



THE LEAST DEVELOPED COUNTRIES REPORT 2018



CHAPTER

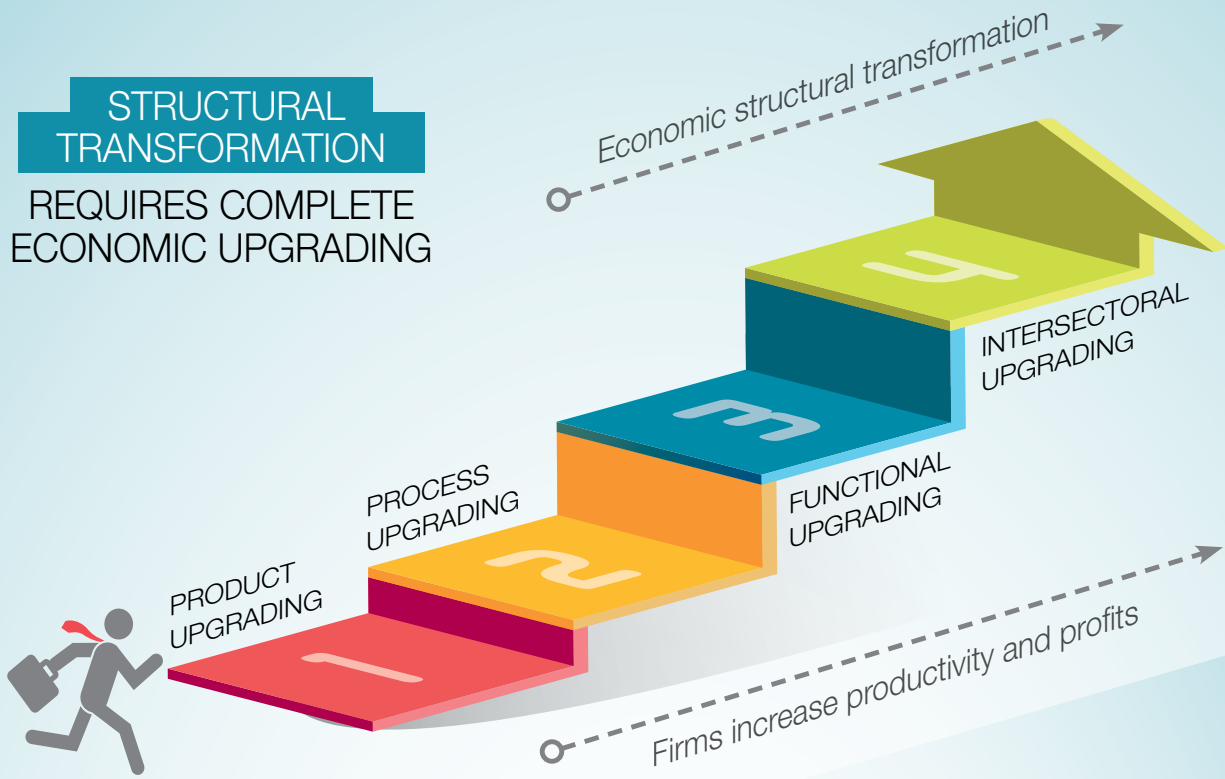
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The local entrepreneurship dimension of global production systems

STRUCTURAL TRANSFORMATION

REQUIRES COMPLETE ECONOMIC UPGRADING



LARGER FIRMS

ARE BETTER AT ECONOMIC UPGRADING IN LDCs

They have superior internal and external resources



IDEAL

REALITY

FOR LDCs, HEIGHTENED COMPETITION IN GVCs MEANS ECONOMIC UPGRADING CAN BE AN ELUSIVE GOAL

CHAPTER 3

The local entrepreneurship dimension of global production systems

A. Introduction	55
B. Global value chains and entrepreneurship	55
1. Interface between entrepreneurs and global value chains	55
2. Upgrading within global value chains	56
3. Competition and entrepreneurial engagement	57
C. Participation of the least developed countries in global value chains	59
1. General patterns of least developed country participation	59
2. Participation of the least developed countries in agricultural global value chains	61
3. Participation of the least developed countries in textile and clothing global value chains	64
D. Global value chains and beyond	69
1. Limitations of integration into global value chains	69
2. The importance of enterprise	71
3. The role of comparative advantage	72
4. International competition for high-level skills and entrepreneurship	73
5. Fostering intersectoral linkages: The example of tourism and agriculture	75
Notes	77

A. Introduction

This chapter explores whether shifting global production patterns stimulate entrepreneurship and industrialization in LDCs. International trade is now widely considered to be the primary source of developmental dynamism, and industrial policy has been largely replaced by trade policy in developing countries as the most predominant type of development policy. However, local entrepreneurship is essential to harness the benefits of trade for sustainable development and to generate the domestic resources LDCs need for investments in infrastructure, as well as skills and innovation that are necessary for achieving the Sustainable Development Goals.

International trade is increasingly defined by GVCs, which tend more and more to mediate the global division of labour and functional specialization in trade, giving rise to a growing disjunction between where goods are produced and where value is created and captured.¹ A critical developmental question for LDCs is therefore how the potential opportunities offered by GVCs can help stimulate the types of entrepreneurship that can drive structural transformation, particularly in the main resource-based traded sectors in LDCs (agriculture, extractives and manufacturing), on which initiatives aimed at structural transformation and wealth creation are increasingly centred. This chapter begins with a discussion on the nature of GVCs (section B) and of LDC participation in them. Greater detail regarding GVCs in agriculture and in textiles and clothing is provided in section C. Section D draws some conclusions from this discussion, raises related issues and suggests options for LDCs.

B. Global value chains and entrepreneurship

GVCs arise from the fragmentation of production processes into tasks that are dispersed internationally in borderless production systems spanning multiple locations in a system of sequential chains and complex global and regional networks. While GVCs are inherently sector specific, all are predicated on the quest by initiating firms to increase efficiency, lower costs and speed up production through the internationalization of operations. UNCTAD estimates that GVCs coordinated by transnational corporations account for some 80 per cent of global trade, much of it in intermediate goods such as parts, components and intermediate services (UNCTAD, 2013b). Trade in intermediate goods accounted for about 54 per cent of global trade in 2016 (United Nations, 2018).

There has been little research to validate the often-asserted advantages of GVCs in stimulating local entrepreneurship

GVCs are considered to offer important advantages, as they allow countries to specialize in particular functions or bundles of tasks, rather than in specific industries; they accelerate changes in comparative advantage (World Economic Forum, 2016), are open to new entrants and accommodate economies at any stage of development and skill. Therefore, integration in GVCs is often presented as an important way for LDCs to industrialize at much earlier stages of development, by bypassing the development of national supply chains involving the production of goods entirely in one country and generating opportunities for entrepreneurial engagement.²

Despite these asserted advantages, however, there has been surprisingly little research to validate the supposed advantages of GVCs in stimulating local entrepreneurship. Instead, the overwhelming emphasis of research is on employment gains, profit and learning opportunities for individual firms (Kowalski et al., 2015) and foreign exchange earnings. It is widely held that firms' participation in GVCs offers the potential for production at scale, specialization and access to international markets; their participation in GVCs is also considered to be an important source of technology, skills and capital in the form of direct investment, supplier credits and trade finance,³ all of which are typically limited in LDCs. However, this view may be oversimplified, and few conclusions can be drawn about the potential benefits to entrepreneurship in LDCs without considering the ownership of beneficiary firms.

1. Interface between entrepreneurs and global value chains

Entrepreneurs and entrepreneurship can be considered to interface with potential market opportunities provided by GVCs through a process of opportunity discovery, evaluation, creation and exploitation (figure 3.1). Opportunity identification involves technical skills, such as financial analysis and market research, and creativity. Entrepreneurship is required to transform potential opportunities in GVCs into actual entrepreneurial opportunities embodied in three constitutive elements: products, customers and capabilities.⁴ Opportunity discovery has an important subjective dimension: two entrepreneurs encountering

Table 3.1

Types of economic upgrading in global value chains

Process upgrading	More efficient production by introducing superior technology or reorganized production systems
Product upgrading	Knowledge and competency acquisition by transitioning to more sophisticated products lines
Functional upgrading	Value addition by acquiring new functions or abandoning existing ones to increase overall skill and value content of activities (moving up the chain)
Intersectoral/chain upgrading	Leveraging knowledge acquired in one sector to achieve horizontal moves into new sectors and productive activities

Source: Humphrey and Schmitz, 2002.

actors and countries in GVCs are thus depicted by the smile curve (figure 3.2), which illustrates the global division of tasks and functions in GVCs and the benefits derived by participants. Activities at both ends of the value chain are intensive in knowledge and creativity, while manufacturing and standardized services are in the lower-value trough of the curve (Mudambi, 2008).

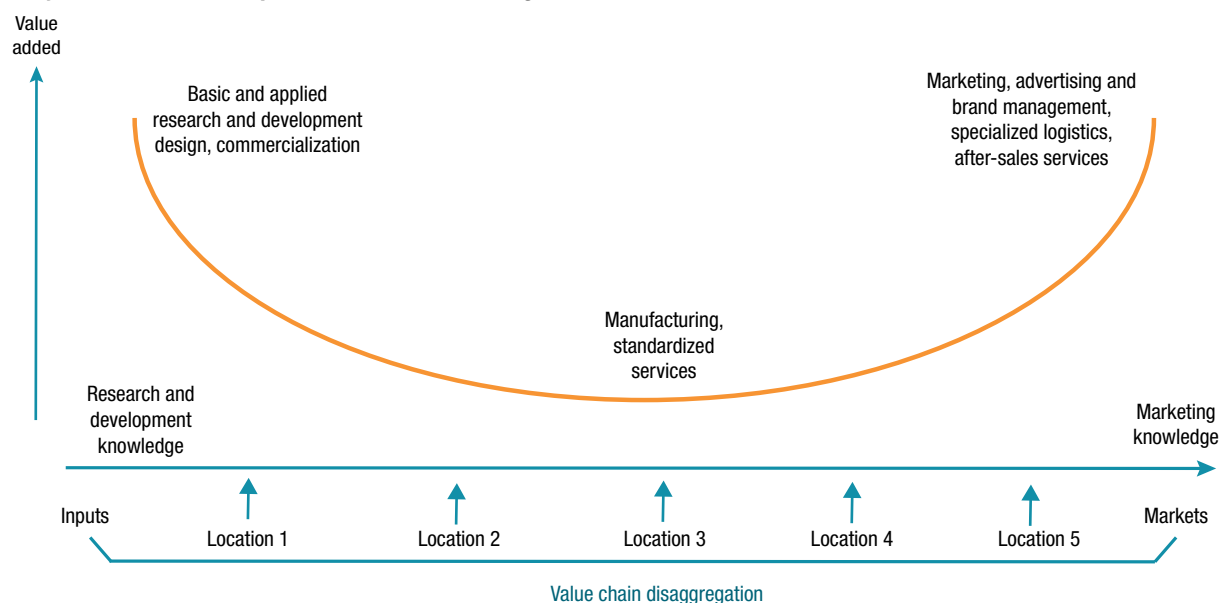
Governance patterns and power relations within GVCs are critical. Lead firms that undertake the functional integration and coordination of internationally dispersed activities determine the allocation and flows of financial, material and human resources within a GVC (Humphrey and Schmitz, 2002). By controlling information flows and knowledge acquisition within GVCs, lead firms have a major influence on upgrading – which is dependent on knowledge that flows through the chain – and on instigating product upgrading through the allocation of new tasks, for example when a supermarket chain induces producer customization by launching new product lines or introducing more sophisticated processing and packaging (Humphrey and Memedovic, 2006).

Thus the pathways to economic upgrading are not only specific to each GVC; they depend on the balance of power within the chain, which is overwhelmingly skewed in favour of the lead firm. A further layer of uncertainty and complexity is added by the prospects for the future evolution of GVCs, given the context of protectionist pressures and digitalization (box 3.1), whose implications are likely to differ markedly between GVCs for different products.

3. Competition and entrepreneurial engagement

The location of fragmented production processes according to the availability, cost and quality of the necessary skills and materials stimulates competitive pressure between economies and locations. As a result, GVCs are associated with heightened competition, which varies between sectors, types of value chains and products. Competitive conditions also change, as GVCs are continuously reconfigured (De Backer and Miroudot, 2013), for example in response to changes in relative labour and capital costs between countries.

Figure 3.2

Stylized smile curve of upstream customization-led global value chains

Source: Mudambi, 2008.

Box 3.1 The future of global value chains

GVCs are currently buffeted by opposing forces, some of which favour their expansion and increased complexity, while others might lead to their realignment or decline. Following a limited consolidation of GVCs during the economic crisis of 2008–2009, declining trade-to-GDP ratios globally suggest that GVCs have lost momentum. In 2017, their growth came to a halt for the first time in 30 years, as the share of foreign value added in exports fell to 30 per cent. It remains to be seen whether this represents a natural correction to an overshooting of international fragmentation as a result of overexuberant company sourcing and production strategies. However, digital technologies and the “fourth industrial revolution” may make production that is close to final markets more attractive, while facilitating rapid responses to changing consumer preferences. Rising trade costs and protectionism also render international production more expensive.

It is uncertain whether the aforementioned factors will outweigh those promoting the further expansion of GVCs: the liberalization of trade and investment, rapid advances in ICTs, the entry of new low-cost producers in manufacturing, increasing efficiency and wider international availability of services, and new markets in emerging economies. Indeed, some impending developments may have opposing effects. Some ICT improvements reduce the benefits of specialization, while others reduce its costs. Equally, while robotization could erode the competitive advantage of cheap labour, contributing to the further concentration of manufacturing in a few locations, some sectors may be largely unaffected, as the technical feasibility of automation may not be matched by profitability. Rapid technological progress could also generate efficiency gains within companies, facilitating functional and intersectoral upgrading and contributing to employment growth and structural transformation.

Sources: African Development Bank et al., 2017; De Backer and Flaig, 2017; UNCTAD, 2017b; UNCTAD, 2018b.

Therefore, the impact of globalization on entrepreneurship is not straightforward and may be positive or negative (Verheul et al., 2001). Opportunities for entrepreneurial engagement may not diminish if developments in GVCs continue to favour LDCs as production locations. However, it is likely that competitive conditions will change, and the ability of LDC entrepreneurs to exploit these opportunities or adjust to changes in GVCs is open to question.

A firm's location within a value chain is important, as competitive pressures are most intense in those parts of the production process with the lowest entry barriers. This affects both the precariousness of a firm's financial position — accentuated by advances in ICTs and technological disruptions — and the lead times a firm has to learn, adapt and innovate.

The intense competition characteristic of the GVC segments most accessible to LDCs can, in principle, be a stimulus for entrepreneurship. Yet it can also be a deterrent or promote destructive entrepreneurship (Baumol, 1990; Wiegatz, 2016). In integrating into GVCs, LDC firms are exposed to competition with firms elsewhere, which may have different characteristics and local conditions more conducive to reacting to GVC challenges and adopting upgrading strategies.

Perceptions and responses of SMEs to market signals are affected by various resource constraints linked to supply and demand, including finance (van Burg et al., 2012). These constraints direct an entrepreneur's attention towards fewer opportunities within his or her constrained domain, with positive or negative effects on the identification of opportunities. LDC entrepreneurs may thus respond differently

from, and less innovatively than, their counterparts in more developed economies, in identical competitive conditions within GVCs, missing out on promising opportunities outside their limited domains.

GVCs also tend to amplify the effects of trade barriers, such as border bottlenecks and diversity of standards in final goods trade (Criscuolo and Timmis, 2017), so that the lack of a supporting environment can lead firms with high growth potential to adopt suboptimal expansion strategies in the face of higher production and trade costs (OECD and World Bank Group, 2015).

Despite potential gains in terms of export growth, the potential benefits of GVCs for LDCs are thus limited by barriers to entrepreneurship. Even entrepreneurs with the necessary attributes for GVC integration cannot escape credit constraints, high transaction costs, inadequate infrastructure and inefficient administrative procedures for international trade.

The types of enterprise that thrive in a GVC environment are an important consideration. Economic upgrading requires firms that are both entrepreneurial (opportunity-seeking) and strategic (advantage-seeking) in their approach (Hitt et al., 2001). While firms that lack these attributes may succeed in entering a GVC, they are unlikely to sustain and improve their position in it. These are key characteristics of high-impact, innovation-driven and market-creating entrepreneurship, as opposed to the survivalist entrepreneurs that typically predominate in LDCs (chapter 2).

An important policy objective in LDCs is thus to develop the critical mass of such entrepreneurs

that is needed to drive structural transformation. A key issue is finance, as upgrading by high-impact entrepreneurs — those with the greatest potential to have an impact on innovation and customer benefits, job creation, wealth creation and society — requires long-term credit for investment and innovation. According to the life-cycle framework (World Economic Forum, 2014), high-impact ventures undergo five stages of growth, each requiring different levels and types of finance. At the *launch* (pioneering and growth) stage they distinguish themselves from other types of entrepreneurial venture through a clear strategy and vision, coupled with strong product or service differentiation. Their long-term potential is underpinned by solid business strategies and differentiated offerings during the *build* (high-growth) stage. During the *run* (mature growth) stage, they attain maturity by leveraging capabilities built in the previous two life stages to embed efficient operations and generate sustainable profits. Having reached their fully adult life stage, they will often renew and reinvent themselves to stay dominant and maintain high-impact and growth.

Long-term credit is particularly limited in developing countries (OECD, 2018), although there is evidence that high-impact opportunity-driven entrepreneurs are less affected by credit constraints than their necessity-driven counterparts (van der Zwan et al., 2016).

C. Participation of the least developed countries in global value chains

This section presents an assessment of LDC participation in GVCs, using case studies of the agriculture and garment manufacturing sectors to shed light on the nature of the entrepreneurial opportunities they offer. It further develops an analysis of the topic undertaken for *The Least Developed Countries Report 2007* (UNCTAD, 2007).

As well as their significance as sources of foreign exchange earnings, the agricultural and textiles and clothing sectors are poster children for job creation, inclusive business and women's empowerment. It has been suggested that growth generated by agriculture is up to four times as effective in reducing poverty as growth in other sectors (International Institute for Environment and Development and Sustainable Food Lab, 2011), and that reaping full benefits in poverty reduction is contingent on the growth of SMEs, which generally include smallholders and small family farms (Humphrey and Memedovic, 2006).

The trend in LDC exports indicates increased concentration of both products and partners

Both sectors also have a long-standing association with the participation of women and remain battlegrounds for gender equality. For example, 82 per cent of all garment industry jobs in Lesotho are occupied by women (*Origin Africa*, 2017). In the agricultural sector, gender inequality in terms of land ownership and value capture is a major challenge. Equally, while textiles and clothing have been traditionally associated with gender empowerment on the basis that job creation tends to favour women whose opportunities were previously limited to the household or the informal sector (Keane and te Velde, 2008), new issues arise from informal operations, low wages, gender pay gaps and poor working conditions.⁶ Rather than challenging or dismantling gendered job segregation, it has been argued, GVCs recruit women at a lower cost by casting particular skills or functions as “feminine”, while the benefits from upgrading accrue disproportionately to men (International Centre for Trade and Sustainable Development, 2016; UNCTAD, 2014g; UNCTAD, 2018c).

1. General patterns of least developed country participation

The share of LDCs in global trade is less than 1 per cent, a relatively constant trend since 2008. In contrast, their export-to-GDP ratios average about 25 per cent, substantially below the developing country average of about 35 per cent, showing a clear downward trend since 2011. This highlights the intractable obstacle to the competitiveness and development of LDCs that their structural impediments represent (UNCTAD, 2017c). The trend in LDC exports indicates an increasing concentration of both products and partners (UNCTAD, 2018d). In addition to inadequate infrastructure and poorly functioning trade-related institutions, many LDCs face specific trade-related obstacles such as landlocked positions, distance from large and dynamic markets, and small domestic markets that limit potential economies of scale. The changing circumstances for LDCs' development over successive decades have compounded the difficulty of escaping the underdevelopment trap (UNCTAD, 2016b).

The participation of LDCs in GVCs is significantly affected by trade and investment agreements. Tariff

Predominant mode of LDC entry into global value chains is



escalation⁷ is a major barrier, both to the processing of agricultural products and to manufacturing, and tariff peaks continue to affect important sectors such as agriculture, apparel, textiles and leather goods. This makes preferential market access critical. LDCs benefit from preferential treatment under bilateral, unilateral or international trade agreements such as the Everything but Arms initiative of the European Union, as do some under the African Growth and Opportunities Act of the United States of America.⁸ However, the proliferation of multilateral, regional and bilateral trade agreements erodes preferential margins over time, limiting competitiveness in

these markets. Trade agreements and associated preferences are often regional, favouring intraregional over interregional trade. However, regional trade agreements vary in their ability to promote trade, and by extension, entrepreneurship.

The predominant mode of LDC entry into GVCs is foreign direct investment (FDI), though with a more limited role in agriculture (box 3.2). Despite a declining trend since 2012, FDI represented 21 per cent of total inward financial flows in LDCs in 2013–2017 (UNCTAD, 2018b). According to the UNCTAD Investment Policy Hub database (<http://investmentpolicyhub.unctad.org/>), virtually all LDCs are parties to bilateral investment treaties or treaties with investment provisions.

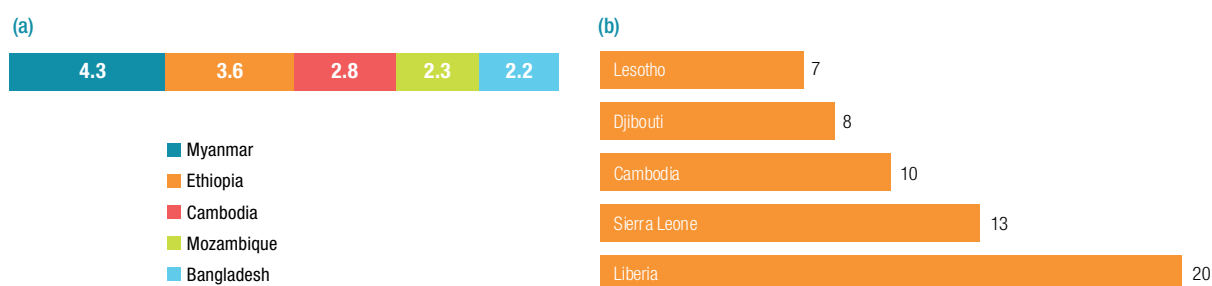
While LDCs' export volumes increased by 276 per cent between 2000 and 2016, LDC participation in GVCs remains limited, having grown by only 2 per cent annually between 2010 and 2017. Further, the share of foreign value added in their exports — 9 per cent — is the lowest among developing countries (UNCTAD, 2018b). LDCs are a predominant source of inputs for other countries' exports in several sectors. That is to say, their downstream (forward) integration is greater than their upstream (backward) integration (figure 3.3), largely reflecting their dependence on primary exports, including ocean-based primary commodities in the case of island LDCs. However, island LDCs have greater upstream integration because of the predominance of services exports,

Box 3.2 Trends in foreign direct investment inflows to the least developed countries

Foreign direct investment represented 21 per cent of total capital flows to LDCs in 2017, a proportion that has been declining since 2012. While FDI flows to LDCs as a whole fell by 17 per cent in 2017, those to Asian and Island LDCs grew by 20 per cent; the fastest growth was achieved by Myanmar (45.2 per cent) and Cambodia (12.5 per cent). In comparison, flows to the Lao People's Democratic Republic declined for a second year, by 18 per cent, due to a reduction in Chinese investment. Though aggregate flows to African LDCs and Haiti declined by 31 per cent, largely because of deep contractions in investments in the extractive sectors in Angola and Mozambique, prospects for FDI appear favourable for African LDCs. While FDI inflows to LDCs represent a small proportion of FDI to all developing countries (4 per cent in 2017), they are often large relative to GDP, which was the case in Cambodia, Djibouti, Lesotho, Liberia and Sierra Leone in 2016.

Box figure 3.1

Top five least developed country recipients of foreign direct investment by (a) value, in billions of dollars, 2017 and (b) share, in percentage, of gross domestic product, 2016

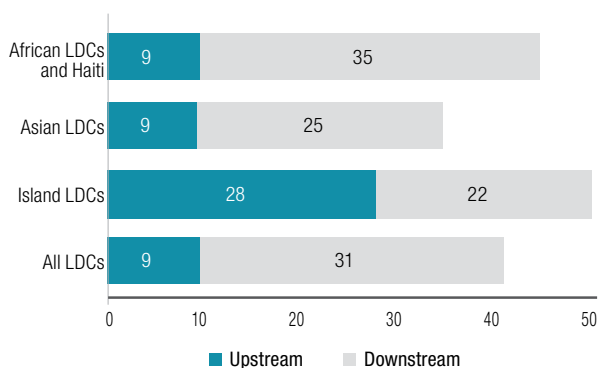


Sources: UNCTAD, 2018b; UNCTAD, 2018d.

Figure 3.3

Integration of least developed countries into global value chains, by country grouping, 2017

(Percentage of total exports)



Source: UNCTAD-EORA database.

primarily tourism. Proximity to “factory Asia” (the regional GVC production hub) — in particular the China growth pole — can be expected to accelerate the integration of Asian LDCs into regional and global value chains, as firms from China, Japan, Thailand and Viet Nam are increasingly propelled by rising labour costs or labour shortages to relocate or outsource operations to lower-cost countries. However, GVC production in Asian LDCs remains heavily dependent on foreign firms, and their role is largely downstream, suggesting limited benefits from integration. There are no signs of a comparable “factory Africa” emerging, reflecting more limited GVC integration among African LDCs, many of which remain effectively locked into low-value upstream segments of the supply chain.⁹

A common source of instability arising from LDCs’ participation in GVCs is its concentration in the production of traded goods that are disproportionately postponable,¹⁰ which makes them particularly vulnerable to global demand shocks (Baldwin, 2009; ILO and World Trade Organization, 2011).

2. Participation of the least developed countries in agricultural global value chains

The agricultural, forestry and fishing sector is the main source of employment in LDCs, in some cases increasingly so (UNCTAD, 2015a). Though not generally an important driver of exports, it is often the leading source of livelihoods (UNCTAD, 2015a; UNCTAD, 2017i). In Cambodia, for example, agriculture accounts for one third of GDP and 80 per cent of employment (International Finance Corporation, 2014). Similarly, 77 per cent of households in Vanuatu are engaged in artisanal fishing.¹¹ Fishing, a mainstay of island LDCs, is mainly undertaken by artisanal

fishers. Industrial-scale fishing, carried out by foreign fleets and sometimes processed by domestic industries, is unlikely to be viable in most island LDCs. In Vanuatu, 77 per cent of households are engaged in artisanal fishing. In contrast, the fishing industry in Bangladesh contributes 4.4 per cent to GDP and directly or indirectly sustains 15 million people (UNCTAD, 2017i). Agriculture is the sector where local participation in value added is greatest in LDCs. However, notwithstanding differences across LDC regions, it is generally characterized by low productivity. Even Asian LDCs, which have the highest agricultural productivity, remain well behind most other developing countries in Asia by this measure. Agricultural labour productivity in island LDCs, though historically higher than in Asian and African LDCs, is declining (UNCTAD, 2015a).

Agribusiness and agro-industry encompass the commercialization and value addition of agricultural and post-production enterprises, and the building of linkages among agricultural enterprises (FAO, 2013a). Agribusiness denotes all business activities performed “from farm to fork”, from agricultural input suppliers, producers, agroprocessors, distributors, traders and exporters, to retailers and consumers.¹² Agro-industry refers to the establishment of linkages between enterprises and supply chains to develop, transform and distribute agricultural inputs and products.

While GVCs play a more limited role in agribusiness and agro-industries than in other sectors, their importance is increasing, a reflection of rising global food prices stemming from and resulting in a redistribution of global economic activity towards developing countries. Their association with manufacturing and agriculture makes agrifood GVCs particularly pertinent to entrepreneurship and structural transformation in LDCs.

GVC dynamics in agriculture vary widely between products and countries, limiting the potential for generalization across the sector or across LDCs. Identifying LDC participation in agricultural GVCs is also hampered by the uneven coverage of country and product case studies, the limited information they provide on entrepreneurship and their focus on trends in upgrading in low-technology industries (DiCaprio and Suvannaphakdy, 2017).

Nonetheless, despite the importance of agriculture in LDCs and their apparent comparative advantage in agricultural production, their participation in GVCs appears generally to be more limited than in other sectors (Asian Development Bank, 2013). Data from the Observatory of Economic Complexity (2016)

and regional and country case studies¹³ suggest that LDC value chains in agriculture tend to be primarily domestic and regional, partly reflecting the predominance of smallholder and subsistence agriculture and of artisanal activities. Asian LDCs tend to supply primary inputs to regional value chains centred in developing Asia, reflecting the region's status as the world's largest food market (Timmer, 2013). A similar pattern, though less marked, is also evident in Africa. The geographical isolation of island LDCs limits both the development of regional value chains and their integration into GVCs, while their small populations compound structural obstacles to competitiveness and attractiveness to FDI.

This may in part reflect distinctive product characteristics and policies (OECD, 2017c). Globally, agriculture is the beneficiary of significant public support, despite contestation of the cost-benefit of such support,¹⁴ and LDCs are seriously disadvantaged by resource constraints in providing such support. Agricultural products are also likely to be processed in export markets for re-export (OECD, 2017c).

Despite widespread reference in the literature to the potential for beneficiation, LDC participation in agricultural GVCs is generally characterized by short domestic value chains and limited domestic

processing; agriculture is typically dominated by small family farms with limited upgrading, as demonstrated by the domestic value chains of key export products from the four food- and agricultural-exporting LDCs (box 3.3). Success in GVC integration is thus mostly measurable in terms of increasing quantities of exports.

Policy and government support can have a significant effect on agricultural value chains, as shown by the success of Rwanda in repositioning its coffee from commodity grade to high-value speciality grade (World Bank, 2016a). Conversely, in Guinea-Bissau, despite the economic importance of cashew nuts, development of the sector has been held back by the absence of a legislative and regulatory framework to structure the market (Catarino et al., 2015).

Trade preferences are particularly important for LDC participation in agricultural GVCs, as tariffs on agricultural produce are generally much higher than those on manufactures and natural resources. Agricultural trade, especially in high-value niche segments of interest to LDCs, is particularly affected by non-tariff measures such as hygiene and health standards, private and national ethical and environmental standards, traceability requirements and regulations relating to product size, form and colour. Opportunities for product differentiation are

Box 3.3 Domestic value chains for major agricultural exports in food and agricultural exporting least developed countries

Guinea-Bissau

Coconuts, Brazil nuts and cashew nuts accounted for 40.5 per cent of total exports in 2016. Cashews are produced mainly by small family farms and producer cooperatives or growing companies. They are bought by a network of up-country buyers linked to urban buyers and sent either to warehouses, where they may be dried, bagged and consolidated in loads, or directly to exporters in the capital. Cashews are almost entirely exported raw to China, India and Viet Nam for processing and sale to developed markets.

Malawi

Raw tobacco leaf, produced mainly by smallholder and tenant farmers, accounted for 29 per cent of total exports in 2016. Tobacco is purchased by international leaf merchants through auctions or direct contracts governed by long-term arrangements with different forms of governance in relations with tobacco farmers and thus with different implications for product and process upgrading.

Solomon Islands

Rough wood accounted for 37 per cent of exports in 2016. Planted high-value teak is a major potential resource, and estimates of participation rates in teak planting since it began in the 1980s suggest that smallholders are likely to remain the significant source alongside State and large commercial plantations that date back to the 1960s. Teak is mainly exported raw to manufacturers in China, India and Viet Nam through a network of international buyers. A small proportion of wood undergoes limited processing by local companies and is exported by traders for further processing in destination markets. The Solomon Islands are also the world's second largest exporter of copra (dried coconut), after Indonesia. Coconut production is overwhelmingly a smallholder crop.

Somalia

The primary export is livestock for food, mainly produced by pastoralists. Exports of chilled meat are facilitated by a network mediated by brokers, who provide the main link between producers, small-scale traders and exporters' agents.

Sources: Australian Centre for International Agricultural Research, 2015; Catarino et al., 2015; FAO and International Bank for Reconstruction and Development/World Bank, 2018; Moyer-Lee and Prowse, 2012; Negassa et al., 2012; news24, 2017; Unfairtobacco, 2016.

often conditioned by non-tariff measures linked to certification (Humphrey and Memedovic, 2006; UNCTAD, 2015b).

Non-tariff measures in agriculture, which lead to compliance costs for local entrepreneurs that can be addressed by technical assistance and the use of modern technology, also have implications for GVCs. The global agrifood business is increasingly dominated by vertically coordinated GVCs akin to those traditionally associated with manufacturing, using various forms of coordination. These include outgrower schemes, contract farming, category management by supermarket suppliers and marketing contracts (Humphrey and Memedovic, 2006). This can aggravate the risk of market power abuse. For example, accurate and timely traceability of products has become an important factor, and lead firms exercise power over producers in the implementation of compliance. In Malawi, where the tobacco sector is dominated by smallholder production, leaf merchants' efforts to contain the costs of compliance and secure guaranteed traceability have created a tendency towards vertical integration (Moyer-Lee and Prowse, 2012). Leaf merchants have also lobbied for the abolition of the country's vibrant and competitive auction system, which ensures higher prices for farmers, in favour of a sector operated by contract farming.

Supermarkets and other major retailers are playing an increasing role in agricultural GVCs, leading to considerable growth of contract farming as a response to high transaction costs in the thin and imperfect markets and weak market institutions common to LDCs. Contract farming is a highly controversial topic, and there are concerns about the potential for abuse of small farmers' weak bargaining positions, exploitation of producers by middlemen (traders, brokers and buyers) and the potential of GVCs to promote destructive entrepreneurship. Responses to such concerns have included attempts to shorten domestic value chains by linking producers directly to exporters or manufacturers and to promote producer cooperatives (International Institute for Environment and Development and Sustainable Food Lab, 2011; Sustainable Organic Agriculture Action Network, 2013; Struthers, 2017; Wiegatz, 2016).

The prevalence of contract farming varies widely between commodities, destination markets and types of buyer (Minot and Ronchi, 2014). The high fixed costs of contracting, coupled with the economies of scale characteristic of some crops, favour medium- and large-scale farmers. However, the delicacy of some high-value products complicates mechanization, potentially favouring

Increased concentration at all stages of the agriculture value chain has implications for entrepreneurship and the balance of power

smallholders (Bamber et al., 2014), and there is evidence of small farmers benefiting from contract farming through more secure access to inputs such as seeds and fertilizers.¹⁵ Nonetheless, challenges remain. The poorest and most marginalized rarely benefit or successfully upgrade and are vulnerable to exploitation by unscrupulous third-party contractors, giving rise to concerns that GVCs may facilitate destructive entrepreneurship (Bamber et al., 2014; Women in Informal Employment: Globalizing and Organizing, 2013; Dihel et al., 2017; Ethical Trading Initiative, 2005; Wiegatz, 2016).

Since larger firms are generally more technically efficient and are better able to meet public and private standards, this helps increase concentration at all stages of the value chain, with implications for entrepreneurship and the balance of power. Concentration at the inputs stage is related to lead-firm strategies for control over intellectual property. With some exceptions, notably coffee and cocoa, where farm production appears to be more and more fragmented and small scale in nature, concentration at the processing stage promotes an increase in scale of production units. Concentration at the processing stage provides a justification for production contracts or direct ownership of production units (vertical integration), and concentration in retailing contributes to increasing oligopoly. Moreover, concentration appears to have a ripple effect throughout GVCs – consolidation at one point giving rise to consolidation at another. The growing importance of standards in agribusiness accentuates this trend (Humphrey and Memedovic, 2006).

Although the scale of potential benefits is difficult to establish, a more positive trend is the potential of some high-value crops to stimulate entrepreneurship in LDCs to exploit niche markets. Examples of direct exports by LDCs in high-price, but often low-volume niche markets include tea and coffee (Nepal and Timor-Leste), organic cocoa (Sao Tome and Principe and Vanuatu), spices (the Comoros, Madagascar and Nepal), exotic fruit (Afghanistan and Madagascar), and Fairtrade and organic cotton (Benin, Burkina Faso, Chad, Mali and Zambia). Madagascar supplied 80 per cent of lychee imports to Europe in 2016 (Centre for the Promotion of Imports from Developing

There is little sign that LDC entrepreneurs will be able to follow the same trajectory as East Asian strategic suppliers

Countries, 2016) and 80–85 per cent of the world's natural vanilla (*The Economist*, 2018a). However, many LDC entrepreneurs may find it challenging to meet the more stringent quality standards, including labour and environmental standards, that are typical of such markets, as well as to overcome high transaction costs, lack of skills and infrastructure.

Agriculture is the highest sectoral priority for African countries in bilateral investment treaties and other agreements with investment provisions, while several agricultural and agro-industrial subsectors are major priorities for Asian LDCs (UNCTAD, 2013a). The share of agriculture in global FDI is small but growing (UNCTAD, 2012b): food, beverages and tobacco accounted for only 3 per cent of FDI in 2012–2014 (Fiedler and lafrate, 2016). As in other sectors, FDI in agriculture in LDCs is more limited than in other developing countries. However, it is concentrated in a few countries, partly reflecting policy differences, for example in Ethiopia, whose development policy focuses on the commercialization of agriculture. There were relatively large flows of agricultural FDI to Cambodia, Ethiopia, Mozambique, Uganda and Vanuatu in 2009–2011, and significant stocks thereof in Cambodia, Malawi, Uganda and Zambia during the same period (UNCTAD, 2012b). However, assessment of the impact of such investment on local agriculture entrepreneurship is hindered by data availability and issues of confidentiality, comparability and reliability.

As a strategic sector, agriculture is often subject to restrictions on foreign ownership (UNCTAD, 2013b). However, such restrictions are not always implemented in LDCs. For example, the High Commission on Investment of Afghanistan has yet to exercise its authority to limit the share of foreign investment in certain sectors, industries and companies (Export.gov, 2016), while a moratorium on concessions greater than 1,000 hectares in the Lao People's Democratic Republic has proven ineffective and unenforceable (International Institute for Sustainable Development, 2012).

In contrast with historical experiences, there is evidence that new forms of FDI in agriculture are increasingly directed towards gaining access to natural resources of land and water, often emphasizing the production of basic foods or animal

feed for export to the investing country (FAO, 2013b). This type of investment limits the scope for looser forms of association with local producers, which are more conducive to local entrepreneurship.

3. Participation of the least developed countries in textile and clothing global value chains

The textiles¹⁶ and clothing sector is widely considered to offer good opportunities for industrialization, because of its labour intensity and requirement of large numbers of unskilled workers. It encompasses several stages of production (fibres, yarns, fabrics, finishing, knitting and so forth), a considerable variety of production processes and a multiplicity of end-products. The sector is shaped predominantly by large companies that decide what is produced, where and by whom; production moves quickly between countries and regions, largely in response to production costs, in particular those relating to labour.

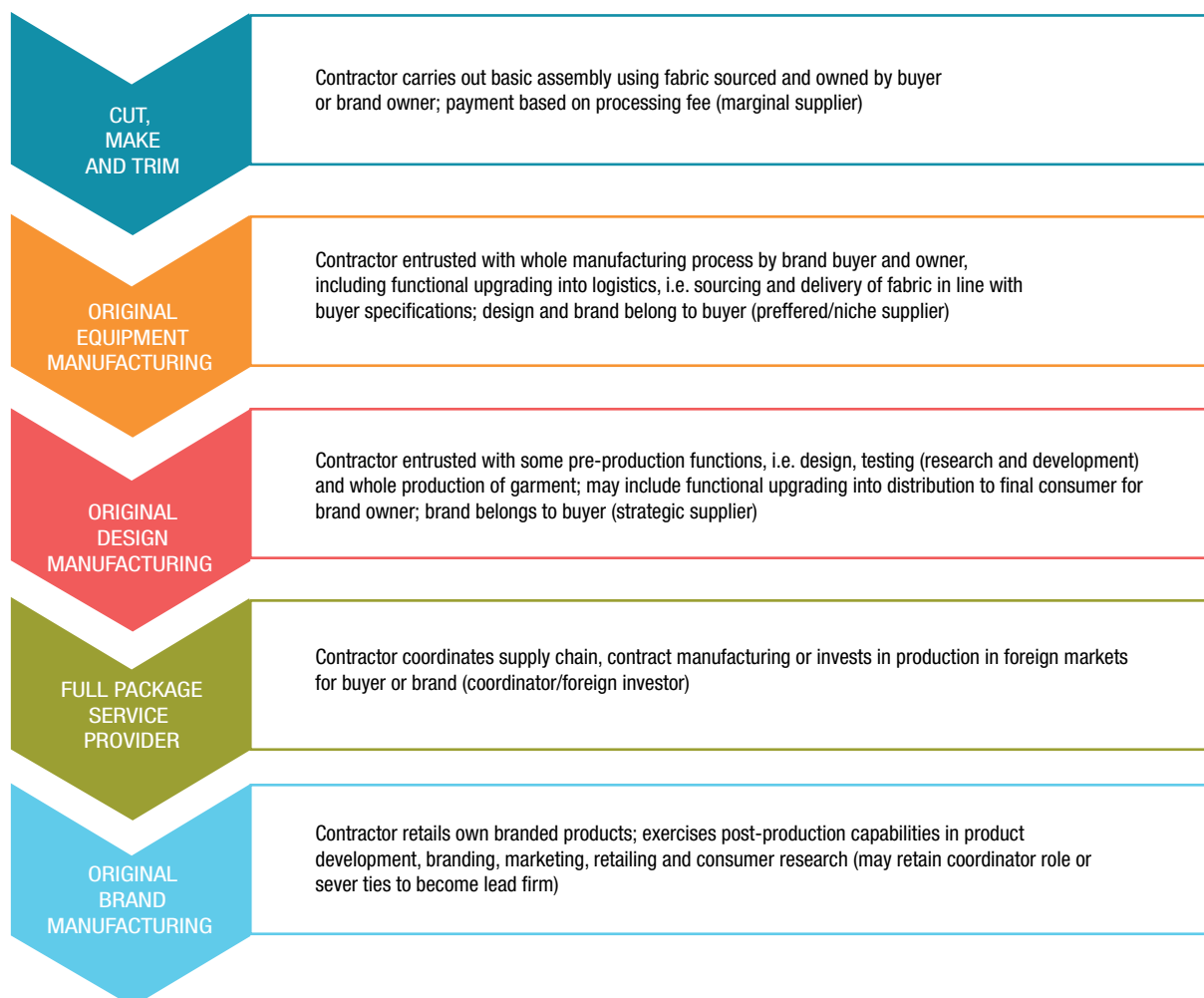
Strategic suppliers and coordinators in East Asia have enjoyed resounding success. The key to this positive outcome was the ability of East Asian companies to progress from the assembly of imported inputs that were traditionally associated with export-processing zones to full-service package suppliers, a more domestically integrated form of exporting that generates greater value added (Gereffi, 1999). This is illustrated in figure 3.4 on the use of combined strategies of proactive upgrading and responsiveness to buyer strategies to reallocate tasks and risks within their GVCs. These transformed East Asian suppliers have now established their own triangular production networks into which LDCs are increasingly being integrated.

As yet, however, there is little sign that LDC entrepreneurs will be able to follow the same trajectory. While LDCs have benefited from GVCs, including regional production networks organized by regionally embedded investors, value addition remains elusive for most, with only the cut-make-trim segment having the room to accommodate additional entrants. For LDC entrepreneurs to emulate Asian strategic suppliers would require regional supplies of inputs, upgraded capacity — including in ICT — and greater speed and flexibility in reaching markets. Crucially, it would require entry by way of independent locally owned investors and a direct relationship with GVC buyers.

All LDCs are active in some way in one or more textiles and clothing segments. Several LDCs have a long tradition of cotton cultivation, dating back to 1904 in the United Republic of Tanzania, for example

Figure 3.4

Towards greater value addition in developing country textile and clothing industries



Source: Esho, 2015; United Nations, 2005.

(International Trade Centre, 2015a) — and 19 LDCs export raw cotton, although cotton exports are a substantial share of exports and significant relative to the global market only in Benin, Burkina Faso, Chad and Mali, known as the “Cotton 4” countries. They export mainly to major textile industry centres in Asia and to Europe, suggesting that, like other LDCs, they are integrated into clothing GVCs, if only informally. Cotton production in LDCs is generally dominated by smallholders, and despite a significant decline across the board, remains a significant source of livelihood for many.

At least 12 LDCs across all geographical groups export prepared cotton, woven cotton and natural or synthetic yarn or textiles. LDC textile industries have suffered similar historical declines, struggling to compete with China following the expiry in 2004 of the Arrangement regarding International Trade in Textiles, also known as the Multi-fibre Arrangement, and in the new context of GVCs. However, the spinning industry

is showing resilience in some LDCs, and several hope to retain capabilities in initial processing, such as woven cotton and yarn, and to rekindle the textile industry.

It is in the garment sector that LDCs are most active, variously seeking to launch, expand or retain export-oriented garment industries. This sector has shown a potential for rapid growth. In Ethiopia, the garment industry grew by 51 per cent per year in 2010–2016 (van der Pols, 2015) and in Cambodia, garment and footwear exports, by 10.8 per cent per year in 2014–2016 (ILO, 2017b). In comparison, employment in the garment sector in the Lao People's Democratic Republic grew from 800 workers at its inception in the early 1990s to some 30,000 workers in 2012 (Nolintha and Jajri, 2015). The origins and evolution of the global garment industry and the role of LDCs in that industry's GVCs has been the subject of extensive study (Gereffi, 1999; ILO, 2014; Kaplinsky, 2005). At least 20 LDCs exported garments in 2016.

Garments are a leading export of Bangladesh, Cambodia, Haiti, Lesotho and Madagascar, and of increasing importance to several others, for example Afghanistan, the Comoros, Ethiopia and Sao Tome and Principe. In other LDCs, the sector remains nascent but is receiving government attention. Several LDCs have designated the sector strategic, or a national development priority, providing generous investment incentives and/or public support.

The scope for upgrading within garment GVCs in LDCs is affected by the positioning of strategic suppliers, which in part reflect investor and export market profiles, and by local dynamics at the time of integration into GVCs. An important driver of the inclusion of LDCs in textile and clothing GVCs is tariff hopping by strategic suppliers in response to shifting trade preferences. LDCs' duty-free access to major markets has influenced the geographical distribution of textile and clothing production and trade. This has contributed to a restructuring of GVCs to include LDCs in the low-value cut-make-trim manufacturing segment, but also in relatively short domestic value chains, mainly limited to primary production or low-value cut-make-trim processes relying on imported fibre, yarn and fabric to assemble finished garments for re-export. Some LDCs have, however, developed a degree of specialization; for example, the United Republic of Tanzania specializes in mosquito nets for the regional market. Some island LDCs specialize in awnings, sails and tents or in-home and lifestyle textiles; Sao Tome and Principe, in synthetic fibres; and several LDCs, in knitwear. In Ethiopia, the sector holds significant promise, as it produces a range of products, from natural and human-made yarns, fibre, threads and textiles, to various garments, carpets and home textiles (International Trade Centre, 2015b).

Since trade liberalization gives rise to a constant threat of preference erosion, compounded by the possibility of such preferences being extended to other developing countries,¹⁷ the tariff-hopping motivation adds a further layer to the uncertainty that characterizes GVCs (section B).

Policy space is also an important issue in the context of trade, and LDCs generally have more policy space than other developing countries under World Trade Organization agreements (UNCTAD, 2015b). However, policy space issues also arise in a bilateral context. The Zambia–China agreement, for example, allows China, which has a competitive, advanced textile industry, tariff-free access to the Zambian market against that country's exports of raw cotton. This poses a major challenge to the development of the Zambian textile industry (Wang and Brown, 2013). Growing interest in recycling, a reflection of increasing

concern with environmental issues, has contributed to a boom in used-clothing exports from developed to developing countries (Baden and Barber, 2005; Waste and Resources Action Programme, 2016). The proposal of the East African Community¹⁸ to place an import ban on used clothing and shoes, aimed at encouraging local production and development, was reversed following a threat of retaliation from the United States — the world's largest exporter of used clothing (BBC News, 2018; The Conversation, 2018). The United States had carried out a similar threat against Rwanda when it raised tariffs on imported used clothing in 2016.

Garment sectors in LDCs are heavily dominated by FDI, with a poor record of upgrading and fostering local entrepreneurship: Bangladesh, Ethiopia, Haiti and Madagascar are among the few LDCs that exhibit significant local ownership and entrepreneurship. Together with the relative capital intensity of the textile and clothing sector, with an investment-to-turnover ratio of 1:1 for spinning, 1:1.5 for fabric production and 1:4 for clothing production (International Trade Centre, 2015a), tariff hopping has contributed to intense competition among LDCs for such investment.

Investment and trade patterns in GVCs are closely linked and combine with local market dynamics to exert a major influence on the potential for upgrading. Rather than adopting global investment and sourcing strategies, investors generally base investment decisions on geographical and cultural proximity to allow greater interaction and a more flexible division of labour. Investments outside an investor's region are primarily motivated by lower labour costs or tariff advantages. The emergence of developing countries in Asia as a global centre for textile and garment production has thus benefited Asian LDCs, which play a complementary role in the GVC strategies of strategic global suppliers in the region. LDCs in Southern Africa are benefiting from the GVC strategies of Mauritian strategic suppliers and strategies of South African manufacturers and retailers to withstand competition from China in their domestic market. For example, the garment industry in Lesotho, though initially driven by Asian FDI seeking access to the United States market, is now dominated in terms of number of firms, not export value, by producers for the South African market. This had led to a diversification of exports (Origin Africa, 2017). In both regions, nearshoring strategies are facilitated by a mix of headquarter and factory economies.

In Southern African and Asian LDCs, nearshoring has delivered qualitatively superior outcomes regarding skills development and functional upgrading, although this has not proved transferable to other

regions, as local and regional embeddedness is critical to this success. For example, Staritz et al. (2016) identify different strategies adopted by firms in Lesotho and Madagascar to fulfil end-market and buyer requirements. Asian-owned firms that are part of established triangular networks supplying mainly standardized high-volume products to the United States market are often compelled to use inputs from investors' established input and services networks, limiting the potential for economic upgrading. In contrast, more regionally embedded investors from Mauritius and South Africa tend to service small orders of shorter-run products with higher fashion content and less upstream customization, mainly to Europe and South Africa. While maintaining close relationships with suppliers in Mauritius and South Africa, their strategies tend to favour small entrepreneurs and skills upgrading.

The proximity of Madagascar to Mauritius has also allowed the development of closer relationships with investors in these countries, facilitating knowledge and skills transfer. Likewise, South African investors increasingly employ local managerial staff in Lesotho, while Asian investors are hampered from doing so by the concentration of decision-making in their head offices and high upstream customization. Language barriers are also cited by case studies as a contributing factor to the use of expatriates in Africa and Asia. Regional investors have shown greater interest in moving higher-value-added functions to local firms. Asian investors engage less in training and innovation, and training is generally limited to basic production. This generates a pattern of widespread use of expatriates to fill skill gaps and in turn, an environment characterized by the following factors: limited career progression, high labour turnover, few incentives for local investment in specialized education, lack of public investment in industry-specific institutions and weak linkages between industry and educational institutions.

The findings on the differences in GVC governance structures and their implications for economic upgrading are confirmed by country case studies across developing regions (Staritz and Morris, 2013; Staritz et al., 2016; World Bank, 2011).

A further impediment to upgrading in many LDCs is the absence of integrated domestic value chains and local entrepreneurs in the sector. Local market dynamics substantially affect prospects for upgrading. In Madagascar, the distinction between domestic and local entrepreneurship is an important consideration, as investment and entrepreneurship in the sector have been led by investors who have European citizenship but are long-term residents and are embedded in

Regionally embedded investor strategies tend to favour small entrepreneurs and skills upgrading

the national economy. These investors' strong links with European markets played an important role in sustaining the industry during the loss of privileges under the Africa Growth and Opportunity Act in 2010–2014. In Bangladesh, where export-oriented garment manufacturing is a major driver of industrial development, the historical presence of a large local textile industry and a relatively complete supply chain contributed to resilient local entrepreneurship in the face of large-scale FDI, in export-processing zones and beyond, despite the predominance of artisanal SMEs and the reliance of the garment supply chain on the modern textile sector (UNCTAD, 2012c). In Haiti, apparel firms, which have traditionally serviced the United States market for high-volume standardized commodity apparel, also include those with roots in the local business community and more recent start-ups launched by or with foreign investors.

Subcontracting, driven by factors linked to GVCs, the phenomenon of fast fashion and the business-enabling environment, including access to credit and trade-facilitation bottlenecks (Centre for Research on Multinational Corporations, 2015), occurs to varying degrees in some LDCs, but primarily in the informal sector. Subcontracting activity and local linkages in Lesotho remain negligible (*Origin Africa*, 2017). In Cambodia, by contrast, subcontracting is a practice that occurs in all parts of the garment production process, primarily in relation to enterprises operated from private homes, warehouses or industrial buildings but their activities go largely unrecorded (ILO, 2017c), which may be indicative of informal operations. The implications for earnings, including effects on formal sector wages, may be negative and require further research. This is not suggestive of the benefits typically associated with subcontracting and linkages in industry cluster approaches to entrepreneurship.

Further constraints to upgrading arise from LDCs' early stage of development. Weaknesses in infrastructure and support services can undermine competitiveness, and limited access to credit and foreign exchange shortages can delay or prevent imports of intermediate inputs. Though a priority of the FDI-led industrialization strategy of Ethiopia, expansion of its garment sector may ultimately be hindered by a foreign exchange shortage (*Financial Times*, 2018). Some LDCs have responded to the

LDCs are potentially direct competitors to Asian strategic suppliers and coordinators

industry's high import dependence by making tax incentives conditional on exporting. In Madagascar, for example, tax incentives are conditional on 95 per cent of production being exported.

The absence of direct linkages with buyers and retailers in major markets and the substantial investments needed to establish such linkages are also obstacles to upgrading. Moreover, LDCs are potentially direct competitors to Asian strategic suppliers and coordinators, and this could be a source of tension. Bangladesh, however, may have the advantage of purchasing and distribution capabilities, while the Lao People's Democratic Republic benefits from having attracted FDI across several segments of the supply chain (Nolintha and Jajri, 2015).

The prospects for LDCs securing a role in garment GVCs is uncertain. Such chains are evolving in

response to growing pressures at the retail end of the chain, as customers in developed markets are increasingly unwilling to pay higher prices for clothing and footwear, intensifying pressures for upgrading to full-package services and cost reduction (The Fung Group, 2016). Further, the industry is increasingly compelled to employ postponement strategies in the face of rapidly changing consumer tastes and preferences (Azmeah and Nadvi, 2014). While LDC garment industries could potentially gain from the pressure to create strategic partnerships, these conditions favour established players and preferred input suppliers and distribution networks. They could also result in industry consolidation, as suppliers seek to increase volume capacity to meet large and unpredictable buyer requirements in United States markets. In an industry that is already highly competitive, with narrow margins, LDCs operating in the cut-make-trim segment might struggle to maintain competitiveness.

The participation of some LDCs in electronics GVCs has similar characteristics to their participation in textile and clothing GVCs, as illustrated by the case of Cambodia (box 3.4).

Box 3.4 Cambodia in the electronics global value chain

GVCs are pervasive in the electronics industry, with production hubs centred in Asia, Europe and North America. The Asian hub is dominant, and most other Asian countries are linked to its two central players: Japan, as lead manufacturer of parts and components; and China, as contract manufacturer. The fragmentation of production processes is promoted by the high-value/low-weight nature of electronic components, which facilitates rapid and inexpensive air shipments globally, and a high degree of standardization, codification, computerization and interoperability.

In comparison, agriculture and garment GVCs are characterized by upstream customization, so that profits are derived mainly from marketing, branding and retailing activities. In electronics GVCs, more complex products and downstream customization mean that profits mainly take the form of economic rents from proprietary knowledge or technology and are driven by scale, volume and technological advances. Governance structures and specific features of electronics GVCs generate specific types of technological spillovers and opportunities to increase value added, leading DiCaprio and Suvannaphakdy (2017) to describe the sector as "propulsive".

Cambodia, a downstream assembler in electronics, has experienced explosive growth in FDI-driven electronics exports, which have more than tripled since 2010. Japanese manufacturers, in particular, have taken advantage of special economic zones in Cambodia for electronics and automotive-related production.

Cambodia has the advantage of proximity to Thailand, which is transitioning from hard drives to integrated circuits and radio frequency identification, and Viet Nam, which has secured a manufacturing niche in mobile phones, printers, and copiers. However, none of these countries is engaged in higher-level electronics design. In Cambodia, the lack of knowledge in physics, chemistry and materials science is a serious obstacle to advancement beyond assembly activities. As in the LDC garment industries, there is a vicious cycle in skills development: limited electronics education is both a cause and an effect of limited upgrading, and there is both a shortage of skilled engineering graduates and few employment opportunities for them. In the absence of opportunities for design work, most university graduates become technicians, while most technical and vocational education and training graduates become assembly workers.

Sources: De Backer and Miroudot, 2013; DiCaprio and Suvannaphakdy, 2017; Kaplinsky, 2005; RTI International, 2016; Sturgeon and Kawakami, 2010.

D. Global value chains and beyond

1. Limitations of integration into global value chains

A full assessment of the benefits of GVC participation for LDCs is not possible without additional data, particularly on spillover effects from GVC investors, which are often imprecisely measured and where tangible evidence is lacking or unclear. New data could rewrite the narrative on this issue, particularly with respect to local entrepreneurship. Nonetheless, while caution is needed in interpreting analysis based on a limited number of country and product case studies, the foregoing discussion suggests some useful insights.

Since a country's participation in GVCs largely reflects its structural characteristics (OECD, 2015a), LDCs attract mainly low-wage-seeking GVCs. While participation by LDCs in lower-end activities in GVCs has direct and visible short-term effects on the presence of FDI, employment and export growth, its longer-term impact on capacity-building, and the sustainability of the local industrial base is less apparent. Understanding of the wider economic effects of participation in low-value segments of GVCs is limited by a lack of systematic research on the linkages between GVCs and local entrepreneurship.

While low-value segments of GVCs have low entry barriers, their potential benefits are conditional on prior entrepreneurial engagement and are dissipated by acute competitive pressures (UNCTAD, 2016b). In LDCs, this form of participation in GVCs is not generally proven to be conducive to such engagement. There are numerous factors that limit opportunities for such engagement in LDCs; unless these other dimensions are addressed, LDC efforts to promote upgrading are likely to prove ineffective at best. For example, the case studies in this chapter show little sign of significant transfers either of technology or of tacit knowledge. When the knowledge needed to upgrade does not flow smoothly within the chain, the quality of national innovation systems can be a binding constraint on upgrading.

Based on 44 studies of developing country participation in GVCs, Choksy et al. (2017) find that suppliers lacking the necessary resources and capabilities rarely achieve functional upgrading. They also note that the occurrence of functional or other upgrading does not necessarily enhance such suppliers' ability to capture higher profits, and their strategies to improve profit margins may include downgrading.

Sustainability of the local industrial base is less apparent from the participation by LDCs in lower-end activities in GVCs

The move towards more dynamic activities is largely determined by a country's production experience (United Nations, 2017a). A broader mix of capabilities and economic activity enhances the growth-pulling potential of the economy (UNCTAD, 2016b) to attract GVCs with different degrees of economic upgrading potential, broadening the range of product supply chains and the scope of entrepreneurship opportunities. Empirical evidence suggests that domestic supply chains and proximity to GVC hubs can reduce fragmentation costs (Beverelli et al., 2016), potentially helping LDC entrepreneurs to overcome some of the obstacles to increasing value capture inherent in GVCs. The same study also finds that strong domestic value chains may discourage GVC integration in sectors with high switching costs and low fragmentation costs. Countries with greater economic complexity (the capabilities to produce a diverse range of products, including niche products) tend to capture a larger share of value added from GVCs (International Monetary Fund, 2015; Kowalski et al., 2015). New interpretations of economic complexity also confirm that greater complexity is associated with less income inequality and that growth and development outcomes are affected by types of exports and related productive capabilities (Hartmann et al., 2017; Mealy et al., 2018; Pugliese et al., 2017).

While the ambition of developing countries to capture and retain more value from GVC participation has been questioned (Kowalski et al., 2015; United States Agency for International Development and East Africa Trade Investment Hub, 2017), such concerns may be misplaced. LDCs face enormous costs to achieve the Sustainable Development Goals (UNCTAD, 2017a) and are under pressure to provide social security nets but there is relentless pressure on them to reduce aid dependence and to undertake further trade liberalization (reducing revenues from trade taxes), while insertion in GVCs relies heavily on generous tax exemptions and incentives to attract FDI. Equally, GVC participation is heavily dependent on foreign exchange for intermediate imports (UNCTAD, 2013b) but implementation of trade support commitments by development partners has been inadequate, including relating to technology transfer. Increasing value retention from GVCs is essential to the domestic

Lead-firm strategies may exacerbate structural deficits in LDCs

resource mobilization required to reconcile these contradictions, in light of the demonstrable failure of GVC participation to unleash local entrepreneurship and the associated concentration of value capture by foreign investors.

Understanding GVC power structures is essential, both for entrepreneurs to identify opportunities for upgrading and for policymakers to devise appropriate policies. However, the effect of power imbalances in GVCs in limiting choice for LDC entrepreneurs is often overlooked in the GVC literature. There is evidence of potential conflicts between policies towards entrepreneurship and upgrading and lead-firm strategies, which, far from serving as an engine for entrepreneurial growth, may exacerbate structural deficits in LDCs.

As well as seeking to arbitrate labour cost differentials across countries,¹⁹ the evidence suggests that lead firms predetermine the location and direction of value capture (Rakhmatullin and Todeva, 2016) and take defensive action against suppliers that might grow to become competitors (Gereffi, 2014). They are able to use their power within GVCs to distribute exposure to risk in their own favour and are increasingly shifting the consequences of uncertainty and the costs of adaptation to unforeseen circumstances to suppliers in developing countries. This issue is of particular significance in LDCs.

This suggests a need for concerted action at the global level to address the more insidious aspects of the GVC trade model. For example, digital and other technological innovations, though unquestionably positive, help lead firms to create and capture new value (Hagel et al., 2015), entrench their market power and disproportionately assign risk to developing countries and firms at the lowest levels of the value chain.

At best, the purported potential of the GVC model to deliver rapid industrialization and flourishing entrepreneurship remains unproven. GVCs have the potential to constrain structural transformation, as well as to widen opportunities (UNCTAD, 2016b), and GVC participation may compound the risk of LDCs graduating without the structural transformation required to sustain development progress (UNCTAD, 2016a). GVCs can also exacerbate existing structural problems such as gender inequality (International

Centre for Trade and Sustainable Development, 2016). IZA World of Labour (2016) highlights the dependence of large-scale job creation in GVCs on low wages, so that labour and skills upgrading may worsen both inequalities and outcomes for low-skilled and women workers.

Yet disappointing evidence on the developmental impact of GVCs is not limited to LDCs. The experiences of other developing countries suggest that economic upgrading is still constrained by a glass ceiling, although particular GVC products or services can provide pockets of excellence in a broader context of productivity-reducing structural change, stalled industrialization or premature deindustrialization as a result of globalization, trade liberalization and the retreat of the developmental State (ILO and World Trade Organization, 2011; UNCTAD, 2016b). This suggests that GVCs cannot guarantee the prospects of economic upgrading.

The opportunities and challenges of GVC participation also highlight the importance of a balanced mix of enterprises of different scales, rather than an excessive emphasis on micro and small enterprises. Scale economies are critical to lowering costs and maintaining competitiveness as profit margins narrow (Audretsch and Thurik, 2001; Kowalski et al., 2015). Larger firms are generally better placed to absorb the cost disadvantages of LDCs (Crisciolo and Timmis, 2017), critical in GVC trade, where low transaction costs are essential; and to meet quantity requirements and quality and safety standards at low production costs, which were identified by a World Trade Organization survey of LDC firms as the most important factors in connecting to GVCs (World Trade Organization, 2013). Equally, high levels of informality and self-employment hamper the ability of LDC firms to capitalize on GVCs (OECD and World Bank Group, 2015), while locally embedded large firms often serve as incubators for entrepreneurial talent and the transfer of tacit knowledge.

This discussion also raises questions about widely used policy instruments. LDC integration into GVCs occurs principally through FDI (Crisciolo and Timmis, 2017; UNCTAD, 2013a), and arguably, investment incentives play a more significant role in LDCs than in other developing countries, where firm competitiveness is of greater importance. However, such incentives can degenerate into measures to avoid FDI relocation, and may divert attention away from the higher priorities of building productive capacities and facilitating local entrepreneurship (Auerswald, 2015; UNCTAD, 2000). Similarly, special economic zones, which are often used to offset high transaction costs, can become enclaves or create

dual economies in which a dynamic modern economy coexists with a more stagnant informal economy (Taglioni and Winkler, 2017; UNCTAD, 2016b). They may have explicit or de facto barriers to domestic investors, allowing disproportionate capture of policy rents by FDI (Kaplinsky, 2005; Taglioni and Winkler, 2017). In addition, they often lead to oligopolistic local market structures that impede the flourishing of transformative entrepreneurship (Bamber et al., 2014; Dihel et al., 2017; Ethical Trading Initiative, 2005; Wiegatz, 2016; Women in Informal Employment: Globalizing and Organizing, 2013).

2. The importance of enterprise

The issues surrounding LDC participation in GVCs reinforce the importance of high-impact entrepreneurs with the ability to overcome the obstacles to upgrading that bedevil LDCs. Despite the formidable impediments to entrepreneurship in LDCs, including infrastructure deficits, underdeveloped logistics industries, high trade transaction costs, underdeveloped input markets and climate risks (chapter 4), there are striking examples of individual

entrepreneurs overcoming such obstacles in LDCs, as well as in other developing countries (box 3.5). The demonstration effects of such ventures can help unleash transformational entrepreneurship, and stimulate policy innovation and crowding in public investment.

What distinguishes the entrepreneurs described in box 3.5 is their ability to engage in opportunity discovery. The case studies also highlight the role of experience and knowledge in effectively overcoming entrepreneurship challenges and recognizing market opportunities, while the intersectoral mobility of some of the entrepreneurs suggests that lack of specialized training in agriculture or in entrepreneurship is not an insurmountable obstacle.

A commonality of the LDC cases, in particular, is young, well-educated, opportunity-driven entrepreneurs with exposure to modern business. Shambani Graduate Enterprise appears to have been motivated by a combination of necessity and opportunity, which may not be unusual. A study of high-growth women entrepreneurs (Neill et al., 2017) has found that most of them engaged in both discovery and creation of

Box 3.5 Entrepreneurship against the odds

Shambani Graduate Enterprise, established by three unemployed agriculture graduates, supplies retail outlets in Morogoro municipality, United Republic of Tanzania, and in the capital, some 200 km away, with fresh, cultured and flavoured milk. It has grown from an initial processing capacity of 30 litres with a single small supplier to a processing capacity of more than 1,000 litres of milk, supplied by 300 Masai cattle owners. The Enterprise has successfully established a viable supply chain, allowing existing producers to become profitable and creating jobs.

A graduate of business administration with practical experience at Ethiopian Airlines founded Green Ethiopia Exports in 2012. The company produces and exports popular Ethiopian spice blends such as shiro, mitmita, korarima and berbere, initially serving the country's sizeable diaspora in Europe and the United States, before expanding into African markets.

A former epidemiologist now owns and runs Fresh Direct Produce and Agro-allied Service, a leading company that grows fresh vegetables and distributes meat across the country. She moved her farm to the capital Abuja — cutting fuel costs and reducing the amount of produce ruined on the way to market — by turning to organic container farming. Before switching to farming, she worked as a research consultant in the Economic Development and Partnership Office of Osun State and research analyst for the Government of Nigeria. She also served as Special Assistant to the President on Wealth Creation and to the Coordinator of the National Poverty Eradication Programme. In the course of this work, she learned about hydroponics.

Taobao, founded in 2003 and owned by Alibaba, is the largest e-commerce marketplace in China and is increasingly important to rural economies across China. Online stores can be established on Taobao with little more than a good Internet connection and a logistics chain (often motorcycle delivery), and millions of rural people now sell goods at low cost online through Taobao villages, including mass-produced manufactured goods sold from villages near factories. This has helped to ease some of the push factors underlying rural-urban migration. Besides the size of the Chinese market, Taobao's success as an online platform is largely attributable to the attention given to building an appropriate ecosystem by taking proactive steps to create trust; build missing infrastructure, including a network of logistics providers; and develop a payment system.

One village in the southern province of Guangdong has taken a step further, opening a Taobao university that offers courses in online sales. The local government of Junpu was proactive in supporting the Taobao concept with free wireless Internet for residents, tax credits and free store space for residents and non-residents setting up physical shops for their inventory. Local officials also opened a free Taobao vocational school. Students are motivated by the wealth amassed by Taobao sellers.

Sources: Agriculture for Impact, 2014; BBC News, 2018a; Food, Agriculture and Natural Resources Policy Analysis Network, 2012; NajjaGists.com, 2017; Strategyzer, nd; Strategyzer, 2017; *The Economist*, 2014b.

The critical role of agriculture in LDCs makes policymaking in this area particularly complex

opportunity, suggesting that entrepreneurs taking this dual approach were most likely to leverage experience and learning in cognitive leaps and were confident in their ability to succeed. However, an entrepreneur's measure of self-belief is not a reliable indicator of entrepreneurial contributions to structural transformation. Despite more limited experience, less successful necessity-driven counterparts exhibited even greater belief in their own ability to succeed.

The case studies also demonstrate that entrepreneurship relevant to rural transformation need not originate in rural areas or entail action primarily at the producer end of the supply chain. As the Taobao case demonstrates, opportunity-driven entrepreneurs can play a catalytic role in channelling policy initiatives and investments. Evidence from countries such as Indonesia, Kenya, Peru and Uganda also suggests a clear divide between older and younger farmers, the latter generally bypassing traditional crops and showing a greater proclivity for technology and higher-value crops, for example in horticulture and greater responsiveness to increasing demand from the middle class (ILO, 2017a).

The critical role of agriculture in LDCs makes entrepreneurship in agriculture particularly important but makes policymaking in this area particularly complex.²⁰ Agriculture plays a major role in LDCs, economically, socially and in political economy, and is central to rural development, food security and poverty reduction, as well as structural transformation. It is also closely linked with environmental sustainability and gender equality.

This makes it difficult to distinguish and align economic and social objectives. While social objectives such as poverty reduction and food security often imply a focus on the most disadvantaged, promoting entrepreneurship in the sector requires attention to those best able to establish viable and thriving businesses. These are typically those already privileged by factors such as proximity to urban centres, education and access to specialized knowledge, capital, infrastructure and networks. Thus, International Institute for Environment and Development et al. (2012), for example, wonder whether a focus on value chains could narrow development vision to the top of the pyramid of small

producers — the top 1–15 per cent of producers — raising the risk of a new elitism in development policy, contrary to the tenets of inclusiveness.

While a detailed discussion is beyond the scope of this report, reconciling these tensions and ensuring that the single-minded pursuit of social goals does not undermine economic objectives and vice versa, is essential to structural transformation, including in rural areas. A first step is recognizing that the interdependence of the two goals is central to sustainable development (UNCTAD, 2016a).

3. The role of comparative advantage

A growing body of GVC literature offers policy recommendations relevant to making GVCs work for development in LDCs (Keane and Baimbill-Johnson, 2017; Taglioni and Winkler, 2017). In particular, Taglioni and Winkler (2017) present comprehensive and detailed practical guidance on the nature and potential of GVCs, their pitfalls and means of leveraging them for development. However, this literature generally relies on revealed comparative advantage,²¹ as identified by standard trade theory, as the basis for the design of GVC engagement strategies. For most LDCs, this would imply seeking or maintaining specialization in low-skilled and low-value manufacturing as the basis for industrialization. Such a specialization would increase their productivity, lower unit production costs, and ultimately benefit global trade.

However, while revealed comparative advantage may be a useful indicator and policymaking tool, the overriding objective is to ensure an evolution of the revealed comparative advantage and develop dynamic comparative advantage in line with the goal to achieve sustainable development in LDCs. Since the weakness of local entrepreneurship in LDCs creates barriers to capturing the gains from GVC engagement, this implies a need to disrupt the revealed comparative advantage to launch the process of structural transformation. Trade theory predicts that a strategy based on static revealed comparative advantage would maximize the overall benefits of global trade, but not that such benefits would be evenly distributed or accrue to all participants. Rather, the evidence strongly suggests that LDCs would be among the losers under this model, as an exclusive focus on leveraging their current revealed comparative advantage would make it difficult to engineer the necessary evolution of their revealed comparative advantage for an upward progression in development and industrialization.

A sustainable development perspective thus indicates the need for a more nuanced approach to the application of revealed comparative advantage in order to enhance coherence and consistency and prioritize developmental goals rather than entry into GVCs based on a country's current revealed comparative advantage.

An important part of good development governance is aligning policies with desired developmental outcomes (United Nations, 2017). An active FDI policy (development-led engagement) aimed at changing a country's industrial structure can be expected to be more effective than passive FDI and trade policy (GVC-led engagement) in preventing adverse development outcomes arising from contradictions between GVC investors' competitive strategies and national development objectives. Under restrictive patterns of GVC governance, the latter approach is more likely to generate static entrepreneurship and export patterns defined by current industrial structures.

The possibility that revealed comparative advantage may evolve in a way that allows the predominance of traditional low-skilled labour-intensive exports to persist²² suggests that LDCs may be better served by an eclectic industrial strategy that simultaneously targets low and high-skill sectors, and by non-equity modes of GVC integration. The probability of positive spillovers from arm's-length trade and non-equity modes of GVC involvement are known to be higher than other modes (Taglioni and Winkler, 2017; UNCTAD, 2013a). An eclectic approach better reflects LDCs' multiple policy objectives of macroeconomic stability, job creation, poverty reduction, industrialization and structural transformation.

GVCs require government coordination at the micro level (Taglioni and Winkler, 2017) and have exposed the limitations of past development strategies that did not prioritize strong developmental States. Indeed, GVCs have contributed to the global revival of industrial policy, while also highlighting parallels between more recent strategies and the failures of past industrial policies — indiscriminate FDI incentives, mirroring unselective subsidies to local firms; the tendency to establish enclaves; a disproportionate focus on incumbents; oligopolistic market structures; and limited capacity to generate feedback between policy design and implementation. While these problematic aspects of industrial policy remain, they can be moulded and rendered less binding through appropriate institutional design (Rodrik, 2008).

LDCs need to strategically
reframe policy



to unlock potential
opportunities of GVC

4. International competition for high-level skills and entrepreneurship

One consequence of the rise of GVCs in both developed and developing economies is job polarization: a shift of employment from middle-wage to high- and low-wage jobs (United Nations Department of Social and Economic Affairs, 2017; World Bank, 2016b). There has been a tendency to assume that the risk of job polarization in LDCs is limited by the potential for GVCs to tap mainly abundant unskilled labour. Nonetheless, in 2016, there was evidence of job polarization in some, though not all, LDCs — in Uganda and the United Republic of Tanzania, but not Ethiopia, for example (World Bank, 2016b); this lack of uniformity could reflect differences in degrees of integration into GVCs and/or lagged effects.

Job polarization arises in part from the growing role of GVCs in increasing competition for highly skilled workers. International mobility of highly skilled human capital has increased substantially, in tandem with the expansion of the knowledge-intensive economy that is the hallmark of contemporary globalization.²³ There is evidence of a strong correlation between high-skill migrant concentration and the ability of destination countries to maintain a competitive edge academically and economically (Kerr et al., 2016); the desire to leverage multiplier effects generated by skill agglomeration has resulted in fierce competition, mainly among developed countries, to attract highly skilled migrants. Like GVC production hubs, the geographical distribution of high-skill migration is

Competition for high-skill human capital has been transformed to encompass the targeting of talented and high-impact entrepreneurs and innovators

significantly concentrated, and such migration to OECD countries is growing at staggering rates. The agglomeration of skills is also evident in the pattern of high-skill intraregional migration within developing regions (UNCTAD, 2018e).

Competition for high-skill human capital has been transformed to encompass the targeting of talented and high-impact entrepreneurs and innovators. The intensity of this competition, which partly reflects the disparity in rents across GVCs indicated by the smile curve (section B.2), is demonstrated by the establishment by several developed and developing countries of entrepreneurship visa programmes in addition to traditional high-skill visa or immigration schemes. These include Australia, Chile, Denmark, Germany, Ireland, Italy, New Zealand, Singapore, Sweden and the United Kingdom. Other countries, such as Qatar and the United Arab Emirates, have policies with the same aim, based on inviting potential entrepreneurs to “come here, build here and we will help you succeed”. Others, such as Spain, offer an automatic second residency for entrepreneurs that set up businesses locally. Following the mass emigration of graduates in the wake of near bankruptcy in 2010, Greece has followed the example of Israel and its venture capital model of investing in Israeli and Israeli-linked businesses to reverse the brain drain. The Government of Greece has entered into partnership with the European Investment Fund and the European Investment Bank to capitalize Greek entrepreneurs abroad, provided they set up businesses in Greece (BBC News, 2018b).

Such programmes are qualitatively different from traditional policies in recognizing differences in the ability of various types of human capability to translate knowledge into commercial value and seeking to leverage potential high-impact entrepreneurs to achieve cognitive leaps in business that create a ratchet effect. However, while some programmes are considered successful, such as that of Chile (chapter 5), their efficacy across the board is unclear, and evaluation is hindered by gaps in data (ICF International, 2016).

Adapting migration strategies to these developments is a high priority in LDCs. Migration clearly raises world

output, and there is conclusive evidence of large benefits in other dimensions of human development, such as education and health (International Organization for Migration, 2018; UNCTAD, 2018e). However, the evidence also indicates a need for selectivity in LDCs seeking to transform or construct revealed comparative advantage through entrepreneurship.

While they cannot hope to match the generous incentives offered by developed countries and other developing countries, LDCs cannot afford to be bystanders, because demonstration effects contribute to increasing emigration (International Organization for Migration, 2018), and differences in the returns to skills are a major driver of international migration (Rosenzweig, 2005; UNCTAD, 2018e). The emigration of skilled workers may also have a negative impact on the returns to expenditure on education for individuals and the economy, in the contexts of GVCs, as in the case of university and technical and vocational education and training graduates in the electronics industry in Cambodia (box 3.4). Related concerns are the implications for individual occupational choices, and associated concentrations in educational investment. For example, while India leads the world in the number of students obtaining Bachelor’s degrees in science, technology, engineering and maths, this demand is driven in large measure by workforce needs and measures to attract highly skilled migrants in the United States (UNCTAD, 2018f).²⁴ The influence of migration prospects on individual educational choices may limit the ability of LDC policymakers to harness scarce education resources effectively for sustainable development.

LDCs may benefit from policies aimed at offering more opportunities and incentives for temporary or permanent highly skilled migrants and high-impact entrepreneurs to return from more developed destination countries. Since skill acquisition is likely to be more important for more educated and higher-skilled migrants with a higher probability of working in dynamic sectors (Rosenzweig, 2005; UNCTAD, 2018e), targeted, rather than generalized, schemes may be more conducive to harnessing return migration to close technology gaps (International Organization for Migration and Migration Policy Institute, 2012) and construct revealed comparative advantage. The latter outline the sequence of steps needed to identify goals, build institutions, and design and implement calibrated strategies in line with policy goals, including strategies specific to entrepreneurship. Cost-effective options range from general frameworks such as dual citizenship,²⁵ to more intensive institutional activities such as the establishment of skilled migrant registries

and matchmaking activities, starting with the mapping of networks, interests, expectations and available resources among expatriate communities.

Some destination countries partner with countries of origin on such programmes. For example, the Ministry of Foreign Affairs of Italy has assisted Ethiopia in registering migrant associations and creating a national database of Ethiopian migrants, and in assessing SME proposals by potential returnees.

LDCs with sovereign wealth funds, such as Angola, Kiribati, Mauritania and Senegal, might be able to emulate enterprises based in other developing countries that have acquired firms or plants from industrialized countries for their technology and have relocated their operations. Examples include the acquisitions by Tata, an Indian company, of Land Rover in the United Kingdom and by Hangang, a Chinese company, of the Kaiserstuhl III coking plant in Germany (*The New York Times*, 2007). Asian platform brands have had notable success in using strategic acquisitions alongside investment in research and development to overcome constraints on upgrading in electronics GVCs.

5. Fostering intersectoral linkages: The example of tourism and agriculture

The service exports of LDCs are overwhelmingly concentrated in tourism, which represents 7 per cent of their total exports and 10 per cent of exports of non-oil exporters (World Tourism Organization et al., 2017). Tourism is also featured as an explicit target in Sustainable Development Goals 8, 12 and 14. Fostering strong and diverse linkages between tourism and other sectors could generate synergies and multiplier effects and increase opportunities for local entrepreneurial engagement. Strengthening linkages with agriculture and creative or cultural sectors, in particular, can be an effective strategy to promote entrepreneurship and structural transformation. In Ethiopia, for example, government restrictions on food imports help cultivate strong backward linkages between tourism establishments and smallholders, increasing local procurement, so that 44 per cent of hotel spending on food accrues to local producers (UNCTAD, 2017d).

However, tourism development in LDCs is oriented primarily towards satisfying export markets rather than promoting local value added, giving rise to enclave issues similar to those found in the manufacturing sector, including heavy reliance on imported inputs and FDI. Exploring new and innovative approaches to leveraging intersectoral linkages in a concerted

Opportunities exist for LDCs to revitalize tourism and entrepreneurship around unique agricultural produce and traditional products

and comprehensive way could play an important role in increasing the potential for local entrepreneurial engagement, plugging economic leakages, increasing production volumes and stimulating upgrading, as well as improving livelihoods, including in rural communities.

Linkages between agriculture and tourism can be strengthened through the establishment of local supplier clusters and supply chains, as well as agricultural supplies for tourism. Coupled with a well-coordinated branding strategy, including the use of geographical indications and other reputational and quality schemes, as well as an organized marketing campaign that taps consumer values, such an approach could generate multiplier effects in terms of investment, upgrading and beneficiation. Food festivals and tours can also expand agriculture–tourism linkages.

UNCTAD research and technical assistance on geographical indications highlights the astonishing array of often unique agricultural produce and traditional products available in LDCs, which have begun to valorize and market these products internationally (UNCTAD, 2015c). Opportunities thus exist for LDCs to revitalize tourism and entrepreneurship around these products. By addressing domestic and export objectives and supporting territorial food supply chain strategies, intersectoral linkages can also contribute to inclusivity and food security

Several developing countries have engaged in deliberate efforts to leverage cuisine as a recognizable national brand. The case of Peru offers useful insights on a national strategy assigning commercial value to local food culture (box 3.6). Peruvian cuisine has been used as a vehicle to foster national identity, social inclusion and economic development. As well as increasing the dynamism of an already successful tourism sector, the strategy spawned Peruvian entrepreneurs in the restaurant sector. The Government of Peru played a central role in gastronomy-centred campaigns to attract global attention and successfully rebranded the country's image following a period of political instability.

Box 3.6 The Peruvian gastronomic revolution

Peruvian cuisine has received international acclaim and is the subject of an application by the Government of Peru for designation by the United Nations Educational, Scientific and Cultural Organization as intangible cultural heritage. In its promotion of Peruvian cuisine as a symbol of a common national cultural identity, the Government declared it national heritage in 2007, triggering a gastronomic revolution. As a result, Peruvian cuisine became an export commodity and a source of dynamism for the tourism sector. Peruvian food exporters have leveraged geographical indications and other quality schemes, while extensive media campaigns have raised the local and international profile of the cuisine. Parallel campaigns marketing Peru as a culinary travel destination, alongside its iconic ruins and landscapes, have led to a boom in tourism and have inspired Peruvian entrepreneurs to establish Peruvian restaurants at home and abroad. This has generated wider benefits for local producers and promoted the development of related agricultural and tourism supply chains.

Sources: Bannister, 2017; Santilli, 2015; *The Economist*, 2014a.

Notes

- 1 Dai, 2013; Phillips, 2017; ILO, 2011; ILO and World Trade Organization, 2011; Rakhmatullin and Todeva, 2016; UNCTAD, 2013b; UNCTAD, 2013c; UNCTAD, 2016b; World Bank Group et al., 2017.
- 2 Hartog et al., 2010; Ponte and Sturgeon, 2017; Thurik et al., 2002; Verheul et al., 2001.
- 3 CUTS International, 2016; International Trade Centre, 2013; World Bank Group et al., 2017.
- 4 Angelsberger et al., 2017; Neill et al., 2017; Oyson and Whittaker, 2010; Oyson and Whittaker, 2015.
- 5 Barkema and Drogendijk, 2007; Shaw and Darroch, 2004; Verbeke et al., 2014.
- 6 Business for Social Responsibility et al., 2017; International Centre for Trade and Sustainable Development, 2016; ILO, 2016a; IZA World of Labour, 2016.
- 7 Tariff escalation is the practice of imposing higher tariffs on finished and/or partially processed exports, giving rise to high rates of effective protection to processing industries in importing countries at the expense of those in countries of origin.
- 8 Garment exports from Haiti have duty-free access to the United States market under the Haitian Hemi-spheric Opportunity through Partnership Encouragement Act of 2008.
- 9 CUTS International, 2016; Economic Commission for Africa, 2014; OECD and World Bank Group, 2015; World Bank Group et al., 2017.
- 10 Postponable products are those which consumers may choose to defer purchases of to a later date, especially during economic downturns and times of uncertainty.
- 11 Fishing is part of the primary sector.
- 12 While agribusiness is widely associated with large-scale enterprise, the definition established by the Food and Agriculture Organization of the United Nations (FAO) also includes smaller farms, processors and so forth (FAO, 2013a). The agrifood industry is a subset of agro-industry centred on making, processing, preparing and packaging food products for human consumption.
- 13 Dihel et al., 2017; OECD, 2017c; OECD and FAO, 2017; UNCTAD, 2017i.
- 14 Government of Malawi et al., 2018; OECD, 2017a; Oya et al., 2017.
- 15 Keane, 2017; Minot and Ronchi, 2014; Nissanke, 2017.
- 16 Unlike the apparels segment, generally every step is mechanized in the modern textiles industry (weaving, spinning and processing industries). However, in some LDCs, such as Bangladesh, the textiles segment still uses traditional methods such as handlooms.
- 17 For example, preferences relating to the Everything But Arms initiative were recently extended to Jordan (European Commission, 2016).
- 18 Burundi, Kenya, Rwanda, South Sudan, United Republic of Tanzania and Uganda.
- 19 Hitt et al., 2001; ILO and World Trade Organization, 2011; Taglioni and Winkler, 2017; UNCTAD, 2016b.
- 20 A further complication is the susceptibility of the agricultural sector to entrenched perceptions whose validity may be questionable (Christiaensen and Demery, 2018), for example regarding the profitability of modern input use, the extent and nature of opportunities for rural non-farm enterprise, the assumed non-functioning of land markets in Africa and the assumed link from agricultural commercialization to improved nutrition.
- 21 The revealed comparative advantage index is used as an indicator of a country's relative advantage or disadvantage in producing certain goods or services based on its current trade flows, identifying sectors or activities where the revealed comparative advantage is highest as appropriate for specialization.
- 22 Benedictis, 2005; Platania, 2014; *The Economist*, 2012a.
- 23 International Organization for Migration, 2018; Kerr et al., 2016; UNCTAD, 2012d; World Bank, 2016b.
- 24 Similar effects may arise with regard to other occupations such as nursing, a skill targeted by countries such as the United Kingdom in a growing number of developing countries; however, there is a paucity of research in this area.
- 25 With the advent of globalization, the number of countries that now formally or informally allow citizens to hold dual citizenship has significantly increased.