6

Does Africa Have What It Takes to Upgrade in Global Value Chains?

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6.1 Introduction

Trends in international trade in the last few decades have been driven by globalisation, which is in turn spurred by major new developments in information and communication technologies (ICTs), and logistics, and greater trade liberalization. World trade in goods and services has increased steadily since the 1990s. From 1980 to 2016 trade in goods increased from USD 2 trillion to more than USD 15.7 trillion; and trade in services from about USD 2 trillion to over USD 20 trillion (UNCTAD 2017). Manufacturing processes and services that make up "value chains" are increasingly distributed strategically across the globe, with countries relying more and more on assembling imported intermediate goods for

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their own exports. These complex international production arrangements have been conceptualised as global value chains (GVCs). In practice, GVCs incorporate the full range of functional activities entailed in the production of a product or a service from its inception to final use, and how these activities are distributed over a range of countries (Sydor 2011; 2013a). As such, they engender a dynamic multipolar political economy in which countries compete to create and retain rents (Kaplinsky and Morris 2008).

Intermediate goods and services, which are introduced at any stage of the value chain, are increasingly capturing a greater proportion of world trade. In just about a decade, the values of this category of goods grew from below USD 4 trillion in 2004 to approximately USD 7.5 trillion in 2014 (UNCTAD 2014). However, participation in GVCs is uneven across regions and does not necessarily reflect a region's participation in global trade. Global value-added trade is concentrated in three regional blocks (Asia, America and Europe), which represent 85% of the GVC trade. By comparison, despite a 60% increase in trade from 1995 to 2011, Africa's share in global value-added only accounted for 2.2% in 2011 (UNCTAD 2013a). This small share in GVCs is partly due to the continent's participation being limited to the lower segments of GVCs, primarily supplying commodities to which value is added (that is, transformed) in other regions.

As more and more trade is conducted through these chains, there are significant implications for regional integration, trade performance and general economic development in Africa. A question that often arises is whether GVCs are an answer to Africa's development conundrum. The objective of this chapter is to examine the critical components of GVCs in relation to African trade, and evaluate the continent's capacity to meet the requirements for upgrading gainfully in these chains. As such, it attempts to identify the type of policies that would facilitate the continent's greater participation in GVCs in a manner that leads to sustainable growth and development, including employment creation.

The chapter contends that considering the structural constraints of Africa, policies to promote GVC participation cannot simply be grafted onto its economy. Comprehensive development policies are necessary to

address these constraints in order to promote intra-African trade as a basis for regional value chains (RVCs), through which the continent could develop its comparative and competitive advantages to position itself in GVCs gainfully.

It must be said from the outset that it is a daunting task generalising about Africa, a continent comprising 54 different countries, with a relatively richer north (in GDP per capita terms) and a poorer sub-Saharan Africa (SSA), excluding South Africa. Thus, the analytical insights might not apply with the same force to all these countries, or equally to the North African and SSA countries. In addition, there is so much heterogeneity in economic performance among countries: a few countries (Botswana and Mauritius) have long been good economic performers, to which another group of countries of "above-average economic performance" might well be added. Examples of the later include countries such as Kenya, Angola, Ethiopia, Rwanda, Nigeria and Ghana, even if their performance has not been consistent.

The next section discusses briefly Africa's position in GVCs, while Sect. 6.3 analyses Africa's participation in global trade in relation to manufactures and services, which dominate GVCs. It also attempts to identify what factors affect Africa's participation in trade and GVCs: does Africa have what it takes to participate in GVCs? The penultimate section explores the implications of the emergence and preponderance of GVCs for Africa's development, how the continent could utilise GVCs to meet its development priorities, and what sort of policy framework would be conducive for upgrading capacity to enhance its participation in GVCs. The final section concludes.

6.2 Africa and GVCs

Much of Africa in the immediate post-colonial period (1960s and early 1970s) attained positive and, in several cases, sustained robust growth rates in output. These gave way to the economic collapse of the late 1970s, paving the way for the structural adjustment programmes (SAPs) of the 1980s and 1990s. Since the mid-1990s, however, African countries

have experienced a moderate growth in output, but this has been episodic with high growth rates punctuated by low and sometimes negative growth rates, resulting in an average annual growth rate of 2.6% (1990–2000) compared to 1.8% in the preceding decade (1980–1990) (UNCTAD 2014b). This all changed at the beginning of the twenty-first century with the continent sustaining a robust average annual growth rate of 5% (2000–2010), although its per capita growth rate has been much slower at 3%; and the continent's share in global GDP at roughly 3% in 2015 is no different from what it was in 1970.[1]

Economic performance in the 2000s, as in the 1970s, has been on the back of higher commodities prices and, to a limited extent, volumes traded. Another similarity between the two periods is that Africa has been unable to utilise revenues from its commodities exports to structurally transform its economies. One school of thought thus contends that unless, and until, Africa undergoes a structural transformation, it will continue to export agricultural commodities, minerals and petroleum, which currently dominate its export basket. The "Africa Rising" school, on the other hand, believes that the good economic performance of the continent since the turn of the century has launched the continent onto a sustained growth trajectory. Whichever of these two competing schools one subscribes to, the indisputable fact is that Africa continues to be marginalised in global trade.

Africa's share in exported added-value is very small (Banga 2013, OECD et al. 2013), although it has been argued that the continent is a large volume exporter and tends to be heavily integrated into GVC compared to other developing countries (Mc Gregor et al. 2013). While this is true, one should caution that this is *forward integration* based on raw material exports. The benefits of this type of integration are less clear and certainly smaller than not only those of *backward integration*, but also of forward integration *based on innovation or research and design* both of which are critical to the continent's industrial development. Other scholars (e.g., Gibbon and Ponte 2005) argue that GVC success stories among African countries did not involve upgrading to more advanced and remunerative activities that serve niche markets, but rather "trading down" to simple, labour-intensive activities that serve mass markets.

These competing views on Africa's position in GVCs notwithstanding, there is a consensus that GVC *management and power* are critical in what share of the total value generated goes to the participants along the chain. The benefits from value chain participation are by no means equitably distributed among countries, and several countries have found themselves trapped at the bottom of GVCs (Banga 2013; Morris et al. 2012; Cheng et al. 2015; Conde et al. 2015; and Gibbon 2001…). This concentrated distribution of value added has been underscored by a recent study using Organisation for Economic Co-operation and Development-World Trade Organisation (OECD-WTO) Trade in Value-Added (TiVA) data. It has been estimated that OECD countries capture 67% of value created in GVCs; the BRICS economies (Brazil, Russia, India, China, South Africa) and a handful of economies from East and South-East Asia capture 25%; leaving the remaining 100+ developing countries to share the balance of 8% of value-added in GVCs (Banga 2013).

Despite this, there is growing literature that suggests that countries that participate in value chains enhance their comparative advantage in various tasks, through technology transfers and cost savings which in turn translate into productivity increases, greater sophistication and diversification of export baskets and greater overall economic benefits (UNCTAD 2013a; Conde et al. 2015; Cheng et al. 2015). Africa's greater integration into GVCs could thus be an engine to higher levels of growth and development, spurring investments in infrastructure, agriculture, industry and services, including information and communication technology (ICT) and domestic resource mobilisation. The continent cannot realise these benefits if it remains trapped at the lower levels of GVCs, hence the need to upgrade.[2] To upgrade successfully and gainfully, Africa has to overcome several challenges in terms of weak institutions, infrastructure, power or energy supplies, and skills. Other challenges include, traceability systems, standards, certification and policy framework, and customs and border management, including efficient port management. A major prerequisite will be an overarching policy context that is stable and predictable, underscored by a stable political system.

6.3 Africa's Participation in Global Trade and GVCs: Why Such a Small Share?

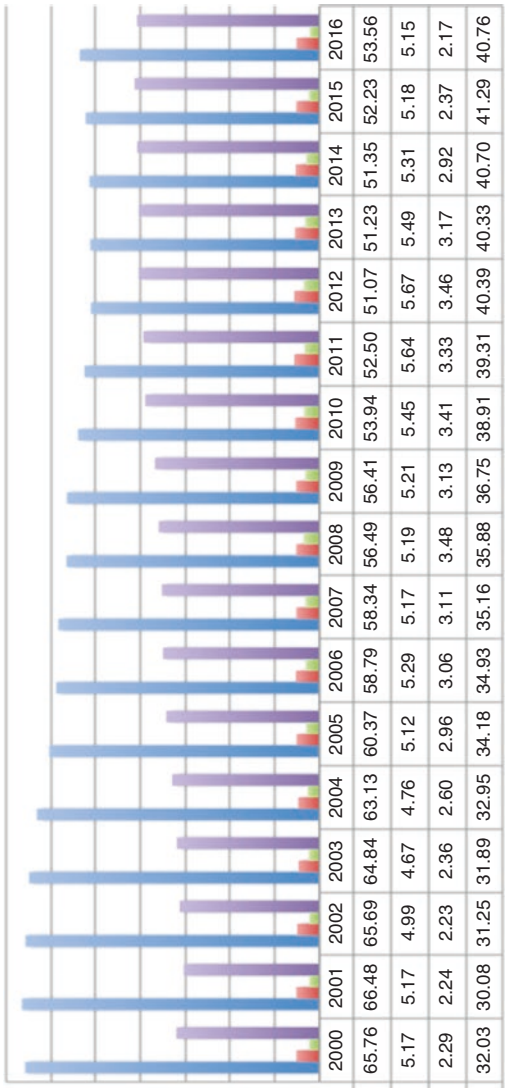
Primarily, Africa has been unable to take advantage of GVCs because its participation in global trade is low and much of this trade is limited to raw materials to which it adds little or no value—that is, *forward* integration.

Growth in Africa's merchandise trade (exports and imports) has kept pace with growth in global trade over the last decade or so, with a real export volume growth at 5.2% (2007–2011) exceeding the global average of 4.8%. However, this rate is below the average growth rates of developing Asia and other developing economies of 8.8% and 7.8% respectively over the same period (UNCTAD 2013b). The continent's share in global trade has remained more or less stagnant, hovering around 2–3%, over the past three decades and showing a steady decline from about 6% in 1980, making it the least successful trading region in the world (see Figs. 6.1 and 6.2).[3]

Broadly, much of the continent has remained a major exporter of raw materials (tropical/agricultural products, fuels, ores and metals), with manufactures, on average, accounting for less than one-fifth of total exports.[4] The fall in the prices of these commodities resulted in a significant decline in Africa's export revenues of 11.5% (from USD 388.7 billion to USD 361 billion) between 2015 and 2016 compared to a global export revenue decline of just 3.2% (Figs. 6.3 and 6.4).

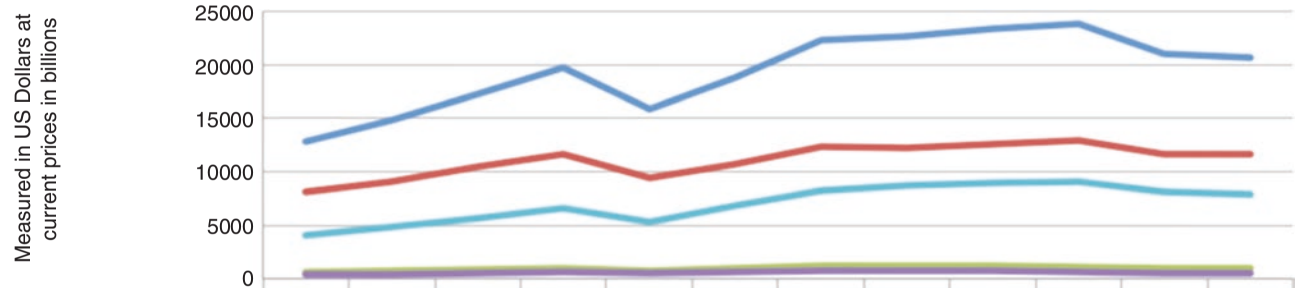
The recent growth spurt has been fuelled by large price and—to a limited extent—volume increases in the exports of unprocessed minerals and fuels, rather than in processed commodities. The continent's manufacturing sector (excluding countries such as, South Africa, Mauritius and, to some extent, Algeria, Egypt, Morocco and Tunisia in North Africa) has remained relatively small. Its share in total global manufacturing exports is currently less than 1%. The share of manufacturing in GDP has fallen since the mid-1970s and has stagnated at around 10% since 2008 (Fig. 6.5).

Growth rates of manufacturing increased from an annual average of 0.2% (1990–2000) to 5% (2001–2008) and then to 7.6% (2009–2014).



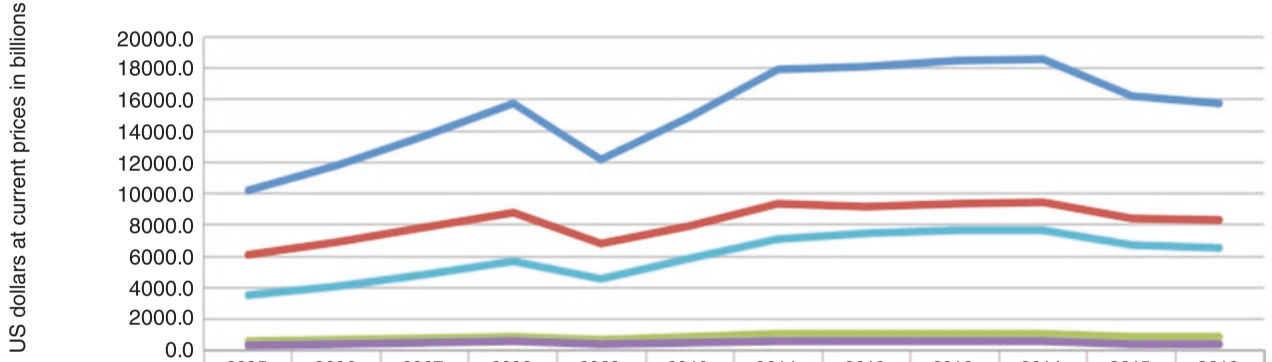
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Developed economies	65.76	66.48	65.69	64.84	63.13	60.37	58.79	58.34	56.49	56.41	53.94	52.50	51.07	51.23	51.35	52.23	53.56
LAIA	5.17	5.17	4.99	4.67	4.76	5.12	5.29	5.17	5.19	5.21	5.45	5.64	5.67	5.49	5.31	5.18	5.15
Africa	2.29	2.24	2.23	2.36	2.60	2.96	3.06	3.11	3.48	3.13	3.41	3.33	3.46	3.17	2.92	2.37	2.17
Asia	32.03	30.08	31.25	31.89	32.95	34.18	34.93	35.16	35.88	36.75	38.91	39.31	40.39	40.33	40.70	41.29	40.76

Fig. 6.1 Goods: Annual trade and share; 2000–2016 in percentage of the total world export. (*Source:* **Authors'** calculations, based on data from UNCTADStat, http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx)



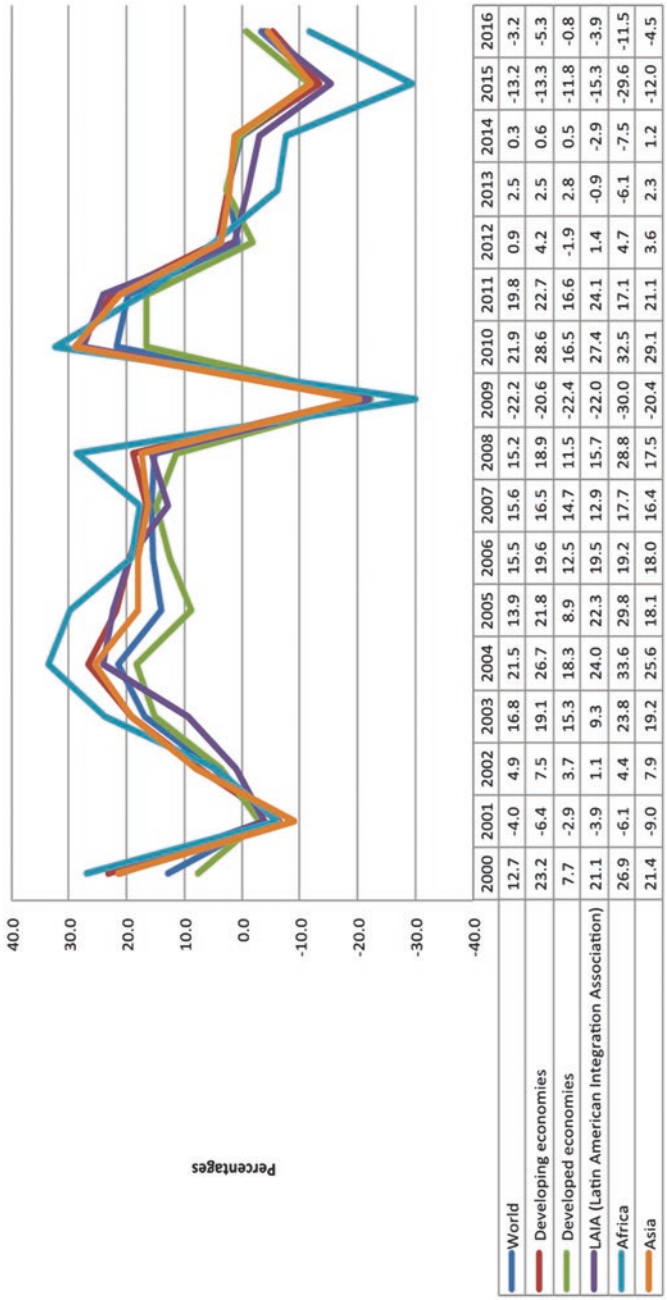
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
World	12828	14762	17219	19738	15802	18828	22361	22658	23357	23778	21064	20641
Developed economies	8075	9080	10515	11693	9400	10700	12376	12199	12603	12983	11675	11677
LAIA	607	720	819	952	755	948	1166	1188	1184	1154	995	961
Africa	381	445	532	664	485	612	694	730	705	651	490	457
Asia	4071	4792	5625	6619	5369	6858	8294	8670	8914	9116	8150	7878

Fig. 6.2 Global trends in goods and services by region, 2002–2016 (USD current billions). (*Source:* **Authors'** calculations, based on data from UNCTADStat, http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx)



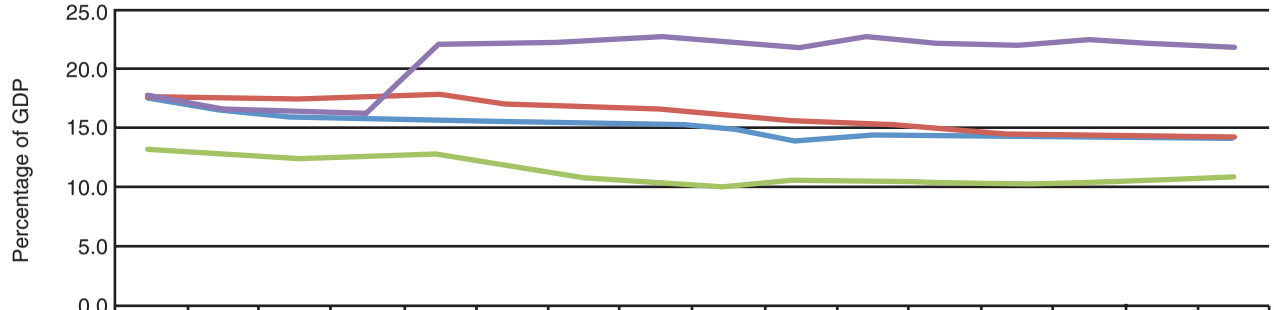
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
World	10173.7	11766.7	13640.3	15720.6	12213.5	14902.1	17950.2	18129.5	18538.4	18627.6	16203.1	15762.9
Developed economies	6087.2	6862.6	7888.3	8783.6	6802.4	7968.6	9323.4	9115.4	9309.0	9451.4	8374.2	8341.1
LAIA	541.8	647.8	732.6	851.1	663.9	844.6	1046.5	1062.8	1052.9	1021.4	867.8	835.0
Africa	319.2	375.2	449.8	571.0	399.6	517.2	595.2	625.3	604.1	545.5	388.7	361.2
Asia	3491.0	4119.6	4807.4	5670.1	4522.2	5822.3	7120.9	7430.1	7609.0	7685.1	6751.9	6477.7

Fig. 6.3 Global trends in goods, 2005–2016 (USD current prices billions – export)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
World	12.7	-4.0	4.9	16.8	21.5	13.9	15.5	15.6	15.2	-22.2	21.9	19.8	0.9	2.5	0.3	-13.2	-3.2
Developing economies	23.2	-6.4	7.5	19.1	26.7	21.8	19.6	16.5	18.9	-20.6	28.6	22.7	4.2	2.5	0.6	-13.3	-5.3
Developed economies	7.7	-2.9	3.7	15.3	18.3	8.9	12.5	14.7	11.5	-22.4	16.5	16.6	-1.9	2.8	0.5	-11.8	-0.8
LAIA (Latin American Integration Association)	21.1	-3.9	1.1	9.3	24.0	22.3	19.5	12.9	15.7	-22.0	27.4	24.1	1.4	-0.9	-2.9	-15.3	-3.9
Africa	26.9	-6.1	4.4	23.8	33.6	29.8	19.2	17.7	28.8	-30.0	32.5	17.1	4.7	-6.1	-7.5	-29.6	-11.5
Asia	21.4	-9.0	7.9	19.2	25.6	18.1	18.0	16.4	17.5	-20.4	29.1	21.1	3.6	2.3	1.2	-12.0	-4.5

Fig. 6.4 Average annual growth rate, world exports of goods by regions, % GDP (2005–2016)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
DE	17.6	16.5	16.0	15.9	15.8	15.5	15.4	15.3	14.9	13.9	14.5	14.5	14.3	14.1	14.1	14.1
LAIA	17.8	17.5	17.4	17.6	17.9	17.1	16.9	16.5	16.3	15.6	15.4	14.9	14.4	14.2	13.9	14.3
Africa	13.2	12.9	12.4	12.7	12.6	11.7	10.9	10.5	10.1	10.7	10.6	10.1	10.0	10.3	10.7	10.8
Asia	18.1	16.6	16.2	16.3	22.0	22.1	22.3	22.6	22.4	21.9	22.7	22.3	22.1	22.5	22.1	21.9

Fig. 6.5 Manufacturing value-added as a share of GDP. (*Source:* **Authors'** calculations based on data from UNCTADStat, http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx)

However, this does not necessarily indicate that a sustained process of industrialisation is underway, as this increase was from a low base (UNCTAD 2016). Africa's share of global manufactures was only 1% in 2000–2016, whiles Asia's increased significantly to 43% and Latin America's increased marginally to 4% over the same period (Figs. 6.6 and 6.7). The share of manufacturing in total value-added as a share of GDP

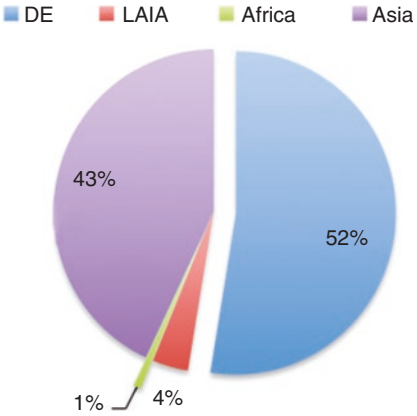
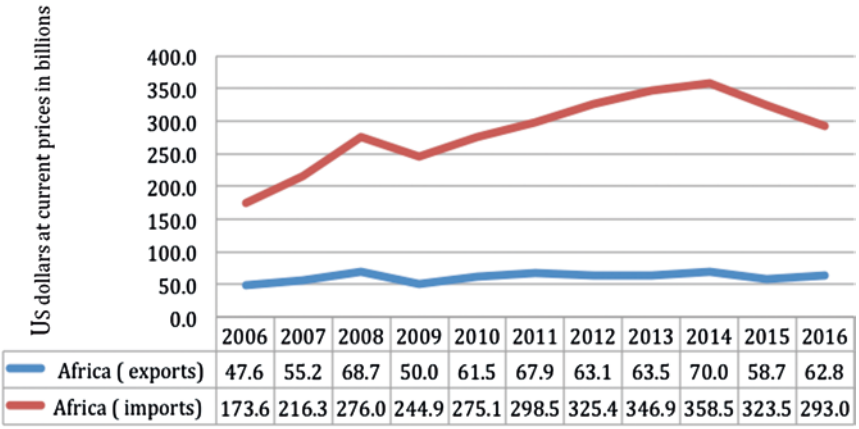
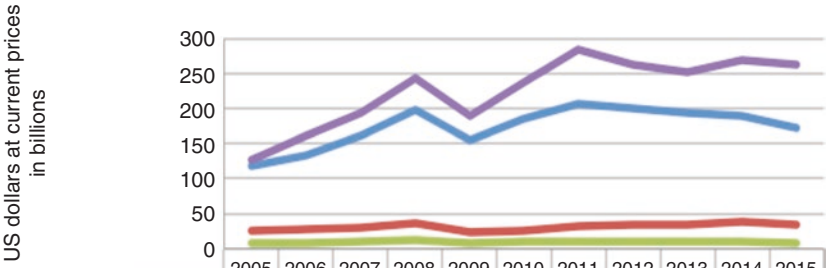


Fig. 6.6 Export of manufactured goods by degree of manufacturing (2016)



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Africa (exports)	47.6	55.2	68.7	50.0	61.5	67.9	63.1	63.5	70.0	58.7	62.8
Africa (imports)	173.6	216.3	276.0	244.9	275.1	298.5	325.4	346.9	358.5	323.5	293.0

Fig. 6.7 Evolution of African trade in manufactured goods (2006–2015). (*Source:* **Authors'** calculations, based on data from UNCTADStat, http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx)



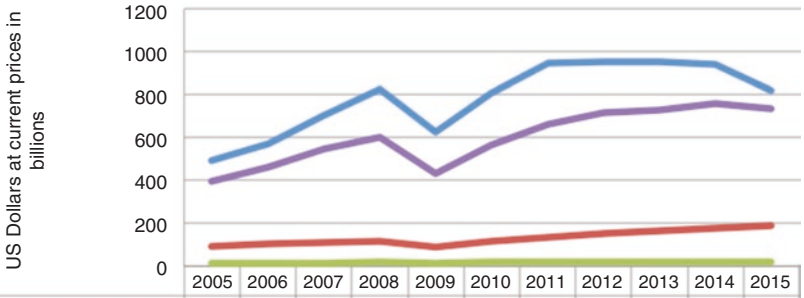
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Developed economies	118	133	162	199	155	185	206	201	193	189	172
LAIA	26	27	31	35	23	26	33	34	34	37	35
Africa	8	9	10	13	8	11	11	9	9	10	7
Asia	126	162	193	244	189	238	284	263	253	271	262

Fig. 6.8 Export of low skills and technology intense manufactures (2005–2015)

declined from 13% (2000) to 11% (2015), with the share of manufactures in total exports declining from 21% to 15% over the same period.[5]

The larger exporters of manufactures had, on average, lower labour productivity growth (UNCTAD 2016). More than 80% of employment in Africa is created in the low-productivity sectors of agriculture and informal services. The continent performs badly in exports of skills and technology intensive manufactures (Figs. 6.8 and 6.9). The share of intermediate goods in total exports increased marginally from 12% to 14% (2015–2016), although this is likely to be due to the decline in the export prices of fuels and other raw materials rather than an increase in volumes traded (Figs. 6.10 and 6.11). It would thus seem that the de-industrialisation trend that commenced in SSA in the late 1970s, and was aggravated through the structural adjustment period (1980–1990s) has yet to be reversed.

Regarding agricultural products, Africa has been losing market share to emerging and more efficient producers in other developing regions, for example coffee growers in Vietnam. On average, while productivity levels for almost all Africa's agricultural exports have been increasing over the years, these remain low and below those of other developing regions.[6] The continent has also found it difficult meeting the exigencies of modern international trade, including sanitary, phytosanitary and other food



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Developed economies	492	573	701	828	623	809	946	955	955	941	822
LAIA	93	107	110	116	89	118	136	151	162	180	187
Africa	11	13	15	19	13	17	20	19	20	22	20
Asia	393	462	545	603	429	566	662	713	726	756	734

Fig. 6.9 Export of medium skills and technology intense manufactures (2005–2015). (*Source:* **Authors'** calculations, based on data from UNCTADStat, http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx)

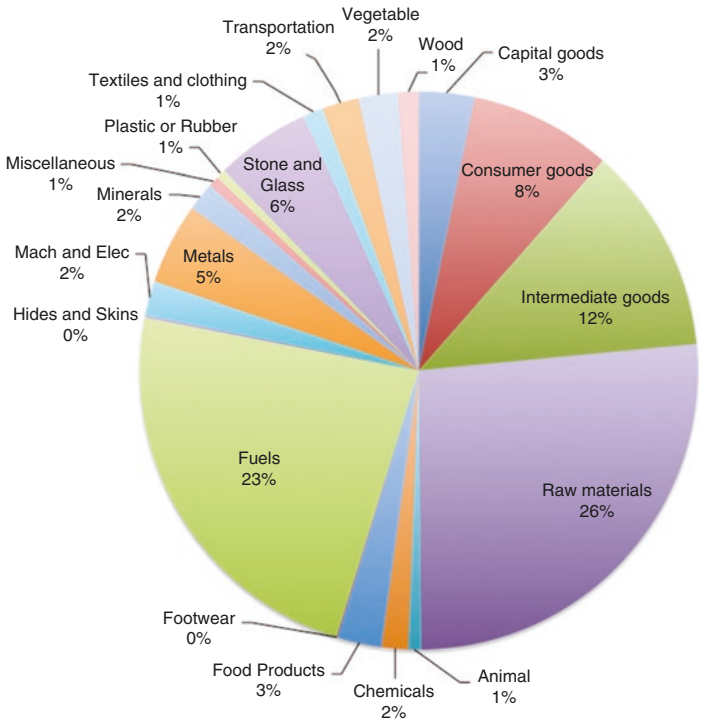


Fig. 6.10 Sub-Saharan Africa export products share, percentage of all products (2006)

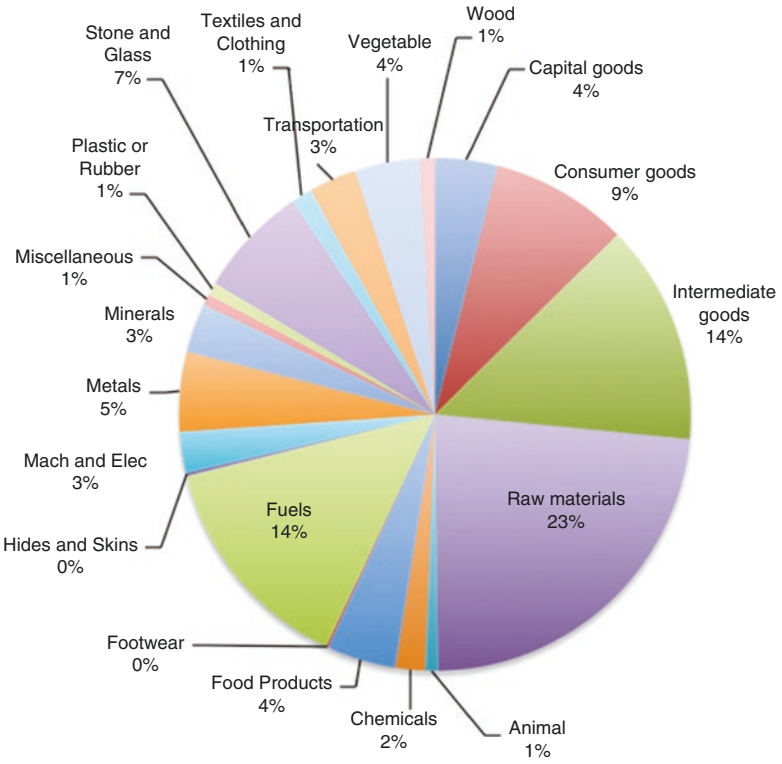


Fig. 6.11 Sub-Saharan Africa export product share, percentage of all products (2015). (*Source:* **Authors'** calculations, based on data from UNCTADStat, http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx)

safety and health standards, as well as traceability requirements. As a result, it has lost its competitive advantage in producing its traditional products such as cocoa and coffee vis-à-vis not only the new but also old, and more competitive producers in Asia and Latin America. At the same time, with a few exceptions—such as Kenya, Ethiopia, and Mozambique—Africa has been unable to break into trade in new and market-dynamic products such as horticultural products (fruits, vegetables and flowers), and fish and seafood, which have high income elasticity and, until the turn of the century, lower rates of protection in industrial and large developing countries.

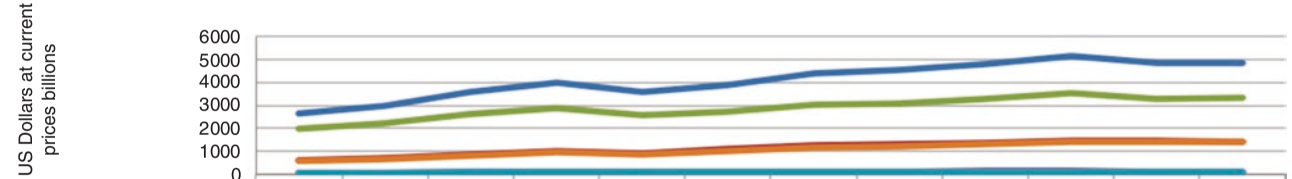
The services sector is significant in world trade, with trade in services (as a percentage of GDP) increasing from 10.9% (USD 2.7 trillion) to 12.3% (USD 4.9 trillion) over the decade 2005–2016. In Africa, however,

the transformation of this sector has been slow, as it has remained subsistent, dominated by low productivity and non-tradable activities. The sector has only picked up in recent years with a few countries supplying cross-border services, such as finance, banking, education, health, commercial and cargo air transport and telecommunications. Increases in exports of telecoms services topped the list with 3.6% (2005) as a share of total services exports increasing to an average of 6% (2013–2016), followed by transport services increasing from 24.9% to 28%, and financial services increasing from 1.9% to 2% over the same period. Despite the vibrancy of the market and the sector's growth at more than twice the global rate in 2009–2011, the continent has remained a marginal player in the global services trade (the fulcrum of global trade in the last decade) with an export share of only 2.0%, compared to developing countries' share of 29.4% in the last decade (see Figs. 6.12 and 6.13).

The region's trade performance, despite recent improvements, compares poorly with those of other developing regions in terms of the diversification of exports baskets, in particular the exports of skill and technology intensive manufactures, and participation in services trade. The reason for this is that the continent has been unable to undergo the type of structural transformation associated with its counterparts in South-East Asia. Primarily this is due to Africa's weak macroeconomic policy environment, low rates of investment and concentration of foreign direct investment (FDI) in the natural resource sector, political instability, poor trade and trade-related infrastructure, and weak institutions, including the legal regulatory frameworks. Low intra-African trade, relative to other developing regions, has also not helped to boost the continent's participation in global trade and GVCs. The next section takes up the issue of structural transformation.

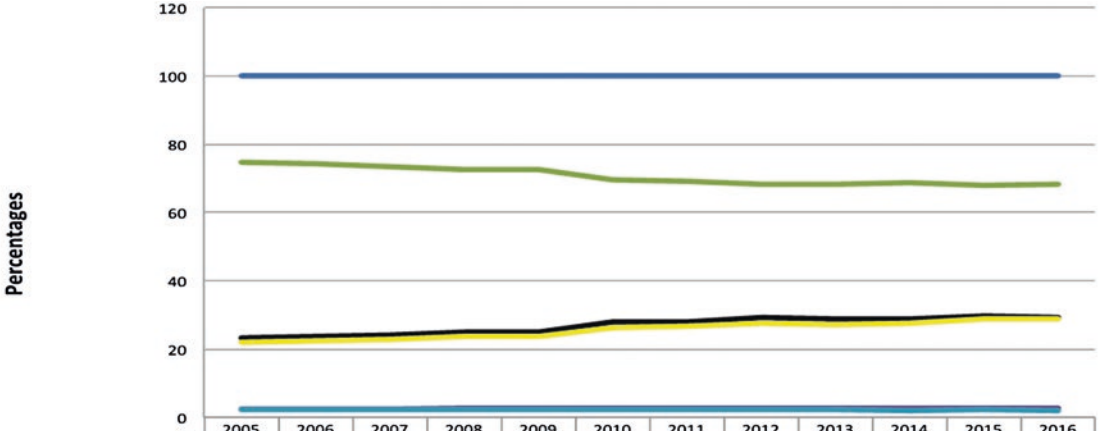
6.4 Structural Transformation Has Eluded Africa

Structural transformation encompasses a reallocation of activities across the three broad economic sectors of agriculture, manufacturing, and services. It entails a shift from low productivity (agricuture) to higher and more labour intensity activities (manufacturing and services). The process is uderscored



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
World	2655	2995	3579	4017	3589	3919	4406	4530	4820	5154	4862	4879
Developing economies	613	712	869	1003	903	1097	1242	1320	1388	1492	1452	1436
Developed economies	1988	2218	2626	2909	2597	2724	3048	3085	3296	3535	3303	3337
LAIA	65	73	87	101	91	104	119	126	131	132	127	126
Africa	62	70	82	93	86	95	98	104	101	106	101	96
Asia	580	672	818	949	847	1036	1173	1239	1305	1431	1398	1401

Fig. 6.12 Global trends in services, 2005–2016 (USD billions current prices—export)



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
World	100	100	100	100	100	100	100	100	100	100	100	100
Developing economies	23.1	23.8	24.3	25.0	25.2	28.0	28.2	29.1	28.8	28.9	29.9	29.4
Developed economies	74.9	74.1	73.4	72.4	72.4	69.5	69.2	68.1	68.4	68.6	67.9	68.4
LAIA (Latin American Integration Association)	2.4	2.4	2.4	2.5	2.5	2.6	2.7	2.8	2.7	2.6	2.6	2.6
Africa	2.3	2.3	2.3	2.3	2.4	2.4	2.2	2.3	2.1	2.1	2.1	2.0
Asia	21.9	22.4	22.8	23.6	23.6	26.4	26.6	27.4	27.1	27.8	28.8	28.7

Fig. 6.13 Export of total service, percentage of the world total, 2005–2016. (*Source:* **Authors'** calculations, based on data from UNCTADStat, http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx)

by labour absorption and productivity improvements in the modern sector and institutional improvements, all of which engender a higher and more diversified output. Several economists have long argued that this type of transformation is a sine qua non for long-term growth of per capita incomes, as this gives rise to the acceleration of productivity, output and employment growth over time. In this process, those sectors enjoying the highest rates of productivity growth and capacity expansion lead the innovation process and productivity gains. After that, the pattern of specialisation shifts towards sectors benefiting from faster growth of demand (domestic and external), which in turn generates positive impacts on output and employment (Ocampo et al. 2009; Herrendorf et al. 2014). In the case of Africa, UNCTAD has argued that developing the manufacturing sector and greater economic diversification should be an integral part of its structural transformation to enhance developmental gains (UNCTAD 2013b).

From this perspective, there has been limited structural transformation of African economies (with the exception of South Africa and Mauritius, and to a limited extent, Botswana, Kenya and perhaps a few countries in North Africa) from heavy reliance on the primary sector to a reallocation of economic activities across manufacturing and services sectors.[7] As mentioned earlier, the continent's manufactures represent about 1% of global exports in the last two decades. In addition to this, of all developing country regions, Africa had the highest commodity dependency ratio of 80–100% in 2012–2013.[8] The continent's commodity dependence increased by 7% between 2009–2010 and 2012–2013. Export concentration (based on the Herfindahl–Hirschmann index) increased by 1.2% over the same period, although the number countries for which three leading commodity exports contributed more than 60% of total commodity export revenues remained stable. In 2013, East and Southern African regions had the lowest export concentration ratio (about 0.2, on scale of 0 to 1), with a moderate concentration in North Africa (0.4), and the highest ratios in West Africa and central Africa of between 0.6 and 0.9 respectively (UNCTAD 2014c).

Simply put, Africa has been unable to escape the "(primary) commodity trap", the features of which are vulnerability to external shocks, (e.g., price volatility), the Dutch disease, rent-seeking behaviour due to resource rents, all of which discourage investment and diversification into new economic activities (Collier 2006; UNCTAD 2013c). Thus, the continent's trade performance is not at all surprising as the health of the commodities

sector in resource-rich developing countries affects their overall trade, economic performance and development.

The next section discusses factors that contribute to the lack of structural transformation in Africa.

6.4.1 Macroeconomic Policy Environment

A weak and unstable *macroeconomic environment* in several countries characterised by large fiscal deficits, high inflation and overvalued exchange rates during the late 1970s and 1980s was not conducive to the competitive development of the export sector.

During the 1990s, fiscal deficits averaged 3.5% (1990–2000), experiencing only a marginal deterioration due to the softening of commodity prices from 6.3% of GDP (2015) to 6.6% (2016) for the continent; 7.5% to 8.0% for oil exporters; and 4.4% to 4.5% for oil importing countries. North Africa recorded the highest deficit of 13.5%, while West Africa recorded the lowest deficit at 2.9% in 2016.[9] Inflation in SSA remained very high through the mid-1970s, at about 16.4%, that is 10% above the averages of industrial countries and Asia. A handful of countries also recorded triple-digit inflation (Chhibber 1991).[10] Inflation has, on average, been reduced to single digits in recent years, stabilising at an average of 8% over the period 2000–2017, with only a handful of countries still experiencing double-digit inflation. Floating exchange rates have been adopted by several countries in recent years, but real exchange rate appreciation has yet to be contained. In 2000–2011, this harmed the export competitiveness of more than two-thirds of countries in Africa.[11]

The prevalence of macroeconomic instability during much of the 1980s and 1990s, combined with a fledgling private sector, could not support investments and the diversification of the export sector. And, several countries have yet to design and implement policies or programmes that take advantage of the improving macroeconomic environment since the turn of the century.

6.4.2 Political Stability

Up to about the early 1990s, the forceful overthrow of democratic regimes in several countries, and civil strife—which sometimes deteriorated into

civil wars—in others, created an *unstable political environment*, not conducive to attracting long-term investments. There is little consensus on the "state of political governance" on the continent now,[12] but it is no exaggeration to say that on average this has improved, although challenges remain.[13]

Overall, the political space is becoming more and more liberalised with an increasing number of countries now organising democratic and multiparty elections, even if the outcomes are sometimes contested. As observed in United Nations Economic Commission for Africa (UNECA) governance reports, adherence to constitutionalism has increased and these elections have become acceptable as means of alternating power between competing contenders. In a sense, therefore, the political system has become more inclusive and diverse and the electoral process and institutions are becoming more transparent and credible. Thus, the constraining effect of this variable on investments should be on the wane, if progress continues.

6.4.3 Infrastructure

Lack of, or weak, *infrastructure* is one of the most significant constraints to economic development in many developing countries, and nowhere is this more apparent than in Africa. Weak or poor infrastructure creates inefficiencies and leads to a high cost of doing business as it increases not only production costs, but also international transport costs. Although international transport costs, as a proportion of the value of imports, have been falling over the period 1985–2014, they are highest for developing Africa. During 2005–2014, for example, they were 11.4% in Africa, compared with 9.0% and 8.0% respectively for developing Asia and America, and 6.8% for developed countries (UNCTAD 2015b).[14] Another study suggests that import and export costs are highest in Africa, representing 11% of the value of imports, compared with 7% in Latin America and the Caribbean and 8% in Asia (UNCTAD 1999). On average, developing countries in Africa (and Oceania) pay 40 to 70% more for international transport of their imports than developed countries, the major reasons being regional trade imbalances, lower trade volumes and poor shipping connectivity (UNCTAD 2015b).

Overall, transport costs are much higher for landlocked countries, and for landlocked African countries they are as high as 19% of import value

(UNCTAD 1999). Thus, it does not help that out of the 54 African countries 15 are landlocked, the highest proportion of landlocked countries among the developing regions.[15] These 15 countries suffer a double disadvantage, as they are forced to contend with not only their own customs and border procedures, which are often inefficient, but also with those of their neighbours and transit countries.[16]

The lack of availability and reliability of complementary infrastructure, electricity and, until recently, telecommunications, further compounds the problem, leading to a situation described by *The Economist* (September, 2014) as "bring-your-own-infrastructure" for potential investors. While microeconomic evidence on the impact of domestic infrastructure on firm investment is lacking, Bigsten and Soderbom (2005) suggest that poor infrastructure is the third leading barrier to investment in Africa after financing and corruption. Indeed, it has been argued that half of Africa's improved growth performance between 1990 and 2005 could be attributed to infrastructure investments, and that the returns to infrastructure investment are significant. ICT investments are believed to have returns of 30–40%; power/electricity generation, over 40%; and about 80% for roads (Kingombe 2011).

6.4.4 Institutional Framework

With the exception of a handful of African countries, the continent has weak institutions and legal regulatory frameworks. The World Bank's annual *Doing Business* reports have demonstrated that there is a strong correlation between transparent and less bureaucratic administrative, legal and judicial procedures, and the positive opinion investors have about potential opportunities in a country. A difficult business environment therefore has a negative impact on investment flows. In 2005, the correlation between a country's rank in terms of ease of doing business and the rate of fixed capital formation was found to be statistically significant at −0.33 (UNCTAD 2007). Transparency of the business environment, including secure proper rights, improves not only its quality but also cuts down the costs of doing business significantly. Recent World Bank data (2017) suggest that the time for export border

compliance in SSA is 108.2 hours, which is seven times more than in OECD high income countries and 3.7 times more than in emerging economies.

Well-functioning institutions are critical to the growth process because of the belief that they will boost investments in capital goods and human capital. The magnitude of the impact of institutions on economic performance is likely to be substantial, as suggested by recent estimates. For instance, an improvement in the institutional development of SSA from its current form to the mean of Asian developing countries could boost per capita incomes by as much as 80% (Johnson et al. 2007).

6.4.5 Investment[17]

Low saving rates cannot meet domestic investment needs, such as those required for expanding productive capacity. At the same time, given the unattractive investment climate, it is difficult to attract FDI to sectors beyond the extractives.

Average savings rates increased steadily from about 17.5% of GDP to about 24% (1960–1974) but finally collapsed to below 15% in 1992 (UNCTAD 2007) and have generally remained below those of other developing regions. In 2005, for example, the gross domestic savings in SSA, at 17.6%, was below those of Latin America (24%), South Asia (26%) and about 43% in East Asia and Pacific countries.[18]

Africa's average *investment rate* of 19% of GDP was lower than those of other developing countries (26%) in the two decades to 2011 (UNCTAD 2014b). In contrast, the efficiency or productivity of Africa's investment, was much higher than in other developing country regions of Latin America and Asia in 2000–2011.[19] However, combined with a low efficiency of public investment in SSA, it has been difficult to attract private investment, as returns to such investment have been sub-optimal (UNCTAD 2014b).

FDI flows to Africa by volume are low relative to flows to other developing regions, and in terms of share of global flows and flows to developing countries.[20] Until recently, its share of global FDI flows has been in

decline. From a peak of 6% in the mid-1970s, Africa's share of global FDI flows declined to 2–3% in the early 2000s. Similarly, its share of developing-country flows fell from 28% to 9% over the same period.[21] FDI destinations display a bias towards countries with large natural resource endowments. With few exceptions, oil- and mineral-rich countries, on average, accounted for about three-quarters of FDI flows in the two decades to 2003. Africa's colonial history has impacted its sources of FDI, with the region depending on just three countries for sourcing FDI. France and the UK, the two leading former colonial powers, and the USA accounted for close to 70% of the continent's total FDI, with the first two accounting for a little over 50% of FDI up to 1995.

FDI flows to the continent have increased in the past 15 years by roughly six times to about USD 74 billion (2015), but the absolute levels are still low relative to other developing regions. The share of total FDI going to resource-seeking operations has declined somewhat, with increasing flows heading to the manufacturing, consumer goods and services sectors. Home countries have witnessed some diversity, even if limited, as China and India have made inroads. Nonetheless, the lion's share still goes to the natural resources sector, and the former European colonial powers are still dominant as home countries.

Increases in intra-African investment flows in the last decade, have led some scholars to observe that they are becoming a significant source of FDI for the continent (Balchin et al. 2016).[22] Intra-African FDI, however, also displays a predisposition towards one sector, services. In the period 2003–2011, of the 673 deals relating to intra-African greenfield investments examined, about two-thirds (68.4%) were in the services sector, about one-quarter (27.9%) in manufacturing, and the rest (3.7%) in the primary sector.

In the services sector, 69.9% of all intra-African FDI went to the finance sub-sector (UNCTAD 2013b). While this is encouraging, as access to services such as finance and transport are crucial to the competitiveness of enterprises, the relatively small share going to manufacturing does not appear to make up for its "neglect" in extra-territorial FDI flows. South Africa (and to some extent, Nigeria for financial services) is the main source of intra-African FDI as it is the only African country among the top 20 investors in Africa.

Long-term investment finance continues to be a challenge for the continent. Net capital inflows remained relatively high in the first quarter of 2016, but these are volatile. And while the share of profits in national income has increased since the mid-1990s, it did not always translate into higher investment rates (UNCTAD 2016).

These constraints have also negatively impacted intra-regional trade, which, arguably, should be the launch pad for participation in GVCs.

6.5 Intra-Africa Trade

Despite the long history of regional economic co-operation, *intra-African trade* at about 11%, is low compared to other developing regions, such as Asia (50%), Latin America and Caribbean (21%)—it is 70% in Europe.[23]

A thriving informal trade suggests that official statistics under-estimate the actual level of trade among African countries (UNCTAD 2013c). However, this does not negate the fact that African intra-regional trade is less than its potential, considering the unexploited opportunities in product categories such as fuel. Intra-African trade in manufactured products—labour intensive and resource-based—and low-skill and technology intensive manufactures is relatively high. Non-fuel exporters account for much of the trade in manufactures as their share is higher than that for fuel exporters, which suggests that a more diversified production base could provide an impetus for enhanced intra-regional trade (UNCTAD 2013c). Indeed, there is some evidence that manufactured exports could be much higher with a more developed productive capacity and trade facilitation measures in a context of a proactive regional integration framework. Potential intra-regional trade in leather and leather products, for example, could have been ten times higher in the period 2003–2011 (Banga et al. 2015).

African regional economic co-operation has not been effective in stimulating greater intra-regional trade for a variety of reasons.[24] Low intra-industry trade (arguably, due to weak production and undiversified economic structures) and weak inter-sectoral and inter-country linkages because of poor transport links, have inhibited intra-African trade.[25] Similarly, they have frustrated the development of trade in intermediate

products, which could then evolve into RVCs, thereby facilitating participation and upgrading in GVCs.

Regional economic communities (RECs) have been largely policy or government driven, to the exclusion of the private sector, with markets being "engineered" without the necessary economic or market infrastructure and/or interlinkages within the production structures of countries.[26] They have overlapping memberships and, often, conflicting agendas for trade liberalisation, both of which have frustrated the elimination of intra-regional trade barriers and complicated the definition of the rules of origin for goods traded within the RECs. In addition, the uneven distributional impact of intra-regional trade liberalisation, including lower tariffs, weaken the commitment of governments because of their high dependence on tariff revenues and the apparent lack of alternative tax handles to replace such revenues.[27] RECs have thus performed below their trade and development potential in Africa, unlike in Asia where the participation of emerging economies in vertically integrated regional manufacturing production networks led to increased intra-manufacturing trade across countries and a rise in intra-regional trade (UNCTAD 2013b).

Africa improved its trade performance at the turn of the century, but its share of global trade and trade in GVCs has remained miniscule. A major factor, as discussed above, is its lack of structural transformation underscored by commodity dependence and weak competitiveness. The peculiar characteristics of FDI inflows to Africa have implications for the type of profit-investment nexus generated: enclavism, which denies the wider economy of skills, jobs, technology and growth spillovers; and a preponderance of greenfield investments over mergers and acquisitions. These types of FDI also create an unstable investment climate because of the greater volatility of natural-resource-linked FDI relative to manufacturing sector FDI. These inflows are, arguably, not conducive to entry into, or upgrading in GVCs. Low intra-regional trade marked by weak intra-industry trade suggests that Africa has yet to fulfil its trade potential both on regional and global levels. Increasing intra-African FDI flows should help fill this lacuna. They also display a bias for the services sector, but services are critical to enhanced GVC participation in the future.

What should be Africa's response to these challenges militating against its increased participation in GVCs via RVCs? This is the issue addressed by the next section.

6.6 What Should be Africa's Response to GVCs?

Until about a decade ago, the continent was locked into low growth sectors in which it could not compete, and into trade with countries (mostly Europe) that have lost growth momentum to (East) Asian economies (China, and more recently India), which have become new growth poles for the global economy. Given Africa's weak productive capacities and manufacturing sector it could not take advantage of the opportunities of outsourcing associated with the production of intermediate goods (and services) in GVCs. Nor could it utilise effectively the trade preferences, such as Europe's Everything but Arms (EBA) scheme and the USA's African Growth and Opportunities Act (AGOA) programmes, available in its traditional markets. These mutually reinforcing factors consigned Africa to the lower end of the value chain, supplying raw materials (agricultural products, fuels, ores and metals) to which little or no value is added.

There has been some geographical diversification of trade in the last two decades. China's merchandise trade with Africa increased by more than tenfold from USD 8 billion to USD 93 billion (2000–2008), while India's increased from USD 7.3 billion to USD 31 billion over the same period (UNCTAD 2010). By 2011, China's trade with Africa had climbed to USD 166 billion and about 12.5% of Africa's exports went to China and 4% to India, accounting for 5% and 8% respectively of the two countries imports. In recent years, Indonesia, Malaysia, Saudi Arabia, Thailand and the United Arab Emirates have also become increasingly important markets for Africa's exports (UNECA 2012). These new trade partners have, more or less, replicated the old trading patterns in raw materials, in particular because of China's insatiable appetite for raw materials. And, Europe is still the continent's top export destination.

The emergence of GVCs has exposed Africa's lack of competitiveness,[28] as demonstrated by its weak bureaucracy and dearth of institutional and physical infrastructure. It also lacks the ability to meet the exacting standards (tight delivery schedules, sanitary and phytosanitary, food safety and health) that participation in value chains entails. Low and stagnating shares in global trade and value-added trade suggest that *forward* integration, which responds to the supply side of GVCs for unprocessed products, is no longer a viable option for sustainable growth and development. Just as the opportunities for "trading down" are becoming threatened by ICT-based automation and rapid advances in science as well as in artificial intelligence (AI).[29]

A major policy response for the continent would be to change the composition of exports to its old destinations from low value raw material exports to high value, improved skill and technological content exports, and at the same time seek new markets for these. This would entail becoming active participants in GVCs, through *backward* integration, and moving into higher levels of the value chain. Given the wide-ranging structural constraints to its trade performance, the role of policy in impacting on value chain participation is limited, as revealed by recent empirical analysis (Conde et al. 2015). The main issue then becomes one of designing and implementing broad policies that assure a high level of economic growth and a broad level of development. This goes beyond specific policy measures to upgrade into GVCs to development policies that improve the overall efficiency and competitiveness of the economy. This is a developmental issue, first and foremost; and second, sectoral, implementing specific policies and institutional re-engineering directed at fostering enhanced participation in GVCs and assuring increased shares of value-added.

Considering the competitive disadvantage that much of Africa suffers relative to other developing regions in both the primary and secondary sectors, a major plank of policy reform should revolve round getting RECs to work to improve intra-regional trade as a basis for RVCs in the short to medium term, and GVCs in the long term. "*Acting* regionally while *thinking* globally" is important because, in the final analysis, the continent has to aim for global competitiveness if it is to move up in GVCs. This would entail specific efforts to implement existing protocols on regional integration and economic co-operation, and designing new

ones that specifically address the functioning of RVCs. RVCs by themselves would, however, not be a panacea. The role of the state will be critical in addressing the trade and trade-related constraints faced, in particular, by the least developed countries (LDCs) in the region. In some of the middle-income countries, however, governments could partner with the private sector through public–private partnerships (PPPs) to engender the conditions necessary for improving the efficiency of trade and competitiveness. PPPs may be necessary in some sectors in LDCs as well.

6.6.1 Why Act Regionally but Think Globally?

There is scope for intra-regional trade to support industrialisation and diversification as current regional exports are more diversified and dominated by manufactures and processed products. Africa's share of this group of products has been higher than its share in extra-regional trade since 1996 (UNCTAD 2013b). Despite this share subsequently falling, an enabling environment for competitive productive, regional trade could serve as a launch pad for African manufactures to the rest of the world. There is also scope for increasing trade in energy products, which are now the least commodities despite their dominance in extra-regional exports trade and in the imports of non-fuel producing countries. RVCs could thus provide opportunities to link gainfully into GVCs by moving up the value chain from primary input production to processed and manufactured products. In addition, intra-regional trade could increase the potential for formal trading of food products, much of which currently feature in informal cross-border trade. This would not only increase revenues, but also reduce instances of food insecurity and/or provide greater opportunities for addressing that problem.

Mature RVCs could provide an alternative way of improving competitiveness and integrating *backwards* into GVCs through branding, marketing and logistics. By so doing, they could improve bargaining power with lead firms and provide access to export markets, technology and FDI. This is demonstrated by the flying geese theory of East Asia whereby fragmentation of production networks improved cost competitiveness,

with final products being able to compete with those from developed countries.[30]

Enhanced intra-regional trade via RECs provides the opportunity for economies of scale for the functioning of RVCs, and a basis for the development of viable RVCs. In particular, RECs will automatically raise the demand for inputs into various products and permit economies of scale in the production of manufactures to supply regional markets. Well functioning RVCs will expand market size since individual African markets are too fragmented to provide the required conditions for international competition. Only three African countries, Mauritius, Morocco, Rwanda and South Africa, were considered competitive according to the global competitiveness index (2012–2013).

In the rest of this section, a three-pronged approach is presented. The first addresses economy-wide or structural weaknesses that would enable the economy to perform at, or close to, its optimum level. As far as possible, policy reforms should be co-ordinated across regional economies with a view to increasing intra-regional trade through RVCs. The ongoing discussions of the UNECA and the African Union towards launching a continental free trade area (CFTA) have the objective of creating the conditions necessary for increasing intra-African trade using RECs as building blocks.

Secondly, considering the high commodity dependence in the region, there is the need for a holistic approach to commodities development in each country, which should be co-ordinated within a regional framework. Inevitably, one aspect of this will focus on agricultural products with a view to promoting forward and backward linkages between the natural resource sector and industry at national and regional levels. This should serve as a spring board to identifying the best and most competitive positioning in each commodity GVC in terms of tasks or functions in the medium term. A second aspect of a regional commodities development programme will be to design a strategy for minerals, metals and fuel commodities exports based on establishing development linkages with national and regional economies.

Thirdly, there should be a framework for developing a services sector with a view to transforming it from providing low-value, informal ser-

vices to high-value, formal services that respond to the needs of public enterprises and private ones in the formal sector.

6.6.2 Economy-Wide Weaknesses

The advantages of intra-regional trade via RECs notwithstanding, the more fundamental problems of structural constraints to expanding the production of tradables would need to be addressed head on. These are unlikely to be solved by regional integration, nor would they be resolved in the short term. Domestic policies of African countries directed at solving these supply-side constraints (for example, poor infrastructure, skill shortages, and low levels of R&D) in the long term therefore become important if they are to reap the full benefits of regional economic integration, such as developing RVCs and moving up into the higher echelons of GVCs.

Macroeconomic management has improved a great deal in the aftermath of the structural adjustment programmes of the 1980s and 1990s. Inflation has been reduced to single digits in many countries. The adoption of a floating exchange rate policy in several countries has ensured that overvaluation of local currencies is limited. And, governments are now sensitive to the running of high fiscal deficits, although the collapse in a range of commodities prices since 2013 has exposed some vulnerabilities in this area. Several countries, notably Angola, Nigeria and Ghana, have had to seek IMF funding to sustain planned expenditures. This suggests that some improvements are required to maintain progress achieved in macroeconomic stabilisation. Firstly, countries have to ensure that windfall incomes from commodities do not give rise to increased expenditures that become unsustainable in times of low prices. Secondly, the management of sovereign wealth funds would need to be improved. This has become fashionable for several commodities producers (and for good reason) but there appears to be some management issues. Overall, better economic fundamentals will attract the necessary FDI into sectors capable of producing intermediate goods and services that have the potential to enhance GVC participation.

Other issues should also be the concern of national governments. These include, improving transportation and communications/ICT

infrastructure, human capital development, reducing red tape and bureaucratic hurdles, improving the business and regulatory environment, standards, and supporting research and development (R&D). Ethiopia's export-led strategy based on the provision of land, infrastructure and logistical services is a good illustration. The Millennium Dam project has significantly reduced the cost of electricity in Ethiopia relative to its neighbours and much of Africa. However, considering the costs imposed on neighbours by these constraints—in particular, landlocked countries, as discussed earlier—a regional approach to these would yield positive externalities. For instance, the new fully electrified cross-border rail link between Addis Ababa in Ethiopia and the Red Sea port of Djibouti, the first in Africa, will reduce the journey from three days to 12 hours. While programmes to improve links must necessarily be national they must also consider regional dimensions with a view to promoting intra-regional trade as well as the development of RVCs.

Tariffs would also have to be rationalised in a regional context considering that a critical element entailed in the functioning of R/GVCs is fragmentation of production across borders. Dismantling non-tariff barriers deserve priority as in practice they tend to be more constraining and frustrating of trade in the region. Product standards, discriminatory foreign exchange allocations, quotas, non-automatic licensing, administrative hurdles, unnecessary document requirements and non-harmonisation of such documents, and lengthy delays at border crossings are believed to have a negative effect on intra-African trade.[31]

The urgency and importance of these issues has led to renewed efforts towards actualising the treaties for a CFTA in the region. Well thought out programmes to address specific aspects of enhancing trade and promoting regional trade have languished in archives for a long time. Take the case for improving regional transportation links. The sub-Saharan Africa Transport Policy Program, launched in 1987 is dedicated to ensuring that the transport sector fosters Africa's poverty reduction, and regional integration. This is a unique partnership of SSA countries, RECs, three African institutions and many national and international development partners.[32] Over the past three decades, the programme has evolved somewhat, but it is by no means close to fulfilling its objectives. Africa's transport infrastructure has improved, but financing has proved a big

constraint to the provision and maintenance of new roads, although the potential benefits are enormous. One estimate suggests that paving Africa's key trading roads could cost as much USD 32 billion but generate additional trade worth USD 250 billion over 15 years (Buys et al. 2006). And, according to Gijon (2008), investment in new infrastructure would cost USD 40 billion a year, and another USD 40 billion per annum to maintain existing ones.

6.6.3 Holistic Commodities Strategy

A holistic commodities strategy should be designed with the overarching objective of reducing Africa's high commodity dependence and diversifying productive capacities to support and strengthen industrial transformation.[33] The strategy should cover both the agricultural and the extractive sectors, despite the distinctive characteristic of each sub-sector, in order to ensure that the necessary trade-offs and complementarities are taken into account to ensure optimal outcomes for the commodities sector—for example deciding whether to mine gold or bauxite deposits in a rich agricultural land; or whether fertiliser for agriculture should be produced locally where the local resources or inputs are available.

The agricultural sector, at a broad level, would certainly benefit from polices that: (a) reduce the impact of price volatility on domestic producers, for example, through warehouse receipt systems linked to local exchanges, and risk management strategies (in the case of cash crops, such as cocoa and coffee, this would be in the form of remunerative "producer prices" that shadow international prices); (b) facilitate access to finance and other agricultural inputs; (c) deepen regional commodities markets, consonant with existing RECs as a means of market expansion; (d) maximise and better manage the economic rents associated with commodities production (and exports), through the full use of policy instruments at the firm, sectoral and macroeconomic levels; (e) improve and harmonise safety and health standards through capacity building, and (f) encourage the formation of commercially oriented farmer-based organisations (FBOs), which can be the units of aggregation and support, in terms farmers' needs. There should also be a complementary package of

policies that makes it possible for small-scale producers to transform their operations into businesses.[34]

The specific objectives of the strategy should be to improve the competitiveness of the sector by reducing informality and introducing market institutions; enhance diversification and production to ensure forward and backward linkages in the domestic economy in order to increase value addition; and to create jobs. Policy interventions could target specific areas of development concern, with a focus on encouraging horizontal and vertical linkages and diversifying into new lines of economic activities that promote the local transformation of commodities through value addition.

Agricultural commodity sectors, such as those whose value chains are dominated by trans-national corporations (TNCs), may require policies that respond to their unique circumstances. In the case of cocoa, for example, the policy package would comprise the following: reinforcing competition law and policy at the national (and international) level; enhancing transparency in both local and international markets; creating opportunities for the emergence and development of small players at the domestic level; and promoting product differentiation to enable farmers to benefit from higher prices.[35]

The GVCs of metals, ores and fuels do not easily lend themselves to the type of value addition and gainful upgrading that is common with agricultural commodities. This is because they are dominated by big mining conglomerates or TNCs. It is therefore no surprise that GVC participation is weaker in Africa and Latin America, the developing regions most dominated by natural resources extraction. The strategy of governments for these commodities would therefore have to be slightly different. A "development linkages" strategy, sometimes referred to as "local content development", comes in handy here.

This is a policy that aims to reduce or break the enclavism of TNCs operations in the natural resource sector by establishing economic links between their activities and the domestic economy. The policy thrust would be to develop and promote the local private sector (small and medium scale enterprises (SMEs), for example) to undertake subcontracting work for TNCs in the host country. This would normally entail engaging the private sector to provide "producer services" such as business

and professional services (book-keeping, accounting, catering, hotel/accommodation, etc.), financial, banking and insurance services, and real-estate services (architectural, engineering, electrical, etc.). This should be supported by enhanced domestic R&D capacity engineered through co-operation arrangements between governments and TNCs. In time, this could evolve into the supply of inputs by local entrepreneurs and then into capacities to provide upstreaming services such as innovation and design, thereby increasing captured value at the domestic level.

Once more, it is important to underscore the central role of governments as some of these preconditions are a sine qua non. These include, in addition to the macroeconomic conditions: infrastructure and power issues discussed earlier; developing local capabilities in the form of a vibrant private sector with strong entrepreneurial skills and a skilled workforce; and TNCs willing to co-operate with government to achieve its objectives. Where these conditions are lacking, governments would have to institute programmes that deliver them, such as overhauling the educational, technical and vocational training system (setting up apprenticeship and/or on-the-job training programmes), supported by R&D in a context of a national innovation system.[36] TNCs could be brought on board through formal agreements/contracts, or informal ones based on nudging them towards these goals.[37] The contracts with TNCs could oblige them, inter alia, to undertake joint-ventureships (JVs) with local companies/SMEs, contribute to training funds, transfer technology and, in some cases, use "local content". Namibia established the Petroleum Fund to train personnel for its energy sector, and Qatar established JVs and entrepreneurship development and training programmes with Total to kick-start of its petrochemical industry. Other practical examples of this model are the Industrial Linkage Programme (ILP) in Indonesia and the Vendor Development Programme (VDP) in Malaysia.[38]

The two strands of the commodities development strategy could feed into a fully-fledged "industrial policy" in the medium to long term, with a new emphasis on sectoral strategies. The development linkages strategy, for instance, could thus be a harbinger to transforming the extractive sector into a manufacturing process divided into segments, similar to agricultural commodities, if properly imbedded in this industrial policy.

6.6.4 Services Sector: Moving from Low to High Value Services

Services are critical to sustained economic growth and transformation and, in particular, to the promotion of intra-regional trade and GVCs. They have become even more important than previously thought, as the TiVA database has shown that the services content of exported goods is much higher than revealed by statistics on trade in services (OECD et al. 2013).

Despite the growth of Africa's services sector in the last decade, it is still dominated by informality and low-value services at high cost, hence the need for improving its efficiency. Among other issues, this would entail addressing the structural impediments, including regulatory challenges, and prioritising services in the on-going discussions on the CFTA.[39] "Producer services", intermediate inputs to further production activities sold to other firms, are critical for value chain participation. These include, business and professional services, financial services, insurance services and real-estate services.[40]

Trade finance has most often been selected for attention but the other categories of services are equally as important (see discussion below). Access to formal sector finance should be a priority as it is still an issue for businesses. This has to be tackled in the context of new financial sector reforms that target competition and high costs in the sector, as these persist despite earlier reforms. Insurance services become indispensable to R/GVC participation as more and more firms sub-contract and would want to be protected in case of any default. This should be supported by an efficient legal and regulatory framework that deals with cases in the shortest possible time.

Intra-regional trade is facilitated by the ease of accessing trade information and the development of a range of business and professional services, including ICT, ancillary to trade promotion. These should be complemented with improvements and modernisation of the transportation and communication infrastructure (as discussed above). The WTO Trade Facilitation Agreement could be used to great effect in these areas. Countries should be encouraged to use the Trade Facilitation Agreement Facility to conduct a "needs assessment"—that is, to assess their capacity

to implement, and in the process identify, their technical assistance needs. For example, what type of measures (category A measures) should African countries have implemented within one year of the agreement coming into force? What of category B measures (that is, provisions that the member will implement after a transitional period following the entry into force of the agreement)? And most importantly, what assistance and support for capacity building is required by Africa in support of trade facilitation (category C measures)?

Middle income economies such as South Africa, Mauritius and North African countries, which have more developed manufacturing sectors, may have to pursue slightly different strategies that build on their existing capabilities. Considering their level of development, they may be better placed to adopt sectoral policies, such as clusters, through economic processing zones and FDI policies to encourage backward linkages that enable them to link gainfully and move up in GVCs.[41]

6.7 Concluding Remarks

Africa's participation in global trade and GVCs has remained insignificant as its exports are dominated by unprocessed raw materials (agricultural commodities, and fuels, minerals and ores), which provide inputs to the manufacturing processes of other countries. More than half a century after their independence, most countries remain highly commodity dependent because of a lack of structural transformation. Past efforts to address this have been met with limited success. While the rates of inflation and fiscal deficits have been brought under control, the high dependence on commodities with volatile prices and weak macroeconomic management capacities, means that several economies have yet to attain robust macroeconomic stability. With the exception of a few countries, weak infrastructure, inefficient bureaucracies and weak institutions are pervasive despite some recent improvements. All these problems dictate that efforts to enhance participation and upgrade gainfully in GVCs go beyond sectoral issues to incorporate economy wide (or macro) issues. In this context, gainfully linking into value chains becomes synonymous with the fundamental issue of how to ensure sustainable growth, development, job

creation and poverty reduction. Considering that most of these shortcomings relate to public goods, the role of the state cannot be overemphasised. However, there is an important role for the private sector, especially in middle level income countries and in some of the LDCs, where it could team up with government within the framework of PPPs.

Africa does not have the luxury of not enhancing its participation in GVCs. As goods and services get increasingly produced and traded across national frontiers, the essence of the "rules of origin" is being eroded and may soon become obsolete. This suggests that it is only a matter of time before the preferential trading schemes lose their value for the continent, as it becomes more and more difficult to assign "nationality" to a product with precision or certainty. RVCs could provide a training ground for countries before they venture into the global market. But for this to happen, and for the continent to get more beneficially embedded in GVCs, it would need to initiate the process of structural transformation.

The policy conclusions derived from the discussion so far are more illustrative than exhaustive and revolve round the following issues.

Get Economic Fundamentals Right This entails attaining macroeconomic stability on a sustainable basis, providing basic public goods (infrastructure, roads, energy and water), efficient and transparent bureaucracy, legal and regulatory frameworks, and an efficient financial sector.

Promote Trade Within a Regional Economic Co-operation Framework Develop institutions that promote trade facilitation, including trade and trade-related infrastructure (port improvements, reduce and/or harmonise documentation required for customs and border crossing, and eliminate random road checks), and improve access to trade information, trade finance and insurance services.

Develop a viable private sector that has strong entrepreneurial skills, supported by a revamped educational and skills training programme that provides a pool of well trained personnel for local and international business operations. This should be linked up with R&D and technological development and innovation systems, incorporating local businesses and research institutions and universities.

Africa's participation in global trade and GVCs is lacklustre because of the dominance of natural resource exports in its export basket. FDI is also concentrated in this sector due, inter alia, to the structural weaknesses of these economies, manifested in the prevalence of a weak physical and institutional infrastructure, non-transparent legal and regulatory frameworks and a generally weak business climate. The upshot is that the manufacturing and service sectors that have given impetus to the development of GVCs through the splicing or slicing of tasks have yet to develop their potential. African leaders are aware of the potential of intra-regional trade to develop RVCs through harnessing comparative and competitive advantages.

Several of the policies discussed above have thus been implemented at some point in the past in one or several countries but without the desired outcomes. In some cases, the programmes designed end up languishing on the shelves. A common theme in these two circumstances is the *lack of (serious) implementation.* Thus, it must be underscored that implementation of the programme is critical to attaining the desired outcomes. This should be conceived of as a process of evaluating progress being made and feeding the results of this evaluation into improvements to the programme. This necessitates an active commitment to and support of the programme from the highest political leadership (i.e., heads of state) who must also commit sufficient financial and personnel resources to implementation. In this regard, political stability becomes important, not only in the sense of not removing governments by force, but also considering policy consistency or predictability. Projects with high sunk costs and long gestation periods— the types likely to develop the skills and institutions necessary for developing sustainable value chains—only become attractive in such a context.

Appendix: Explanatory Note on Categories of Services as Described by UNCTAD

Services are classified into the following four main categories: goods-related services (manufacturing services on physical inputs owned by others and maintenance and repairs), transport, travel and other services.

Other services are further disaggregated into: construction, insurance and pension services, financial services, charges for the use of intellectual property, telecommunications, computer and information services, other business services, personal, cultural and recreational services, government goods and services and services not allocated (UNCTAD).

Goods Related Services This covers manufacturing services on physical inputs owned by others, and maintenance and repair services.

Transport This includes all transport services involving the carriage of people and objects from one location to another, as well as related supporting and auxiliary services. Also included are postal and courier services.

Transportation This covers all transportation services that are performed by residents of one economy for those of another and that involve the carriage of passengers, the movement of goods (freight), rentals (charters) of carriers with crew, and related supporting and auxiliary services. Some related items that are excluded from transportation services are freight insurance (included in insurance services); goods procured in ports by non-resident carriers and repairs of transportation equipment (both are treated as goods, not services); repairs of railway facilities, harbours and airfield facilities (included in construction services); and rentals or charters of carriers without crew (included in operational leasing services) (UNCTAD 2017).

Travel This covers primarily the goods and services acquired from an economy by travellers during visits of less than one year to that economy. It includes business and personal travel, which includes health-related expenditure (total expenditure by those travelling for medical reasons), education-related expenditure (i.e., total expenditure by students), and all other personal travel expenditure.

Communications Services This covers postal and courier services (which cover the pick-up, transport and delivery of letters, newspapers, periodi-

cals, brochures, other printed matter, parcels and packages, including post office counter and mailbox rental services) and telecommunications services (which cover the transmission of sound, images or other information by telephone, telex, telegram, radio and television cable and broadcasting, satellite, electronic mail, facsimile services and so on, including business network services, teleconferencing and support services). It does not include the value of the information transported. Also included are cellular telephone services, internet backbone services and on-line access services, including provision of access to the internet.

Construction Services This covers work performed on construction projects and installation by employees of an enterprise in locations outside the territory of an enterprise.

Insurance Services This covers the provision of various types of insurance to non-residents by resident insurance enterprises, and vice versa. These services are estimated or valued by the service charges included in total premiums rather than by the total value of the premiums.

Computer and Information Services This covers hardware and software-related services and data-processing services; news agency services include the provision of news, photographs, and feature articles to the media; and database services and web search portals (search engine services that find internet addresses for clients who input keyword queries).

Wholesale, retail trade, restaurants and hotels: ISIC Rev.3, divisions 50–55.

Agriculture consists of agriculture, hunting, forestry and fishing: (ISIC Rev.3, divisions 01–05).

Industry consists of mining and quarrying, manufacturing, electricity, gas and water supply, and construction (ISIC Rev.3, divisions 10–45).

Services include all other economic activities (ISIC Rev.3, divisions 50–99). Mining, manufacturing and utilities: ISIC Rev.3, divisions 10–41. Construction: ISIC Rev.3, division 45.

Notes

1. See, http://ivanstat.com/gdp/africa.html (accessed 28 August 2017).
2. Upgrading can be defined as improving one position up on the value ladder, that is, moving away from products and services with low value-added and low barriers of entry to more sophisticated and higher value-added products and services (January 2015).
3. In terms of exports and imports of goods and services, foreign trade accounts for more than 50% of the GDP of African countries. However, its relatively poor export performance only confirms how import dependent the continent is for its survival.
4. The discussion focuses on manufacturing, agriculture and services as these are the sectors that are currently important for GVC participation.
5. Note, however, that a recent ODI study contends that African manufacturing has grown by about 3.5% per annum in real terms over the past decade, with a gradual increase in the technology intensity of these exports (Balchin et al. 2016).
6. There have been some phenomenal increases in productivity levels in a few African countries since 2000, but these are still below productivity levels attained in other developing country regions, in particular, Asia.
7. Some authors have argued that there have been some improvements in the fortunes of Africa since the turn of the century (McMillan and Harttgen 2013), but this is varied across countries and regions, with the notable examples of Ethiopia (leather products and garments) and Lesotho (textiles and garments).
8. Commodity dependence is defined as the ratio of (percentage) the value of commodity exports to the value of total merchandise exports. A country is commodity dependent if this ratio exceeds 60% of the country's merchandise export value (UNCTAD 2014c).
9. African Economic Outlook, 2017, accessed 6 June 2010.
10. It is only in Francophone West Africa that inflation has traditionally been low because of the pegged exchange rate to the French Franc.
11. See, Economist Intelligence Unit (EIU), 16 March 2016
12. For example, the Ibrahim index of African governance shows that only six countries (Botswana, Cabo Verde, Mauritius, Namibia, Seychelles and South Africa) of the 54 have made progress between 2011 and 2014 (UNECA 2016).

13. There are still about seven leaders who have been in power for at least the past 25 years, and there have been some attempts to rewrite constitutions to remove term limits for incumbents, some of which have failed. Political conflicts in a handful of countries have become protracted (Somalia, Democratic Republic of Congo and the Central African Republic, for example) and a few countries in the Sahel also face increasing security risks.
14. This excludes insurance costs, as a percentage of the "cost, insurance, freight" value of the imported goods.Comprehensive data is unavailable, but anecdotal evidence suggests that, effectively, freight rates for exports are lower than those for imports in most countries in these two regions (UNCTAD 2015b).
15. These are, Botswana, Burkina Faso, Burundi, Central African Republic, Chad, Ethiopia, Lesotho, Malawi, Mali, Niger, Rwanda, Swaziland, Uganda, Zambia and Zimbabwe.
16. For other estimates of the cost of poor infrastructure to African economies and the challenges of landlocked countries, see Chap. 2, UNCTAD 2009.
17. Note that there is substantial cross-country variation in both savings and investment rates.
18. A few countries such as Algeria, Botswana, Cape Verde, the Congo, Equatorial Guinea, Guinea, Lesotho, Sao Tome and Principe, and Seychelles attained rates of 25% or more.
19. Measured by the Incremental Capital Output Ratio (ICOR).
20. Unless otherwise stated, this section is based on UNCTAD 2005b.
21. Viewed from another perspective, however, this share is consistent with the continent's share in world output as the ratio of Africa's share in global FDI flows to its share in global output has remained broadly unchanged over this period (UNCTAD 2005b).
22. This notwithstanding, intra-African FDI at 5% of total FDI projects value (2003–2010) is low relative to the share of intra-ASEAN (Association of South East Asian Nations) FDI inflows in total FDI flows to ASEAN, which averaged 16.7% (2008–2010).
23. See UNCTAD 2013; and UNECA 2004a, b.
24. See Onitiri 1995, UNCTAD 1996, and UNCTAD 2013a, for a more elaborate discussion of some of these issues.
25. Intra-industry trade averages 10% of total trade for a number of countries, with huge country variations (UNCTAD 2013b, citing Ofa et al.

(2012)). Transaction costs are much higher for intra-African trade than for trade with the rest of the world. The average transport costs in Africa represent 7.7% of total export value, double the global average of 3.7% (UNCTAD 2013b).

26. On the contrary, in Asia where intra-regional trade has been so successful, production interlinkages and intra-trade expansion have evolved in the absence of a formal institutional mechanism for co-operation and integration, almost certainly because of the greater involvement of the private sector.
27. Fiscal-compensation instruments designed to redress disproportionate losses suffered by some REC members are complex and difficult to administer, particularly because of unreliable statistical data in many countries.
28. It must be acknowledeged that a handful of countries have made it to the top 50/100 of the World Economic Forum's competitiveness ranking in the past two decades.
29. *The Economist*, 26 August 2017, for example, reports of advanced efforts to use genetic engineering to grow leather without any need to raise animals. And, there are companies currently experimenting with automation for sewing clothes, without any need for tailors.
30. Starting with the first tier of countries—Japan, South Korea, Taiwan and Hong Kong—production networks later moved into the second tier of countries comprising Indonesia, Thailand, Malaysia and the Philippines.
31. For a detailed discussion on these, see UNCTAD 2013b.
32. The partnership comprises 36 SSA countries, eight RECs, two African institutions (UNECA, AU/NEPAD); ten active donors—the European Commission (main donor), Denmark, France, Ireland, Norway, Sweden, the UK, the Islamic Development Bank, the African Development Bank and the World Bank (host)—and numerous public and private state and regional organisations.
33. Both the African Union and the Secretariat of the African Caribbean and Pacific (ACP) are in the process of designing such regional strategies. For the ACP, see paragraph 26 of the Sipopo Declaration "The future of the ACP Group in a changing world: Challenges and opportunities", 7th Summit of ACP Heads of State and Government, Sipopo, Equatorial Guinea, 13–14 December 2012.
34. For an elaborate discussion on this, and the specific policies entailed, see UNCTAD 2015c.

35. For the details of these policies, see Gayi and Tsowou 2016
36. For the technical details on the innovations systems for local value chain and knowledge, see Lee 2017.
37. The informal approach has been found to work quite well in some countries as it is based on trust between governments and TNCs, and reduces or avoids legalities. However, whichever of these two approaches is adopted will depend on the political, social and economic context of the country.
38. The objective of Indonesia's ILP is to develop domestic SMEs into competitive manufacturers and suppliers of parts and components and related services to TNCs, which benefit from some fiscal incentives such tax incentives for limited periods. Eligible SMEs are granted, among other benefits, an investment tax allowance on qualifying capital expenditure incurred within a specified period. Malaysia's VDP has similar objectives, that is: to stimulate SMEs as reliable manufacturers and suppliers of industrial parts and components required by TNCs and large industries—so called "anchor companies" willing to participate; and create growth through "industrial deepening" and import substitution. Participating SMEs must meet certain conditions, for example, 70% local equity participation, and have skilled workers with relevant experience. For details, see UNCTAD 2005a, b.
39. For a detailed discussion on how to unlock the potential of Africa's services sector to promote trade and development, see UNCTAD 2015a.
40. Based on International Standard Industrial Classification (ISIC) Rev.
41. For a detailed discussion of these policies and how they have been implemented in developing countries in Asia and Latin America, see Banga 2013.

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7

Logistics and Value Chain Development: Cost and Capability Considerations

Jodie Keane

7.1 Introduction

The term global value chain (GVC) has been transformed in recent years and emerged as a new paradigm to understand contemporary patterns of global trade. The more recent additions to the GVC literature focus on vertically fragmented trade—trade in intermediate goods—between tiers of firms and suppliers organised within global production networks. As described by Keane (2014), this literature was prompted by the need to better understand the domestic and foreign content of exports, so as to avoid double counting related to the use of imports. In comparison, the highly asymmetric distribution of

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shares of value added between chain actors was the focus of the 1990s wave of GVC literature (Keane 2012).

In view of the low shares of value added now available at some GVC entry stages, coupled with high trade costs because of geographical distance from the main hubs of global economic activity, attention has begun to shift towards analysis of "future fragmentation" processes (Keane and Bambil-Johnson 2017). It is recognised that the global trend toward supply chain rationalisation poses big challenges to smaller countries and firms, which face substantial scale and purchasing power limitations (Gereffi and Luo 2014). It is increasingly recognised that, underpinned by the fourth industrial revolution, future fragmentation processes will be supported by a very different global trading landscape.

Through comparative analysis of the interactions between trade costs, GVCs and economic development, Zi (2014) finds that "Factory South" (as opposed to "Factory US", "Factory Europe" and "Factory Asia") is likely to be regionally clustered. This finding is based on an analysis of two opposing forces: international cost differences and the benefits of co-location of related stages. This is because of recognised tensions between the comparative costs that create incentives to "unbundle" compared to agglomeration forces that may bind some parts of a process together, for example, through reducing the costs of co-located activities and developing network effects.

However, while much of the current GVC discourse has focused on these aspects of trade costs, directly affected by the logistics sector, much more limited attention has been 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: gaining control of the logistics sector can assist in enabling forms of upgrading. The ability to service multiple markets can also assist in enabling a type of "multi-chain upgrading" (Navas-Aleman 2011).

Recent developments within the global economy and archetypal GVCs suggest that in order for sub-Saharan African (SSA) countries in the twenty-first century to effectively adapt to the emergence of tiers of suppliers, they must address the underlying factors of their logistics capabilities.

This includes progressing from being a supplier located at the lowest tier within the GVC without full responsibility for delivery to end markets, towards assuming this role and therefore capturing and adding more value in the process.

Through comparative GVC case study analysis, which draws on the comparative GVC 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 underscores the importance of the logistics sector in terms of the development of producers' capabilities.

This chapter is organised as follows. In Sect. 7.1, we review aggregate trends in relation to sub-Saharan Africa's participation in GVCs and the influence of trade costs. In Sect. 7.2, these trends are reviewed alongside the available evidence on logistics capabilities. In Sect. 7.3, country-specific comparative value chain analyses are introduced. Finally, this chapter concludes regarding the role of the logistics sector in terms of the development of producers' capabilities. In view of the role of the logistics sector in relation to conventional value-adding processes, gaining control of the logistics sector can assist in enabling forms of upgrading, particularly multi-chain upgrading.

7.2 Economic Geography and Cost Considerations

An excessive penalty on integration with GVC is exerted on many African countries because of small domestic economies in addition to long distances from global centres of commercial activities. This results in economic disadvantages in view of excessive trade costs. These cost disadvantages must be considered within the context of available value-added shares being low at the entry level stages of GVC participation (Baldwin 2012).

As discussed by Shepherd (2016) and Arvis et al. (2017) one metric that provides an overall indication of a country's degree of integration with world markets comes from the ESCAP-World Bank Trade Costs Database. This database provides a comprehensive measure of bilateral

trade costs as it incorporates all factors that drive a wedge between factory gate prices in the exporting country and consumer prices in the importing country. It therefore covers the full range of trade frictions, including tariff and non-tariff barriers, regulatory measures, standards, differences in cultural and legal institutions, and geographical and historical factors (Shepherd 2016). It means that bilateral data can be aggregated into a single number per country by calculating "average" trade costs, in the sense of a constant value for trade costs that, if applied to all bilateral partners, would result in the same level of total trade as is actually observed in the data.

7.2.1 Trade Costs for Sub-Saharan Africa

The results calculated for trade costs in SSA by Shepherd (2016) show that they are around twice as high as in the comparator markets, with the exception of South Africa, where they are around 1.5 times as high. This result, although indicative of the economic penalty exerted in view of geographical factors, also suggests that capabilities matter: although South Africa is geographically more distant from major markets than some other countries in the region, its trade costs are substantially lower.

In order to emphasise how value chains are networks of co-ordinated transactions rather than a linear series of point-to-point movements, Shepherd (2016) represents the value added in exports data in network form for agriculture and textiles and clothing respectively, taking 2000 and 2012 as the base years. In order to do this, only the largest export flows among regional partners and the UK and USA are considered. As discussed by Shepherd (2016), each country is represented as a box, and its largest trade flow is a line connecting it with the destination market. The results from this exercise are presented in Figs. 7.1, 7.2, and 7.3.

Within both of the archetypal GVCs, the UK and USA are evident as major sources of demand for SSA's value-added in both the agricultural and textiles and clothing sectors. These networks are seemingly rather stable over time and between 2000 and 2012, although in agriculture Mozambique moves from the UK-centric cluster to the USA-centric

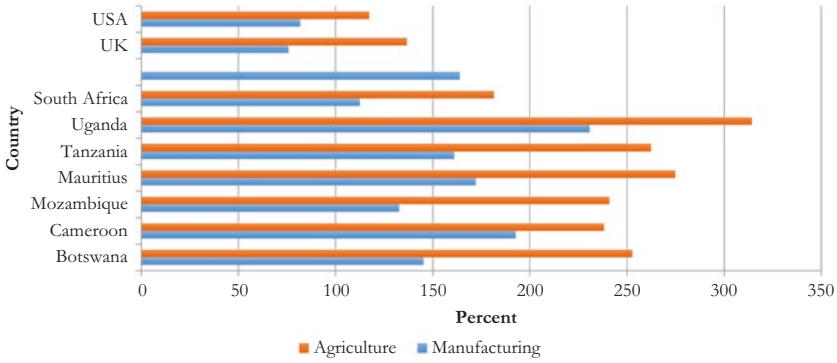

Fig. 7.1 Trade costs in agriculture and manufacturing, per cent ad valorem equivalent, selected countries, latest available year (2012). (Source: Shepherd 2016)

cluster, via a connection with South Africa. The data suggest that this particular country has developed stronger links with its large neighbour in agriculture, which in turn has led to an indirect linkage to the US market.

For agriculture, only two SSA countries have their largest export flows with another SSA country (South Africa). For textiles and clothing, the picture is somewhat different, with large chains predominantly connecting African countries to the USA. Mozambique has changed its position in the value chain over the period analysed to service the USA-driven textiles and clothing value chain to a greater extent than the EU-driven chain.

Although these results present us with some interesting shifts over time, they focus on vertically fragmented intermediate goods trade. This is because over the last two decades, some firms within particular sectors have internationalised to such an extent that their operations now span multiple national territories. The emergence of tiers of suppliers within GVC-trade has become more pronounced in recent years. Given this, a greater range of data are required in order for policy-makers to make better sense of the new GVC phenomenon with respect to trade in goods and services, including in the logistics sector—a key horizontal enabler—which have accelerated under the recent globalisation processes.

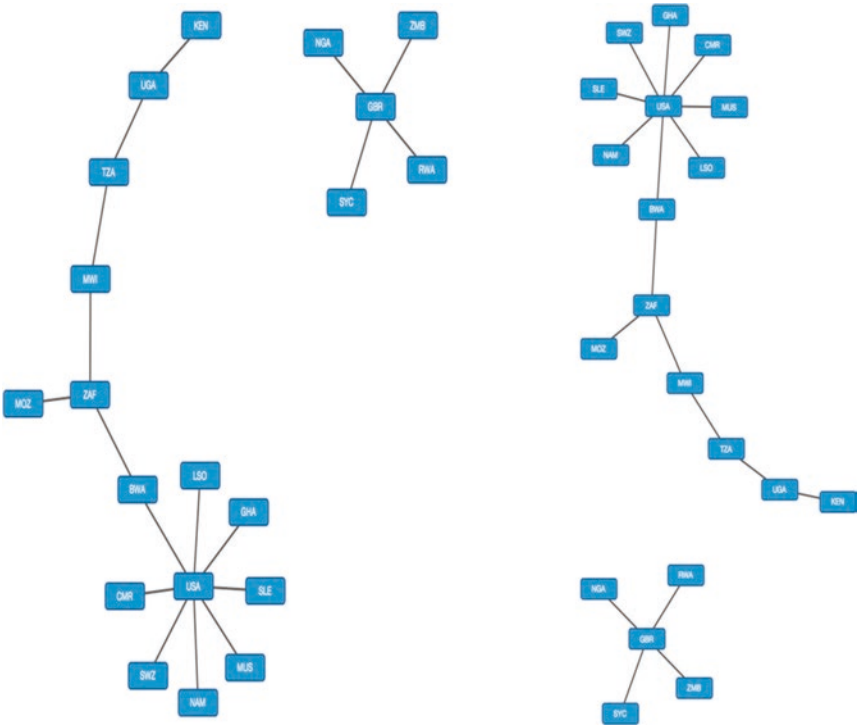

Fig. 7.2 Network representation of value-added trade in agriculture in SSA, largest export flow only among the partners considered, 2000 (top) and 2012 (bottom). (Note: Country codes are Botswana (BWA), Cameroon (CMR), Ghana (GHA), Kenya (KEN), Lesotho (LSO), Malawi (MWI), Mauritius (MUS), Mozambique (MOZ), Namibia (NAM), Nigeria (NGA), Rwanda (RWA), Seychelles (SYC), Sierra Leone (SLE), South Africa (ZAF), Swaziland (SWZ), Tanzania (TZA), Uganda (UGA), Zambia (ZMB), UK (GBR), and the USA; Source: Shepherd 2016)

Although new understandings of how countries are positioned within GVCs have been made available through the creation of input:output tables this descriptive analysis fails to illuminate further on the incentives to fragment and relocate different parts of a production process.[1] There are recognised tensions between the comparative costs that create the incentive to "unbundle" some parts of a production process, compared to agglomeration forces that seek to bind parts of a process together and facilitate co-location (Baldwin and Venables 2013).

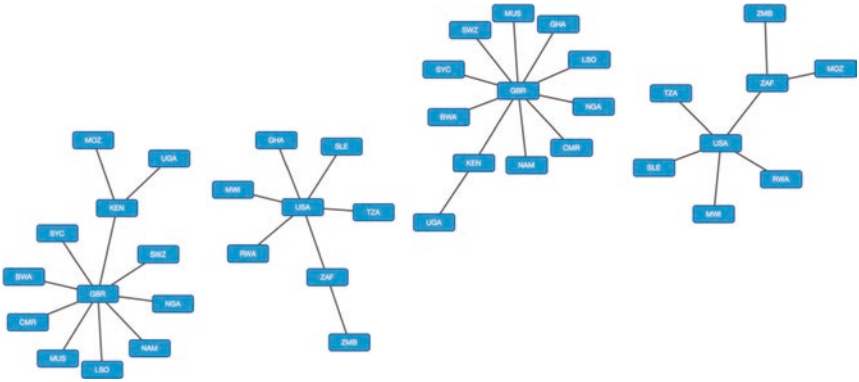

Fig. 7.3 Network representation of value-added trade in textiles and clothing in SSA, largest export flow only among the partners considered, 2000 (top) and 2012 (bottom). (Note: Country codes are Botswana (BWA), Cameroon (CMR), Ghana (GHA), Kenya (KEN), Lesotho (LSO), Malawi (MWI), Mauritius (MUS), Mozambique (MOZ), Namibia (NAM), Nigeria (NGA), Rwanda (RWA), Seychelles (SYC), Sierra Leone (SLE), South Africa (ZAF), Swaziland (SWZ), Tanzania (TZA), Uganda (UGA), Zambia (ZMB), UK (GBR), and the USA; Source: Shepherd 2016)

7.3 Logistics Capabilities

The penalties for trade inefficiencies are heightened within trade in tasks and GVCs, because value addition is accrued between stages of production that may straddle multiple borders. The import of goods and services is required before the subsequent export of goods. Many countries are only very weakly connected to global networks of trade in value added, and this is likely due to their correspondingly weak performance on metrics of air and maritime transport connectivity (Shepherd et al. 2016). The adverse influence of economic geography on trade costs can therefore be mediated by policies to enhance connectivity.

Efficiency within the aviation sector has been a key enabler of engagement with the high-value agriculture GVC. Maritime shipping linkages depend more on having high volumes for the development of links between countries. Closely linked to transport is the logistics sector, and there is much work suggesting that logistics performance is a key determinant of a country's ability to be competitive in global markets, including through joining and moving up in GVCs.

Some of the econometric results derived from recent analysis of SSAs connectivity to GVCs as proxied by shares of value added and logistics capabilities include the following[2]:

- The positive association between the World Bank's logistics performance index (LPI) and value chain connectivity suggests that regional value chains could be strengthened, and the SSA countries' competitive position improved, by upgrading overall trade facilitation performance through measures such as regulatory reform and private sector development.[3]
- Scores for SSA on the World Bank's air connectivity index and shifts in trade in value added are broadly in line with what would be expected given their ability to connect to global air transport corridors.
- In the case of maritime connectivity, using UNCTAD's liner shipping connectivity index, the results for SSA are broadly in line with what would be expected given its ability to connect to global shipping markets. However, there are some cases of countries below the regression line, which suggests that they are not taking full advantage of the opportunities offered by their maritime connectivity.

However, while much of the current GVC discourse has focused attention on connectivity in relation to trade costs, directly influenced by investment in the logistics sector, much more limited attention has been 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: supporting development of the logistics sector can assist in enabling forms of upgrading. The ability to service multiple markets can also assist in enabling a type of "multi-chain upgrading" (Navas-Aleman 2011). Countries seeking to benefit from GVC participation need to address underlying factors of their logistics capabilities (Memedovic et al. 2008).

Thankfully, more recent additions to the literature, which apply econometric techniques, including factor content methodology, have been able to demonstrate the role of capabilities driving participation in GVCs (Pathikonda and Farole 2016). In these studies, proximity to markets

(which invariably reduces trade costs), efficient logistics coupled with strong institutions are the major drivers of GVC participation (Pathikonda and Farole 2016).

There is a need to more carefully distinguish between interventions designed to assist small and medium enterprises (SMEs) in entering into GVCs and developing relationships with lead firms. As summarised by Pathikonda and Farole (2016), this necessarily entails both understanding what it takes to attract lead firms' interest and the incentives for producers to upgrade to higher value-added activities.[4] Different strategies will invariably be required in view of the nature of GVC participation, with implications for public policy. Greater consideration must be paid to horizontal integration processes, which are particularly relevant within the logistics sector.

7.3.1 Multi-Chain Upgrading

Although not usually linked to horizontal integration processes, there is an emerging literature on "multi-chain" upgrading. This relates to the greater learning opportunities available to firms serving multiple markets. In particular, domestic firms may have more opportunities to launch their own manufactured and branded products in domestic or neighbouring markets, with similar levels of development. This literature draws on the experience of producers in the textiles and clothing industry in Kenya (Kamau 2009), and the furniture and footwear industries in Brazil (Navas-Alemán 2011).

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

This aspect of upgrading within GVCs emphasises horizontal fragmentation processes, as opposed to vertical ones. Within particular

sectors, notably textiles and clothing, because of the challenges associated with moving towards taking control of some of the downstream functions within the textiles and clothing value chain, the traditional route of upgrading posited—from original equipment manufacturing (OEM) to original design manufacturing (ODM) and then original brand manufacturing (OBM) as described in Gereffi (1999)—has been replaced by other opportunities to increase the range of services offered to lead firms.

This is why the more recent distinction between a country that specialises in basic assembly and cut make and trim (CMT) (Tier 1) compared to another that is a full package supplier that takes control of the assembly of the product, including the sourcing of inputs as well as delivery to customers (Tier 2) is now made. However, the implication of these shifts in potential upgrading trajectories—the closing of some routes and opening of others—has not been adequately explored within the literature to date.

Movement by CMT producers into certain types of activities so as to become a full package supplier may generate powerful spillover effects. For example, the experience obtained with managing logistics could serve to attract similar basic activity functions of other industries. However, major questions remain as to the opportunities to functionally upgrade, as compared to previous decades, given the emergence of tiers of suppliers that specialise in particular functions.

Policy lessons for SSA's effective engagement with GVCs in the twenty-first century can be derived from the experiences of other exporters within the textiles and clothing sector. The most up-to-date summary of functional upgrading processes in the sector for Bangladesh is undertaken by Alam and Natsuda (2013). They find that most firms are engaged in what they term FOB-1 and FOB-2 production, which they describe as being analogous to the OEA, OEM and ODM descriptions and upgrading trajectory used within the GVC literature.[5] The terms are defined as follows:

- FOB-1 is a step above CMT production, whereby producers take responsibility for the sourcing of intermediate materials and production.
- FOB-2 includes the sourcing of intermediate materials and the undertaking of all levels of production and design.