

The Potential of the Agribusiness Regional Value Chain under the AfCFTA

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ABSTRACT

This Trade Report analyses one of the value chains identified as a development priority by the AfCFTA: the broadly-defined agricultural/agro-processing/agribusiness sector in Africa, from the perspective of the regional and global value chain dimensions. The paper firstly establishes the imperative for value chain development in the context of the AfCFTA, before undertaking an analysis of existing and potential regional value chain development within the specific sector. Finally, a gender analysis using enterprise (microeconomic) data is undertaken, before conclusions and policy recommendations are drawn out in the final section.

About the Author

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The Potential of the Agribusiness Regional Value Chain under the AfCFTA

By John Stuart¹

Introduction

Regional Value Chains (RVCs) – a localised form of a global value chain (GVC) – are a form of trade that involves a chain of intermediate products and services value addition from multiple contributing countries into a final product. The ‘regional’ variant refers to the component of the value chain that exists among countries confined to a specific geographical region, such as Africa or South-East Asia. These countries may collectively produce the final product, from raw materials sourced elsewhere or within the region. Equally, the countries in the RVC may together produce an unfinished product that is finished and finally exported by a country in a different region.

In the case of Africa, most of its value chain participation is ‘forward’ from raw materials extraction to the exportation to other regions, where additional beneficiation takes place. It is in the ‘downstream’ beneficiation, that takes place beyond Africa’s borders, that the bulk of value addition takes place and therefore the bulk of the benefit – to growth, development, upskilling, employment and diversification – is enjoyed. For this reason, and in the context of Africa’s industrialisation challenges, there exists an imperative for African industries to ‘upgrade’² from their current status as raw materials producers.

In order to upgrade, firstly the potential of the sector/industry needs to be established. This involves leveraging existing strengths in terms of resource, labour, capital and infrastructure endowments. Where RVCs are nascent or barely established, an analysis of the potential for value chains development

¹ I am grateful to Trudi Hartzenberg for valuable feedback on an earlier draft.

This trade report is one of two exploring the same theme, one focusing on the broad agricultural value chain and one on the C&T value chain. These papers consequently share certain content. I would like to thank the Enterprise Analysis Unit of the Development Economics Global Indicators Department of the World Bank Group for making their data available.

² ‘Upgrading’ refers to the process of graduating to downstream phases in the value chain (see Kaplinsky and Morris, 2001).

is required, which would draw on existing industrial, trade and enterprise data. Thereafter, policy implications and implications also for gender equity would need to be considered.

This paper attempts such an analysis by focusing on one of the value chains identified as priority by the AfCFTA (AfCFTA, 2021): the broadly-defined agricultural/agro-processing/agribusiness sector in Africa³, from the perspective of the regional and global value chain dimensions. The paper will firstly establish the imperative for value chain development in the context of the AfCFTA, before undertaking an analysis of existing and potential regional value chain development within the specific sector. Finally, a gender analysis using enterprise (microeconomic) data will be undertaken, before conclusions and policy recommendations are drawn out in the final section.

Value chains for development in the digital age

The ways in which developing countries industrialised post the industrial revolution have drawn attention from scholars for decades. The ‘Asian tigers’ are a group of South-East Asian countries⁴ that industrialised in the 1960s, by following an export-led growth path and supported by ‘state capitalism’ – attentive industrial and trade policy that created the environment for the targeted industries to flourish.

Thirty years later, Malaysia, Thailand, China, India and The Philippines industrialised in a similar export-led fashion, with the exception that the nature of their exports changed. Instead of using import-substitution policies and then export-led policies to gain a foothold in final goods markets, they integrated their production chains into those of developed countries, frequently within the supply chains of multinational corporations (MNCs). This was the beginning of the era of global value chains (GVCs) because now, production chains spanned continents and entire regions.

In the 21st century, economic integration within regions has increased, heavily driven by digitisation and the way it allows financial systems to be integrated, strengthens communications and information flows

³ Due to differences in aggregating sectoral industrial data, the sector has been defined as ‘the broadly-defined agricultural/agro-processing/agribusiness sector’. The aggregate contains data for agricultural production; agri-business production, defined as ‘economic activities derived from or connected to farm products’ (BBVA, 2022) and agro-processing, defined as ‘the sub-sector of the manufacturing that beneficiates primary materials and intermediate goods from agricultural, fisheries and forestry based sectors’ (DTIC, 2022).

⁴ These countries are South Korea, Singapore, Hong Kong and Taiwan.

and creates a global marketplace via the internet. In this century, regional value chains (RVC) have grown on the back of the growth in the number of preferential trade areas and the ways they encourage cooperation, reciprocity and make markets accessible.

However, digitisation also promotes the cross-border integration of production in that it permits production management to be controlled centrally, but implemented in a decentralised way. Value chains either exist within a single entity or MNC, or within a group of entities that are connected by what the World Bank calls ‘durable relationships’ (World Bank, 2020). These durable relationships are necessitated the more complex and disaggregated is the production chain and the more specific the requirements of the ‘lead firm’ – the firm that owns the intellectual property of the product and is responsible for branding it. Were the relationships not durable, this would involve risks to entities in the value chain, especially those at the more upgraded end.

In Africa, where most exported production is primary or extractive, these issues are less important. However, if Africa is to upgrade its value chains, it needs to further digitise production processes and services. In addition, African enterprises need to develop durable relationships that go beyond supply contracts and extend to the establishment of foreign affiliates as well as merger and acquisition steps. Integration of value chains into larger, merged and digitally competent enterprises will allow scale economies to be exploited, technology to be taken up, unit costs to fall and competitiveness to improve.

The AfCFTA context

Why value chains under the AfCFTA?

The AfCFTA is the backdrop against which regional value chain (RVC) development could be promoted and extended. It appears clear then that as Africa imminently moves towards free trade and greater economic integration in a number of spheres, attention should be placed on how value chain trade could be extended and deepened among state parties. These initiatives could address:

- The reversal of deindustrialisation in Africa: defined as a secularly-declining proportion of manufacturing value-added out of total value-added. Essentially, African economies have become more primary and services production based over the past three decades, have prevented their progress in ‘upgrading’ their industrial activity. RVCs enable a degree of

specialisation not possible if countries were to establish entire industries themselves – such as, for example, happened during the industrialisation of the South East Asian countries in the previous century. That model of industrialisation is now more difficult whereas the path offered through RVCs is still attainable by African countries.

- Low levels of intra-African trade flows, which are approximately 14% of total trade by African countries⁵ (ITC Trade Map, 2022). Despite being well integrated into global value chains – albeit as heavily forward-linked primary producers – African countries are not well integrated with one another. There are many reasons for this, not least the low degree of complementarity of African economies. However, intra-African trade liberalisation under the AfCFTA, geographic proximity and active industrial and trade policy as well as private-public cooperation could change these patterns. Value chain relationships are well developed in economically similar countries in Europe and South East Asia, and the same potential exists among African economies. However, the role of the private sector and especially the buy-in of larger firms is crucial. This is because the most successful value chain configurations involve intra-firm, cross-border flows of value (UNCTAD, 2015).
- Gender imbalances in enterprise ownership and leadership in African economies. By understanding the variation across sectors and sub-sectors, policy can target industrial sectors where training and capacitation aimed at female entrepreneurs and workers can assist in raising female participation and compensation rates. As will be seen, female enterprise participation and ownership could be enhanced in tandem with the promotion of high-potential value chains (see, for example, Stuart, 2022).

The choice of the broad agricultural value chain

The question arises as to the choice of the agricultural sector for analysis. The AfCFTA Secretariat, in a recent report, identified certain industrial sectors and sub-sectors as potential candidates for value chain development under the AfCFTA agreement (AfCFTA Secretariat, 2021). One of the determinants

⁵ The intra-African trade proportion increased in the first pandemic year (2020) and then decreased in the second (2021). This figure (14.6%) is based on the last non-pandemic year's data (2019). These calculations are made on data sourced from ITC Trade Map (2022).

of these choices were the standing tariff offer commitments at the time, others relate to actual production and trade activity in these sectors. The broad sectors included in their list were agricultural/agro-processing; clothing, textiles & leather; automotive; pharmaceuticals; mobile financial services and cultural industries.

This value chain was selected due to the extent of female employment and its potential to facilitate structural transformation in low and low-middle income countries, as observed in the development path of the East Asian countries (AfCFTA Secretariat, 2021: 50). Over the long term, agricultural production has robust prospects given the simple arithmetic of a growing global population and a fixed quantum of arable land. Also, unlike Africa's other primary industries – fuels and minerals – agriculture alone permits the productive participation of entities from individuals in the informal sector all the way through to large scale, highly technologically leveraged commercial agriculture.

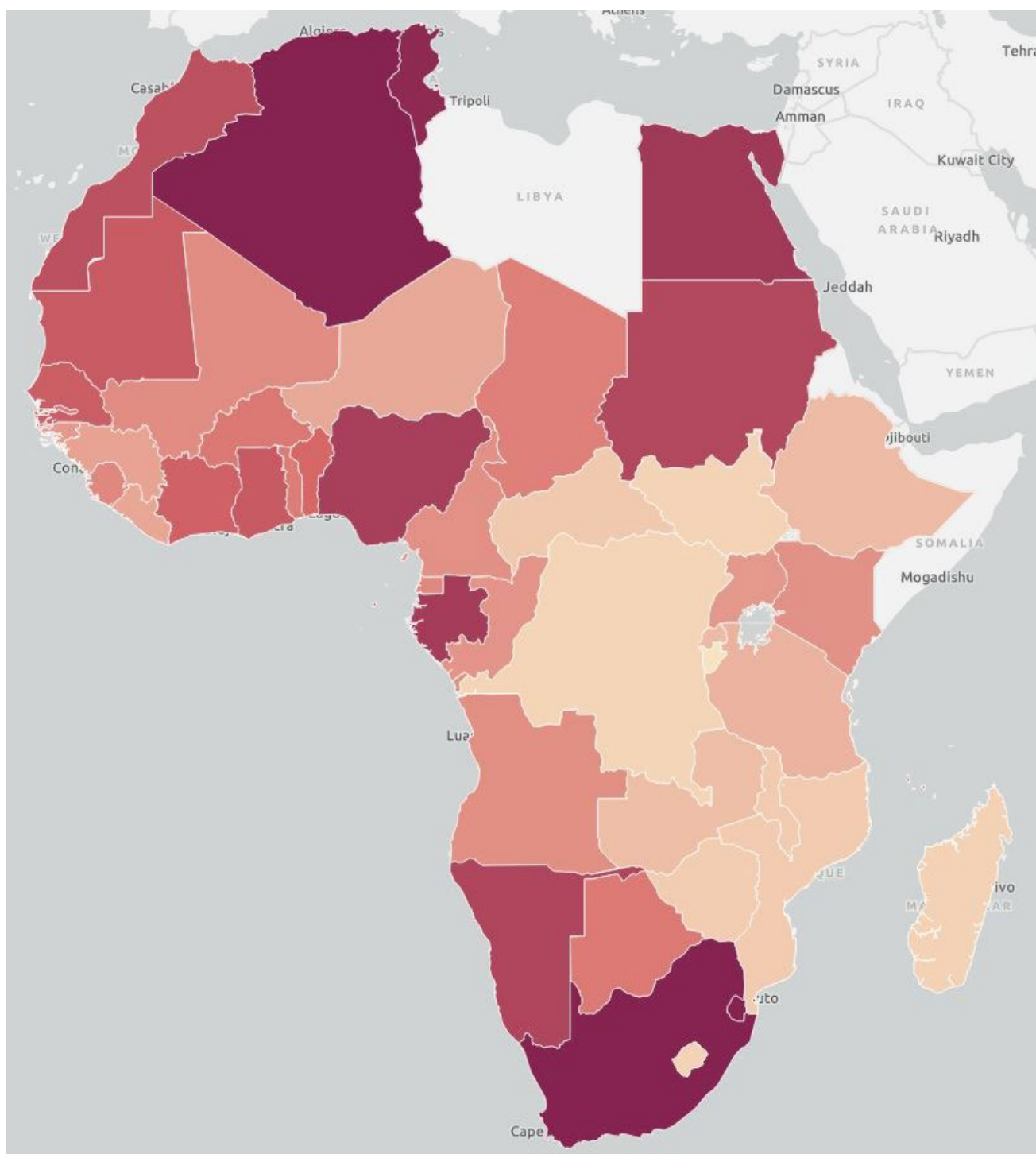
However, as important as agriculture is in Africa, productivity – especially in low and low-middle income countries – is very low. Subsistence agriculture dominates, involving a loss of efficiency and ultimately wastage of a limited resource. Table 1 presents data to illustrate this: it ranks regions according to their 2019 annual value added per worker in the agriculture, forestry, and fishing sector.

Table 1: Agriculture, forestry, and fishing: value added per worker, per annum, 2019 (ranked, constant 2010 US\$)

Region	VA (USD)
High income	29 527
Latin America & Caribbean	7 668
Middle East & North Africa (excluding high income)	7 084
East Asia & Pacific	4 078
South Asia (IDA & IBRD)	1 824
Sub-Saharan Africa	1 562

Source: World Bank (2022)

Figure 1: Agricultural value added per worker (2019)



Source: Constructed by the author using data sourced from World Bank (2022)

As is evident, the aggregate value added in the sector is lowest for sub-Saharan Africa (SSA), and only a fraction of that for the high-income countries. This same data is plotted in Figure 1 by African country.

In this map figure, darker shades indicate a higher value-added for the country aggregate. The map makes it plain which African countries have predominant commercial agricultural sectors and which do not: Algeria, Eswatini, Mauritius, South Africa and Tunisia show high agricultural value added. Although this metric is not an exact indicator for commercial agricultural productivity levels, it is nevertheless concerning that agricultural specialists such as Malawi, Zambia and even Ethiopia show subsistence-like productivity levels.

Value chain development can improve productivity by corporatizing agricultural production, leading to specialisation, the adoption of technologies and the adoption of improved cost models. This transformation would be more effective when implemented in cross-border value chains, where production models can take advantage of specialised capital and labour distributed between, rather than within, countries.

Very large countries such as South Africa – home to a wide range of biomes, livestock and crop types and with well-developed financial, agronomic and other business support services – are able to lead value chain development with regional neighbours. South Africa is a successful exporter of a wide range of agricultural products and is competitive in many markets at the international level. This experience and leadership is valuable to African agricultural value chain development; similarly for a North African agricultural leader such as Egypt.

The importance and pervasiveness of this sector for productive development across Africa is reflected in that five major RECs on the continent have marked it for value chain development under their industrial policies. These are SADC, ECOWAS, COMESA, EAC and IGAD (Briel, 2022). Obviously, the sector is not a monolith, and each region and REC will target specific sub-sectors and forms of production. For example, the cocoa bean value chain involves Côte d'Ivoire, Ghana, Liberia and Uganda. The livestock value chain involves Ethiopia, Nigeria and Tanzania as leaders in this value chain, although many other countries have the potential to become involved too (AfCFTA Secretariat, 2021). Specific sub-sectors earmarked by the AfCFTA Secretariat include the chocolate value chain – cocoa, dairy & sugar – as well as soya. However, tobacco, grains, tea and coffee are also important potential sub-sectors within agro-processing.

Finally, analysis of the offers to the AfCFTA, within the agricultural and agro-processing headings reveals considerable scope for the opening of agricultural value chain trade when commercially meaningful trade under the AfCFTA begins (AfCFTA Secretariat, 2021: 51).

Actual and potential value chain trade under the AfCFTA

‘Potential’ value chain trade is that which could be realised as a result of the liberalisation of merchandise trade under the AfCFTA, in conjunction with other continental initiatives to boost intra-African trade and encourage greater integration of production. This will involve extending and deepening existing value chains as well as upgrading current value chain production and accessing new markets for final goods in Africa and the rest of the world.

Currently, African value chains are dominated by extractive industries. Table 2 ranks Africa’s most important value chains by total GVC participation (final column). As is evident, the total is dominated by mining and quarrying, which is also heavily forward-linked, meaning that other countries (most of them not in Africa), add additional value to the materials before a final product is produced. Being primarily forward-linked in your dominant GVC trade sector is not conducive to manufacturing industrialisation, the generation of high value-added production and development of technology and skills.

Table 2: GVC participation by sector: Africa, ranked (2015, USDm)

Sector, including services	Backward	Forward	Backward/ Forward	GVC total participation
Mining/quarrying	10 164	54 054	19%	64 217
Petrochem/minerals	8 598	9 514	90%	18 112
Metal products	4 348	9 286	47%	13 634
Electronics/machinery	4 791	4 106	117%	8 898
Transport	2 949	5 927	50%	8 876
Agriculture	1 893	6 648	28%	8 541
Textiles/clothing	4 014	2 932	137%	6 947
Food/beverages	2 930	2 969	99%	5 899

Sector, including services	Backward	Forward	Backward/ Forward	GVC total participation
Finance/business	801	2 911	28%	3 712
Wood/paper	1 368	2 189	62%	3 556
Transport equipment	2 686	770	349%	3 457
Hotels/restaurants	748	1 510	50%	2 257
Wholesale trade	395	1 859	21%	2 254
Post/telecom	437	1 274	34%	1 711
Recycling	735	665	111%	1 399
Other manufacturing	991	297	333%	1 288
Education/health	432	749	58%	1 181
Retail trade	241	668	36%	910
Construction	358	308	116%	666
Fishing	197	264	75%	461
Public administration	184	128	143%	312
Maintenance/repair	126	149	85%	275
Private households	135	108	126%	243
Electricity/gas/water	55	51	107%	106
Other activities	42	12	359%	54

Source: Author's calculations based on World Bank (2020) GVC database

However, the patterns of GVC trade in mining and quarrying are not easy to reverse. The main buyer of African mining and quarrying output is China (ITC Trade Map, 2022), a global manufacturing giant with a profound cost and economies of scale advantage. Instead, a more viable approach would be to focus on industries where there is potential to establish continental trade connections and upgrade existing production. The agribusiness value chain, which overlaps with the agriculture and the food/beverage value chain data in Table 2 is in net, more balanced in terms of forward and backward integration than mining and quarrying. This means that a greater proportion of the value addition in creating a final product takes place on the continent. Unlike sectors such as 'electronic/machinery' and 'transport

equipment', which rely on inputs imported from the rest of the world, the agribusiness sector uses domestically-produced inputs.

The intra-African value chain flows in the agribusiness sector are visualised in Figure 2 and Figure 3⁶. These two figures are variants of the Sankey chart, used to show flows between multiple nodes, here nodes can be both producers and consumers of flows. An additional property of the Sankey chart is the ability to represent an additional dimension, in this case African FTA membership⁷. The country set in both charts has also been 'top sliced' to show only the top 45 or so countries and their flows.

The REC FTA membership situation is summarised in Table 3, which ranks RECs according to the quantum of RVC flows. This is not exactly the same data as that used in the Sankey charts; the charts used top-sliced data whereas the table summarises the full set of data.

Table 3: Value chain trade flows: agribusiness value chain, Africa to Africa flows by FTA, ranked (USD 000, 2017)

REC FTA	RVC Flow	Proportion
Other – no FTA	158 249	70.93%
SADC	45 709	20.49%
ECOWAS	12 948	5.80%
EAC	4 185	1.88%
ECCAS	1 465	0.66%
COMESA	546	0.24%
Total	223 103	100.00%

Source: Author's calculations based on UNCTAD-(2022) (UNCTAD-Eora GVC database)

The table data shows an interesting pattern: agribusiness value chain trade in Africa is dominated by flows between countries for which there is no FTA in place. The balance of flows – in other FTAs – make up about 29% of the total. This implies considerable potential to expand and deepen agribusiness value

⁶ Note that Mauritius and Cabo Verde do not appear as originators in this data because of the non-standard way they classify their agricultural output. They do appear as exporters however.

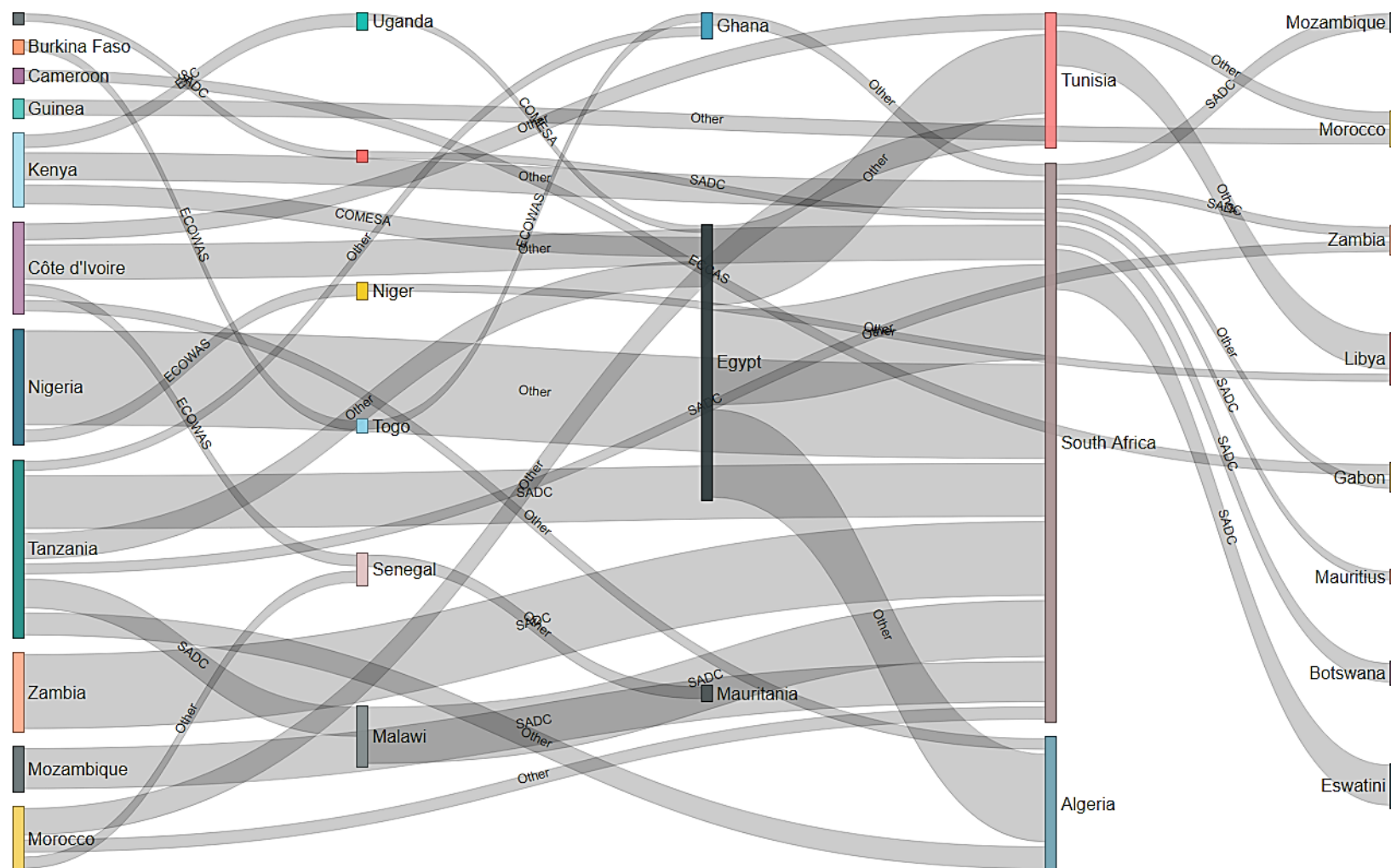
⁷ Although there are more REC memberships involved than just those shown in Figure 1 and Figure 2, only RECs which are also FTAs are shown.

chain flows with the expected liberalisation under the AfCFTA⁸. It should be borne in mind though, that within the broader agricultural sector, sugar and tobacco are very sensitive product categories. Indeed, within SADC, sugar has its own trade regime and in some cases trade between FTA partners is still tariffed at relatively high levels. In the case of these sensitive product categories and certain others, rules of origin (ROO) – their design and implementation – will be key⁹.

⁸ Liberalisation of agricultural and agribusiness lines under the FTA is not a forgone conclusion. In some active African FTAs, agricultural trade is still tariffed even between FTA partners. For example, SADC members South Africa and Namibia both tariff SADC partner Mauritius' sugar products exports. See Stuart (2022:7).

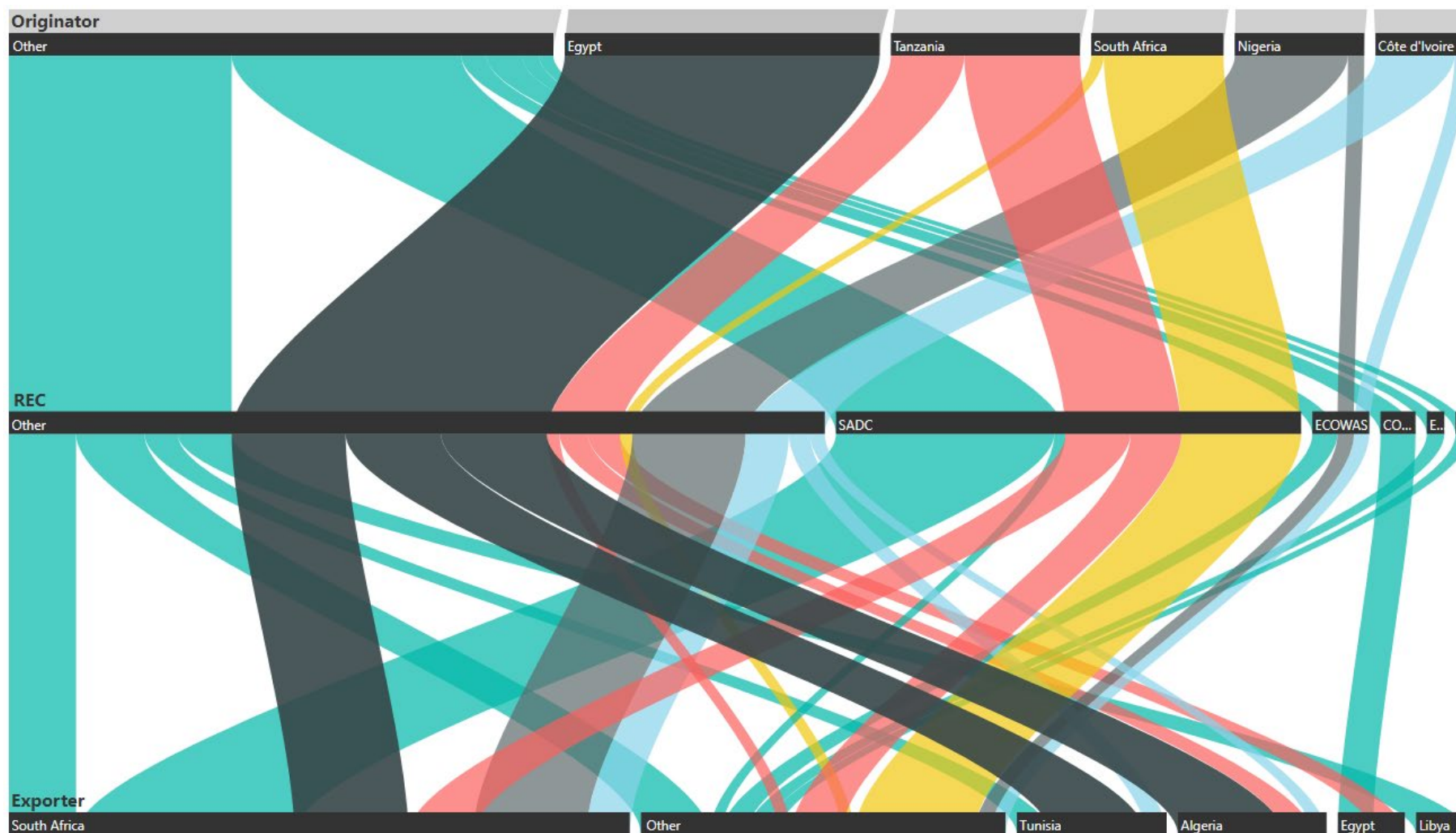
⁹ I owe this point to Trudi Hartzenberg.

Figure 2: Value chain trade flows: agribusiness value chain, Africa to Africa flows by country, FTA (USD 000, 2017)



Source: Author's construction based on UNCTAD-(2022) (UNCTAD-Eora GVC database)

Figure 3: Value chain trade flows: agribusiness value chain, Africa to Africa flows by country, FTA (USD 000, 2017)



Source: Author's construction based on UNCTAD-(2022) (UNCTAD-Eora GVC database)

However, one fact that is apparent, when comparing the data in the table with that in the charts, is that there is a reasonable representation of SADC trade flows in the charts, whereas SADC flows are only a minority in the full set of data. This implies that there are a large number of small non-FTA flows that did not make the cut for the top slice. This needs to be borne in mind if value chain development among liberalising countries is to be anticipated, because the ‘quick wins’ for further value chain development will be those that are the larger ones, such as between Nigeria and South Africa, Egypt and South Africa and Egypt and Tunisia. However, if value chain development is to contribute to upliftment of smaller economies with weaker value chain connections, attention will need to be paid to country value chains among smaller countries, or between smaller countries and larger ones.

The charts also make it clear as to how important certain countries are both as originators and exporters of value. South Africa is clearly a ‘hub’ country and is by far the most important single player in the sector. However, it is more important as an exporter of value than an originator. Egypt is the opposite – it is more important as an originator than as an exporter of value. Tanzania is an important originator, with links to both SADC and non-SADC countries. Interestingly for Tanzania, none of its value flows to fellow EAC members make the cut to be shown in the chart. This is surprising given that it is a member of a customs union with five other countries, but could be explained by complementarity between these countries in this sector, as well as Tanzania’s SADC membership.

North African countries Tunisia and Algeria both appear in the chart as important exporters of agribusiness value, although Tunisia has no important connections to countries in sub-Saharan Africa (SSA). Nevertheless, their most important value originator – Egypt – although it is part of the Arab States along with them, is not part of an *African* FTA along with them. However, they are partners in the Grand Arab Free Trade Area (GAFTA).

The second Sankey chart, perhaps more so than the first, illustrates the true extent of non-FTA trade in the sector. All of Egypt’s considerable value flows are not under free trade, nor are much of Nigeria’s and Côte d’Ivoire’s (the latter an important global exporter of cocoa products). However, most of South Africa’s and Tanzania’s are, being traded under the SADC FTA.

Indicators of potential RVC involvement in the CT&L value chain

RVC trade not yet under preferences is an indicator of the potential to further develop value chains under a more liberalised continental trade regime. The preceding charts were only capable of showing the larger flows in the sector, for originating and exporting countries. Table 4 presents part of the same data, transformed somewhat in order to permit investigation of the situation of the smallest countries. The table has data for 49 African countries¹⁰.

Table 4: Indicators of potential RVC involvement in the broad agri value chain, ranked by originating value (USD 000, various years)

	Total Originating Value	Originator: Africa/ROW	Exporter (African value)/Originator	PCBVCI
Egypt	1 427 537	2.4%	0.6%	
South Africa	1 122 630	3.8%	6.1%	51.8
Morocco	1 095 949	0.8%	1.0%	
Kenya	996 592	1.6%	0.2%	48.7
Ghana	918 863	0.5%	0.5%	45.2
Côte d'Ivoire	699 342	1.6%	0.3%	57.1
Nigeria	632 676	2.8%	0.3%	38.7
Tanzania	521 048	4.6%	0.3%	41.3
Algeria	398 405	0.7%	5.3%	
Tunisia	322 423	2.4%	6.2%	
Cameroon	271 452	2.3%	0.5%	43.0
Angola	198 175	1.6%	2.2%	35.7
Madagascar	180 352	1.3%	0.5%	45.6
Senegal	169 158	1.9%	3.8%	45.2
Malawi	149 764	6.4%	3.8%	36.3
Chad	143 490	1.9%	0.1%	22.7

¹⁰ Mauritius and Cabo Verde are omitted for reasons given in a previous note.

	Total Originating Value	Originator: Africa/ROW	Exporter (African value)/Originator	PCBVCI
Congo, Dem. Rep.	130 599	1.4%	1.3%	
Zambia	98 418	12.6%	4.6%	44.0
Gabon	96 610	1.3%	4.3%	
Ethiopia	88 960	0.7%	1.1%	44.9
Uganda	86 274	3.3%	2.6%	47.9
Mali	78 444	4.5%	0.5%	31.4
Mozambique	76 809	8.9%	3.6%	47.0
Togo	64 940	4.7%	4.4%	28.4
Liberia	62 763	0.9%	2.9%	
Congo, Rep.	62 743	1.0%	3.7%	
Guinea	50 738	6.1%	0.9%	30.0
Zimbabwe	45 368	2.6%	0.9%	39.6
Burkina Faso	45 262	5.2%	0.9%	35.1
Libya	41 675	0.8%	18.9%	29.5
Namibia	41 120	4.3%	54.9%	33.5
Mauritania	38 936	3.1%	10.7%	59.8
Sierra Leone	33 354	2.5%	3.4%	34.0
Sudan	30 743	2.0%	0.0%	40.4
Central African Republic	30 356	1.8%	0.7%	18.9
Burundi	28 776	2.1%	1.0%	36.8
Benin	26 161	8.4%	2.5%	29.1
Eswatini	22 883	3.1%	25.1%	36.3
Niger	22 105	10.1%	12.8%	13.8
Eritrea	19 804	3.5%	0.6%	32.7
Rwanda	18 645	2.9%	1.7%	48.3
South Sudan	12 569	3.9%	0.8%	19.2

	Total Originating Value	Originator: Africa/ROW	Exporter (African value)/Originator	PCBVCI
São Tomé and Príncipe	11 291	3.4%	3.4%	
Seychelles	10 317	1.1%	19.2%	
Botswana	10 133	5.1%	32.4%	29.2
Gambia	9 541	5.8%	1.8%	42.0
Somalia	4 987	2.9%	1.0%	
Djibouti	2 919	6.6%	10.7%	
Lesotho	1 999	5.9%	76.2%	42.1
AFRICA	10 654 101	3.4%	7.0%	38.0

Source: Author's calculations based on UNCTAD (2022) (UNCTAD-Eora GVC database) (first three columns) as well as World Bank Enterprise Surveys (2022) (final column)

Column 1 of the table lists the total originating value for the country. Note that this includes value originated by the African country but exported in the ROW. For this reason, the scale of originated and exported value for a single country in the two charts (for example South Africa) will not be comparable – the Sankey charts only utilise Africa to Africa flows, not Africa to the ROW.

Africa to ROW flows are given in Table 4 to give an idea of an African country's participation in African value chains as against total value chain participation. This is best illustrated by the second data column, which is the ratio of a country's originated value that is exported by a fellow African country to the originated value that is exported by the ROW. The small numbers in this column suggest that few African originators of agricultural-related value have their value exported finally by other African countries, which indicates a low degree of current value chain intensity. It is noteworthy that the four leading countries (in terms of African RVC integration) out of the top 20 are all SADC members: South Africa, Tanzania, Malawi and Zambia. They are more integrated into African RVCs than other countries in the top 20.

The third data column in Table 4 is the ratio of exported value to originated value; giving an idea of the country's role in exporting African-originated value (in other words this does not include imported value from the ROW). This data is thus a good proxy for 'actual intra-African value chain involvement'. It shows

that a smaller country such as Namibia exports a large proportion of African-originating value, relative to how much they consume, to Africa and the ROW. However, the pattern for the balance of the countries is that they are primarily originators of African value and not exporters of African value.

Potential cross-border value chain involvement (PCBVCI)¹¹

Besides considering the extent of RVC flows currently not under preferences as well as the extent of current value chain involvement by country, potential value chain involvement can also be assessed using microeconomic data. It is possible to quantify the potential for increased cross-border value chain involvement using data drawn from enterprise surveys (World Bank Enterprise Surveys, 2022), where the respondents indicate the extent to which their enterprise adds value to raw and intermediate inputs, as well as the extent to which they export their products (whether final or intermediate) cross border. We name this metric the ‘*potential cross-border value chain involvement*’ (PCBVCI) score. The metric gives a higher score to countries or sectors whose manufacturing industries add more value to inputs and simultaneously have greater export orientation. The metric is evaluated at the individual enterprise level and is therefore essentially microeconomic in nature.

On its own at the country level, PCBVCI may not be truly representative, since it is drawn from a sample of enterprises and not the entire country population. The researchers who collected the data (World Bank Enterprise Surveys, 2022) would have followed best practice in obtaining as representative samples as possible, but nevertheless the metric does not have the same aggregate meaning as say county trade or macroeconomic data. For this reason, the PCVBCI scores have the most meaning when evaluated in dimensional analysis that includes dimensions such as industrial sector, female ownership and enterprise size.

The rightmost column of Table 4 contains PCBVCI data for as many countries in the set that it could be calculated for. For the larger players, there is a strong positive correlation between PCBVCI and total originating value, meaning that these established value originators also show good potential to develop their cross-border intra-African value chain involvement. The correlation is weaker, however, between PCBVCI and actual intra-African value chain involvement (the third data column). When inspecting the

¹¹ Parts of the first two definitional paragraphs of this section are drawn from Stuart (2022).

data in column 3, however, it is clear that actual intra-African value chain involvement (the third data column) for these countries is rather low.

On the other hand, certain smaller value agribusiness originators such as Uganda, Mauritania, and Rwanda score comfortably above the Africa average PCBVCI of 38.0. Of these three countries, only Mauritania scores marginally above the continental average for actual intra-African value chain involvement (the third data column). This indicates that there are enterprises in these latter countries that have the potential to participate further in continental PCBVCI value chains but possibly lack opportunities. The AfCFTA, should it result in meaningful liberalisation in the broad agricultural sector, could contribute to creating opportunities for these countries. However, additional attention by policy makers to creating the right conditions for enterprises to grow, will also be necessary: trade facilitation, skills availability, digitisation and industrial policies such as SEZs and industrial parks (for an example of the latter policy instruments applied in the CT&L sector, refer to Besette, 2022).

Gender parity considerations

The policy mix for promoting and deepening value chain development should also take cognisance of gender parity considerations specific to the sector. Although not available for every country for which a RVC analysis was done, an appreciable set of gender data is available for most of the African countries analysed in the foregoing.

Table 5: Female ownership and staff complement by GVC participation, top 20 countries ranked by originating value (various years)

	Total Originating Value	Cumulative Proportion of total	Female Ownership	Female fulltime staff
<i>Egypt</i>	1 427 537	13.4%		
<i>South Africa</i>	1 122 630	23.9%	27.6%	
<i>Morocco</i>	1 095 949	34.2%		
<i>Kenya</i>	996 592	43.6%	21.4%	
<i>Ghana</i>	918 863	52.2%	42.0%	
<i>Côte d'Ivoire</i>	699 342	58.8%	27.7%	

	Total Originating Value	Cumulative Proportion of total	Female Ownership	Female fulltime staff
<i>Nigeria</i>	632 676	64.7%	36.8%	27.0%
Tanzania	521 048	69.6%	24.7%	
<i>Algeria</i>	398 405	73.3%		
<i>Tunisia</i>	322 423	76.4%		
<i>Cameroon</i>	271 452	78.9%	25.0%	
<i>Angola</i>	198 175	80.8%	24.3%	64.6%
Madagascar	180 352	82.5%	33.8%	
<i>Senegal</i>	169 158	84.0%	31.1%	60.0%
Malawi	149 764	85.5%	26.8%	18.3%
Chad	143 490	86.8%	25.8%	10.3%
Congo, Dem. Rep.	130 599	88.0%		
<i>Zambia</i>	98 418	89.0%	29.4%	17.4%
Gabon	96 610	89.9%		
<i>Ethiopia</i>	88 960	90.7%	24.7%	17.4%
<i>Top 20 only</i>	9 662 444		28.7%	30.7%
<i>All Africa, agribusiness sector</i>	10 654 101		30.5%	24.6%
<i>Balance of countries</i>	991 657		31.6%	19.9%
<i>All Africa, all sectors</i>			30.5%	28.6%

Source: Author's calculations based on UNCTAD-(2022) (UNCTAD-Eora GVC database) (first two columns) as well as World Bank Enterprise Surveys (2022) (second two columns)

Table 5 presents some of this data: the top 20 countries ranked by their total originating value, together accounting for 91% of the CT&L value generated on the African continent. The third and fourth data columns list the aggregate percentage of female ownership and female staff proportion, respectively.

It is known that the agribusiness sector and the agricultural sector more generally employ a considerable proportion of female workers¹². The data set on female fulltime staff proportion in the table is unfortunately incomplete, but the average of female staff for the leading countries exceeds the Africa average for all sectors (including services), albeit with important divergences between individual countries. In fact, there are large differences in countries, with Angola and Senegal at 65% and 60% respectively, while Togo is at 5% and Niger at 12%.

The variability of female ownership is less than for female staff complement, with the sector average marginally below the Africa average (in weighted terms), however with leading countries South Africa, Kenya and Cote d'Ivoire below the sector and all-sectors average. Gender parity in the broad agricultural value chain then, is less than that for the clothing, textiles and leather (CT&L) sector, for example, but exceeds that for most other manufacturing and extractive/primary sectors.

Conclusions and policy recommendations

The broad agro-processing and agribusiness sector has been flagged by the AfCFTA Secretariat as one of a set of priority sectors for development under the preferences and integration imperatives under the AfCFTA. Many African countries export agriculture-related products and most of these exports are in relatively unprocessed form. A smaller set of African countries export semi-processed and finished agricultural goods, and a minority of this quantum is exported to other African countries. It is this pattern that policy makers seek to change as the AfCFTA, and its promise of substantially liberalised trade and deeper intra-African economic integration is realised.

RVC development can help to reverse the pattern of premature deindustrialisation observed across the African continent, even in relatively industrialised countries such as South Africa. This is on account of how value chain participation allows specialisation within a production process potentially designed or engineered by specialists in a lead firm or lead country. Specialisation within production chains will also help to overcome the pattern of low complementarity between African economies. When it comes to

¹² However, note importantly that the seasonal worker cohort, in which female representation is high, is not counted in this data.

primary production, a lack of complementarity is not easily overcome, but advanced production can be made to be complementary by design, as countries in Europe and South East Asia demonstrate.

Data presented in this report showed that agribusiness value chain trade in Africa is dominated by flows between countries for which there is no FTA in place. The balance of flows – in other FTAs – make up about 29% of the total. This implies considerable potential to expand and deepen agribusiness value chain flows with the expected liberalisation under the AfCFTA. To release gains, the AfCFTA could address ‘liberalisation gaps’ like this in this sector and in others (such as the clothing, textile and leather sector) through targeted tariff and NTB liberalisation.

The potential of this non-FTA trade will, however, not necessarily translate into actual gains unless other non-tariff barriers (NTBs) can also be overcome. When it comes to NTBs, there are both ‘administered’ and ‘non-administered’ barriers that will need to be dealt with. ‘Administered’ barriers are regimes such as rules of origin (ROO), technical barriers to trade (TBT) and sanitary and phyto-sanitary (SPS) requirements.

The finessing of ROO negotiated under the AfCFTA will be critical, since there are always a wide range of options for ROO – from very strict requirements (requiring value to be wholly originating) to much more liberal rules (allowing a greater percentage of non-originating value). These ROO are currently under negotiation under the AfCFTA, as is the schedule of tariff liberalisation. As was noted earlier, certain sub-sectors in the broader agricultural sector, such as sugar and tobacco, are very sensitive product categories and could be excluded from liberalisation (whether tariff or ROO related).

‘Non-administered’ barriers on the other hand, are those that arise from poor efficiency and mal-administration at border posts, additional requirements, additional levies and charges, and corruption. In order to tackle these, the AU has put in place an online monitoring system¹³ to enable traders to report and follow up on encountered trade barriers (whether administered or not).

When it comes to the choice of country involvement, the ‘quick wins’ for further value chain development will be those that are the larger ones, such as between Nigeria and South Africa, Egypt and South Africa and Egypt and Tunisia. However, if value chain development is to contribute to

¹³ <https://www.tradebarriers.africa/>

upliftment of smaller economies with weaker value chain connections, attention will need to be paid to country value chains among smaller countries, or between smaller countries and larger ones.

Other data assisted with understanding existing and potential value chain participation in the sector. It was seen that few African originators of agricultural-related value have their value exported finally by other African countries, which indicates a low degree of current value chain intensity and therefore the potential to develop this further. Data for a derived ‘microeconomic’ metric – the PCBVCI – was also helpful in identifying countries that are currently not much involved in intra-African RVCs, but which have the potential to be more involved. For example, there are enterprises in Uganda, Mauritania and Rwanda that have the potential to participate further in continental PCBVCI value chains but possibly lack opportunities. The AfCFTA, should it result in meaningful liberalisation in the broad agricultural sector, could contribute to creating opportunities for these countries

Skills are an ever-present constraint in African countries, and it stands to reason that production processes will not be upgradeable if ‘upgraded skills’ are not available. This speaks to the need to create and improve education and training facilities and services and ensure gender parity in admissions and apprenticeships. However, skills need to be retained once developed, and this will only be effective if Africa’s industrial hubs and zones are able to offer attractive living conditions for scarce skilled labour. Gender parity in the sector, while less than that for the CT&L sector, exceeds that for most other manufacturing and extractive/primary sectors.

Digitisation is a major priority. In Africa, where most exported production is primary or extractive, value chain upgrading is imperative in the medium term. If Africa is to upgrade its value chains, it needs to further digitise production processes and services. In addition, African enterprises need to develop durable relationships that go beyond supply contracts and extend to the establishment of foreign affiliates as well as merger and acquisition steps. Integration of value chains into larger, merged and digitally competent enterprises will allow scale economies to be exploited, technology to be taken up, unit costs to fall and competitiveness to improve.

Much agricultural production in Africa is still subsistence-based, and this represents inefficiency and the waste of a precious, limited resource in a time of global food insecurity. Value chain development in the context of liberalisation, production process ‘leading’, the development and retention of skills,

digitisation and the monitoring of gender representivity can be part of a solution to permanently raising productivity and at the same time, further industrialising and developing African countries.

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Appendix

Table 6: Value chain trade flows: agri value chain, Africa to Africa flows, ranked, above threshold only
(USD 000, 2017)

Originator	Exporter	Value	Exporter Region	Exporter REC	Originator REC	Common FTA
Egypt	South Africa	11461.88	Southern Africa	SADC	COMESA	No
Nigeria	South Africa	11377.13	Southern Africa	SADC	ECOWAS	No
Egypt	Algeria	10608.8	North Africa	AMU	COMESA	No
Egypt	Tunisia	9602.655	North Africa	CENSAD	COMESA	No
Zambia	South Africa	8996.986	Southern Africa	SADC	SADC	SADC
Malawi	South Africa	6893.158	Southern Africa	SADC	SADC	SADC
Tanzania	South Africa	6527.451	Southern Africa	SADC	EAC	SADC
Mozambique	South Africa	5004.029	Southern Africa	SADC	SADC	SADC
South Africa	Eswatini	4986.85	Southern Africa	SADC	SADC	SADC
Côte d'Ivoire	South Africa	4354.25	Southern Africa	SADC	ECOWAS	No
Tunisia	Libya	4337.269	North Africa	COMESA	CENSAD	No
Tanzania	Malawi	3669.379	Southern Africa	SADC	EAC	SADC
Kenya	South Africa	3447.73572	Southern Africa	SADC	EAC	No
Morocco	Tunisia	3348.479	North Africa	CENSAD	CENSAD	No
Tanzania	Egypt	3214.116	North Africa	COMESA	EAC	No
Tanzania	Algeria	2847.535	North Africa	AMU	EAC	No
Kenya	Egypt	2507.01688	North Africa	COMESA	COMESA	COMESA
South Africa	Botswana	2442.763	Southern Africa	SADC	SADC	SADC
Côte d'Ivoire	Tunisia	2114.807	North Africa	CENSAD	ECOWAS	No
South Africa	Mozambique	2031.789	Southern Africa	SADC	SADC	SADC
Guinea	Morocco	1985.703	North Africa	CENSAD	ECOWAS	No
Kenya	Uganda	1762.44266	East Africa	EAC	EAC	EAC
Morocco	South Africa	1699.553	Southern Africa	SADC	CENSAD	No

Originator	Exporter	Value	Exporter Region	Exporter REC	Originator REC	Common FTA
Tunisia	Morocco	1669.634	North Africa	CENSAD	CENSAD	No
Nigeria	Niger	1643.908	West Africa	ECOWAS	ECOWAS	ECOWAS
Senegal	Mauritania	1633.917	North Africa	AMU	ECOWAS	No
Ghana	South Africa	1607.306	Southern Africa	SADC	ECOWAS	No
Morocco	Senegal	1592.892	West Africa	ECOWAS	CENSAD	No
Côte d'Ivoire	Senegal	1542.854	West Africa	ECOWAS	ECOWAS	ECOWAS
Côte d'Ivoire	Algeria	1485.361	North Africa	AMU	ECOWAS	No
Cameroon	Gabon	1444.211	Central Africa	ECCAS	ECCAS	ECCAS
Tanzania	Zambia	1436.813	Southern Africa	SADC	EAC	SADC
South Africa	Zambia	1325.321	Southern Africa	SADC	SADC	SADC
Burkina Faso	Togo	1319.552	West Africa	ECOWAS	ECOWAS	ECOWAS
Tanzania	Ghana	1310.442	West Africa	ECOWAS	EAC	No
South Africa	Gabon	1265.103	Central Africa	ECCAS	SADC	No
South Africa	Mauritius	1247.832	East Africa	SADC	SADC	SADC
Togo	Ghana	1211.943	West Africa	ECOWAS	ECOWAS	ECOWAS
Namibia	Angola	1142.516	Southern Africa	SADC	SADC	SADC
Niger	Libya	1078.539	North Africa	COMESA	ECOWAS	No
Angola	South Africa	1057.304	Southern Africa	SADC	SADC	SADC
Uganda	Egypt	1013.754	North Africa	COMESA	EAC	COMESA

Source: Author's calculations based on UNCTAD (2022) (UNCTAD-Eora GVC database)