



# Empowering Africa's future: Remarks on the digital transformation

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# Takeaways

- DIGITECH and supportive policies for national data management and Services are necessary for successful digitalization
- Offshoring/onshoring balance driven by ongoing DIGITECH transformation (IOT, 3D, etc). Mauritius less remote
- Economies of scope (diversification) /economies of scale (to drive down unit costs) balance to tilt towards economies of scope
- Indices of Network Readiness (NRI) show average performance for Mauritius

## AFCFTA

- Inter-REC trade very low (<1% of GDP on average); Applied tariffs are high
- Phase I tariff offers are generally above minimum compatible with modalities
- ...but Product-specific ROO are complicated in sectors with high preference margins (ROO should be business-friendly not business-owned)

# Digitalization and structural transformation under an 'end of globalisation' era

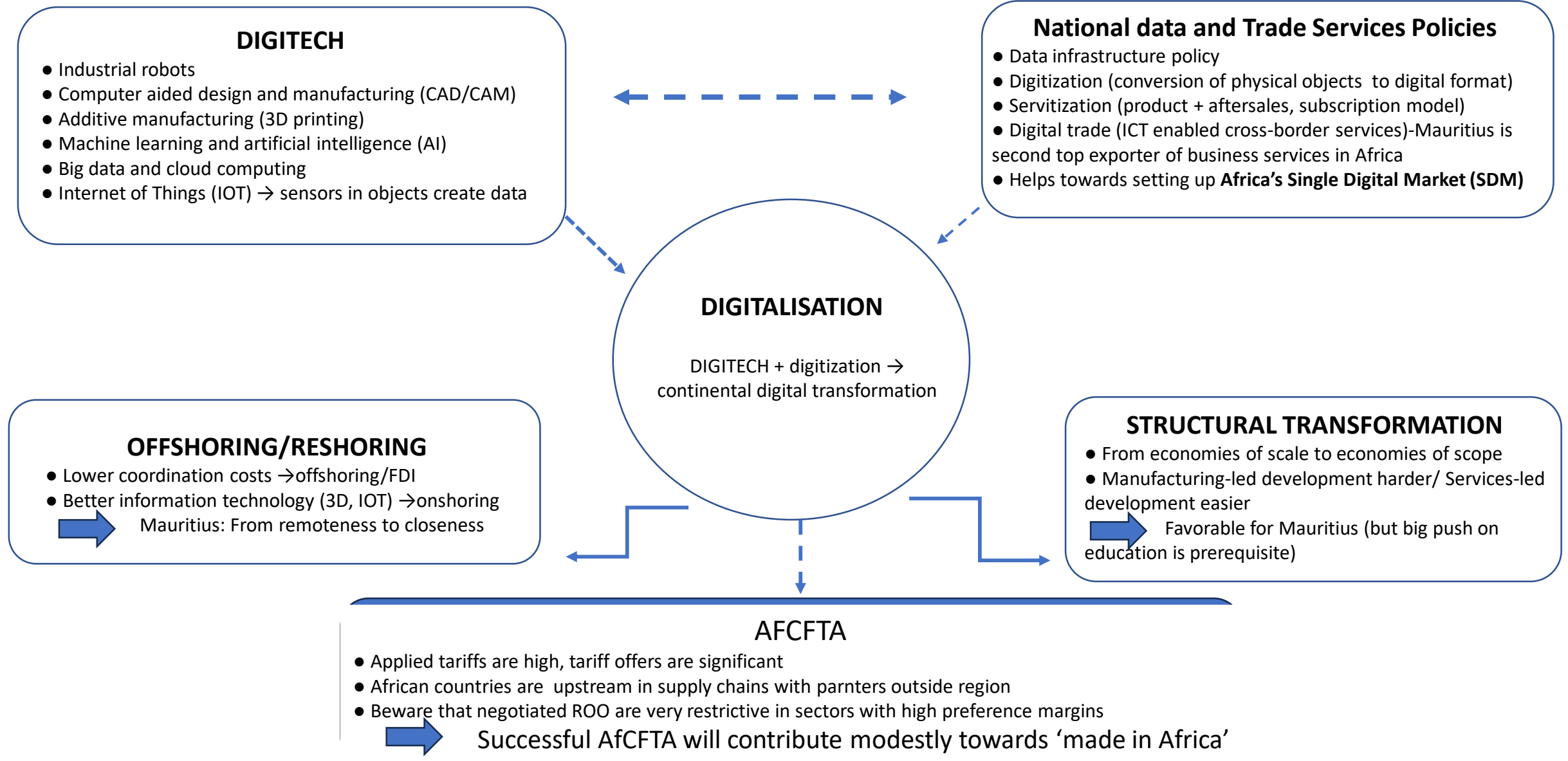
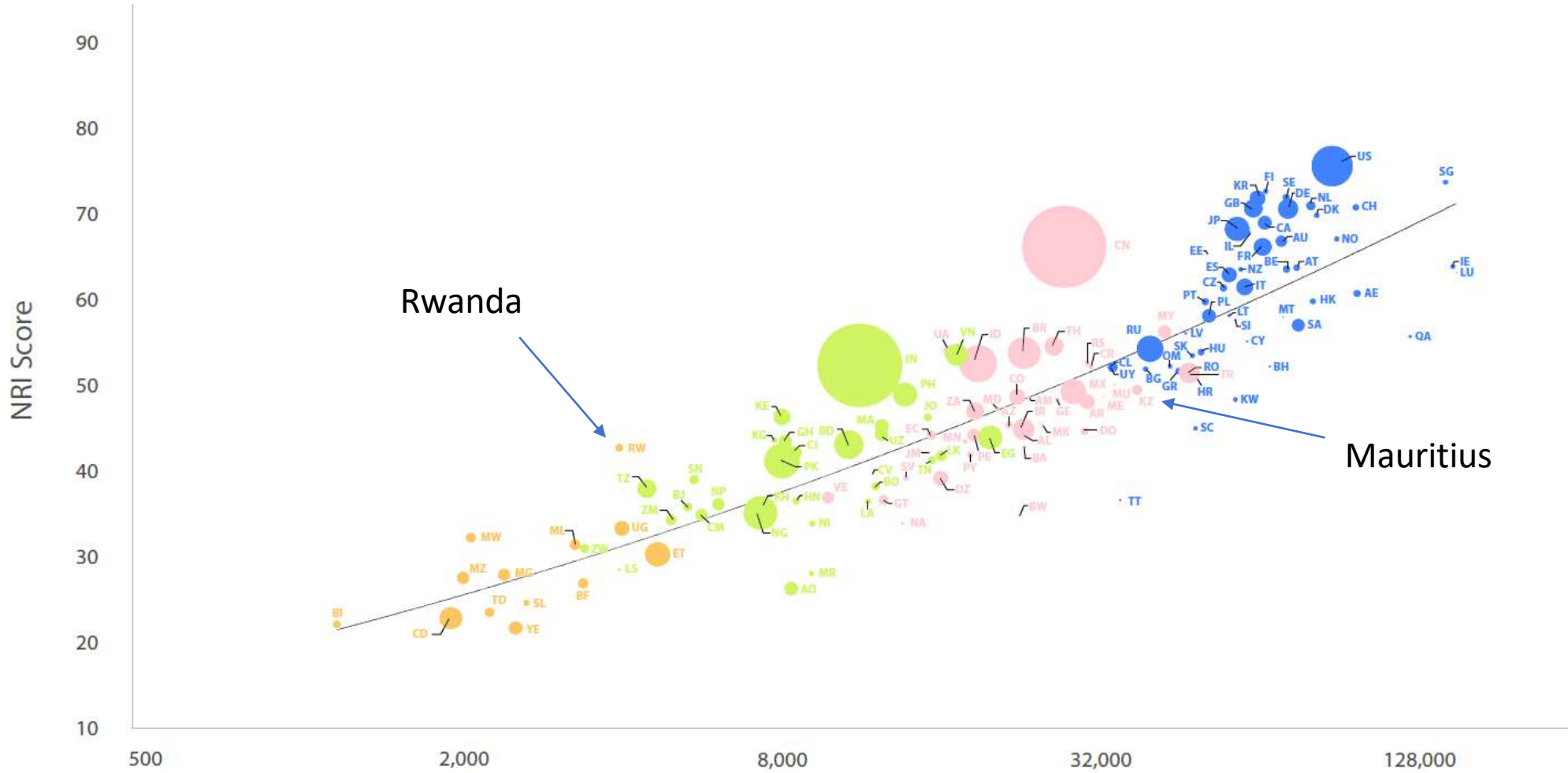


Figure 1 NRI scores and GDP per capita in PPP\$ NRI 2024 (bubble size: population)



Network readiness index for 133 countries

Mauritius rank: 60/133. Score: simple average of 4 pillars (see next slide)

## NRI and its 4 components

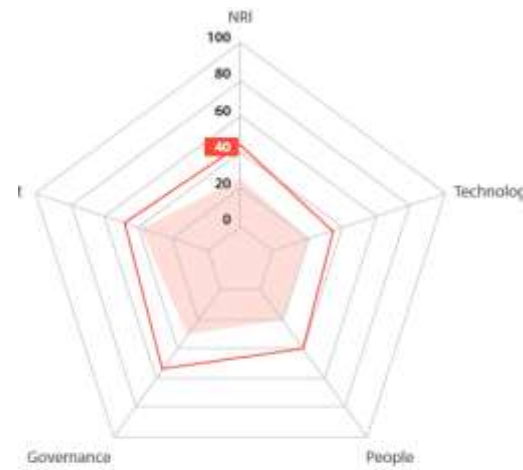


Seychelles  
underperforms,  
Rwanda overperforms,  
Mauritius & South  
Africa perform average

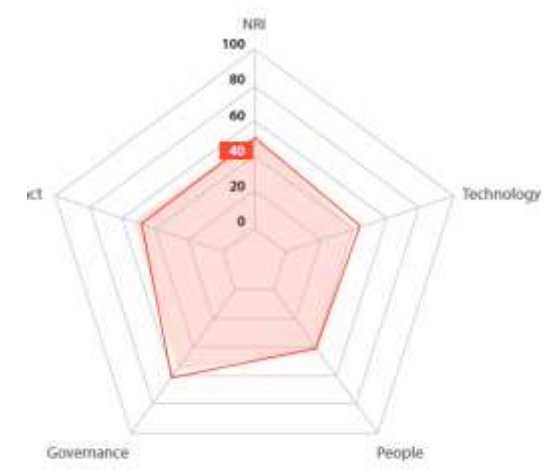
### Notes:

Shaded areas delimit averages for each pillar for respective income groups: HI (Seychelles), UMI (Mauritius and South Africa), LI (Rwanda)

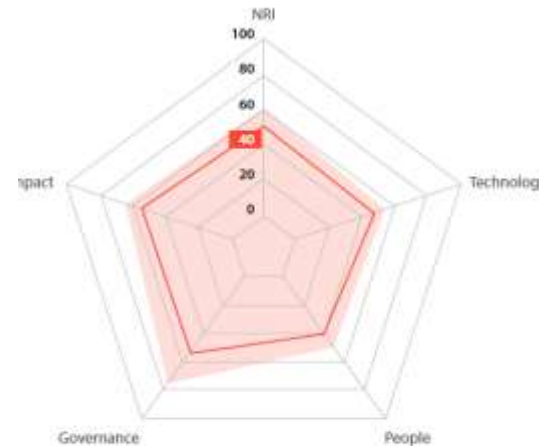
Report identifies strengths and weakness for each subcomponent in each pillar for each country (e.g. Patents)



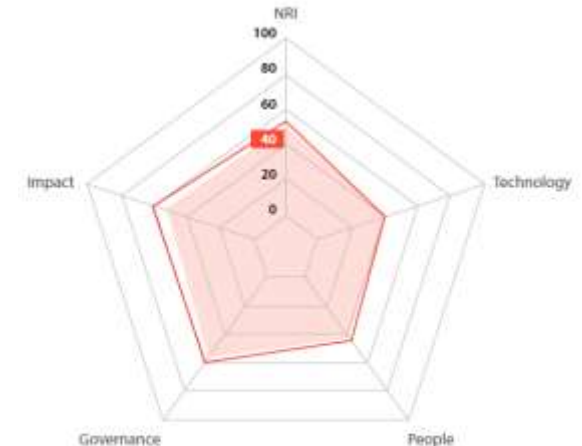
Rwanda Low-income countries



South Africa Upper-middle-income countries



Seychelles High-income countries



Mauritius Upper-middle-income countries

- Mauritius scores high on impact pillar because of above average engagement of women in network readiness  
...but overall Mauritius would perform below average in the HI category

Table 1: Services Dashboard metrics: Mauritius and Selected African countries

Economy	Services trade restrictiveness index (STRI) (0-100)	Percentage of firms using email	Percentage of individuals using the internet	Digital skills index (0-100)	Magnitude of forward linkages for global innovator services (%)	Magnitude of forward linkages for low-skill tradable services (%)	NRI rank 2024 (1-133)
Column	1	2	3	4	5	6	7
Mauritius	16.9	68.4	64.0	55.7	2.6	1.8	60
South Africa	34.5	54.2	56.2	37.9	—	—	72
Kenya	29.5	69.5	22.6	59.1	—	—	73
Morocco	21.0	98.4	74.4	48.0	—	—	76
Egypt	51	68.5	57.3	61.0	1.2	1.8	85
Ghana	18.4	64.7	37.9	53.5	1.7	13.7	87
Tunisia	44.5	95	66.7	53.9	0.5	10.7	96
Senegal	19.0	67.0	29.6	53.4	0.9	10	101
Nigeria	27.1	24.1	7.5	40.4	—	—	112
Cameroon	26.4	52.0	25	48.3	0.7	7.0	113
Botswana	41.7	82.4	41.4	44.9	—	—	114
Zambia	21.0	55.8	17	41.7	—	—	115
Namibia	37.0	76.5	36.8	43.9	7	5.9	117
Uganda	34.5	39.2	23.7	40.4	0.5	4.4	118
Malawi	34.2	78.3	13.8	30.7	—	—	119
Ethiopia	88.2	78.6	18.6	45.8	0.9	4.6	122
Lesotho	27.3	46	29.8	41.5	—	—	123
Madagascar	18.7	59.6	4.7	39	0.3	1	125
Mozambique	18.6	50.8	20.8	29.0	0.3	6	126

**Mauritius**

**Source :** Nayyar et al. (2021, table A1 for cols. 1-6) NRI for col. 7. Selection of countries from Nayyar et al. Table A1. Mauritius has highest rank among African, notably thanks to lowest STRI value

**Notes** Countries ranked in descending rank of NRI in col. 7

# ‘Made in Africa’ is still a long way down the road

	Year	Share P.Back	Share P. Forw	(NRVC) Share Non-Regional	(RVC) Share Regional
Column		1	2	3	4
Africa	1995	.15	.21	.36	.05
	2022	.12	.27	.40	.05
Asia	1995	.16	.16	.20	.16
	2022	.17	.22	.20	.26

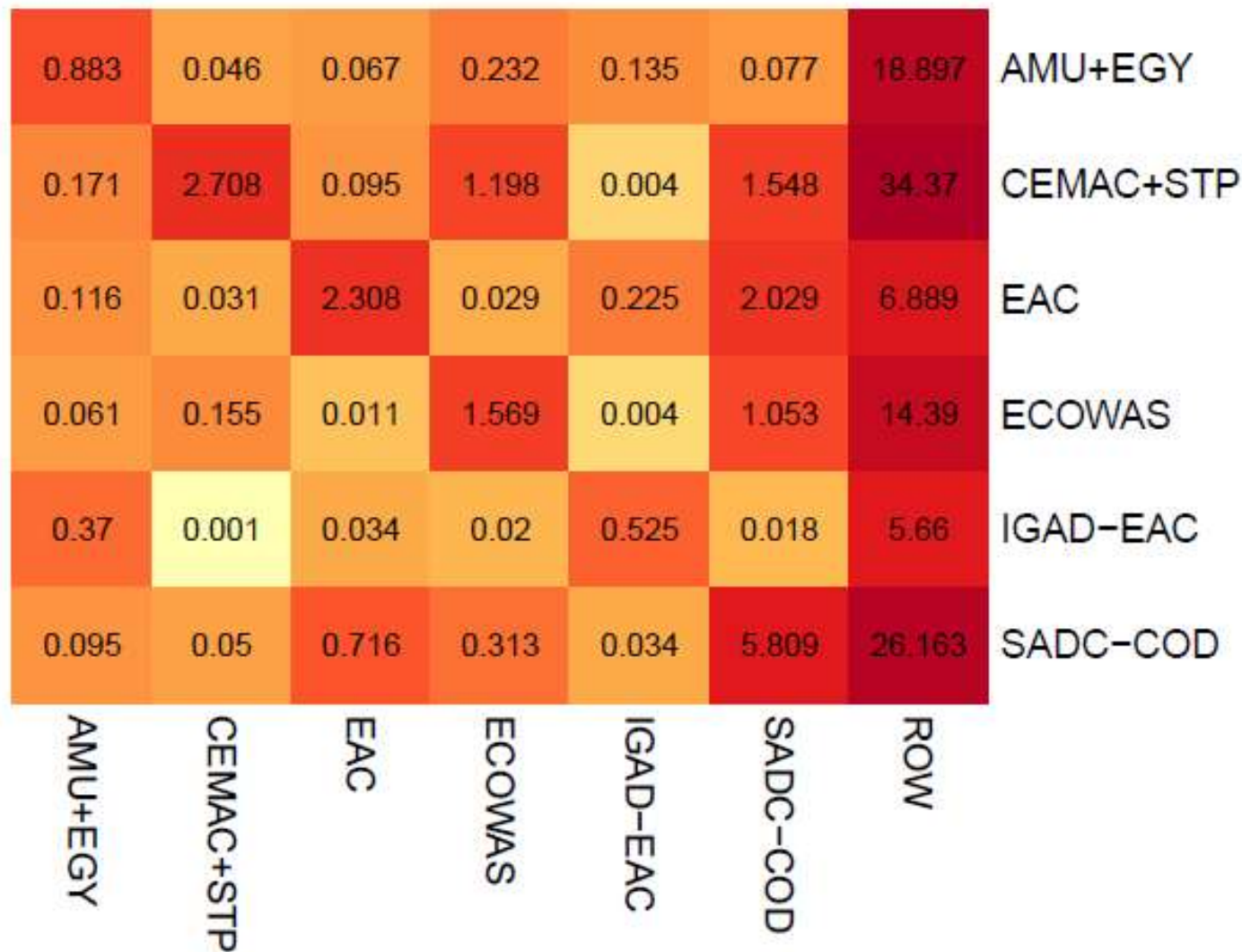
(N)RVC: (non) regional value share in GVC share in gross exports

Source: Melo and Solleder (2025)

- “Made in the world” is coming to an end. Can AfCFTA help towards a “made in Africa”? For this to happen supply chains will have to develop with partners within the region (i.e. African trade partners)
- Over 1995-2022, Asia region (here excluding China and India) turned towards regional supply chains but Africa’s supply chains grew faster with countries outside the region.
- To reverse trend and move to ‘made in Africa’, reductions in trade barriers to intra-African trade will have to go beyond reducing tariffs to include reduction in NTBs
- .... and less restrictive Rules of Origin (see [link to AU assembly summary](#) of Feb. 2024) and Gourdon et al. (2021)

Inter-REC trade less than 1% of GDP  
(except CEMAC and ECOWAS)

Intra-Africa trade costs  
are huge!  
Heatmap of REC  
exports: Intra-and  
between-REC as  
percentage of GDP  
(Average 2010-2022)



Notes: REC (Regional Economic Community). RECs are defined to exclude multiple membership. EAC countries export on average 2.3% of GDP to other EAC members and 6.8% to Rest-of-the-world (ROW) and less than 1% to other RECs !.



## Average applied bilateral tariffs between RECs are still high (and close to MFN rates)

Export / Import		South		East		Central		West	North	EU	USA	China	MFN
		SACU	Non-SACU	EAC	Non-EAC	CEMAC	Non-CEMAC	ECOWAS					
South	SACU	0	1	6	8	8	4	8	8	3	8	8	8
	Non-SACU	2	2	3	4	10	6	10	8	7	10	10	10
East	EAC	6	1	0	3	13	8	13	10	13	13	13	13
	Non-EAC	15	8	7	10	16	14	16	13	16	16	16	16
Central	CEMAC	17	17	17	17	1	17	17	17	17	17	17	17
	Non-CEMAC	10	10	10	10	10	10	10	10	10	10	10	10
West	ECOWAS	12	12	12	12	12	12	4	12	11	12	12	12
North		13	9	9	6	13	13	13	2	8	12	13	13
EU		0	0	0	0	1	0	0	1	0	5	5	5
USA		1	1	1	1	1	1	1	2	4	–	4	4
China		9	5	4	1	6	6	5	9	11	11	–	11
		Customs Union				FTA between all countries				FTA between selected countries			

Note: The figure shows bilateral (unweighted) average tariffs between African regions and with individual selected trading partners. Tariff data describe the year 2017, trade agreements include all those notified to the WTO (as of date: September 9, 2021).

w/n ECOWAS 4% but 12% for all other partners. w/n SACU 0% and 8% for other African and MFN

## ACFTA tariff offers beyond minimum required in most cases

Gov't revenue from tariffs ranges from 1.% to 16% and AcFTA tariff revenue is less than 4.9% =.117x.419

Repaired offers complete schedules, harmonize offers to common HS6 -2017 revision.

LS=1. A tariff offer of t=0% is full tariff liberalization under modalities (e.g. Mauritius).

LS = 0.8 Algeria (DZA) offers a tariff of 0.6% from current 8.3% tariff. Modalities would allow DZA to offer 3.%

- Tariff engagements in phase I bode well for the long road towards progress at integration.
- Expansion of [ONA in EAC](#) to Burundi. ONA members apply unique roaming charges among members. To be emulated and progressively expanded to the Continental level under SDM to reduce the costs of cross-border communications

AcFTA liberalization stance  
(Boysen 2024)

Tariff offers submitted to AcFTA secretariat (2024)

Importer	Tariff share in tax revenue (AU share in tariff revenue)	Average Import Tariffs (%) Repaired data			Liberalization stance (LS)  LS=1-(toff/trmax)
		Pre-AfCFTA	Offer  toff	Maximum Revenue  trmax	
Column (1)	2	3	4	5	6=1- (4/5)
(7) CEMAC	12.5(13.1)	11.1	1.8	2.4	0.6
(6) EAC[656]	8.0(4.0)	5.9	2.6	2.6	0.0
(15) ECOWAS	14.3(4.1)	9.7	2.2	2.1	0.0*
(5) SACU[494]	6.2(1.3)	0.4	0.3	0.4	0.8
COD	11.7(41.9)	10.9	1.8	2.0	0.1
DZA	-(2.9)	8.3	0.6	3.0	0.8
EGY	5.7(0.7)	1.4	0.2	0.6	0.8
MAR[461]	1.6(0.1)	1.3	0.2	0.7	0.7
MDG	16.6(7.2)	4.3	1.0	1.6	0.3
MUS[1]	1.4(1.1)	0.1	0.1	0.1	1.0
SYC[2]	4.3(7.1)	2.0	1.9	2.0	0.1
TUN	4.7(1.7)	1.0	0.3	0.9	0.7
ZMB[564]	7.1(1.1)	0.1	0.0	0.1	0.0

Source : Boysen (2024, table 5)

Column 1:( number of countries ); [number of missing HS6 Tariff lines of total 5387]

Column 2 (AU share in tariff revenue)

Cols. 3,4,5 average tariff (import-weighted) offered to other AcFTA members from repaired offers

# References

Böschmeier, H, F. Teti, J. Cernicky, G. Rieck Moncaya (2022) “AcFTA in a Rut-Can the Pan African Agreement Regain Momentum?”, *CESifo Forum*, 23(2), 46-56

Boysen, Ole, 2024, “The AfCFTA tariff offers: Current state and first revelations about members’ stances towards openness and protectionism”, *The World Economy*

Gourdon, Julien, Dzmitry Kniahin, Jaime de Melo and Mondher Mimouni “Rules of Origin Across Regional TradeAgreements: A Landscape with Measures to Address Challenges at Harmonization”, *Journal of African Trade*, 2021 8(1), 96-108

Krantz, S., and D. Beltekian (2025) “Africa’s Regional and Global Integration”, SSRN, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4929189](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4929189)

Melo and Solleder (2025) “How can the African Continental Free Trade Area (AfcFTA) help develop regional value chains across Africa? An exploration”, *Review of World Economics*, and FERDI <https://ferdi.fr/en/publications/how-can-the-african-continental-free-trade-area-afcfta-help-develop-regional-value-chains-across-africa-an-exploration>

Network Readiness Index (2024) <https://networkreadinessindex.org/>

AU (2024) AU Assembly of February 24, 2024 on rules of origin <https://qaafcfta.z6.web.core.windows.net/rulesoforigin>