

## **Learning on your own – Bricolage and the quest for relevance in the squeezed Bangladeshi garment supply chain**

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# Learning on your own – Bricolage and the quest for relevance in the squeezed Bangladeshi garment supply chain

## Abstract

This chapter explores knowledge-acquisition strategies adopted by Bangladeshi garment suppliers, in pursuit of economic upgrading. The context is characterised by ‘tacit promissory’ contracting relationships, whereby suppliers make recurrent discrete transactions with the same buyers over a long period of time, without the existence of any original and legally binding written agreement. We explore whether and to which extent suppliers in such contexts can access the knowledge resources of their powerful trading partners. Furthermore, we examine the strategies these supplier firms may pursue, at a functional level, to compensate for their lack of knowledge in order to effectively progress towards upgrading. We draw on a qualitative case analysis of two small and two large Bangladeshi garment manufacturing firms. The findings show that these suppliers source knowledge externally to the extent to which these are available and affordable to them, in order to compensate for the lack of access to buyers’ tacit knowledge resources. The small firms in our study are only able to seek locally available knowledge sources, and thus are constrained to technocratic or output-oriented dimensions of process upgrading. Large firms, however, are able to afford sourcing tacit and codified components of knowledge from overseas and thus arrive at higher order functional capabilities including designing and branding.

## Keywords

Upgrading, global value chains, tacit promissory contracting, garment, supply-chain

## 1 Introduction

This chapter explores the knowledge acquisition strategies adopted by suppliers in the Bangladeshi garment industry for the development of different functional-level capabilities and economic upgrading. Multinational enterprises (MNEs) are often regarded as the key source of knowledge for their equity partners involved in international acquisition (Bresman, Birkinshaw, and Nobel, 1999; Zou and Ghauri, 2008; Bresman, Birkinshaw, and Nobel, 2009;

Park and Choi, 2014) and joint venture arrangements (Lyles and Salk, 2007; Park, 2011). Knowledge spill-over from MNEs is found to be a substantial and strong driver of upgrading by linkage firms in the host country (Giroud, 2007; Giroud and Scott-Kennel, 2009; Giroud, Jindra, and Marek, 2012). Giroud (2003) finds that suppliers gain technological skills from the knowledge transferred through their linkage channels with MNEs partners. Previous IB literature has largely studied the knowledge transfer channels in equity-based cross-border relationships, whereby entities involved in the alliance can access each other's tacit knowledge resources (e.g. Foss and Pedersen, 2002; Mudambi and Swift, 2011). With the rise in externalisation practices such as subcontracting and outsourcing/offshoring by MNEs since the 1980s (Strange and Newton, 2006), it is important to understand whether suppliers in such non-equity relationships can access their MNE partners' knowledge. In addition, knowledge transfer has mostly been studied from the perspective of MNEs with limited attention being accorded to suppliers' knowledge acquisition strategies. Thus, we examine the knowledge acquisition strategies of suppliers who are involved in a unique international outsourcing relational context, namely a 'tacit promissory contracting relationship.' This is a form of non-equity relationship, whereby suppliers make recurrent discrete transactions with the same buyers over a long period of time without the existence of any original legally binding written agreement (Hoque, Sinkovics, and Sinkovics, 2016). The chapter investigates to what extent the suppliers in such non-equity, non-contractual outsourcing relationships can access the knowledge resources of their powerful trading partners. Also, if they lack access, what strategies these supplier firms may take, at a functional level, to compensate for their lack of knowledge in order to effectively progress through different stages of upgrading.

In capital-intensive and high-tech industries, MNEs are required to maintain a greater degree of collaboration and a knowledge-sharing routine with their supplier, which in turn result in some sort of value for the suppliers (Khan and Nicholson, 2014). For example, Liu and Zhang (2014) find that the tacit knowledge transferred from MNEs stimulated their Taiwanese technological suppliers to move upward in the value chain by switching from original equipment manufacturing (OEM) to original design manufacturing (ODM) or even original brand manufacturing (OBM). In contrast, Hoque et al. (2016), in their study on labour-intensive and low-tech industry, find that suppliers can access only codified knowledge of their MNE buyers. In such industries, the production function involves modest skill requirements with most of the actions being standardised and codified. The design, marketing, and information functions involve tacit components and therefore, are largely managed by MNEs

themselves. They tend to create high entry barriers for suppliers by protecting their tacit knowledge and by bringing down the unintended leakage to a minimum level (Strange and Newton, 2006). As a consequence, suppliers in labour-intensive, low-tech industries face higher barriers to access MNEs' tacit knowledge than suppliers from capital-intensive, high-tech industries. The current IB literature accords significant focus on knowledge transfer issues in the high-tech and capital-intensive industry context (Hoque et al., 2016). For this reason, we focus on a labour-intensive low-tech industry context to study the knowledge acquisition strategies adopted by suppliers for developing different functional capabilities in order to further their upgrading ambitions.

We draw on four empirical cases including two smaller and two larger firms. The two small firms have been previously analysed by Hoque et al. (2016), while the two larger cases have been examined by Sinkovics, Hoque, and Sinkovics (2018). In this chapter, we bring the four cases together with the aim to synthesize and extend the findings previously presented in those two studies. The rest of the chapter contains four main sections. The next section presents a literature review establishing the theoretical linkage between the key concepts used in the study. The methodology section presents the study design and defines the conceptual building blocks of the study. The fourth section presents the results. The final section provides a discussion and concludes the chapter by highlighting the theoretical contributions and practical implications of the study.

## 2 Literature Review

As set in the previous section, the chapter examines the knowledge acquisition strategies adopted by suppliers for development of different functional-level capabilities that are needed at various stages of upgrading. In so doing, the paper integrates concepts from IB, GVC and strategic management. In IB literature, knowledge transfer is predominantly examined in terms of knowledge flows between MNE headquarters and their subsidiaries (e.g. Bjorkman, Barner-Rasmussen, and Li, 2004), international joint-venture partners (e.g. Lyles and Salk, 2007; Park, 2011) and acquisition partners (Bresman et al., 1999, 2009). A relatively small number of scholars have examined knowledge transfer within inter-firm networks whereby firms are involved in non-equity, even non-contractual, relationships, such as international strategic alliances (Ho and Wang, 2015) and cross-border outsourcing relationships (Liu and Zhang, 2014). These studies largely regard MNEs as the hub for disseminating knowledge within the network (Bojica and Fuentes, 2012; Liu, 2012). Thus,

while this body of literature provides critical insights into the role of MNEs in knowledge transfer within inter-firm networks, it ignores the alternative sources of knowledge (besides MNE buyers) that may be available to the suppliers for learning on their own. In this respect, Fletcher and Harris (2012) argue that small firms can acquire tacit and explicit knowledge required for internationalisation from both external and internal sources. In particular, in situations whereby suppliers face limited access to MNEs' knowledge sources, they have to rely on alternative sources for learning (Hoque et al., 2016). For instance, Hoque et al. (2016) find that having limited access to MNEs' tacit knowledge, the suppliers in the Bangladeshi garment industry principally acquire tacit knowledge by making partnerships with external consultants and raw-material suppliers. They argue that the standardised nature of production in the garment industry and the absence of a contractual relationship diminish the need and willingness of MNEs to share tacit knowledge with their suppliers. This finding indicates the struggles encountered by developing-country suppliers in accessing MNEs' tacit knowledge. Therefore, further attention is still necessary in order to find out the strategies adopted by these suppliers for acquisition of knowledge in situations where they have limited access to MNEs' tacit knowledge.

In this chapter, we explore the strategic process involved in knowledge acquisition and learning by the suppliers for their capability formation. The concept of capabilities, although originally from strategic management, is not new in IB. The concept has mostly been applied in IB studies to examine how different capabilities have affected various performance dimensions of MNEs in their internationalisation activities (Prange and Verdier, 2011; Michailova and Zhan, 2015; Pinho and Prange, 2016). Previous IB studies have also found that the knowledge flow from MNE buyers has influenced suppliers' capability formation (Liu and Zhang, 2014). Nevertheless, these studies are conducted in capital-intensive industry context in which MNEs have greater need for knowledge sharing and collaboration given the high-tech nature of production (Khan and Nicholson, 2014). A further limitation is that these studies ignore the micro-processes involved in the development of different capabilities (cf. Verbeke and Calma, 2017). Studies analysing the capability development micro-processes in the supplier firm context are rare (Prashantham and Floyd, 2012). Therefore, while the concept of capabilities is widely adopted in IB research, there is still need for explorations in terms of the strategies and actions involved in the process of learning needed for capability formation by suppliers in labour-intensive industries (Sinkovics et al., 2018).

We adopt the concept of economic upgrading from GVC analysis and also draw on this body of literature to understand the link between knowledge flow, supplier capability formation and upgrading. In GVC analysis, knowledge dynamics are usually examined in relation to the process of upgrading (Marchi, Maria, and Ponte, 2014). Previous GVC studies have found that the nature of knowledge flow can be influenced by the mode of inter-firm governance adopted by the lead firm (e.g. Gereffi, Humphrey, and Sturgeon, 2005). There is also evidence in the GVC literature that the form of inter-firm governance influences the type of upgrading in the supply base (e.g. Humphrey and Schmitz, 2002). Furthermore, GVC scholars have found that inter-firm knowledge transfer in a global production network provides new opportunities for capability formation by local suppliers in developing countries (e.g. Ernst and Kim, 2002). While these findings imply that there may exist a link between the knowledge flow in inter-firm relationship, capability formation and upgrading by suppliers, this connection has not been explored explicitly before in GVC literature. Inspired by GVC analysis, therefore, we explore this link in this chapter.

Further to this, GVC literature is often criticised for its limited focus on firm-level strategic behaviour (Starosta, 2010). For instance, although GVC analysis embraces suppliers' capabilities as one of the key factors shaping the form of governance to be adopted by the lead firm (Gereffi et al., 2005), there is less emphasis on the strategic processes involved in learning for development of capabilities (Mahutga, 2012). The existence of a certain degree of supplier capability is more or less taken for granted, and firm-level efforts to learn in order to develop new and/or improve capabilities are largely underexplored (Kawakami, 2011). In addition, capability dynamics in the GVC literature are generally considered in relation to upgrading (Marchi et al., 2014). Yet the interplay between these two concepts is under-researched (Kawakami and Sturgeon, 2011). The terms are often used interchangeably within GVC analyses (e.g. Ivarsson and Alvstam, 2011), although they are distinct concepts originating from different disciplinary areas. While there is a clear indication of the link between capabilities and upgrading in GVC studies, the strategic route from the formation of capabilities to the achievement of different forms of upgrading is still not entirely clear (Sinkovics et al., 2018). In this chapter, we contribute to GVC literature by showing the inter-link between capability formation and upgrading, while also exploring the strategic process involved in capability formation.

## 3 Methodology

### 3.1. *Research design and sample*

An exploratory multiple case-study approach was adopted for the study. Data was collected from two small (Firm A and B) and two large (Firm C and D) Bangladeshi garment manufacturing firms (Table 1). The interviews were conducted in two rounds. In the year 2014, ten managers from different divisions of the selected firms were interviewed. The interview guide involved questions about the history of their firm, critical incidents, opportunities and challenges their businesses faced at the time, and the future plans of the organisation. The interviewees were also asked about their relationships with their buyers (such as the existence of a contract, length of relationship, process of ordering, materialising and finishing a transaction, exchange of knowledge and information, modes of contacting buyers, and critical shapers of repetitive relationships). Later in 2017, follow-up interviews were conducted for the purpose of gaining more specific insights into the upgrading initiatives taken since inception, the capabilities developed to progress through the stages of upgrading, the strategies adopted for knowledge acquisition and the learning processes deployed for development of different functional capabilities. The interviews were complemented with corporate presentations by divisional managers, factory visits, and participant observation aimed at better understanding the micro-processes. Finally, organisation documents were also consulted to gain insights into their upgrading history. Data analysis involved use of nested templates (Sinkovics, 2018) which supported adoption of a flexible pattern-matching technique (Table 2). The initial template builds on the four conceptual dimensions that are elaborated in the following section.

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*Insert Table 1 about here*

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### 3.2. *Conceptual building blocks*

#### 3.1.1 *Knowledge acquisition strategy*

In this paper, we adopt Rumelt's (2011, p.6) definition of strategy as "a coherent set of analysis, concepts, policies, arguments and actions that respond to a high-stakes challenge." Rumelt (2011) argues a good strategy should undergo three functions, namely the 'kernel of strategy': prescient diagnosis, a guiding policy and coherent action. We explore the knowledge acquisition strategies, specifically, and adapt Rumelt's functions for our analysis purpose. In

our study, the diagnosis stage involved identifying the knowledge needs at different phases of upgrading. The guiding policy refers to the plans undertaken at the corporate level in order to implement processes and organise resources for knowledge acquisition and learning. The action stage involved the actual learning practices adopted at functional level for development of various capabilities (Rumelt, 2011).

### 3.1.2 Capability

In our study, capability is defined as “resources needed to generate and manage technical change, including skills, knowledge and experience, and institutional structure and linkages” (Martin Bell and Pavitt, 1997, p. 89). For our analysis purpose, we adopt the capability framework proposed by Fujita (2011). The framework contains two dimensions: functions and levels. The functional dimension consists of four categories of capabilities (Fujita, 2011, p. 71):

- *Planning capability (pre-production)*: This category includes market research, product concept development, new product design and development capabilities.
- *Equipment/raw-material-related capability (pre-production)*: This group encompasses capabilities related to the operation, maintenance, design and manufacture of equipment, dies, moulds, jigs and tools.
- *Production-management capability (production)*: This category refers to the organisation and management of the production process.
- *Sales and marketing capability (post-production)*: The fourth category embraces marketing, branding, sales, and customer-relationship-building capabilities.

Fujita (2011) argues that suppliers’ capabilities deepen over time. Suppliers typically rely on mature, standardised technology imported from advanced economies during their early years. Over time, they master the imported technology and, at some point, they even adapt the technology according to the needs of their domestic customers. Finally, some even innovate technology of their own. Subsequently, the framework looks at four levels of depth:

- *The operational level* refers to the extent of suppliers’ ability to work with the existing technology.
- *At the assimilative level*, suppliers have mastered the existing technology and developed the ability to maintain operations over time.

- *At the adaptive level*, suppliers have developed the ability to make modifications and amendments to the existing technology.
- *At the innovative level*, suppliers are able to develop original and novel technologies.

Fujita's (2011) capability matrix involves four functional and four depth-related categories. We use both the dimensions for our analysis which allows conducting in-depth analysis of supplier knowledge strategies and learning processes at different functional levels. The framework permits us to study the dynamism involved in the improvement of functional capabilities over time, making it possible to trace development or refinement of capabilities at different stages of upgrading.

### 3.1.3 *Economic upgrading*

We adopt the definition of economic upgrading proposed by Gereffi (1999, p. 38): "a process of improving the ability of a firm to move to a more profitable and/or technologically sophisticated capital and skill-intensive economic niche." For our analysis purpose, we refer to Gereffi and Frederick's (2010) typology. The typology consists of four functional upgrading trajectories, which helped us identify the levels of upgrading pursued by our studied firms. These are as follows:

- *Cut, make and trim (CMT) producers*: the focus of the supplier is on the production and assembly of imported inputs following buyers' specifications;
- *Package contractors sourcing or original equipment manufacturer (OEM)*: the supplier takes on a broader range of tangible manufacturing-related functions, such as sourcing inputs and inbound logistics in addition to production;
- *Full package provider or original design manufacturer (ODM)*: the supplier carries out part of the pre-production processes including design and R&D;
- *Original brand manufacturer (OBM)*: the supplier acquires post-production capabilities and is able to fully develop products under its own brand names.

## 4 Results

The findings show that the studied firms, irrespective of their size, lack access to buyers' tacit knowledge resources within the tacit promissory contracting relational context. As a consequence, they bricolage from whatever external sources of knowledge are available and affordable to them. With their limited resources, the small firms could afford to seek locally

available informative knowledge which only allowed them to pursue technocratic or output-oriented dimensions of process upgrading. In contrast, the large firms could afford to obtain both tacit and codified components of knowledge from overseas sources which allowed them to develop higher order functional capabilities including designing and branding (Table 2).

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*Insert Table 2 about here*

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The findings further show that all four case firms identified their knowledge needs, devised strategies and taken coherent learning actions needed to perform appropriate functional activities (i.e. pre-production, production and post-production) as they embarked on different stages of upgrading (i.e. CMT, OEM, ODM and OBM). The strategies and actions adopted at each stage of upgrading aided the development of appropriate functional capabilities. At the same time, the level of functional capabilities also increased stage by stage from operational level to assimilative level, adaptive level and finally to innovative level as the firms progressed through each stage of upgrading. While the large firms achieved progression through all the levels of capability development, small firms could only grow to the assimilative level.

#### *4.1 CMT stage*

During their inception, all four firms started production at a small scale in a rented shared building. The two small firms started with two to three production lines and the two large firms with five to six production lines. In their early years, they approached their buyers with an offer to providing CMT services. They used to get orders via buying agents and had no direct relationship with the MNEs. For this reason, marketing capability was less important at this stage. The key capability required at this stage was the knowledge of factory set up and production of basic garments. They also required the skills to execute the technology and design specifications provided by the MNEs.

At this stage, each of the small firms largely relied on the previous experiences and personal network of the owner who had worked in the garment sector for a long time. They recruited unskilled workers with an aim of developing them. They recruited a few experienced managers and supervisors who provided on-the-job training to the workers in the production of basic garments, such as T-shirts. The two large firms, on the other hand, were more resourceful during the start of their business given that they were already engaged in other

different family businesses and had better access to loans from financial institutions. As a result, from the beginning, they recruited skilled or semi-skilled workers and highly experienced managers and supervisors. They even transferred a number of experienced managers from their other ventures into the new garment manufacturing business. All the firms, regardless of their size, acquired substantial learning on garment production and factory setup from training provided by their machine suppliers and the Bangladesh Garment Manufacturers and Exporters Association (BGMEA).

The interviewees from all case firms informed us that they received support from the buying agents in decoding buyers' design instructions in their early days. Over time they learned to understand the design specifications. Given that the backward linkage system was underdeveloped during their early years, they relied on imported raw materials from buyer-nominated suppliers. Subsequently, they required limited knowledge of raw-material production and could largely rely on the suppliers for quality inputs.

Marketing capability was less important at this stage because of reliance on buying agents for orders. The small firms primarily used their owners' personal contacts for connecting with different buying agents. All the marketing-related activities including liaison with agents, order management and searching for new agents were looked after by the owners themselves in the case of small firms. The large firms, on the other hand, recruited marketing graduates from local universities to do these tasks.

#### *4.2 OEM stage*

The findings show that the small firms accelerated their upgrading initiatives since 2013 after being pressured by the buyers for social compliance. They established new factories in their own land in response to the buyers' reservations about their previously shared rental arrangements. The new factories were built following the fire and building safety guidelines of Accord. The new factories also consistently increased production capacity. In order to compensate for the increased cost of compliance, the firms sought to increase productivity and sales. In doing so, Firm A and B replaced the majority of their manual machines with automatic machines with an aim of producing more output with less labour cost. Both firms also purchased sophisticated machines such as computer-aided manufacturing (CAM) and computer-aided design (CAD) machines for implementing complex designs. They introduced a daily target-based work-allocation system to increase workers' productivity. Systematic production scheduling was used to work out the daily targets. These changes allowed the firms

to significantly increase their volume of production and enhance efficiency. Having the new setup and increased capacity, both the firms started looking for new buyers by directly approaching them. In order to ensure better control on price and lead time of raw materials, both the small firms developed their network of local suppliers instead of relying on costly imported raw materials. They worked with experienced suppliers and relied on their knowledge for quality control and design of raw materials. With these changes they progressed to the OEM stage of upgrading.

While a number of initiatives were taken to upgrade the machinery, enhance productivity and develop a supplier network, both the small firms made limited efforts for workers skill development. Instead, they largely relied on the knowledge of their owners on a number of issues, for instance, decoding the design instructions, maintaining liaison with the suppliers and marketing to the new buyers. The owner of Firm B stated:

*“I used to attend the training provided by BGMEA and different overseas organisations on machineries, production operation management and client management. I would then train the managers, who afterwards provided on-the-job training to the workers. Even now I visit overseas markets to search for buyers and present the company to them.”*

The small firms, therefore, progressed to the assimilative level of capability by producing the same garments in a more efficient manner and at a larger scale, by managing a local supplier network in a more co-ordinated and controlled manner and by pursuing more elaborate marketing activities. However, the progress to this stage was highly reliant on the knowledge and skill of the owner.

The two large firms, on the other hand, sought to become OEM service providers by establishing their vertically integrated textile and accessories production plants. The head of the textile division of Firm C indicated that they wanted to build in-house raw-material production units to have more control over price, quality and delivery time and also to demonstrate a strongly differentiated position to their buyers. Subsequently, during the period of 1994–2006, Firm C established a number of vertically integrated textile units including spinning, weaving, washing and dyeing, processing and finishing plants. Similarly, 6 years after inception, Firm D also decided to gradually develop vertically integrated raw-material production units. They established a fabric production plant and then gradually also set up a denim (2003), a washing (2003), a dyeing (2004) and an accessories production (2004) plant. Thus, it took 4 years for the firm to become a full OEM service provider.

At the OEM stage, both firms needed to develop a range of pre-production capabilities for the in-house production of raw materials. Gaining knowledge on setting up these large-scale factories and operating state-of-the-art machinery was a priority at this stage. In addition, strengthening the marketing capabilities was a necessity in order to promote their new, more differentiated position to high-fashion buyers. Both firms increased their capacity to produce larger volumes of output. Subsequently, Firm C had undergone a major process of upgrading when they established a new garment unit at a larger scale (with 220 production lines) on their own 200-acre campus in 2005. They installed high-tech machines and integrated advanced facilities in the garment factory in order to increase the production volume.

Similarly, Firm D built a new plant with 10 production lines in the year 2000. From 2007 to 2009 they established two green factories in the industrial area. The two factories combined had 130 production lines compared to 23–49 production lines in previous stages. In 2010, they established another green factory with 90 production lines, advanced high-tech machinery and energy saving facilities. Both firms not only enhanced their production capacity but also increased efficiency by systematic planning through the use of advanced software.

Firm C hired an external consultancy firms from China and Sri Lanka which would help them to set up the factories. The same consultants also trained them on efficient order management:

*“The Sri Lanka based consultancy firm trained us on how to efficiently manage each order. This involved training on decoding the design, scheduling the process from raw material production till final garment production and co-ordinating internally between functional units and externally with the clients. Previously it took us minimum 3 months to process an order from start till shipment. But now, we have learned to complete the entire process in less than a month, which allows us to work with fast fashion high-end buyers.” (Managing Director, Firm C)*

The large firms also received training from their machinery suppliers on handling the machines appropriately. With greater need for co-ordination between the vertically integrated units, both the large firms required a system in place for internal integration. Subsequently, they hired an IT consultant firm which helped them by providing software and training in the use of it.

As they started catering to their high-end buyers, Firm C and D experienced a greater need for quality checks, reduction of defects and identification of mistakes at source. Efficient scheduling and management of production lines were also necessary in order to optimise value

from their new large-scale production facilities. Both the firms recruited a team of industrial engineers from India and Sri Lanka to guide and manage these process-upgrading moves. The learning activities delivered by this internal teams of experts involved regular on-the-job and off-the-job training. The key managers were also funded to attend training provided by BGMEA and overseas organisations and even to participate in business courses offered by overseas universities.

The firms were motivated to improve their marketing capability by the need to contact new high-end buyers and promote their new factories to them. They recruited marketing graduates from local business schools who would proactively search buyers online, set up meetings with potential buyers, deliver presentations, and provide samples to prospective buyers. Attending local and international trade fairs and other industrial events on a regular basis also contributed to the enhancement of their level of exposure and knowledge. Therefore, at this stage, both the large firms sought to develop assimilative-level capabilities by building up and enhancing their expertise in raw material and garment production as well as in the area of marketing.

### 4.3 ODM stage

Neither of the small firms could progress to the ODM stage due to the lack of required resources and capabilities. Financial constraints were regarded as the key barrier. However, the interviewees also reported that the absence of knowledge of international fashion trends had been a significant barrier to this form of upgrading. The owner of Firm A stated that although they were now proficient in understanding the buyers' design codes, they were still not skilled enough to produce the designs on their own. The owner of Firm B mentioned that the absence of tacit knowledge flow from buyers and the lack of its own firm-level resources contributed to its limited capability:

*“I learned to read the design instructions provided by the buyers during my first job experience in a buying house. I have transferred that knowledge to my employees. But we never received any training from any buyer on how to do the design itself. We also did not invest in learning this skill on our own. Firstly, because we lack understanding on the fashion trends in buyers' market. Without that knowledge, buyers are unlikely to appreciate our design. Secondly, we lack the resources, I mean finance, local designers etc. for setting up such facility. We cannot afford to hire world renowned designers likewise some large firms. One designer would charge the salary of ten of my managers.”*

In contrast, both large firms became ODM service providers with establishment of their in-house design studios. The interviewees from both Firm C and D indicated that firms with an

in-house design facility were better able to attract high-fashion buyers. Nevertheless, initially both firms were challenged with limited knowledge of fashion design. In addition, they reported the shortage of designers in the local market. In order to overcome these barriers, both the firms engaged in a collaborative design arrangement with overseas design consultancy firms. In addition, they recruited renowned designers from foreign countries. For instance, in 2007, Firm C collaborated with a Spain-based design consultancy firm and recruited an ex-Zara designer as the head of this collaborative arrangement. Two years later, after it had accumulated a sufficient level of tacit knowledge on fashion designing from this collaboration, it established its own design studio. Recently, it has opened two international design offices in Barcelona and New York in order to facilitate faster communication with European and US-based buyers. The MD stated that having an international R&D team allowed them to keep track of fashion trends and constantly update their knowledge. One of the firm's recent R&D activities is an upcycling project involving production and sale of garments from cut pieces at a mass scale. Further to this, it is currently developing designs for active formal wear (clothes that can be used for riding a bicycle to work that are also good enough as office wear) on behalf of a potential buyer from Canada. The MD stated:

*“Our team of designers can now innovative products on their own. Our team consists of designers from India, Spain and different other countries. A number of our buyers are now completely dependent on our design service and have already closed their design units.”*

Similarly, Firm D progressed to the ODM stage with establishment of in-house design studio in collaboration with a US-based textile design firm. Within 2 years, the firm gained knowledge of fashion trends in their buyers' markets. They set up advanced design software for making complex designs for cuts, embroideries and appliqués. Staff received training from the software vendor involving an initial 10 days of training followed by regular short exercises on updates and consultation on problem solving. Currently, the firm has its own independent design studio where its staff conducts research on fashion trends, raw materials and software, and innovate new designs. An international office was established in 2018 in Milan.

In the ODM phase, therefore, both the large firms had to develop pre-production capabilities related to garment design, which they pursued mainly by recruitment of experienced local and international designers. They also sought interns from reputed foreign and local universities to facilitate knowledge sharing. Their learning process further included regular training of the junior designers by international experts, attending fashion shows and

fairs and participating in collaborative research with foreign design institutes. The designers at the international offices started proactively developing new designs and making recommendations to buyers and also sometimes shopping with the buyers to understand their needs better and accommodate their demands in the design. Therefore, at this stage, the large firms achieved assimilative-level capability by upgrading their design capabilities that they needed for gaining ODM status.

#### *4.4 OBM stage*

Both the large firms gained OBM status with the launch of their own brands sold in the local market through their own retail stores. Growing fashion consciousness among younger Bangladeshi consumers and a rising demand for fusion clothing encouraged both the firms to launch their own brands. The small firms, on the other hand, could not progress to this stage as they lacked the design capability which is a precursor to introducing their own brand.

At this stage, the large firms required further marketing skills; knowledge of demand patterns, distributors, advertising, media, and the overall business environment in the local market was especially necessary. For this, they leveraged the marketing and brand-management knowledge gained from other sister businesses. In so doing, they transferred a number of experienced employees from other family businesses to this new unit. They utilised the same network of distributors and advertising channels that were being used by other family businesses.

As for design capability, they were utilising the learning gained from their long-term experience in designing for MNEs. The Western designs were adapted to accommodate local fashion trends and the needs of the target market. Research activities contributed to their knowledge on local customer demands. For instance, before launching its brand, Firm C conducted a survey at local universities and coffee shops to understand the needs of the younger generation, its potential target market. The survey identified a high demand for fusion-type clothing among this customer group. As a result, when the brand was launched, it was much appreciated by its young customers.

In order to remain updated on changing demands and the rise of new opportunities in the local market, both large firms engage in continuous market research. For instance, from its recent research, Firm C found that there is a prospect for a local brand in the lower income segment of the market. Accordingly, Firm C is soon to launch another brand targeted to the lower end of the market. Therefore, the findings show that the large firms have developed

adaptive-level capabilities at this stage by adjusting and leveraging their accumulated learning and experience.

After launching their brands in the local market, both the firms started selling their brands in other South Asian markets. In addition, they eventually developed new products and brands as a joint venture with overseas firms in foreign countries. For instance, Firm C established a joint venture in the USA with PVH for the innovation, production and sale of wrinkle-free fabric (Cortex-2000; Cotra DP 3.5+). Similarly, Firm D started production of its own lingerie brand by establishing a joint-venture project in Myanmar with a Sri Lankan garment manufacturer, Brandix. The joint arrangement allowed them to share the expertise of their partner's knowledge on the product. With these ventures in place, both the firms achieved innovative-level capability.

At this stage, both large firms were challenged by limited knowledge about foreign market demands and about their institutional dynamics. In South Asian markets, they used their existing knowledge, and social and political networks, while in other markets they adopted strategic alliances and joint ventures as entry modes. For instance, Firm C chose to sell its brand in its own retail outlets in Pakistan as its owner is a Pakistani citizen. As a result, it possesses some knowledge of the business environment in Pakistan. In contrast, it chose to distribute its brand in other South Asian countries and Africa via wholesalers in order to benefit from its partners' local knowledge. Firm D also started selling its brand in India considering its similarity with the Bangladeshi market.

As their cross-border activities were enhanced, the firms experienced an increased need for collaboration with their overseas agents and joint-venture partners. As a result, both firms set initiatives for joint training and team work to facilitate knowledge transfer from their alliance partners. For instance, in the case of Firm D, the Sri Lankan partner provided training on design and production of lingerie, while Firm D shared its knowledge and experience of managing a brand in the international market. In addition, actions were undertaken for collaborative research activities in order to understand the lingerie specifications and fashions in South Asia. As firm D got involved in product and brand development jointly with its cross-border partners, it achieved innovative-level capability.

## 5 Discussion and Conclusion

GVC literature predominantly assumes that insertion into GVC provides suppliers with a platform for learning and acquisition of new skills (Ernst and Kim, 2002). Lead firms are seen here as the key node of knowledge in the network (Dolan and Tewari, 2001). This assumption mainly originates from two empirical patterns observed in GVC studies by Martin Bell and Figueiredo (2012). They suggest that such studies have either focused on latecomer firms that very rapidly grew into charismatic MNEs, or on dyadic relationships between latecomer firms and Western MNEs where the latter was a significant source of knowledge and learning. However, different types of GVC governance mechanisms (Gereffi et al., 2005) allow for deviations from these empirical patterns. Both intra- and extra-chain factors involved in a specific form of relationship can have an impact on suppliers' capacity to learn and the extent to which they have the freedom to innovate (cf. Ponte and Ewert, 2009). For instance, in our study context, the uncertainty resulting from the absence of a legal contract functioned as a barrier to suppliers' access to MNEs' tacit knowledge resources.

In his study of the East Asian apparel industry, Gereffi (1999) observed a certain degree of knowledge transfer from lead firms. However, the same cannot be assumed for firms from other emerging economies that entered the sector at a later stage. Given that strong OEM and OBM clusters already existed across newly industrialised Asian countries, and a number of emerging economies competed for CMT orders, there was no need for lead firms to transfer substantial knowledge or deliver inputs in countries like Bangladesh. The firms from these latecomer economies were expected to learn on their own from the specifications given by the lead firm (Sinkovics et al., 2018). As a result, in our study, we observed that suppliers, at all stages of their upgrading, had access to only the codified knowledge of their MNE buyers. They were left to learn the tacit components by their own firm-level efforts.

For this reason, our studied firms relied on a number of alternative external and internal sources (Fletcher and Harris, 2012) to acquire the knowledge needed to develop capabilities and upgrade. Our findings show that tacit knowledge is critical for suppliers to pursue a higher degree of upgrading (Ernst and Kim, 2002). For instance, when the two large firms attempted to progress to ODM and OBM stage, they required knowledge on design, product development, marketing and brand management, which are fundamentally tacit in nature. Being resource constrained, the small firms managed to access only information-oriented or publicly available explicit knowledge which enabled them to improve only technocratic or output-oriented

dimensions of process upgrading. On the other hand, the large firms were able to source tacit knowledge from various external sources that are expensive. With their substantial resources, they could hire international experts and consultants, get engaged in collaborative partnership with foreign universities, research institutions and knowledgeable business entities. As a result, even in the absence of tacit knowledge flow from MNEs, they were able to deepen their levels of capabilities (Fujita, 2011) and thereby to climb the ladder of upgrading (Morrison, Pietrobelli, and Rabellotti, 2008). Our study, therefore, contributes to IB and GVC literature by showing how firm size influences the learning strategies for capability development, thereby affecting their success in upgrading.

Our paper contributes to IB literature by identifying the nature of learning mechanisms adopted by garment manufacturing firms that operate in low-tech and labour-intensive industries. Martin Bell and Figueiredo (2012) find that high-tech firms focus profoundly on their dyadic relationship with buyers/supplier as a significant external learning source supporting the development of technological capabilities (i.e. design, component manufacturing, imitating licensed/patented technologies etc.), while the use of other outside knowledge sources including universities and research institutes has been insignificant (information from innovation surveys shows that only 3% of high-tech firms used these sources) (Martin Bell and Figueiredo, 2012). Nevertheless, our studied firms have benefitted trivially from such dyadic relationships and thus have relied largely on partnerships with local and foreign universities, research institutes, consultancy firms and machine and raw-material suppliers. This finding, therefore, responds to the call of Martin Bell and Figueiredo (2012) by identifying the distinct nature of learning mechanisms used by developing-country suppliers in low-tech and labour-intensive industries.

A further contribution of our paper involves identification of the changing learning strategies deployed by the studied firms over time, thus sketching their paths towards developing innovation capabilities (cf. Martin Bell and Figueiredo, 2012). As the studied firms proceeded from developing operational, assimilative, adaptive and finally innovative-level capabilities over the period, their learning mechanisms and strategies changed. For instance, at the operational phase, Firm D replicated designs from samples provided by buyers. However, as it moved to the assimilative stage, in order to acquire deeper learning, it formed a collaboration with a US-based fashion consultancy firm to start an in-house design studio. The accumulated learning from the partnership was then adapted to design its own brand. To sell its newly launched clothing brand, it also used and modified its internal marketing and brand-

management knowledge developed from the experience of the successful functioning of sister-business units. Therefore, the learning strategy changed at each stage showing varying levels of dependency on external and internal learning mechanisms.

Overall, these findings show how suppliers can, against expectations of Peter J. Buckley and Verbeke (2016), not only develop firm-specific advantages/assets but also gain and maintain sufficient control over them, thus achieving a smiling curve. More specifically, this smiling curve is not the direct result of MNE–supplier engagement and their partnering efforts. Peter J Buckley and Prashantham (2016, p.41) argue that a “meaningful MNE–supplier engagement” can result from “building interdependence in two ways: MNE orchestration and SME participation leads to mutual dependence and MNE–SME dialogue to redress power imbalances.” They stress that such engagement helps suppliers find their voice through proactive utilisation of allies, innovation in partnership and risk-taking. However, our findings show that instead of engaging in effective partnership when involved in tacit promissory contracting relationships, MNE buyers have attempted to reduce spill-over to the minimum, while at the same time maximising their benefits by locking their suppliers in through tacit promises (Hoque et al., 2016). Within this uncertain relational setting, our case firms have used their pro-activeness, innovation and risk-taking actions to overcome constraints originating from relational arrangements that would otherwise have hindered their upgrading moves. To this end, the chapter contributes to the IB studies by highlighting how suppliers, even in a challenged relational context, can control their own learning strategies to develop capabilities in order to gradually redress the power imbalance between themselves and their buyers.

The paper contributes to the GVC literature by responding to Kawakami and Sturgeon’s (2011) call to examine firm-level strategic behaviours that underlie the formation of capabilities. The results highlight that supplier capabilities do not necessarily remain static. The GVC framework largely treats the existence of capabilities as a static dimension in the analysis process and regards upgrading as something that can be achieved through mere participation in GVCs (e.g. Humphrey and Schmitz, 2002; Giuliani, Pietrobelli, and Rabellotti, 2005). In contrast, our chapter suggests that upgrading does not automatically happen merely by insertion into a GVC. Rather, it requires the adoption of appropriate learning strategies and formulation of coherent capabilities by participating firms (cf. Kawakami, 2011; Kawakami and Sturgeon, 2011). This strategic behaviour is furthermore shaped by the nature of suppliers’ relationships with their buyers, which is in line with Kawakami and Sturgeon’s (2011) suggestion for studying the process of suppliers’ capability development. However, the

findings in our study move beyond the capability matrix of Fujita (2011) and Kawakami and Sturgeon's framework (2011) by conducting an in-depth analysis of the learning process at functional level and also by showing the implication of these processes for step-by-step upgrading. Lastly, our attempt to build a bridge between the IB and GVC literatures, by studying the process of suppliers' capability development from a GVC upgrading perspective (cf. Marchi et al., 2014), advances the emerging agenda of cross-fertilising IB and GVC studies (Johns et al., 2015).

The paper provides managers of developing-country supplier firms with insights into possible learning strategies, processes and resources potentially leading to the development, implementation and transformation of capabilities at different stages of upgrading. Further to this, the paper identifies knowledge-sharing micro-processes such as seeking external support for training, consultation and also internalising knowledge by recruiting experts and skilled workers. The reliance on such collaborative arrangements intensified as our case companies moved up the hierarchies of upgrading. This finding, therefore, highlights the importance of cross-border linkages for gaining access to the necessary resources in order to upgrade and to speed up the process of capability development.

The main limitation of the study stems from its exploratory nature and small sample size. We present a comparison between large and small firms, yet the findings are not generalizable due to the limited scope of the study. In this chapter, we only consider the learning challenges originating from the specific nature of relationship between MNEs and Bangladeshi suppliers. Thus, we do not consider the other barriers to learning, for instance, the precarious institutional environment in Bangladesh. Future research could benefit from researching the phenomenon with a larger sample size and considering different challenges and opportunities to learning faced by developing-country suppliers.

## 6 Appendix –Tables

**Table 1: Profile of the studied firms**

Topic/firm	Firm A	Firm B	Firm C	Firm D
Year of start	2010	2009	1985	1994
Country location	Bangladesh	Bangladesh	Bangladesh	Bangladesh
Ownership structure	Investment from Turkish and Bangladeshi owner (joint venture)	Owned by two brothers (local)	Board of directors; public limited company (listed in Dhaka Stock Exchange)	Family business
Surrounding environment	Urban: rented building	Industrial: own building in industrial area	Factory: Gazipur industrial area; own campus with own infrastructure facility (electrical substation; ICT etc) HQ: in the same campus	Old factories: Dhaka city New factories: Gazipur industrial area (with own electric substation); Chittagong Export Processing Zone HQ: Dhaka city
Number of employees	500	600	12000	10000
Workforce nationality	Bangladeshi and foreign	Bangladeshi	Bangladesh, India, Sri Lanka, Malaysia, Spain, UK	Bangladesh, India, Sri Lanka, USA
Supervisors	Bangladeshi	Bangladeshi	Bangladeshi	Bangladeshi
Workers	Bangladeshi	Bangladeshi	Bangladeshi	Bangladeshi
No. of Production lines	5 lines	6 lines	220 lines	230 lines
Product type	Knitted T-shirts, trousers, tops, shorts, hoodies	Knitted T-shirts, trousers and tops	Yarn: woven, knit and denim fabric, garment accessories • Apparel (T-shirts, formal trousers, formal shirts, denim jeans etc.) • Embroidery, appliqué and printing	<ul style="list-style-type: none"> <li>• Woven and knit</li> <li>• Garment accessories</li> <li>• Apparel (T-shirts normal and fancy; polo shirts; denim jeans and other bottoms, sweats and cardigans etc.)</li> <li>• Embroidery, appliqué and printing</li> </ul>
Turnover	£9 million	£13 million	£450 million/year	£380 million/year
Net profit	£0.18 million	£0.24 million	£52 million/year	£32 million/year
Production method	Traditional (progressive bundle system)	Traditional (progressive bundle system)	Traditional (progressive bundle system)	Traditional (progressive bundle system)
Form of relationship with MNE buyer	Non-equity, non-contractual	Non-equity, non-contractual	Non-equity, non-contractual	Non-equity, non-contractual
Structure of local value chain	Lead contractor having own network of suppliers in Bangladesh	Lead contractor having own network of suppliers in Bangladesh	Own vertically integrated units	Own vertically integrated units
Origin of buyers	Mainly Netherlands; other European	Netherlands, Belgium, and Spain	<ul style="list-style-type: none"> <li>• USA: American Eagle; JC Penny; PVH; Tommy Hilfiger; Calvin Klein Jeans; Macy's</li> <li>• Europe: Top Shop; Dorothy Perkins; H&amp;M; River Island; s.Oliver; Zara; Arcadia Group Ltd.; Bershka</li> </ul>	<ul style="list-style-type: none"> <li>• USA: Polo Ralph Lauren; Oxford</li> <li>• Europe: C&amp;A; Marks &amp; Spencer; G-star; Celio; Kariban</li> <li>• Japan: Etuchu</li> </ul>
Means of contact with buyer	Direct	Direct and buying house	Direct	Direct
Length of relationship with buyers	Mixed (long-term and short-term)	Mixed (long-term and short-term)	Long-term; more than 10 years	Long-term; more than 10 years

**Table 2: Knowledge strategies, capability development and upgrading**

Firm	Small firms (Firm A and B)		Large firms (Firm C and D)			
Stage of upgrading	CMT	OEM	CMT	OEM	ODM	OBM
Level of capability	Operational level: Production and export of garments using buyers' design and imported raw materials	Assimilative level: Mastering garment production and developing local network of raw-material suppliers	Operational level: Production and export of garments using buyers' designs and imported raw materials	Assimilative level: Mastering garment and raw-material production and export	Assimilative level: Mastering garment design and production  Innovative level: New product development (upcycling project, formal/sportswear)	Adaptive level: Launched own brand in local market by adapting design  Innovative level: New product and brand development (wrinkle-free fabric, lingerie) jointly with overseas partners
Diagnosis of knowledge needs	Knowledge of... Basic garment production process Factory setup Decoding buyer design Marketing to contact buying agents Contacts of local buying agents	Knowledge of... Production efficiency and quality management Factory setup and use of modern machinery Contact information for new buyers to approach directly Promoting the new compliant factory to the buyers Developing linkage with own local suppliers and co-ordinating them	Knowledge of... Garment production Factory setup Decoding buyer designs Marketing to contact buying agents Contacts of local buying agents	Knowledge of... Raw material and garment production Production efficiency and quality management Setting and using modern machineries Contact information for new high-end buyers to approach directly Promoting the new vertically integrated factory to the buyers	Knowledge of... Designing various high-fashion garments Fashion trends in different markets Fashion trends in local market	Knowledge of... Brand management in local and international market Managing foreign ventures
Guiding policy	Manufacture and export garments on a small scale (2 production lines) Export garments via buying houses	Build new independent factory building with more capacity (5-6 production lines) Develop local supplier network for outsourcing raw material Start contacting buyers directly	Manufacture and export garments on a small scale (5-6 production lines) Export garments via buying houses	Develop vertically integrated textile unit including spinning, fabric weaving, washing, dyeing, and accessories production plants Significantly increase the production capacity (200+ production lines) Start contacting high-end buyers directly	Start in-house design studio in collaboration with an international design consultancy Later, create autonomous design studio to perform both fashion and material related designs Provide complete design service to the buyers	Launch own brand locally and start selling in own retail outlet Later, start selling in other South Asian countries in own retail outlets FDI via joint venture with international firms for production and selling of new product brands International office to facilitate better platform for R&D and also for easier communication with buyers
Actions for developing functional capabilities	Planning: Recruit experienced managers and supervisors who can give on-the-job training to the workers Attend training by BGMEA Acquire guidance from buying agent Raw materials: Import from buyer-nominated overseas suppliers who are already knowledgeable	Planning: Use previous experience on decoding buyers' designs Hire consultant for guidance on building a compliant factory Raw material: Work with experienced raw-material suppliers and rely on their knowledge Production:	Planning: Recruit experienced employees who can decode buyers' design specifications to produce samples Recruit experienced workers from other factories Attend training by BGMEA Raw materials: Import from buyer-nominated overseas suppliers who are already knowledgeable	Planning: On-the-job training by external consultants on how to process designs and scheduling related to each order in 2-3 days Hire external consultants to establish an internal integration system via software and provide training on use of it Recruit industrial engineers from Sri Lanka and India for factory setup and production management	Planning: Recruit internationally reputed fashion designers Recruit and work in collaboration with design graduates and internees from reputed foreign and local universities Regularly attend fashion shows, design-training programmes held locally and internationally Raw material:	Planning: Research on local fashion trends Attending local fashion shows to understand trends International offices do research on international fashion trends and work closely with workers to understand their demands Work in collaboration with international venture partners for design, strategic planning and scheduling

	<p>Production: Get training from machine suppliers on factory setup and use of machines On-the-job training for workers by experienced supervisor and the owner himself Sales/marketing: Use owner's personal experience on dealing with orders gained from previous job in a buying agent firm Gain information on agents from personal contacts Get information on buyers' preferences from the agents</p>	<p>Owners attend training provided by BGMEA on quality control and production scheduling Sales/marketing: Marketing activities are still reliant on owners' experience and knowledge Reference from existing and ex buyers' links with new buyers Owners' overseas visits for buyer search</p>	<p>Production: Training from machine suppliers for factory setup The owner and general manager attend overseas training and transfer the knowledge to employees through on-the-job training Sales/marketing: Gain information on agents from online search, BGMEA and personal contacts Get information on buyers' preferences from the agents Recruit local employees who are experienced in dealing with buying agents and maintain buyer accounts</p>	<p>Attend monthly/yearly training by overseas organizations of design and production Raw material: On-the-job training for the workers by external consultants on how to process and produce raw materials according to the specifications and schedule set by planning division On-the-job training by consultants on checking quality Attend monthly/yearly training by industrial machine suppliers for training on setup and machine operation Hire international industrial engineering consultancy firms for guidance on setup and operation Production: On-the-job training by external consultants and recruited industrial engineers on identifying and reducing mistakes at source and managing efficient production lines Sales/marketing: Attend trade fairs and industrial events regularly Proactively search buyers online and set meetings with potential buyers and present company profile and samples Recruit marketing experts from local business schools</p>	<p>Recruit textile engineers from India and Sri Lanka for knowledge on production of superior fabric Production: Gain advanced knowledge on total quality management from external consultants Sales/marketing: Participate in high-profile international trade fairs and fashion events with demonstration of products for knowledge sharing and exposure</p>	<p>Knowledge sharing with partners through working in collaborative teams for design and strategic planning Raw material: Research on raw material trends in international target markets Work in collaborative teams made of internal division staff and venture partners for innovation of new fabrics and raw materials for garment Production: Develop cross-functional working skills via training and working in mixed-skill teams for knowledge sharing Creation of autonomous workers' training institution for regular off-the-job training of workers on new/improved skills Sales/marketing: Research on international markets, get customer feedback Work in collaborative team with venture partners and overseas offices for knowledge sharing and marketing activities</p>
Knowledge transferred from buyers	Codified design and material instructions; quality standards; labour standards	Codified design and material instructions; quality standards; labour standards	Codified design and material instructions; quality standards; labour standards	Codified design and material instructions; quality standards; labour standards	Limited transfer of codified instructions; suppliers produce initial designs independently and customise to accommodate buyers' feedback	Limited transfer of codified instructions; suppliers produce initial designs independently and customise to accommodate buyers' feedback

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