

# Chapter 12

## Global Value Chains and Least Developed Countries in Asia: Cost and Capability Considerations in Cambodia and Nepal

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**Abstract** In today's world, global trade increasingly involves spreading the production of a final good over firms located in several countries, with each undertaking a task in the overall process. Powerful new trade opportunities have thus arisen, including for least developed countries (LDCs) in Asia. Although such countries may otherwise lack the capabilities to export goods from modern sectors, they can obtain these through engagement with global value chains (GVCs), characterized by the vertical fragmentation of production. These tend to be led by foreign direct investment (FDI) and have more hierarchical governance structures.

Tensions exist between the comparative costs that create the incentive to unbundle and the colocation or agglomeration forces that may bind some parts of a process together. Risks for LDCs also exist; for example, producers may be locked into low stages of production and be unable to upgrade their functional position over time.

Cambodia has benefited from the expansion of formal employment opportunities through FDI-led GVC integration, but it continues to struggle with functional upgrading. Nepal, on the other hand, is in the initial stages of engaging with GVCs as well as upgrading within them. Both case studies also exhibit different economic geography considerations that influence the cost and capability of GVC integration. In both, governance capability issues regarding the ability to effectively design and implement industrial policy exist, and powerful new trade opportunities represented by GVCs could be more effectively and realistically harnessed.

**Keywords** Global value chains • Least developed countries • Foreign direct investment • Governance • Capability • Industrial policy • Cambodia • Nepal

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## 12.1 Introduction

The most recent global value chain (GVC) literature, which adopts a more quantitative approach to analysis compared to the more qualitative approach of the 1990s, provides new evidence on the interconnected nature of global trade through global input – output tables, which measure a country’s participation in vertically fragmented trade. However, although these new descriptive analyses have been made available, some of their relevance is questionable in relation to least developed countries (LDCs).

Cambodia is considered to be a success story in terms of engaging with the garment GVC, achieving impressive social and economic progress. However, despite these gains, there has been little change in the country’s functional position, as, for example, only recently has an industrial policy been formulated. In this chapter, the experience of Cambodia is contrasted to that of Nepal, which today continues to struggle with effective GVC integration. Nepal’s limited participation in GVCs, in terms of vertically fragmented trade, may be explained by cost and capability considerations related to ineffective policy design and implementation.

## 12.2 Global Value Chain Literature and Organizing Concepts

As discussed by the World Trade Organization (2013), multilateral, regional, and unilateral trade liberalization have greatly increased market access. Sharply falling transport and communication costs have facilitated the emergence of value chains. Production that once was located close to sources of major suppliers of inputs or near consumers in final markets is now increasingly carried out wherever the necessary skills and materials are available, at competitive cost and quality. This fragmentation process has created new opportunities for developing countries to enter global markets as component or services suppliers, without having to build the entire value chain. By providing access to networks, global markets, capital, knowledge, and technology, integration in an existing value chain can provide a first step to economic development, which is often easier than building a complete value chain (OECD 2013).

As global production has become fragmented, it has also become more coordinated by the lead firms that drive GVCs. In fact, just how integrated supply chains are became particularly notable during the global financial crisis. Since then, as countries have sought to rebalance their economies and trade out of the crisis, GVCs have been used to reinvigorate the trade policy debate (i.e., countries need to import before they export) and have focused attention on “behind-the-border” issues, that is, moving beyond tariffs and considering regulatory coherence. For example, Hoekman and Jackson (2013) argued that trade policy makers need to “think supply chains” and recognize the integrated and interconnected nature of global trade patterns.

The new wave of GVC literature focuses on the intermediate goods trade, or vertically fragmented trade. New information provided by input – output tables

suggests that around 85 % of trade in intermediate goods trade occurs in and around the three hubs of East Asia, Europe, and North America (AfDB, OECD, and UNDP 2014; Baldwin 2012). The latest estimates indicate that around 80 % of all trade takes place within the international production networks of transnational corporations, around one-third of which is intra-firm trade, that is, that which occurs within the ownership structure of a single firm or transnational corporation (UNCTAD 2013). Developing countries have increased their shares in global trade, while the share of the intermediate goods trade has also increased (Elms and Low 2013).<sup>1</sup>

Various trade economists have analyzed the cost considerations that underpin the fragmentation process of production, and a new theory has accompanied the new descriptions of the extent of vertically fragmented trade. Baldwin and Venables (2013) explored the technological characteristics of products and economic geography considerations; they emphasized the presence of centripetal forces that bind some activities together, a process that differs across products and depends on the colocation of certain activities. They recognized that there are tensions between the comparative costs that create the incentive to unbundle and the colocation or agglomeration forces that may bind some parts of a process together. Opposing forces of international cost differences and the benefits of colocation of related stages thus determine the fragmentation of stages of the production process. The end result will depend on the technological relationships between stages of production.

However, little analysis within specific country contexts has been conducted, and the East Asian or “flying geese” model of recycling comparative advantage in other regions is not necessarily replicated within the current global trade landscape. A World Trade Organization and Institute of Developing Economies, Japan External Trade Organization (2011) study has refocused the debate, similar to how the World Bank “East Asia miracle” study shifted the debate in the 1990s. It has moved away from bland, prescriptive notions of trade liberalization toward more practical considerations within the context of GVCs and evolving production networks, including consideration of behind-the-border issues and management of foreign direct investment (FDI).

### ***12.2.1 Case Studies***

More qualitative development economists became interested in GVCs in the early 1990s as developing countries became more integrated into the global economy, focusing on economic power and asymmetries in trading relations. Much was derived from global commodity chain analysis and world systems theory, which emphasized how economic relationships are constructed over time rather than emerging spontaneously (Wallerstein 1974). The term “GVC” was used as analysis

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<sup>1</sup> Intermediate goods trade accounts for 60 % of global trade (Elms and Low 2013). Developing countries now account for around 50 % of global trade flows. Developing economies accounted for only 34 % of world merchandise exports in 1980, but by 2011, their share had risen to 47 %, or nearly half of the total.

shifted toward understanding how local processes could influence value creation (Gereffi 1999). Different GVC governance structures were identified based on where economic power resided within the value chain. There were some commonalities regarding the analysis of value chains across sectors, including manufacturing, agriculture, and extractive industries (Kaplinsky and Morris 2001). However, the literature generally reached less optimistic conclusions about upgrading within GVCs compared to entering them.

Within the context of more hierarchical GVCs, which are what recent trends on intrafirm trade suggest, some types of upgrading may be more difficult to achieve. This hypothesis has been subject to increasing scrutiny by researchers, most notably under the Capturing the Gains research project.<sup>2</sup> The objective of this project is to design win–win outcomes when working with lead firms and their suppliers to advance economic and social upgrading.

As discussed by Gereffi and Lee (2014), linking lead firms in GVCs with small and medium-sized suppliers in diverse contexts is a major challenge in all industries, whether characterized by producer-driven chains like automobiles, electronics, or shipbuilding (for whom finding and nurturing technically capable suppliers is a requisite of global supply chain management for those who play a leading role in determining what and how to produce); buyer-driven chains like apparel and footwear (where low cost is a major driver, and retail buyers govern how the chains work); or fresh produce and food products (where safety and quality standards are of the utmost concern). Gereffi (2014) also noted several important trends, including the following:

- **Organizational rationalization.** Lead firms seek a smaller number of big, technologically capable, and strategically located suppliers.
- **Geographic consolidation.** The production hubs of these supply chains are concentrated in large, emerging economies because of their abundant supply of workers, local firms with manufacturing expertise, and expanding markets.
- **Growth in south–south trade.** This has occurred particularly since the global financial crisis, which slowed exports to advanced economies.

Given recent trends on the proportions of trade controlled by transnational corporations, it is probable that increasingly complex, technologically sophisticated products are being produced in fragmented chains, but control by lead firms remains high through FDI, either because domestic capabilities in recipient countries remain low or the benefits of colocation and agglomeration forces remain weak relative to costs (since governing value chains costs lead firms).

### *12.2.2 Policy Implications*

The policy implications drawn from the new GVC literature are similar to past arguments regarding the use of infant industry protection, that is, that LDCs today

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<sup>2</sup> See Capturing the Gains. <http://www.capturingthegains.org>

can benefit from external economies through trade. Specialization within trade now relates to a single task rather than a whole value chain and a final good. Hence, the costs of infant industry protection relating to a whole value chain are even higher than they have been in the past.

The new literature is optimistic regarding new trade opportunities that may arise from entering GVCs. Much of the information and new data presented, including from organizations not typically associated with optimism regarding trade liberalization such as the United Nations Conference on Trade and Development, resonates with the export sophistication literature of the mid-2000s. This includes the relationship between the export of more sophisticated products and growth in gross domestic product (GDP) per capita.


However, more qualitative researchers maintain some continuity with the historical GVC literature and world systems theory, emphasizing such aspects as economic power and control. The policy implications derived from this literature recognize that entering a GVC may provide for powerful new opportunities to expand formal employment through engaging with the modern export sector. Yet, sustaining upgrading processes may become difficult unless the process of GVC integration is managed carefully.

The need for sector-specific industrial policy has arguably increased. To some extent, industrial policy needs to become even more finely tuned so as to assist firms strategically engaged in specific chain nodes or stages of production. Because of the risks of government failure overriding that of market failure, the need to develop government capabilities prior to the design of interventions is clear. Within the context of engaging with more hierarchical GVCs, effective governance capabilities are key. Although new trade opportunities exist, these must be carefully managed and effectively channeled to achieve development objectives.

Further, there are inherent tensions between chain actors. For some producers to upgrade their functional positions within a given GVC, it may be necessary for other actors to relinquish control. The design of specific interventions may be tied to certain windows of opportunities in terms of their political feasibility (Bolwig et al. 2010). Changing trade policy at the border is unlikely to be sufficient to address the upgrading challenges faced by producers already engaged with GVCs, and donors must recognize these tensions in the design of their interventions (Pietrobelli and Staritz 2014). Although World Trade Organization members agreed on the importance of trade facilitation at the Ninth Ministerial Conference in 2013, it is unclear how this will be implemented in practice. Moreover, there are concerns that simply facilitating trade glosses over the very real challenges faced by countries in terms of upgrading within GVCs.

Despite these differences, both the more quantitative and qualitative GVC literature recognize that global trade patterns have never been so interconnected. Moreover, trading success within increasingly integrated global markets means entering and upgrading within GVCs. Success also requires consideration of new issues and beyond-the-border measures, such as the effective management of FDI within an overall industrial policy framework.

**Table 12.1** Key determinants of global value-chain governance

| Governance structure | Complexity | Codification | Capabilities | Degree of explicit coordination   |
|----------------------|------------|--------------|--------------|---|
| Market               | Low        | High         | High         | Low   |
| Modular              | High       | High         | High         |  |
| Relational           | High       | Low          | High         |   |
| Captive              | High       | High         | Low          |   |
| Hierarchy            | High       | Low          | Low          | High  |

Source: Adapted from Gereffi et al. (2005)

### 12.2.3 *Organizing Concepts: Governance Structures and Upgrading Trajectories*

The GVC framework is centered on two main organizing concepts: value chain governance and upgrading within GVCs. Both of these concepts have evolved in recent years.<sup>3</sup>

At the core of GVC analysis is the notion of governance, which determines how the production and marketing of goods and services are organized globally, reflecting economic power. The initial distinction made in terms of GVC governance structures was between industry-specific types (e.g., whether structures are buyer- or producer-driven Gereffi and Korzeniewicz 1990). The differences between these two types of governance result from who controls the dominant type of economic rent. The economic power within a buyer-driven GVC for lead firms, the chain drivers, results from control over the marketing and retailing nodes, from which economies of scale are derived. In a producer-driven GVC, economic rents are derived from proprietary knowledge or technology, meaning that the chain drivers are located at the node of production. Within both types of GVC, lead firms are able to set the parameters for other participants through, for example, subcontracting arrangements.

As sector studies using the GVC approach highlighted a broader range of methods of coordination by chain drivers, Gereffi et al. (2005) identified types of governance structures. Each type is distinguished by the degree of coordination between actors at different value chain nodes and stages of production, which is a function of the complexity of a transaction, the ability to codify aspects of it, and the capabilities of producers. The governance structures range from market-based to hierarchical structures, and vary according to the depth of interfirm and intrafirm relations and the degree of explicit coordination required, which increases with the complexity of the transaction (Table 12.1).

Overall trends in consolidation across marketing and retailing nodes, which have become more apparent in recent years, suggest that all types of goods are progressing toward more hierarchical types of GVC governance structures. A key feature raised in the GVC literature is the way in which the relative position of firms and the governance structures within which they trade conditions their potential upgrading options, with some types of governance facilitating rapid producer

<sup>3</sup>The following subsection is adapted from Keane (2012).

upgrading and others hindering this process. As the capabilities of producers change, it is assumed that so too will the governance structures between them. However, this trajectory is neither automatic nor guaranteed.

The GVC literature does not fully explain the links between different types of internal and external value chain governance (Keane 2012). The governance structures posited by Gereffi et al. (2005) did not include reference to external structures, including those negotiated by governments for private actors, but rather focused on the internal structures between firms and private actors. This omission is particularly striking when attention is turned to analysis of the processes by which producers upgrade, as well as potentially downgrade, within a GVC.

### *12.2.4 Upgrading Trajectories*

The type of upgrading strategies in the GVC literature was developed based on the experience of industrialization and upgrading of newly industrialized countries (Kaplinsky and Morris 2001; Humphrey and Schmitz 2004). Upgrading processes have subsequently been linked to different types of GVC governance structures. For example, the case study-based literature has found that GVCs characterized by more hierarchical GVC governance structures are unlikely to facilitate functional upgrading over time.

Obviously, the trading environment faced today is very different to that encountered by newly industrialized countries in East Asia as they industrialized. The emergence of new actors, such as the People's Republic of China (PRC), within the trade and investment arena as well as entry into the global trading system has generated ripple effects. Global trade is also more tightly controlled by lead firms than at any other time in the past. Thus, research continues, with a view to disentangling upgrading opportunities and challenges within this context.

Efforts have been made to assign quantitative indicators to the qualitative GVC upgrading types developed by Humphrey and Schmitz (2004), including product upgrading, process upgrading, functional upgrading (i.e., acquiring skills that enable movement toward another node of production), and intersector upgrading (i.e., using skills acquired to move into another sector).

Bernhardt and Milberg (2011) also distinguished between economic and social upgrading, defining economic upgrading as trade performance indicated by export unit values and market shares, while social upgrading refers to employment and wage growth.

Policy makers and researchers are interested in instances when economic and social upgrading work in tandem because of concerns regarding a "race to the bottom" should countries engage in the wrong way within hierarchical GVCs and fail to negotiate with FDI in a development-friendly way. Social upgrading can also refer not only to access to better work, but also to enhancing worker conditions, protection, and rights, thereby improving the overall well-being of workers as well as their dependents and communities (Barrientos et al. 2011).

Economic upgrading indicators were adapted from Kaplinsky and Santos-Paulino (2005). The analytical approach tends to be limited to linking economic and social upgrading to a particular node of production as opposed to viewing the movement of labor and investors across and into new functions.<sup>4</sup> Although the results from this research are insightful, the ability to monitor these processes over time remains challenging. Movement from one functional position to another, or from one sector to another, can only be known through detailed case study analysis.

There is also emerging literature on “multichain” upgrading, which relates to the greater learning opportunities available to firms serving multiple markets. In particular, domestic firms may have more opportunities to launch their own manufactured and branded products in domestic or neighboring markets, with similar levels of development. This literature draws on the experience of producers in the textile and clothing industry in Kenya and the furniture and footwear industry in Brazil (Navas-Alemán 2011).

Participation in multiple value chains provides the possibility of leveraging competencies, that is, different value chains create different possibilities for learning, and what is learned in one value chain can be applied in others (Lee and Chen 2000). A focus on domestic markets leads manufacturing firms to broaden the scope of their activities (i.e., functional upgrading) into design, marketing, and branding. This may be because they have a better understanding of domestic markets than foreign markets, or it may be because domestic customers are not as powerful or concentrated as their counterparts in GVCs (Brandt and Thun 2010).

The variance of governance types in end-markets is related to buyer demands as well as to consumer demands. Hence, some aspects of the Gereffi et al. (2005) framework, which was based on northern markets, may be relevant. However, one limitation of the multichain hypothesis is that it obscures how and why FDI can be a substitute for domestic capabilities. For countries that have extremely limited productive capabilities, such as LDCs, attracting FDI and entering GVCs at a particular stage of production to begin capital accumulation and assimilation processes remain an important new trade opportunity.

Regarding Cambodia, integration with the garment GVC began in the 1990s as the country liberalized its economy under a new political settlement. Because of limited productive capabilities, its process of GVC integration was FDI-led. Only recently has an industrial policy been formulated, and this has been prompted, in part, by the need to more effectively harness the knowledge and technology spillovers from FDI.

### 12.3 Cambodia Case Study

Cambodia had been a star growth performer in East Asia prior to 2008, achieving almost double-digit growth in each consecutive year from 1998 (Guimbert 2010).<sup>5</sup> This performance was even more impressive when put in the context of a

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<sup>4</sup> See Capturing the Gains. <http://www.capturingthegains.org/>

<sup>5</sup> This section is adapted from Keane (2015).



post-conflict society; Hill and Menon (2014) noted that Cambodia surpassed all other post-conflict economies analyzed over the same period. This achievement has been fueled by the country's integration with the garment GVC, the relative economic importance of which has not, contrary to expectations, diminished.

Cambodia was drawn into the buyer-driven garment GVC based almost entirely on inward investment (Natsuda et al. 2010). Although its pattern of industrial development, led by a labor-intensive industry, has been similar to those of neighboring countries in East Asia, Cambodia pursued entry into the garment GVC without a strong industrial policy in place (Yamagata 2006). The need for an industrial policy has become more apparent in recent years, especially given the effects of the global financial crisis, as well as the removal of the safeguard on PRC garment exports to the European Union (EU) and United States (US). It also relates to the inability to achieve certain types of upgrading within the sector.

### *12.3.1 The Garment Global Value Chain*

Because many low-income countries, which are recent entrants to the garment GVC, lack the necessary factor endowments to produce textiles and other inputs, the traditional route of upgrading posited (i.e., from original equipment manufacturing to original design manufacturing, and then to original brand manufacturing as described in Gereffi 1999) has been replaced by other opportunities to functionally upgrade in terms of the range of services potentially offered to lead firms in the garment GVC. This includes the distinction made between being a country that specializes in basic assembly and cut–make–trim compared to another that is a full-package supplier (i.e., producers take control of not only the basic assembly of the product but also its delivery to customers).

Producers that specialize in the cut–make–trim segment, like Cambodia, may over time become full-package suppliers, dealing directly with retailers, mass merchandisers, or branded marketers. However, this vertical upgrading trajectory depends not only on the commensurate development of producers' capabilities but also on the relinquishment of controls by lead firms. These differences help explain why some firms have been able to upgrade within the value chain (as opposed to at a node of production) and undertake a greater number of functions. As elaborated by Gereffi and Frederick (2010), there is a regional division of labor in the garment GVC:

- The US generates product design and ordering.
- Japan provides the machinery, such as sewing machines.
- Newly industrialized countries supply fabric.
- And low-wage Asian economies (including Cambodia) sew and stitch together the end product.

Cambodia attracted FDI during the early 1990s from other areas—including Hong Kong, China; Malaysia; Singapore; and Taipei, China (Bargawi 2005)—because of the more favorable market access conferred to it by the EU and US under

the Multifibre Arrangement and then the Agreement on Textiles and Clothing.<sup>6</sup> As discussed by Wells (2006), investors often came from other parts of Asia, which had already reached quota limits for their garment exports to the EU and US. The US was, and continues to be, the major destination for garment exports from Cambodia. Under the US–Cambodia Bilateral Textile Agreement in 1999, Cambodia was not subject to the quota limits under the Multifibre Arrangement or the Agreement on Textiles and Clothing.

Wells (2006) posited that this agreement was a key part of Cambodia's insertion into the global trading system. Prior to 1999, the government had implemented a structural adjustment program that required major tariff cuts to convert a few state-owned enterprises that produced textiles and apparel into a foreign-owned, export-oriented industry. In return for increased quotas, Cambodia had to agree to other concessions, including abolishing import licenses and allowing imports of inputs into the sector duty-free, as well as providing tax incentives for FDI (Wells 2006).

As discussed by Keane (2012), Cambodia then adopted a highly liberal approach toward engaging with globalized production networks, which was enforced as part of a new political settlement. Because of the tremendous growth of the industry, as well as concerns over a race to the bottom and labor market abuses, many believed that the US – Cambodia Bilateral Textile Agreement was created in 1999 to ensure that this growth resulted in more of a race to the top, and that workers in the sector were not being exploited. However, Wells (2006) posited that this agreement was also part of a bargain and the broader landscape of trade and investment reform processes, further to the end of the civil war and conflict.

Most imported material for the sector is sourced from East Asian neighbors, who also account for the majority of firm ownership in the sector. Although the US – Cambodia Bilateral Textile Agreement prompted best practices and adherence to labor standards—hence upgrading processes at the node of production in terms of fair wages being paid—the low level of domestically owned factories has reduced bargaining power, leverage, and autonomy overall vis-à-vis powerful actors within the GVC. This includes negotiating and attracting orders, since these decisions are made by parent companies located outside of Cambodia (Natsuda et al. 2010).

Because of the hierarchical structure of governance of the garment GVC, companies often operate garment factories in other countries as well, which means that orders are relatively easy to strategically reallocate (Natsuda et al. 2010). Thus, although Cambodia has succeeded in penetrating a market niche based on adherence to labor standards, it has not necessarily obtained a more secure position within the value chain over time. The industry, at its inception, was completely foreign-owned, and this is still true. It has, however, become

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<sup>6</sup>Cambodia became a member of the World Trade Organization in 2004. In addition to the locational advantage conferred to Cambodia because of these arrangements, others, such as Asuyama et al. (2013), posited that the 1997/98 Asian crisis also served as a push factor for investors to relocate to Cambodia, despite the coup d'état that occurred around the same time.

increasingly difficult to differentiate between ownership structures, given the movement of factories from the PRC to Cambodia with their owners (Nyíri 2012).

Most transactions carried out in the sector occur in US dollars, which compounds the challenges of Cambodia's highly dollarized economy. The government's current policy is to de-dollarize over time, as confidence in the country's macroeconomic management increases (Hill and Menon 2014). There are also efforts to shift consumers toward the use of the riel as their preferred use of payment (Pilling and Peel 2014). Currently, the government uses the auction market to buy or sell its foreign currency reserves to maintain control over the money supply and prices; a managed exchange rate uses an official and market-determined rate, and the government closely monitors divergences between the two to keep these divergences as low as possible. However, the scope of the government to influence its exchange rate remains limited.

### ***12.3.2 Firm-Level Organization***

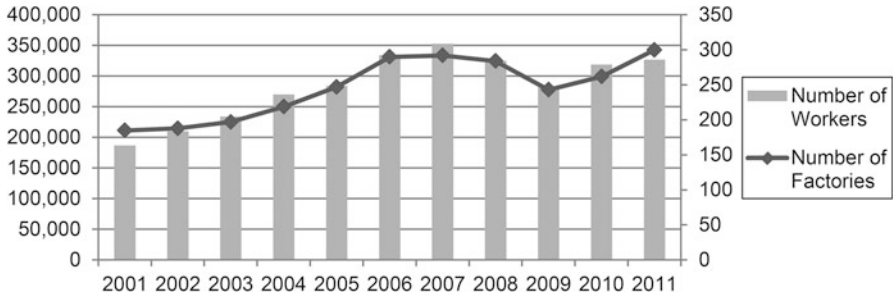
As mentioned, Cambodia's exports are mainly destined to the US, which accounts for around two-thirds of total exports. The EU accounts for the majority of the rest of the exports, as does Canada, which like the EU also offers duty-free access to Cambodia under its Generalized System of Preferences. The export-oriented industry remains within the cut–make–trim node of production and dependent on imported inputs. However, the range of import partners has become more diversified over time. According to Asuyama and Neou (2014), most imported fabrics and accessories now come from Association of Southeast Asian Nations (ASEAN) member states; the PRC; Hong Kong, China; and Taipei, China. The hub of garment production remains Phnom Penh, where products are subsequently shipped to Sihanoukville, which is the only deep sea port in Cambodia.

Between 1999 and 2005, exporters undertook mandatory International Labour Organization (ILO) monitoring to access the US market. This was the only agreement of its type and was renewed periodically until 2004, as the Multifibre Agreement era ended in 2005.<sup>7</sup> Increased quotas for Cambodia were made contingent on adherence to labor standards, with a 6 % quota uplift (Asuyama and Neou 2014). Obtaining export licenses meant adhering to mandatory monitoring by the ILO, and factories were allocated these through membership in the Garment Manufacturers' Association of Cambodia, within an open auction system.

The value of the increased quota was considerable: the increase in quota for 2002 was estimated to result in an additional 13,000 jobs and earnings of \$9.5 million (Wells 2006; Kolben 2002). Yet since 2005, the explicit link between adherence to labor standards and market access to the US has ended. Nevertheless, adherence to

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<sup>7</sup> The Multifibre Agreement ended in 2005, but safeguards on PRC exports to the US continued in 2008 and to the EU in 2007.



**Fig. 12.1** Number of factories and employment in the Cambodian garment industry, 2001–2011. Note: Based on data obtained from the Government of Cambodia, Ministry of Economy and Finance for exports, and Government of Cambodia, Ministry of Commerce for the numbers of factories and workers (Source: Adapted from Asuyama and Neou (2014))

labor standards has been used as a marketing strategy to differentiate products from Cambodia, with the Better Factories Cambodia program that now certifies producers at a subsidized rate.<sup>8</sup>

According to Hill and Menon (2014), upon Cambodia's first trade policy review as a World Trade Organization member, it maintains a highly liberal and open trading environment. However, as an economy, it still relies disproportionately on trade taxes as a source of government revenue; trade taxes in all forms contribute over a half of the government's total tax revenue (Hill and Menon 2014). As discussed by Ear (2013), representing 14 % of Cambodia's GDP, the garment industry has been the single largest foreign exchange earner for Cambodia for at least a decade.

Asuyama and Neou (2014) stated that there are an estimated 300 factories in operation, which directly employ around 327,000 workers. The number of factories in operation declined during the global financial crisis, but the total number of firms registered in 2011 exceeded pre-crisis levels (Fig. 12.1). To take advantage of tax incentives, some firms closed and then reopened under different names, influencing firm entry and exit strategies. This frequent turnover of firms accounted for more than a half of sector productivity level growth as discussed by Asuyama et al. (2013), and the liberal environment for FDI played a role in this.

Despite these challenges, the sector has made a significant contribution to poverty reduction through the expansion of formal employment opportunities, particularly to mostly migrant female workers who typically remit some of their income back to rural areas. The sector almost doubled in size over a decade as well. As noted by Asuyama and Neou (2014), it accounted for around 15 % of GDP in 2010 and 50 % of manufacturing employment. The total value of garment exports in 2010 was just over \$3 billion (representing around 90 % of Cambodia's total exports).

<sup>8</sup> This program was initially funded by the International Finance Corporation but was expected to be self-funding by 2009.

**Table 12.2** Estimated average firm performance of the Cambodian garment industry, 2006 and 2010

| Indicator             | Index year (2000) | 2006  | 2010  |
|-----------------------|-------------------|-------|-------|
| Gross product         | 100               | 145.1 | 184.8 |
| Value added           | 100               | 144.4 | 155.9 |
| Profit                | 100               | 149.8 | 152.7 |
| Number of workers     | 100               | 106.7 | 112.4 |
| Labor productivity    | 100               | 135.4 | 138.7 |
| Labor cost per worker | 100               | 114.5 | 150.7 |

Source: Asuyama and Neou (2014)

Notes

1. Data are based on those obtained from the Government of Cambodia, Ministry of Economy and Finance, except labor cost, which is based on Ministry of Commerce data
2. The United States garment price is used, as most exports are destined to this market and given that the economy of Cambodia is dollarized and most businesses conduct business in US dollars
3. Gross product = garment exports/number of factories; value added = exports – material imports/number of factories; profit = value added – total payroll/number of garment factories; number of workers = total number of workers/number of garment factories; labor productivity = value added/number of workers; labor cost per worker = total payroll of industry

Despite a rather extreme dependence, the ability of the sector to contribute to a more dynamic growth trajectory remains questionable. There has been little change regarding firm ownership structure and the proportion owned by Cambodians. The United Nations Development Programme (2009) estimated that only around 10 % of the industry was wholly domestically owned; Asuyama and Neou (2014) noted that less than 5 % of garment factories are owned by Cambodians.

According to Asuyama et al. (2013), the majority of firms are subsidiaries, with 73 % responding that they work as subcontractors. The top three investors in the sector are from Hong Kong, China; the PRC; and Taipei, China. Although there seems to be little change in domestic capital accumulation processes within the sector, the size of firms increased between 2002 and 2008 in terms of capital value added, which nearly doubled. The profit share of firms also increased due to improvements in productivity. However, labor costs have also risen considerably over the period analyzed (Table 12.2).

As discussed by Thul (2014), garment workers have requested a doubling of wage levels from a 2010 settlement to a minimum of \$160 per month. The minimum wage increased by 31 % after a 22 % increase in 2010. The monthly minimum salary is now \$80, compared to \$61 effective from July 2010 (World Bank 2013). The World Bank (2013) suggested that this increase is in contrast to the deceleration of several selected labor cost indicators surveyed to calculate a monthly inflation basket (including housing maintenance, personal care, cleaning, repair, clothing, and medical outpatient costs). Because of these wage increases, the government is under increasing pressure to review wage levels more generally, as discussed in World Bank (2014).

### 12.3.3 *Social and Economic Upgrading*

Bernhardt and Milberg (2011) found that there is an “unambiguous case of social upgrading in Cambodia” (p. 38), a result of doubling real wages and a 60-fold increase in employment from the late 1990s to the late 2000s.<sup>9</sup> Hence, the development of the sector is viewed favorably, but there has been a failure to incorporate the importance of skills development.

There is evidence of economic upgrading, in terms of Cambodia improving its market share and unit value for its garment products over time. New investment has been attracted, but none to suggest that Cambodia has functionally upgraded in terms of moving from one functional position to another within the garment GVC. Cambodia operates within a particular niche and as a tier of supplier, with limited ability to influence forward linkages (and backward linkages are nonexistent), and there has been little structural change in this regard. Instead, Cambodia is well positioned to become a platform for activities to be offshored from other regional partners with the opportunity to increase employment and skills development opportunities. Intersector upgrading seems more likely in the future.

### 12.3.4 *Other Upgrading Indicators*

Asuyama and Neou (2014) used the survey data obtained by Yamagata (2006) and subsequently updated by Asuyama et al. (2013) and explored the influence of variables on total factor productivity (TFP) for garment assembly firms in Cambodia. They pooled the sample over 2 years, 2003 and 2006, to explore factors that affect TFP. They did not explore differences between firms in specific indicators between the two different periods.

Their TFP index was the value-added residual that could not be explained by the measurable use of capital and labor. Thus, any unobservable or immeasurable factors concerning value added, capital, and labor, as well as management practice, learning by doing, intangible capital (e.g., reputation, brands, and know-how), and firm structure could be included as TFP.

They found that between the two periods, the average human capital quality of garment workers improved, as supported by the following observations:

- The estimated average years of education increased from 10.0 to 10.2 for supervisors, from 6.6 to 7.1 for operators, and from 6.3 to 7.4 for helpers. Other data supported a general human capital improvement, including how the share of population who received no education or below a primary education

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<sup>9</sup> According to their estimates, employment in the sector increased 60-fold, or by 5,824.7 % from the late 1990s to 2000s; wages increased by 84.5 % over the same period.

declined from 80.1 % in 1998 to 64.1 % in 2008 for females aged 15 years and above.<sup>10</sup>

- An increasing number of garment firms raised the required education level for newly recruited workers from 1.0 to 3.8 years for operators and from 0.8 to 4.5 years for helpers.

Firms that had operated across the two time periods were expected outperform the new entrants across the indicators. In order to explore these aspects in more detail, we use their data and undertake a comparison of means test. We do this by splitting the sample between those firms producing and/or exporting across the two time periods (Type 1 firms, 41) and those that only produced and/or exported in 2009 (Type 2 firms, 82). The following indicators were used:

- **Output.** Firms that were continuously in operation were expected to be more productive and produce more; Type 1 firms that were larger in terms of output could indicate differences in productivity.
- **Size and number of employees.** Firms that were continuously in operation were expected to be more productive and employ more workers.
- **Skill of workers.** Firms that have been continuously in operation were expected to employ more skilled workers.
- **Wages.** Firms that were continuously in operation were expected to pay higher wages, assuming that they were larger, more productive, and employed more skilled workers.

Table 12.3 presents the results for the two types of firms identified. For the numerical variables, an independent *t*-test was used to explore differences in means between the two groups.

Overall, no significant differences between the firm types could be identified for the indicators. These results are not surprising given the challenges of policy influences, such as tax incentives on normal processes of firm entry and exit. Nevertheless, given that firms that do not re-register for tax reasons may have different motivations compared to those that do, analyzing the data in this way was logical. Although the differences are not significant, Type 1 firms do seem to produce more as well as employ more workers. Their managers and operators also seem to have slightly more experience than Type 2 firms. Type 1 firms seem to pay a lower piece rate for operators, compared to the new entrants, however.

### 12.3.5 Conclusion of the Cambodia Case Study

The focus of Cambodia's growth strategy has shifted from an emphasis on physical capital formation toward investment in building knowledge capital, implying more

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<sup>10</sup>The share of those completing primary and secondary school also increased.

**Table 12.3** Means test on Type 1 and Type 2 firms

| Indicator                         | Type of firm | No. | Mean          | Standard deviation | Kurtosis (statistic) | T-value for difference in means test |
|-----------------------------------|--------------|-----|---------------|--------------------|----------------------|--------------------------------------|
| Output (total value)              | Type 1       | 41  | 43,419,126.38 | 236,679,673.70     | 40.53                | 1.130 <sup>a</sup> (0.111)           |
|                                   | Type 2       |     | 1,646,199.07  | 6,972,505.51       | 27.78                |                                      |
| Size (no. of employees)           | Type 1       | 41  | 1,777.90      | 4,062.50           | 34.52                | 1.160 (0.248)                        |
|                                   | Type 2       |     | 1,216.06      | 1,102.50           | 5.76                 |                                      |
| Years of experience for managers  | Type 1       | 41  | 2.88          | 2.32               | 2.73                 | 0.291 (0.772)                        |
|                                   | Type 2       |     | 2.76          | 1.90               | 2.37                 |                                      |
| Years of experience for operators | Type 1       | 41  | 0.97          | 1.01               | -0.17                | 0.397 (0.692)                        |
|                                   | Type 2       |     | 0.89          | 0.23               | 1.49                 |                                      |
| Piece rate for operators          | Type 1       | 41  | 16.12         | 13.45              | 3.34                 | -4.260 (0.671)                       |
|                                   | Type 2       |     | 18.05         | 22.39              | 20.95                |                                      |

Source: Analysis of data obtained and reported in Yamagata (2006) and Asuyama et al. (2013)

<sup>a</sup>Equality of variances was not assumed, as Levene's test for equality of variances is greater than 0.05

human capital development (Government of Cambodia 2014). The latest phase is accompanied by an industrial development policy to better assist in the process of meeting the following four strategic objectives:

- (i) ensuring average annual economic growth of 7 %;
- (ii) creating more jobs for young people or addressing youth unemployment;
- (iii) achieving a 1 % reduction in poverty incidence annually; and
- (iv) strengthening institutional capacity and governance at national and subnational levels.

The development of Cambodia's first industrial policy is specifically linked to the third phase of its national Rectangular Strategy and private sector development and employment, and is intended to "elevate Cambodia's economy to a higher level in the regional and global value chain" (Government of Cambodia 2014: 27). The partnership between the government and private sector is to be strengthened and expanded through the efficient process of a government – private sector forum, a key high-level dialogue mechanism between officials and business representatives.

Although these efforts are commendable, challenges remain regarding the concerns of small, medium, and domestically owned firms. Dialogue mechanisms with the private sector must engage different types of firms, and there are limited



attempts at coordination and development of linkages with the nascent domestic private sector. Thus, a more coordinated, targeted industrial policy could be formulated. Some of the typical concerns of FDI have been avoided, such as the race to the bottom in terms of labor standards, but tax revenues from the garment sector and continued pressure by firms to exempt them continue. An effective FDI management policy would entail not only responding to private sector demands, but also better directing activities.

Finally, labor standards remain important, given the overwhelming influence of this sector on the rest of Cambodia's economy as well as its future industrialization path. Productivity has increased according to firm-level analysis. However, firm profits have not been as impressive. Wage increases in the sector are arguably being enforced as part of a new political bargain to appease the electorate as opposed to being based on real productivity and skills improvement. This serves to indicate some challenges relating to upgrading within GVCs. The typical assumption that internal GVC governance structures will automatically change as producer capabilities develop and that a greater range of functions will be obtained is very strong and deserves more scrutiny.

## 12.4 Nepal Case Study

Although Nepal has an industrial policy in place, it remains ineffective, and there has been a limited ability to engage with GVCs.<sup>11</sup> Overall, Nepal's private sector has limited participation in GVCs and is defined in terms of vertically fragmented trade.

### 12.4.1 Global Value Chain Participation

Some GVC-related indicators were analyzed to identify the key characteristics of, and the problems faced by, the private sector in Nepal (Table 12.4).<sup>12</sup> The majority of the firms in the survey are domestically owned, with only about 0.1 % being foreign owned, which is in line with limited FDI inflows to Nepal. Only 8.2 % of firms have an internationally recognized quality certification,<sup>13</sup> which can be an important determinant to access and participation in GVCs, due to prerequisite capabilities.

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<sup>11</sup> This section draws on Basnett and Pandey (2014).

<sup>12</sup> The survey included 482 firms. See World Bank Group. Enterprise Surveys. Survey Methodology. <http://www.enterprisesurveys.org/Methodology>

<sup>13</sup> Such as ISO 9000, 9002, or 14000.

**Table 12.4** Firm characteristics in the manufacturing sector in Nepal

|  |      |
|--|------|
| <b>General</b>   |      |
| Age (years)  | 14.2 |
| Proportion of private domestic ownership in a firm (%)                   | 99.5 |
| Proportion of private foreign ownership (%)                              | 0.1  |
| <b>Innovation and technology</b>   |      |
| Firms with an internationally recognized quality certification (%)       | 8.2  |
| Firms using technology licensed from foreign companies (%)               | 1.6  |
| <b>Trade</b>   |      |
| Proportion of total sales that are domestic sales (%)                    | 97.0 |
| Proportion of total sales that are exported directly (%)                 | 1.8  |
| Percent of firms using material inputs and/or supplies of foreign origin | 44.9 |
| Proportion of total inputs that are of domestic origin (%)               | 72.3 |
| Proportion of total inputs that are of foreign origin (%)                | 27.6 |
| <b>Infrastructure</b>  |      |
| Average loss owing to electrical outages (% of annual sales)             | 17.0 |
| Percent of firms owning or sharing a generator                           | 50.5 |

Source: World Bank Group. Enterprise Surveys. <http://www.enterprisesurveys.org>

Limited participation in GVCs is reflected in firms' sales as well as input figures. According to the results of Nepal's most recent Enterprise Survey, out of total sales, 97.0 % are domestic, 1.8 % are direct exports, and 1.2 % are indirect exports. A sizable proportion of firms use inputs that are of foreign origin (44.9 %), but as a proportion of total inputs, domestic inputs (72.3 %) far outweigh foreign inputs (27.6 %).

To better understand how and why Nepal's participation in GVCs is so low, recent performance in two important sectors is highlighted: tea and electrical transformers.

#### 12.4.1.1 Tea

Gorkha Tea Estate is one of the largest tea exporters in Nepal. A key factor in providing a competitive edge in the export market is the quality of the product—achieved through proper pruning, careful picking, shorter picking rounds, timely pest and disease control, adherence to relevant good agriculture and manufacturing practices, and International Organization for Standardization certification. However, several factors—low-quality inputs from local suppliers, unavailability of inputs (mainly organic manure, certified organic fertilizers, biopesticides, and bioinsecticides), and delays in the delivery of inputs—make it difficult to maintain the quality of the product. Most of the tea produced is exported; about 65 % of total production is exported to India, and close to 30 % is exported to Germany. The rest is sold on the domestic market. Tea products enter both India and Germany duty-

free. Basnett and Pandey (2014) identified the following as constraints to production and competitiveness in the tea industry:

- insufficient irrigation facilities, a shortage of labor owing to outward migration, and the demands of labor unions;
- lack of technical support from the government and private institutions (e.g., the absence of laboratories to measure residue levels, heavy metal, and radiation, as well as to carry out other tests necessary for export);
- delays in consignment because of lack of access to product testing laboratories, located mainly in India and Germany;
- inadequate transport facilities to transfer products from farm to factory;
- absence of storage facilities required to maintain the freshness and quality of green tea leaves;
- outdated machinery used for processing; and
- high energy costs and frequent power shortages.

Government policies and incentives have played a positive role in increasing competitiveness, but distortions exist in the implementation of policies, and functional support is lacking. For example, factories have benefited from exemption from the land ceiling,<sup>14</sup> rebates on land registration fees and land revenues, subsidies for organic certification, and cash incentives for export. However, the requirement to export in convertible currency to benefit from the cash incentives disadvantages companies exporting to India, as exports are in Indian rupees. The support provided by the Nepal Tea and Coffee Development Board is also laudable, but the board lacks adequate technical expertise.

#### 12.4.1.2 Electrical Transformers

Nepal Ekarat Engineering Company, established in 1990, is a joint venture between Nepalese entrepreneurs and Ekarat Engineering Public Company in Thailand. This firm specializes in the production of electrical transformers and is the largest manufacturer of distribution transformers in Nepal. The plant is situated in Hetauda and employs more than 132 workers.

Most of the inputs are imported from abroad—silicon from Singapore and India, transformer oil and corrugated fins from Malaysia and India, and tap chargers from Turkey. Copper and magnetic silicon steel are sourced in Nepal.

It is estimated that the domestic value addition in the production process is 30–35 %. The company has around a 33 % share of the domestic market. The company has also exported transformers to Bangladesh, Bhutan, and India. However, in recent years, it has been reluctant to enter into export markets because it lacks confidence in its ability to deliver on time and to avoid penalties owing to fears that

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<sup>14</sup>The law in Nepal prohibits individual landholdings above 11 *bighas* (about 8 hectares). Tea farmers are exempted from this.

political demonstrations and *bandha* (the shutdown of all activities by the agitating political party), road blocks, labor problems, and the unavailability of electricity could destabilize its supply chain.

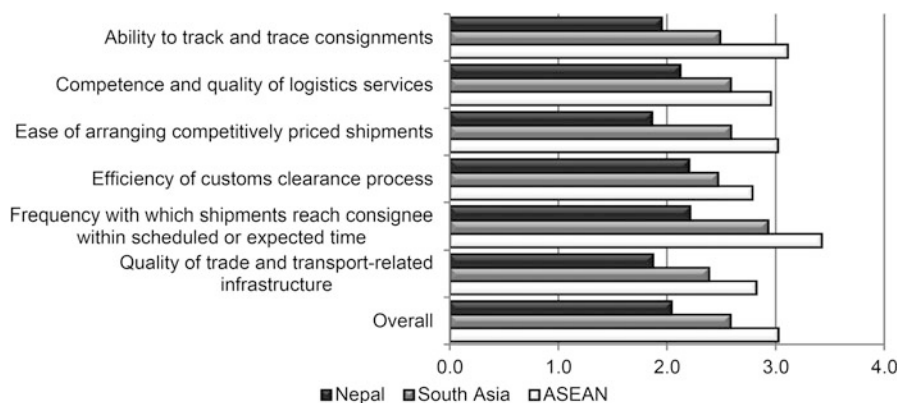
Despite availing itself of initial tax breaks, duty drawbacks, and export subsidies, the company suffers from several disadvantages that reduce its competitiveness, particularly in securing inputs, bottlenecks in the production process, and access to financial markets. The tariff structure is also perverse, as the rates levied on some of the inputs required for the production of a transformer are higher than that levied on the transformer itself, implying a negative rate of protection. Manufacturing of transformers is an energy-intensive process. With increasing load shedding in the electricity supply, the company has two options—either to build its own captive source of energy with thermal or fossil fuel power generators, or to pay high electricity tariffs with demand charges. Either option increases the cost of production.

Nepal's fixed exchange rate regime with India has also eroded the competitive edge of Nepal in both domestic and Indian markets. With an inflation rate in Nepal higher than in India, the Nepalese rupee is undervalued relative to the Indian rupee. Furthermore, the flexible exchange rate regime with the rest of the world has resulted in the devaluation of the Nepalese rupee and high costs of imported inputs. The syndicate in the transport sector has resulted in high costs not only in the access to inputs but also in the delivery of the finished product. Unreasonable wage demands, supported by major political parties, have delinked wage increases from productivity and efficiency, resulting in a significant rise in the per-unit cost of production.

To incentivize exports, a system of export credit with an interest rate lower than the market rate has been instituted, but the company has not been able to benefit from the scheme because of the short duration of the financing. The Nepal Electrical Authority is a major buyer of transformers, yet as a government entity, it has to follow government procurement guidelines, including global bidding, and the company cannot compete with international bidders who cross-subsidize their products and quote at below the cost of production to enter the Nepalese market. Such anticompetitive practices pose a great threat to the sustainability of the company.

#### ***12.4.2 Challenges Inhibiting Access to Global Value Chains***

A number of behind- and beyond-the-border factors constrain the competitiveness of the private sector in Nepal to enter GVCs. Behind-the-border factors include inadequate trade infrastructure, energy shortages, problems arising from coordination failure, and a weak and uncertain investment regime. Beyond-the-border factors include shallow regional integration, non-tariff barriers, and inefficient transit trade.



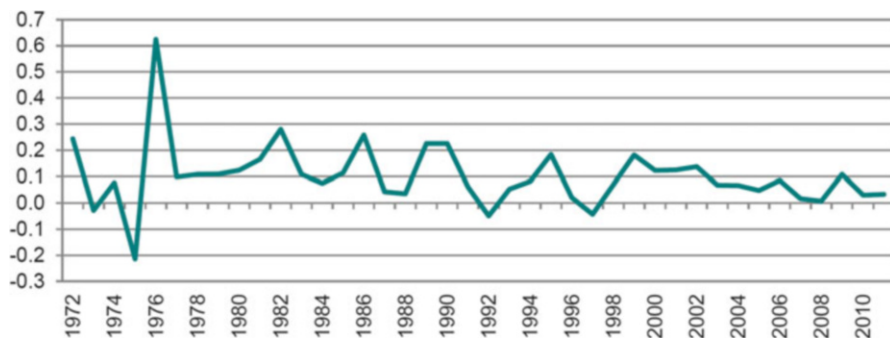
**Fig. 12.2** Logistics performance indicators, 2012. ASEAN Association of Southeast Asian Nations. Note: 1 = low, 5 = high (Source: Authors' calculations based on data from World Bank (2013))

#### 12.4.2.1 Inadequate Trade Infrastructure

Nepal's ability to participate in and benefit from GVCs is constrained by the lack of adequate physical infrastructure. The Global Competitiveness Report 2013–2014 ranks Nepal 144 out of 148 countries on the stock and quality of infrastructure (World Economic Forum 2014). Lengthy export and import times in Nepal point to weak trade infrastructure. According to 2013 data from the World Bank's World Development Indicators, it takes 42.0 days to export in Nepal, while South Asia's average is 33.0 days and the ASEAN average is 17.3 days. To import, it takes 39.0 days in Nepal, 34.3 days in South Asia, and 17.5 days in ASEAN member states.

Figure 12.2 compares the logistics performance of Nepal with that of South Asia and ASEAN. Nepal lags behind both in all of the indicators. The figure also highlights two important issues: (i) Nepal is a member of a region—South Asia—in which trade performance logistics are lagging, which further accentuates Nepal's internal inadequacies; and (ii) Nepal's worst score is on the infrastructure quality indicator.

It is financially impossible for Nepal, a resource-poor country, to address all production-related infrastructure challenges simultaneously. The country's topography and land scarcity add to the challenges of organizing production efficiently. Other countries in Asia have successfully used special economic zones to address such challenges in a targeted, manageable way. Nepal's few industrial zones, created in the 1970s and 1980s, are in a dilapidated state, owing to lack of policy attention and public investment. Policies for upgrading and expanding infrastructure have not been implemented.



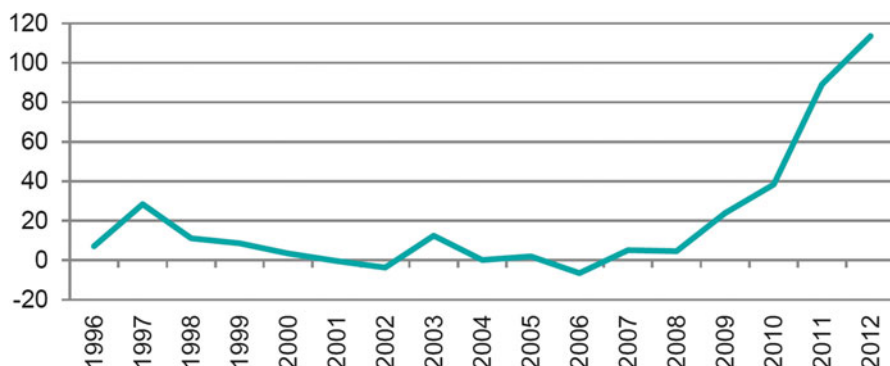
**Fig. 12.3** Electricity production (year-on-year change) (Source: Authors' calculations based on data from World Bank (2013))

#### 12.4.2.2 Energy Shortages

The high cost and shortage of energy in Nepal undermines production and value-added activities. Petroleum and electricity are the major sources of energy for nonfarm production, with wood being an additional source for farm production. Consumers in Nepal pay on average \$0.093 per kilowatt-hour, 115 % higher than tariffs in India and Bangladesh, 43 % higher than those in Pakistan, and 18 % higher than those in Sri Lanka (Basnett et al. 2014). Domestic electricity production is low, with little change from year to year (Fig. 12.3).<sup>15</sup> Shortages of electricity have led to producers using generators during power outages, creating huge cost implications for production. Discussions with manufacturers revealed that in the last 10 years, energy costs have increased on average from NRs6 to NRs24 per unit of output due to the electricity shortage.

According to the World Bank's recent Enterprise Survey, the firms surveyed experienced an average of 8.7 power outages per month (compared with, for example, the 4.1 per month reported by respondents to Sri Lanka's 2011 survey). Each time there is a power outage, production is halted to shift from national grid electricity to generators. The irregular supply of oil for running generators has also led many to hold reserves, further increasing the cost of production. It is estimated that to increase the electrification rate to India's level (the rate in Nepal is currently 60 % of that in India) would require an investment of \$1.5 billion (at 2006 prices), and to increase both the electrification rate and consumption levels would require \$5.1 billion (at 2007 prices; ADB, DFID, and ILO 2009). Further investment is also required for upgrading the transmission infrastructure. For this, in 2008/2009, the government allocated \$163 million, which falls far short of what is required.

<sup>15</sup> Although since 1997, there has been a noticeable increase in the supply of hydroelectricity driven by increased investment.



**Fig. 12.4** Foreign direct investment flows into Nepal (\$ million, fiscal year ending 15 July) (Source: Asian Development Bank (2013))

### 12.4.2.3 Coordination Failure

Existing constraints to Nepal's industrial growth and ability to participate in regional value chains and GVCs are not new. They remain unaddressed because of a failure to coordinate policy formulation and implementation due to poor intragovernment coordination as well as between actors in the economy. As a result, policies are partially implemented and public goods are underprovided (Basnett et al. 2014). The implications for the economy are that investments in the productive sector are miniscule, the private sector is wary of expanding businesses (with many preferring to expand in neighboring countries), productivity and productive capacity are low, product chain linkages to the region and elsewhere are minimal, and the ability to add and upgrade value is absent.

### 12.4.2.4 Weak, Uncertain Investment Regime

Until 2008, FDI into Nepal was low, but it has been increasing (Fig. 12.4). Between 2008 and 2012, FDI increased by an annual average of 160 %. In 2013, the PRC overtook India as the largest source of FDI (Krishnan 2014), with current investment standing at \$174 million. Increases in FDI reflect the economic reforms Nepal has undertaken to improve the investment climate, such as bilateral investment treaties,<sup>16</sup> streamlined processes for investment,<sup>17</sup> easier access to business visas, and clearer provisions for investment repatriation (Government of Nepal 2010 and 2011). As a result, Nepal has improved its position in the Doing Business rankings. For instance, the same number of procedures (seven) is required to start a business

<sup>16</sup> Nepal has bilateral investment treaties with Finland, France, Germany, India, Mauritius, and the United Kingdom. See UNCTAD (n.d.).

<sup>17</sup> See Government of Nepal, Office of the Investment Board. <http://www.investmentboard.gov.np/>

in Nepal as in the rest of South Asia, and the process takes only marginally longer than the South Asia average (i.e., 17.0 days in Nepal and 16.2 in South Asia).

Sustaining the reforms aimed at improving the investment climate will be vital to attracting FDI. While increasing flows is paramount for a country that is starting from a low base, the type and quality of investment also need attention. The recent rise in FDI in the hydroelectric sector will help the economy overcome the energy crisis and contribute to the expansion of production. Yet, Nepal also needs to attract foreign investment in value-added activities, in particular in the manufacturing sector. This will require a more targeted approach, which in turn will require a more effective industrial policy and strategy.

#### 12.4.2.5 Shallow Regional Integration

Nepal belongs to a region that is one of the least integrated in the world—South Asia. Intraregional trade in South Asia accounts for only about 5 % of the region's total trade; the equivalent figure for ASEAN is 25 % (Razzaque and Basnett 2014). Banga and Razzaque (2014) analyzed textile and clothing supply chains in South Asia and found that the region hosts many low-cost suppliers of inputs that are also global suppliers. Despite the availability of low-cost suppliers within the region, global imports for many of the identified inputs outweigh regional imports for many individual South Asian countries. They concluded that market forces alone are insufficient to develop regional supply chains.

#### 12.4.2.6 Non-tariff Barriers

The shifting nature of regional and global trade barriers is presenting new challenges for Nepal. On the one hand, Nepal is experiencing a sharp erosion of its tariff preferences; on the other, non-tariff measures, in both regional and global export markets, are on the rise. Table 12.5 shows the share of various non-tariff measures in total non-tariff barriers in the South Asian region. Sanitary and phytosanitary standards, technical barriers to trade, and other related measures account for

**Table 12.5** Share of non-tariff measures in all non-tariff barriers in the South Asian Association for Regional Cooperation

| Non-tariff measures  | Share in all non-tariff barriers (%) |
|--|--------------------------------------|
| Sanitary and phytosanitary standards, technical barriers to trade and other related measures | 86.3                                 |
| Tariff quotas  | 9.8                                  |
| Anti-dumping measures  | 7.4                                  |
| License requirements   | 5.3                                  |
| Countervailing measures  | 1.2                                  |

Source: Rahman and Razzaque (2014)



86.3 % of all non-tariff barriers in the region. Although sanitary and phytosanitary standards and technical barriers to trade requirements are particularly applicable to Nepal's exports, which are predominantly agro-based, meeting them requires specialized technical skills and sophisticated laboratories, which are beyond Nepal's capacity. Nepal currently depends on regional technical facilities, which are mostly in India. Apart from the expense of using such facilities, the private sector in Nepal also has to contend with delays in addition to the multiple tests that increase costs and reduce export competitiveness.

#### **12.4.2.7 Inefficient Transit Trade**

As a landlocked country, Nepal depends on transshipment via India for trade with the rest of the world. It also depends on India for regional, overland trade. This inescapable dependence has restricted Nepal's trade diversification. In the past, India has also used it for political leverage, as in 1989–1990, when India imposed a trade blockade. While trade flows have been normalized since, the experience of the blockade has left a legacy of uncertainty concerning Nepal's transshipment routes.

Nepal has established inland ports in the east and is linked to the ports at Kolkata and Haldia by rail. This was expected to reduce the cost of transit trade from 12 %–15 % to 8 %–10 % of the cost, insurance, and freight total, and the journey time from 10 to 3 days. However, a through bill of lading, which would avoid or reduce customs clearance in Kolkata and Haldia, is not yet available. Nepal has long sought access to alternative ports in India and some in Bangladesh, but this has not yet occurred, as such access will have to be negotiated with or via India.

#### **12.4.3 Conclusion of the Nepal Case Study**

Participating in and moving up within GVCs in Nepal could not only help generate productive activities, which in turn will contribute to increasing income and employment, but could also lead to dynamic benefits such as stimulating investment and upgrading productive capacity, contributing to economic diversification. However, while large developing economies have leveraged GVCs for their economic growth and diversification, smaller economies have been less successful in doing so. This raises an important development concern about potential new forces of global convergence and divergence being driven by GVC proliferation, which may risk the further marginalization of smaller economies.

Many of the problems faced by the private sector in Nepal in entering GVCs are not new. They have remained unresolved because of weak industrial policy and implementation. Nepal's industrial growth strategy—and its related policies—remains incoherent. National as well as donor failure to give priority to industrial development, coupled with weak governance capabilities relating to the

administrative capacity to implement policies, are at the root of Nepal's inability to lift constraints to industrial development through GVC participation.

## 12.5 Conclusions

This chapter has attempted to put new GVC literature into context by making more specific reference to the challenges of selected LDCs in terms of entering and upgrading within GVCs. The findings of the Cambodia case study are related to capability considerations, given its inability to upgrade over time within the garment GVC. Within this context, the assumption that lead firms will relinquish control of certain activities as producer capabilities develop has been challenged. Further, the presumed automatic transition from hierarchical governance structures toward relational ones as producer capabilities develop within the Gereffi et al. (2005) framework, in practice, may be fraught with tensions. Thus, the consideration of external governance structures, such as FDI management within an overarching industrial policy, is vital.

In the case of Cambodia, a step change in its approach toward GVC integration processes has become apparent. Simply responding to private sector demands in a facilitative way has begun to reach its limits, and a more directive approach now seems necessary. Cambodia's engagement with GVCs was always part of a political bargain and as a component of the structural adjustment, and reorientation of its economy to a more market-friendly approach. Yet the limitations of this approach have become apparent in recent years. Current industrial policy in Cambodia focuses on growth, job creation, and poverty reduction, but future industrial policy must also take into account the need to negotiate effectively with FDI for learning outcomes to maximize domestic spillovers with the nascent domestic private sector.

The specific findings of the Nepal case study are related to both cost and capability considerations. It is financially impossible for Nepal, a resource-poor country, to address all production-related infrastructure challenges simultaneously.

Actual industrial policy, understood as the status quo, in Nepal is ineffective. Future potential roles include addressing coordination failures and building productive capacity. However, a selective approach that prioritizes interventions must be coupled with the development of governance capabilities to implement policy effectively. At a functional level, there is a need to improve the capacity of the public administration to design and implement industrial policy. As Nepal demonstrates, it is necessary to go beyond the creation of an enabling environment toward actively seeking opportunities for GVC integration.

In both of the LDC country case studies, more general findings are emphasized that relate to the formulation of industrial policy and the creation of effective dialogue mechanisms between private sector actors. These aspects relate to the playing field negotiated by governments for the private sector, an aspect that is often taken as given within mainstream GVC literature but remains in the more experimental and design phases within the LDC case studies.

Because of the risks of government failure overriding that of market failures, the need to develop government capabilities prior to the design of interventions is clear. Within the context of engaging with more hierarchical GVCs, the need for effective governance capabilities within LDCs is heightened. Although powerful new trade opportunities exist, these must be carefully managed and effectively channeled to achieve development objectives. It is therefore notable that within the context of deeper, more integrated production networks, as more recent trends in intrafirm trade indicate, discussions related to the effective management of FDI are lacking.

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