Out of the 70 firms surveyed, 85% (56 firms) were involved with FOB-1 production, 6% (four firms) were involved with FOB-2 production and 9% (six firms) were involved with traditional CMT arrangements. They note that only four of the 70 firms surveyed offer finished products to retailers. This includes providing all necessary production material, including design and branding.

Although they do not distinguish between the end markets for these products they do note that, "most of the garment firms in Bangladesh are owned by domestic entrepreneurs who have limited capital, less experience, and little knowledge to carry out all necessary stages of production" (Alam and Natsuda 2013: 27). Competency in design was noted as a major barrier to entry by key informants in the sector. Overall, they conclude that although there is evidence of functional upgrading from CMT to FOB-1 production, the ability of firms to upgrade to FOB-2 is doubtful. They make reference to broad-based productive constraints, including weak infrastructure—a crucial component of logistics capabilities—as the reasons for this.

7.4 African GVC Case Studies

Despite the differences between the more recent quantitative additions to the GVC literature and that of the more qualitative wave of the 1990s, both perspectives recognise how global trade patterns have never been so interconnected. Moreover, that trading success within increasingly integrated global markets means entering and upgrading within GVCs. The ability of countries to do so depends on many of the policy measures applied at their borders, as noted by the traditional trade literature, as well as considerations related to institutions and economy geography. However, success also requires consideration of new issues and beyond the border measures.

It is recognised within the GVC literature that some upgrading processes may be easier to achieve within intra-regional value chains, precisely because these markets are less dominated by a few lead firms. Hence, supplying processed and branded chocolate may be more likely

for firms orientated towards intra-regional markets than more tightly controlled global markets, not only because of reduced competitiveness challenges but also because of similar tastes and cultural proximity. Barriers to entry within intra-regional markets may also be lower.

7.4.1 A Comparison of Kenya and Ethiopia

The high-value agriculture GVC has evolved in recent years to exhibit very similar tendencies to that of the textiles and clothing GVC. Because of this, and in view of recent developments in both sectors, this subsection presents a comparative analysis of recent upgrading processes in Kenya and Ethiopia. These are then subsequently related to the development of logistics capabilities and the ability to meet demanding "just-in-time" requirements.

Since the 2000's, around six UK retailers account for the direct sales route in the case of Kenya, and around half of these in recent years have been supplied directly by one major firm, a subsidiary of a major trans national corporation (TNC) (founded in 1750, originally as a trader and manufacturer of cotton). In recent years, because of continued growth in the sector, however, Kenyan leading firms have emerged. One of these recent entrants now ranks as one of the largest producers and exporters of fresh produce from Kenya and is among Kenya's top five flower exporters. Subsequently, the company has become part of a group that has expanded production into neighbouring countries such as Ethiopia and Ghana. In relation to the operations undertaken overseas, these have grown from production towards packaging and exporting, as well as into logistics, energy and general trading. This process of intra-sectoral upgrading has also begun to be replicated by other leading firms in the sector.

The available evidence suggests that Kenya is favoured as a preferred supplier mainly in view of its compliance infrastructure, a component of logistics capabilities (Table 7.1). In comparison, Ethiopia is viewed favourably in terms of cost. One aspect of this cost differential conferred to Ethiopia results from its status as a least developed country, compared to Kenya.

Table 7.1 Country capabilities

	Kenya	Ethiopia
Hectares	3400 (in 2010)	1600 (in 2010)
Main products	Range of products available: roses; other decorative flowers High value rose products (geographical factor)	Roses ~ limited flower product
Main destinations	66% UK; 17% Netherlands; 5% Germany; 12% other	84% Netherlands; 8% Germany; 8% other
Strengths	Certification and trust in compliance infrastructure: business to business and retailer specific Pool of skilled labour force Ten-year corporate income tax holiday Exemption from VAT and customs import duty on inputs Business support services, including industry associations Political stability	Cost competitive; incentives provided to investors Cheap labour force Ease of doing business Tax holiday for five years; duty free import of input materials Credit and finance available
Weaknesses	Perceptions regarding pesticide residue issues in the past (e.g., MRL) Perceptions regarding labour standard and rights issues, e.g., minimum wage legislation Difficult to start a business and register property; complex land management and administration Taxes are problematic with poor co-ordination among government agencies Labour is no longer low cost	Weak compliance infrastructure; delisted from some standards compliance (e.g., Sedex) Weak post-harvest technologies Labour standard and rights issues, e.g., minimum wage legislation Air freight dictated by government Lack of trade promotion support
Trade policy	Uncertainty regarding the EU-EPA negotiations was problematic and costs were borne due to a failure to conclude negotiations in advance of the deadline set by the EC Market access has been secured	LDC status and security of tariff rent available in EU market. Willingness to work with buyers and industry representatives, e.g. CBI Netherlands

Source: Adapted from Rikken (2011 and 2012)

7.4.1.1 Upgrading Opportunities, Including Multi-Chain

The range of upgrading opportunities for producers in the modern agricultural sector are similar to those available to new entrants into the textiles and clothing GVC. A form of functional upgrading could entail sales on the domestic market. Gaining control of logistics and supplying retailers with a flower product may be considered broadly comparable to movement from FOB-1 to FOB-2 suppliers in the textiles and clothing GVC (Keane 2017). A form of upgrading entails moving from supplying fresh cut flowers, towards the supply of complete bouquets and flower "product".

There is evidence of Kenyan cut flower firms moving towards a position of a full package supplier, with responsibility for sourcing all inputs, as in the case of a more relational type of GVC governance (Keane 2013). In this respect, it is fairly safe to say that Kenya is an FOB-2 type supplier. In comparison, Ethiopia remains at the FOB-1 stage of production. It mainly supplies fresh cut flowers (roses) mainly to Dutch auction houses; some supply is destined for UK retailers.

As described by Keane (2017), the comparison of GVC engagement in the cut flower GVC in Kenya and Ethiopia suggests there is evidence of a type of East African "flying geese" in action. This is taking place as investors in Kenya begin activities in Ethiopia, which is a lower cost producer of cut flowers. Ethiopia has been inserted into the cut flower GVC through a strong FDI-led process, with a specific focus on the supply of cut flowers to Dutch auction houses. It has exhibited an impressive performance to date in relation to the volume of cut flowers exported. There is evidence of some functions, notably logistics, being handled by the Kenyan firm.

The emergence of tiers of suppliers therefore includes some Kenyan lead firms, which also act as intermediaries, controlling production and supply to retailers, including from Ethiopia—because they have developed the logistics capabilities to do so. These results are interesting in a number of respects because they represent an aspect of the multi-chain hypothesis that is under-explored in the literature—horizontal integration. The development of formidable logistics capabilities invariably underpins these recent trends.

The evolution of the cut flower GVC suggests that some Kenyan lead firms have extended their range of services undertaken within the sector

across a number of countries, including Ethiopia. As described by Keane (2017), this is essentially a form of intra-sectoral upgrading, which is not currently conceptualised within the GVC governance structures identified by Gereffi et al. (2005). Intra-sectoral upgrading induced through improvements in logistics capabilities has occurred even though functional upgrading in the conventional sense, into international services such as sales and marketing, has not been achieved.

7.4.2 Firms in Southern Africa[6]

Firms based within the South African Customs Union (SACU) are highly likely to be subject to major or severe customs and trade regulations compared to most other regions (Keane et al. 2010). As major and severe customs and trade regulatory barriers are experienced, the more likely it is that Southern African firms export on an intra-rather than an extra-regional basis (Keane 2015).

In the following sub-sections, the results of the econometric exercise undertaken by Keane (2015) are summarised. This analysis moves beyond trade cost considerations in order to explore the capabilities underpinning the choice of export markers. It explores indictors related to GVC participation. This includes a customs, trade and regulation dummy variable as a proxy for logistics capabilities. Despite the limitations inherent in the research methodology, which are reflective of a more general lack of information on GVC-related firm-level indicators, differences between firms trading products mostly on an intra- and extra-African basis have been identified, which arguably warrant further attention.

7.4.2.1 Empirical Analysis

First, the results specifying γ as a dichotomous outcome variable, coded as = 1 if SACU firms only supply the domestic market, are presented in Table 7.2. These results suggest older firms are less likely to supply domestic markets, as is the case for those that are foreign owned. Firms selecting the domestic market are also less likely to encounter major or severe customs and trade regulations—an obvious result. Although the effect of firm size is

Table 7.2 Firms orientated to the domestic market

	B	S.E.	Wald	Sig.	Odds ratio Exp (B)
Ownership dummy	−3.917	0.221	313.795	0.000**	0.020
Manager's experience (years)	0.14	0.009	2.424	0.119	1.014
Firm age (years)	−0.14	0.006	4.846	0.028**	0.987
Customs, trade regulations dummy	−5.69	0.315	3.271	0.071*	0.566
Labour regulations dummy	−0.141	0.302	0.219	0.639	0.868
Workforce dummy	0.327	0.243	1.802	0.179	1.386
Size (no. of employees)	0.000	0.000	5.659	0.17**	1.000
Formal training dummy	−0.261	0.192	1.848	0.174	0.770
Constant	4.066	0.262	241.451	0.000	58.308

Note: *N* = 1652. The labour regulations, customs/trade regulations and workforce regulations dummy variables take a value of 1 if firms report these policy and institutional variables to have either a severe or major (negative) effect on production. Goodness of fit indicators: Cox and Snell 0.281; Nagelkerke R Square 0.511

Source: World Bank Enterprise Surveys and UN Comtrade; Keane (2015)

* = significant at 10% level; ** = significant at 5% level

significant, its influence in terms of the odds ratio is ambiguous: it neither increases nor decreases the odds of firms selecting the domestic market.

7.4.2.2 Results: Intra- and Extra-Regional SACU Exporters

The potential differences between firms that export goods traded mainly on an intra- or extra-regional basis are explored. In order to do this we first specify γ as a dichotomous outcome variable, coded as = 1 if SACU firms export mainly on an intra-regional basis. The results are presented in Table 7.3. The independent dichotomous variable is only coded 1 for those firms that produce products we definitely know are mainly supplied on an intra-regional basis (using our 50% threshold).

It is clear from the results presented in Table 7.3 that the policy/institutional barriers of customs/trade regulations and workforce regulations exert a significant influence (10 and 5% level, respectively) on the likelihood that a firm exports on an intra-regional basis. These results are easier to make sense of when we compare them to the results for extra-regional exporters. In Table 7.4 we specify γ as a dichotomous outcome variable, coded as = 1 if SACU firms export predominantly on an extra-regional basis.

Table 7.3 Results of logistic regression for intra-regional exporters

	B	S.E.	Wald	Sig.	Odds ratio Exp(B)
Ownership dummy	3.388	0.276	150.264	0.000**	29.599
Manager's experience (years)	−0.023	0.011	4.241	0.039**	0.978
Firm age (years)	0.006	0.007	0.650	0.420	1.006
Customs, trade regulations dummy	0.651	0.346	3.533	0.060**	1.917
Labour regulations dummy	0.390	0.338	1.330	0.249	1.477
Workforce dummy	−0.913	0.319	8.206	0.004**	0.401
Size (no. of employees)	0.000	0.000	0.124	0.725	1.000
Formal training dummy	0.287	0.223	1.650	0.199	1.332
Constant	−4.261	0.309	190.130	0.000**	0.014

Note: *N* = 1652. The labour regulations, customs/trade regulations, and workforce regulations dummy variables take a value of 1 if firms report these policy and institutional variables to have either a severe or major (negative) effect on production. Goodness of fit indicators: Cox and Snell 0.140; Nagelkerke R Square 0.349

Source: World Bank Enterprise Surveys and UN Comtrade; Keane (2015)

* = significant at 10% level; ** = significant at 5% level

Table 7.4 Results of logistic regression for extra-regional exporters

	B	S.E.	Wald	Sig.	Odds ratio Exp (B)
Ownership dummy	4.161	0.529	61.848	0.000**	64.115
Manager's experience (years)	0.022	0.013	2.981	0.084*	1.022
Firm age (years)	−0.015	0.011	1.958	0.162	0.985
Customs, trade regulations dummy	−1.359	0.640	4.513	0.034**	0.257
Labour regulations dummy	0.284	0.411	0.478	0.489	1.328
Workforce dummy	0.103	0.338	0.092	0.761	1.108
Size (no. of employees)	0.000	0.000	4.184	0.041**	1.000
Formal training dummy	0.117	0.285	0.169	0.681	1.124
Constant	−5.875	0.572	105.373	0.000**	0.003

Note: *N* = 1652. The labour regulations, customs/trade regulations and workforce regulations dummy variables take a value of 1 if firms report these policy and institutional variables to have either a severe or major (negative) effect on production. Goodness of fit indicators: Cox and Snell 0.105; Nagelkerke R Square 0.365

Source: World Bank Enterprise Surveys and UN Comtrade; Keane (2015)

* = significant at 10% level; ** = significant at 5% level

It may be expected that firms which trade predominantly on intra- and extra-regional bases exhibit differences related to the indicators we use as proxies for GVC participation. However, what has been revealed through this analysis is how firms that export on an intra-regional basis are more likely to experience problematic customs, trade and regulatory barriers, which may reflect weak logistics capabilities. Moreover, firms are less likely to export on an extra-regional basis if these logistics capabilities are weak.

To some extent these results further substantiate the empirical findings of Keane et al. (2010). Although this analysis could be improved in a number of ways—for example, interaction terms could be introduced, as well as the use of panel data to explore whether firms begin exporting on an intra-regional basis—nonetheless, the results are suggestive of important differences in relation to logistics capabilities and the likelihood of exporting on an intra-regional basis within Southern Africa, which deserves further attention.

7.5 Concluding Remarks

Much of the current mainstream interpretation of the GVC discourse focuses on these aspects of trade costs, which are directly affected by the logistics sector, but much more limited attention is paid to the role of the logistics sector in terms of the development of producers' capabilities. This is an important omission that assumes a particular importance in view of the role of the logistics sector in relation to conventional value-adding processes. Through comparative case study analyses of firms in Eastern and Southern Africa, within archetypal GVCs such as the textiles and clothing and high-value agricultural sectors, this chapter demonstrates why this is an important omission.

The comparison of GVC engagement in the cut flower GVC in Kenya and Ethiopia provides some evidence of a type of East African "flying geese" in action. This is taking place as investors in Kenya begin activities in Ethiopia, which is a lower-cost producer. Ethiopia has been inserted into the cut flower GVC through a strong FDI-led process, with a specific focus on the supply of cut flowers to Dutch auction

houses. It has exhibited an impressive performance to date in relation to the volume of cut flowers exported. There is evidence of some functions, notably logistics, being handled by Kenyan firms. The evolution of the cut flower GVC suggests that some Kenyan lead firms have extended their range of services undertaken within the sector across a number of countries, including Ethiopia. This is essentially a form of intra-sectoral upgrading, which is not currently conceptualised within the GVC governance structures identified by Gereffi et al. (2005). Intra-sectoral upgrading has occurred, even though functional upgrading in the conventional sense into international services such as sales and marketing, has not been achieved (Keane 2017). With regards to firms in Southern Africa, the results of an econometric exercise undertaken by Keane (2015) to explore firm-level performance across different types of value chains reveal differences between firms' trading products mostly on an intra- and extra-African basis, which warrant further attention.

Through comparative GVC case study analysis, which draws on the upgrading experiences of producers in the cut flower GVC in East Africa and the available evidence for firms that trade on an intra- or extra-regional basis in Southern Africa, including across multiple markets, this chapter shows that weak logistics capabilities may reduce the ability of firms to service multiple markets and the upgrading opportunities which may result.

Notes

1. Although there are three main types, the UNCTAD/Eora database has the most country coverage.
2. These results are presented in Shepherd (2016).
3. The World Bank's logistics performance index (LPI)—a weighted average of six indicators, and based on a survey of around 1000 logistics professionals—takes into account performance on trade and transport-related infrastructure, customs clearance, the ease of arranging competitively priced shipments, the ability to track and trace consignments, timeliness of delivery, and the competence and quality of logistics services.

4. See Pathikonda and Farole (2016).
5. This is derived from case study analysis of the automotive or electronics industry.
6. Adapted from Keane (2017) forthcoming.

References

Alam, M.D., & Natsuda, K. (2013). The Competitive Factors of the Bangladeshi Garment Industry in the Post-MFA Era, *Ritsumeikan Center for Asia Pacific Studies* (Working Paper 13003). Japan: Ritsumeikan Asia Pacific University.

Arvis, J.F., Duval, Y., Shepherd, B., Utoktham, C., & Raj, A. (2017). Trade Costs in the Developing World: 1996–2010. *World Trade Review, 15*(3), 451–474.

Baldwin, R. (2012). *Global Supply Chains: Why They Emerged, Why They Matter, and Where They Are Going* (CEPR Discussion Papers 9103, C.E.P.R. Discussion Papers).

Baldwin, R., & Venables, A. (2013). Spiders and Snakes: Offshoring and Agglomeration in the Global Economy. *Journal of International Economics, Elsevier, 90*(2), 245–254.

Brandt, L., & Thun, E. (2010). The Fight for the Middle: Upgrading, Competition and Industrial Development in China. *World Development, 38*(11), 1555–1574.

Gereffi, G. (1999). International Trade and Industrial Upgrading in the Apparel Commodity Chain. *Journal of International Economics, 48*(1), 37–70.

Gereffi, G., & Luo, X. (2014). *Risks and Opportunities of Participation in Global Value Chains* (Policy Research Working Paper No. 6847). Washington, DC: World Bank © World Bank. https://openknowledge.worldbank.org/handle/10986/18333

Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The Governance of Global Value Chains. *Review of International Political Economy, 12*(1), 78–104.

Kamau, P. (2009). *Upgrading and Technical Efficiency in Kenyan Garment Firms: Does Insertion in Global Value Chains Matter?* (PhD Thesis). Institute of Development Studies, Nairobi.

Keane, J. (2012). The Governance of Global Value Chains and the Effects of the Global Financial Crisis Transmitted to Producers in Africa and Asia. *Journal of Development Studies, 48*(6), 783–797.

Keane, J. (2013). Aid-for-Trade and Global Value Chains (GVCs): Engaging with High Value Agriculture GVCs and Developing Trade. In M. Razzaque

& D. W. te Velde (Eds.), *Assessing Aid for Trade: Effectiveness, Current Issues and Future Directions*. London: Commonwealth Secretariat.

Keane, J. (2014). *The New GVC Discourse: What's New, Innovative, and Missing?* (Briefing Paper). London: Overseas Development Institute.

Keane, J. (2015). *Firms and Value Chains in Southern Africa*. Washington, DC : World Bank Group. http://documents.worldbank.org/curated/en/840341467999993764/Firms-and-value-chains-in-Southern-Africa. Accessed 23 Aug 2017.

Keane, J. (2017). *Future Fragmentation: Effectively Engaging with the Ascendency of Global Value Chains* (J. Keane & R. Bambil-Johnson, Ed.). London: Commonwealth Secretariat.

Keane, J., & Bambil-Johnson, R. (2017). *Future Fragmentation: Effectively Engaging with the Ascendency of Global Value Chains*. London: Commonwealth Secretariat.

Keane, J. Cali, M., & Kennan, J. (2010). *Impediments to Intra-Regional Trade in Sub-Saharan Africa* (Report Prepared for the Commonwealth Secretariat). London: Overseas Development Institute. http://www.odi.org.uk/sites/odi.org.uk/files/odi-assets/publications-opinionfiles/ 7482.pdf.

Lee, J., & Chen, J. (2000). Dynamic Synergy Creation with Multiple Business Activities: Toward a Competence-Based Growth Model for Contract Manufacturers. In R. Sanchez & A. Heene (Eds.), *Research in Competence-Based Management*. London: Elsevier.

Memedovic, O., Ojala, L., Rodrigue, J.-P., & Naula, T. (2008). Fuelling the Global Value Chains: What Role for Logistics Capabilities? *International Journal of Technological Learning, Innovation and Development, 1*(3), 353–374.

Navas-Alemán, L. (2011, August). The Impact of Operating in Multiple Value Chains for Upgrading: The Case of the Brazilian Furniture and Footwear Industries. *World Development, 39*(8), 1386–1397.

Pathikonda, V., & Farole, T. (2016). *The Capabilities Driving Participation in Global Value Chains* (World Bank Policy Research Paper 7804). Washington DC: World Bank.

Rikken, M. (2011). *The Global Competitiveness of the Kenyan Flower Industry*, Paper Prepared for the Fifth Video Conference on the Global Competitiveness of the Flower Industry in Eastern Africa, The Netherlands: ProVerde Trade Strategies. http://www.kenyaflowercouncil.org/pdf/VC5%20Global%20Competitiveness%20Kenyan%20Flower%20Industry%20-%20ProVerde.pdf. Accessed 12 June 2014.

Rikken, M. (2012). *Kenya Flower Industry Global Competitiveness Report.* Belgium: Centre for the Development of Enterprise. http://proverde.nl/Documents/

ProVerde%20-%20Kenya%20Flower%20Industry%20Global%20Competiveness%20Report.pdf?531dec. Accessed 10 June 2014.

Shepherd, B. (2016). *Infrastructure, Trade Facilitation, and Network Connectivity in Sub-Saharan Africa.* Paper Prepared for the Overseas Development Institute.

Shepherd, B., Keane, J., & Goel, P. (2016). *Connectivity and Global Value Chain Participation, Commonwealth Trade Hot Topic Issue No. 136*. https://doi.org/10.14217/5jlr21n0m80q-en. Accessed 23 Aug 2017.

Zi, Y. (2014). *Trade Costs, Global Value Chains and Economic Development* (CTEI Working Paper 2014–06). https://doi.org/10.2139/ssrn.2877099. Accessed 23 Aug 2017.