also extending to other segments (e.g. business analytics and legal services). Firms operating in RVCs are also involved in the local market (6) or in all markets (5), and are typically providing BPO services. The following sequence of value chain participation can be observed: all foreign firms operating simultanously in LVCs and GVCs (8) and in all VCs (1) started from GVCs and expanded into LVCs and RVCs, whereas, out of 15 South African firms operating outside the domestic market, 12 firms started from LVCs and expanded to RVCs (5) or to GVCs (3) or to RVCs and GVCs (4). Only three South African firms entered GVCs directly.

Table 1: Description of the sample

	Market location of client					***47***
	LVC (13)	*LVC, RVC (6)*	*LVC, GVC (11)*	*GVC (12)*	*LVC, RVC, GVC (5)*	
Ownership						
South African	10	5	3	3	4	**25**
Foreign	3	1	8	9	1	**22**
Size (employees)						
Small (< 200)	9	1	4	3	1	**18**
Medium (200–500)	2	1	4	1	2	**10**
Large (> 500)	2	4	3	8	2	**19**
Service segment						
BPO	8	5	5	9	1	**28**
BPO/ITO	3	0	0	1	3	**7**
BPO/KPO	0	1	4	1	0	**6**
ITO	2	0	0	0	1	**3**
KPO	0	0	2	1	0	**3**

Source: Authors.
Notes: *BPO* business processing outsourcing, *ITO* information technology outsourcing, *KPO* knowledge processing outsourcing, *LVC* local value chain, *RVC* regional value chain, *GVC* global value chain. The bold numbers indicate the total numbers.

Learning Patterns of Firms in Different Value Chains

Table 2 summarises the results of the various learning channels used in heterogeneous value chains of ITES. The rows represent the sources of learning that resulted from the firm interviews, grouped under VC learning, NIS, and firm resources, thus showing the number of firms in different value chains using such sources. Firms in GVCs, even though they also participate in LVCs (11), and in both LVCs and RVCs (5), are grouped under GVCs, and firms who operate in RVCs and LVCs (6) are categorised under RVCs.

Nearly all firms claim to learn from their clients through various forms of communication (e.g. face-to-face meetings). Firms participating in GVCs indicate additional learning opportunities through enforcement of standards and training of employees undertaken by the client firm, compared to firms that participate in LVCs and RVCs (see rows in VC learning in Table 2). Furthermore, firms in GVCs have more interactions in NIS that assist in capacity building, especially from government and business associations, reflecting policies towards assisting firms serving offshore markets (see rows in NIS). Finally, firms in GVCs make use of various firm resources, whereas firms in RVCs and especially LVCs have fewer resources in-house to assist in building capacity (see rows in firm resources).

Table 2 needs to be interpreted with caution, due to the grouping of data, which may hide the heterogeneity that exists within groups of firms (as shown in Table 1). The following sections describe the learning patterns in each VC based on firm interview results while highlighting similarities and exceptions across South African and foreign-owned firms and those engaged in multiple value chains.

Table 2: Learning avenues for developing service-delivery competence in the South African ITES sector

	LVC (13)	*RVC (6)*	*GVC (28)*
VC learning			
Communication			
Exchange of information (face-to-face meetings, conference calls, reports) between service provider and client	**11** (85%)	**5** (83%)	**22** (79%)
Training			
Client firm places employees (temporarily) at providers site, training of staff by client firm, provider sends staff to client	2 (15%)	2 (33%)	**16** (57%)
Standards			
Incentives to upgrade capabilities to adhere to client standards	0	2 (33%)	**15** (54%)
NIS			
University			
Linkages with universities for internships, upskilling courses, training facilitates	0	1(17%)	5 (18%)
Government			
Linkages with representatives at national, provincial, and municipal level for financial and HR-related incentives and industry-specific knowledge	1 (8%)	0	13 (46%)
Business association			
Membership, access to knowledge-sharing platforms and operational support, skills *development programmes*	5 (38%)	1 (17%)	**16** (57%)
Local actors			
Consultants, data analytics, public and private training and recruitment organisations	**8** (62%)	**4** (67%)	**14** (50%)
Mergers and acquisitions			
Typically, foreign-owned company mergers or acquisition of South African-established company. Access to local resources and capabilities	2 (15%)	1 (17%)	6 (21%)
Collaboration with (ITES) service providers			
Typically, between foreign and local providers, driven by B-BBEE	4 (31%)	2 (33%)	7 (25%)
Mobility of employees			
Tacit skills and (international) work experience through employees with prior work experience at competition	4 (31%)	2 (33%)	7 (25%)
Competitors benchmarking	5 (39%)	**3** (50%)	6 (21%)
Firm resources			
Corporate group			
Parent and subsidiary linkage for human resources, knowledge, and standards	3 (23%)	**5** (83%)	**19** (68%)
Formal in-house training academy			
Skills development through formal and accredited training programmes	3 (23%)	0	10 (36%)
In-house knowledge sharing			
Internal transfer of ideas, knowledge and experience, employee engagement	**7** (53%)	**5** (83%)	**14** (50%)
Knowledge build up			
Internal accumulation of knowledge, experience, learning by doing	**8** (62%)	**3** (50%)	11 (39%)
Management: prior work experience	**8** (62%)	1 (17%)	**14** (50%)

Table 2: *continued*

	LVC (13)	*RVC (6)*	*GVC (28)*
Management: international experience and networks	3 (23%)	2 (33%)	**18** (64%)
Management: risk taking	3 (23%)	1 (17%)	5 (18%)
Career development	2 (15%)	0	8 (29%)
Foreign managers	3 (23%)	2 (33%)	**14** (50%)
South African managers	4 (31%)	2 (33%)	**18** (72%)
Standards			
Incentives to upgrade capabilities to adhere to service standards	4 (31%)	**3** (50%)	9 (32%)
Self-study			
e.g. white papers, Internet	4 (31%)	1 (17%)	8 (29%)
Other			
International actors			
e.g. ITES providers (in SSA), consultants, business associations	3 (23%)	**5** (50%)	10 (26%)

Source: Authors.
Note: Bold digits are learning mechanisms reported by at least 50% of firms in a value chain.

Learning Patterns in GVCs

GVC Client Learning

Client firms play a key role in knowledge diffusion, through standards that pressure providers to learn and upgrade services, through close collaboration, and by exchanging and training personnel. These interactions provide knowledge in areas such as process requirements, client- and industry-specific requirements, as well as avenues to develop human resources. Active information sharing takes place between clients and providers in the form of business meetings, manuals, reports, training, and face-to-face visits. The latter are considered particularly effective for transfer of tacit knowledge (e.g. on business culture, work ethics) and embodied skills. The majority of firms received a team of expats from overseas clients to transfer skills and process-related knowledge that helped them kick start operations and upgrade services in line with standards of the client firm. This is motivated by pressure on providers to represent the client's company brand, compelling firms to follow the same technology, international standards and qualifications, and employ staff with international experience. Such interactions with GVC clients contribute to developing HR and domain expertise, especially considering the shortage of skilled and experienced personnel (e.g. in specialist and senior management roles) in South Africa.

NIS

Close interactions exist between firms in GVCs and other actors in the South African NIS (e.g. South African governmental agencies, industry bodies, consultants, recruitment and training organisations). This facilitates firms' entry into GVCs and helps to build service-delivery competence. Particularly, industry bodies provide support, for example by facilitating access to government incentives, and obtaining permits to source foreign skills. They also function as intermediaries between firms and offshore clients and other industry stakeholders, ultimately forming a platform for sector-specific learning. For example, information can be shared through workshops, such as market trends, operational requirements, labour market issues (e.g. best HR management practices in South Africa). Furthermore, local actors, including recruitment and training providers, also provide skills and information regarding industry trends and management of employees. Foreign firms, especially, claim to rely on local actors – i.e. collaboration with South African ITES providers, mergers and acquisitions, consultants, etc. – to acquire tacit knowledge about the local environment. They emphasise the importance of cultural understanding and nuances of the South African market for adapting foreign knowledge to the local context, critical for better service delivery.

Firm Resources

The majority of foreign-owned firms that participate in GVCs have in-house training programmes and so-called academies to offer accredited skill development and learning trajectories to their employees. Similarly, nearly all foreign firms in GVCs are connected to a global corporate network (i.e. a parent company), which facilitates mobilisation of HR internally. Such networks also help to transfer skills and tap into prior experience as well as 'tried and tested' strategies. Through in-house training academies and interactions among employees, firms seek to further distribute and adapt (foreign) skills, experience, and information obtained from corporate or client firms to the rest of the firm. Furthermore, most foreign-owned firms in GVCs employ both foreign managers to secure skills and experience in international operations while also employing South African managers to obtain an understanding of the absorptive capacity of local employees. While internal firm resources can provide similar learning effects as GVCs in terms of accessing skills and knowledge on processes in ITES, respondents stress that client interactions are still critical in obtaining skills and information to cater to client-specific requirements.

Most South African firms participating in GVCs do not have corporate networks or in-house training academies. Rather, resources such as managers' previous (international) work experience and learning by doing are pivotal for entering GVCs and building capacity. Among ten South African firms participating in GVCs, three managed to immediately obtain offshore contracts, mainly due to existing networks with offshore clients and managers' prior international work experience. The other firms started in LVCs, which allowed them to upgrade HRMC and develop domain expertise, mainly via internal firm efforts, expanding their client base and strengthening their networks and reputation among others, thus enabling them to enter GVCs. Firms operating simultaneously in LVCs and GVCs show similar yet more moderate use of internal firm resources compared to firms operating only in GVCs, mainly differing in their capacity to develop HR in-house.

Learning Patterns in LVCs

LVC Client Learning

Nearly all firms in LVCs state that they learn about client needs and operational aspects of the processes through communication with clients. Such interactions, however, are not extensively used for the transfer and development of skills, except for some large-scale providers in the local market where the client firm has an onsite manager who can collaborate with local managers. Furthermore, no specific cases of learning that resulted from the pressure of meeting standards were reported, as was the case with GVCs. Explanations provided by respondents include lower standards for services and skills qualifications demanded in the domestic market. Moreover, projects in GVCs tend to be long-term, larger in scale, and customer-facing services, prone to risk of reputational damage (due to geographical and cultural distance), which could motivate the client to invest in the transfer of knowledge and skills. Governance structures (see Humphrey and Schmitz, 2002) that prevail in value chains may differ across chains, which could further explain differences in learning opportunities for supplier firms.

NIS

Respondents argue that as current government incentives prioritise the need to attract FDI and job creation linked to offshore markets, various organisations and policy measures are not oriented towards the local market, and especially small South African operations. This is also expressed by local firms operating in both LVCs and RVCs. For instance, platforms for knowledge sharing and access to financial incentives are critical for firms in LVCs and RVCs, yet not available as in the case of GVCs. Firms in LVCs, especially South African-owned SMEs, are often not members of industry bodies that are central to such knowledge platforms.

The Broad-Based Black Economic Empowerment (B-BBEE) regulation has special relevance for firms operating in the domestic market, pressuring ITES providers to comply with B-BBEE regulations, for instance, through enhancing cooperation with South African firms. This explains the interactions between foreign and South African ITES service providers. Interviewees state that although the regulations have the potential to promote knowledge transfers and develop local enterprises, in some cases, this had limited effects on knowledge transfers for local firms due to conflicts of interest and lack of implementation. In fact, other more indirect knowledge flows exist between these firms (e.g. competition, mobility of personnel), which allow local firms to capture internationally experienced and skilled workers and learn about international service requirements and market trends.

Firm Resources

Many local firms that currently operate only in the domestic market expressed a desire to operate in global markets. However, this is not possible due to lack of an established brand, scale, networks, or sufficient financial resources to explore business opportunities in offshore markets. A manager from a UK-based client firm confirmed the importance of firms' resources, emphasising a preference for large and well-known global service providers due to the higher perceived risk intrinsic to contracting of smaller domestic firms that lack scale or a strong reputation (Interview, March 2016).

South African small firms seek to offset their lack of scale and reputation by adopting standards (e.g. ISO) and offering customised services with increased flexibility in delivery. This requires multi-skilled employees capable of comprehending the customer's varied and specific needs accurately and tailoring their services flexibly. In interviews, the CEOs and managers disclosed that they rely on personal networks to recruit people, as well as access to information about business processes, opportunities, and market trends. Furthermore, internal learning occurs through experimentation with new business processes, technologies, and promoting knowledge sharing within the firm. Managers seek to dynamically interact with employees to gain trust and understand how to motivate them to produce an environment conducive for learning and retain staff. Despite such efforts, many firms, especially SMEs, stated that their resources were constrained, particularly regarding financial resources needed to mobilise and develop HR. The majority of local firms consider LVCs an opportunity to accumulate knowledge and experience gradually, and build capabilities and scale eventually needed to enter GVCs. This mirrors the experiences of South African firms from this sample that started in LVCs and are currently operating in GVCs.

Learning Patterns in RVCs

RVC Client Learning

Interactions with clients in the African region do not convey as much operational knowledge about the targeted business process, compared to those with clients in offshore markets. This is largely due to more standardised and non-client facing services of BPOs, such as administrative tasks, data capture, and payroll activities, where the intangible skill sets required for more complex customer-focused service delivery in the case of GVCs become less paramount. Instead, literacy, computer skills, and foreign languages are critical in RVCs. While the operation generates fewer effects in terms of accessing and upgrading skills, firms asserted that they build up experience and knowledge about conducting business in foreign markets and different cultures. Respondents argue that despite perceived cultural proximity to South Africa, differences exist in languages, cultural norms and habits, and business operations in RVCs. They argue that interactions with client firms are crucial for conveying information about such specificities, which are paramount in ensuring quality of service and establishing a relationship with the client conducive to knowledge sharing.

NIS

Firms in LVCs and RVCs act similar to firms in LVCs with regard to sourcing knowledge in the NIS. They highlight the lack of support from the NIS in South Africa. For instance, they stress that information on business processes and potential clients in the region is often obtained through personal networks rather than through organisations and platforms that are more pronounced in the case of firms in GVCs. Furthermore, firms in RVCs put more emphasis on knowledge sharing through partnering with African-based ITES providers in the region (see other in Table 2). In fact, four out of 11 service providers delivering services from South Africa to clients in the African region did so in partnership with local ITES providers to acquire local resources and capabilities (language skills and an understanding of business culture and needs of clients).

Firm Resources

Firms in RVCs emphasise the importance of internal learning efforts, gradual accumulation of knowledge and experience through learning by doing, similar to firms in LVCs. They appear to be less resource constrained compared to firms in LVCs. Respondents explain that by operating in the domestic and regional market they have opportunities to build and demonstrate their capabilities, and develop networks and sufficient reputation to further expand into African and overseas markets. For instance, some firms have, over time, become part of a corporate group that assists with the development of capabilities. Three out of four South African firms that are simultaneously operating in LVCs, RVCs, and GVCs argue that they started in the domestic market, expanded into the region where they built the necessary resources, before they moved into GVCs.

Discussion: Learning in Heterogeneous Value Chains and Implications for NIS

The previous sections illustrated how ITES providers in South Africa source the knowledge to build and deepen their capabilities. Findings show that GVC participation can provide an important mechanism to develop service-delivery competence. GVC learning is important in sourcing specific skills and knowledge to cater to client demands. This determines the quality of the service, based increasingly on value added through client customisation rather than cost considerations alone. Furthermore, GVC learning is especially important in the face of a weak local knowledge base (shortage of skills, missing industry linkages, and policy support) – even more so for resource-constrained firms that struggle to overcome such weaknesses in NIS. This is largely in line with earlier claims in the literature on the importance of foreign knowledge for developing countries that typically lack a strong knowledge base (see Ernst, 2002; Morrison *et al,* 2008). However, we find that GVC learning becomes effective when this interacts with firm resources and NIS (determining firm learning, see Fig. 2) while also finding an interaction between GVC participation and NIS.

This study reveals various examples showing that industry interactions (e.g. mainly industry bodies) facilitate firms' entry into GVCs, and assist in the obtaining of foreign skills and knowledge from GVC clients. Furthermore, due to local characteristics of the South African formal and informal institutional environment (e.g. socio-cultural dynamics, local business ethics, B-BBEE regulations), interactions between actors within the country (e.g. collaborations with local ITES providers, training organisations, and consultants) are the key to developing the local capabilities necessary to adapt foreign-sourced knowledge accordingly. Simultaneously, firm participation in GVCs can strengthen NIS, potentially benefitting other ITES providers that do not have access to GVCs. This study documents various examples of such potential spillover effects, including the transfer of information and skills resulting from GVC learning to other ITES providers in South Africa. Skills were transmitted through the NIS, due to collaboration between local and foreign ITES providers (typically driven by B-BBEE regulation), mobility of

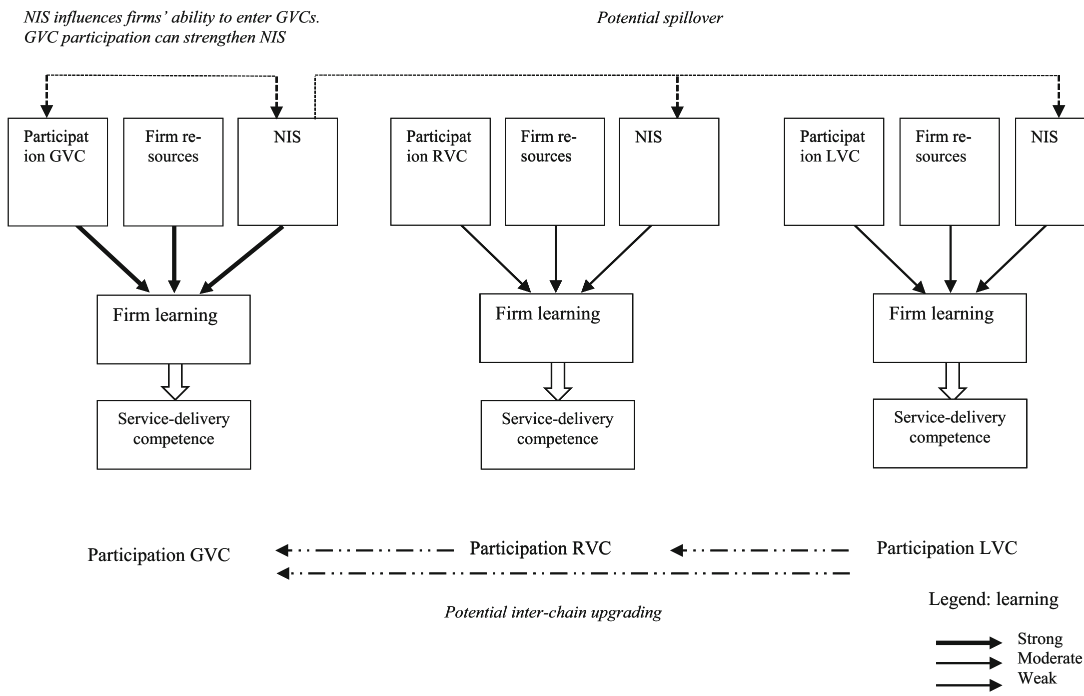

Figure 2: Learning avenues for capability building in the South African ITES sector.
Source: Authors.

personnel and observing competitors. Furthermore, GVC participation may trigger institutional developments from which benefits may also accrue to the rest of the industry. For instance, demand for international skills and quality standards in ITES have stimulated the development and use of skills-related standardisation and accreditation across the ITES industry in South Africa. This has recently led to the introduction of skills certifications specific to ITES in line with both local qualifications as well as international standards (industry stakeholder interviews, 2017). Furthermore, growth in GVC participation has put further pressure on the private and public sector to coordinate and align efforts to address HR shortages and other obstacles to the growth of the sector. Finally, local institutions, particularly the B-BBEE regulation that aims to promote knowledge transfer from foreign to local employees, if properly implemented and enforced, can further encourage knowledge spillovers. In short, a combined effect exists between the NIS and GVC participation with regard to their role in capacity building (see Fig. 2).

GVC participation is not the only avenue for learning. Internal firm resources also influence capacity building, and are critical for GVC entry. In our sample, firms with strong internal resources (mostly foreign firms) manage to insert directly into GVCs, whereas the majority of South African firms, mainly due to resource constraints, participate in LVCs and RVCs. Various South African firms in this study that are currently in GVCs have, through participation in LVCs, built the capabilities needed to move into GVCs, several also via participation in RVCs. This provides evidence for the assertion in earlier studies that RVCs, and especially LVCs, can serve as possible playing fields for capability development and a springboard into GVCs (Bamber *et al,* 2014).

The present study reveals the configuration of learning trajectories in these heterogeneous chains, an area that is understudied. Firms in RVCs and especially in LVCs show differences in sourcing knowledge for capability building from firms in GVCs. Figure 2 indicates that the latter have more learning opportunities arising through all three channels (VC participation, NIS, and firm resources), compared to firms in RVCs and especially in LVCs. Overall, firms in RVCs and LVCs experience fewer immediate learning effects in terms of the transfer of HR from client firms. Particularly, the lack of industry support (e.g. missing interactions and policy incentives) contrasts with (foreign) firms in GVCs, and forms an obstacle to sourcing the resources needed to expand their capacity. Rather, through internal resources they seek to strengthen their position in the local and or regional market and, in various cases, seek to upgrade into GVCs. Respondents of firms that have upgraded to GVCs confirm their initial reliance on in-house resources. Such inter-chain upgrading is, however, not guaranteed for most firms currently in LVCs and RVCs, with resource constraints posing immediate challenges to expanding operations. Respondents emphasise the severe competition from large and well-established global service providers over contracts not only in offshore markets but also in the domestic market (e.g. pointing to possible crowding-out effects).

The NIS has an important role to play in mobilising resources to assist these local firms in gaining competitiveness in domestic and regional markets, and potentially upgrading into offshore markets. Current government policies in the ITES sector prioritise incentives to firms who are in GVCs, which are usually foreign and large in scale. This makes sense, as the short term strategy is to generate employment and economic impact. However, to develop local capabilities in the long run, a stronger innovation system catering to the needs of firms in LVCs and RVCs is key, as these two chains can provide a space for learning for South African firms, especially for SMEs. Policies suggested by respondents to build capacities include facilitating the development and adoption of internationally recognised standards; developing of industry linkages and knowledge platforms that also cater to the needs of domestic and regional markets, such as providing information on potential clients and (operational) requirements; and providing (financial) support to source and develop critical skills and information from industry actors.

Conclusions

The South African ITES sector is relatively small, but has expanded rapidly in recent years. However, increased demand for services coupled with weaknesses in the innovation system has resulted in a shortage of human resources, putting constraints on growth in the sector. The interviews showed that strategies to build service-delivery competence – defined as capacity to develop and manage human resources and to obtain domain expertise (i.e. knowledge of process, industry, and client requirements) – differ between firms depending on their internal resources, embeddedness in the NIS, and participation in value chains. Findings show that GVCs create useful learning avenues for firms; however, this needs to be supported by firm resources and NIS, confirming previous studies (Ernst, 2002; Pietrobelli and Rabellotti, 2011). However, this study adds to the literature by providing empirical evidence on the learning trajectories in LVCs, RVCs, and GVCs, illustrating how GVCs and NIS interact in capability building and exploring the implications for NIS in capability building in LVCs and RVCs.

The latter is relevant considering that most South African firms in this sample operate in LVCs and in RVCs. This is mainly due to a lack of firm resources and support from NIS needed to meet requirements of GVCs. Participation in these value chains is important, as it could be a pathway to a continuous, yet gradual, building of competence and potential upgrading into GVCs. This study has analysed learning trajectories in these chains, demonstrating that to assist firms in the development of capabilities and potential inter-chain upgrading, a stronger NIS is required that caters to their needs. The findings in this study suggest a nuanced role for GVCs in transferring knowledge to domestic firms in developing countries. Such understanding may further policy discussions on GVCs.

The selected sample and methodology allowed for an in-depth exploration of possible learning avenues and their interlinkages for capability development. However, it limits the extent to which conclusions can be drawn on the relationship between learning avenues, capability formation, and upgrading of firms both within and between value chains. This would be of interest to shed light on the effects of multi-chain participation on upgrading (see Navas-Aleman, 2011). We encourage future researchers to further analyse and compare the performance effects of participation in LVCs, RVCs, and GVCs of services by firms in less-developed countries.

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Notes

1. Massini and Miozzo (2012, p. 1221) define offshoring as “referring to a domestic company obtaining services from a foreign-based company, be that a subsidiary (captive or international in-sourcing) or an independent (i.e. third-party) service provider (offshore outsourcing)”.
2. These data are collected through a survey focusing on all the sector players who make up 80% of the total ITES market in South Africa. The response rate was 62% (BpeSA, 2017).
3. BPS schemes were introduced in 2007–2011, revised in 2011–2014, and were followed by the extended BPS scheme from 2014 to 2019.
4. The B-BBEE Act of 2003 was issued to enhance the equal participation of previously disadvantaged communities, targeted to assist coloured people and women of all races in the South African job market (Mashalaba *et al,* 2015).

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