

Health Products and Medical Technologies Manufacturing in Africa

Insights session presentation

July 2025

The contents of this document are meant to be informative of a fact base, rather than provide any specific recommendation. They are based on initial research, interviews, and analysis and are subject to change given continued feedback

Agenda



- 1 Overview of health products manufacturing opportunities in Africa**
- 2 Overview of technical assistance and technical facilitation support provided to health products manufacturing through MA**
- 3 Discuss the opportunities for further support**

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- 2 Overview of technical assistance and technical facilitation support provided to health products manufacturing through MA
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Regional health product manufacturing in Africa could add a potential \$8bn p.a. to GDP by 2040 and improve public health outcomes

Economic Impact



Direct GDP growth

\$8Bn direct annual GDP growth by 2040¹



Capability development

1+mn direct and indirect high-quality jobs²



Improved trade balances

\$9bn in annual improvement in the trade balance and FX accounts of the continent¹

Public Health Impact



Increased health security

Mitigate against **~30%** decline in availability of medicines e.g., as seen during COVID in parts of Africa



Increased affordability of drugs

Locally produced drugs in countries like Ethiopia and Nigeria are **5-15% cheaper than imports from India**



Research & Development

Provide local capacity for development of products **relevant to the African region**

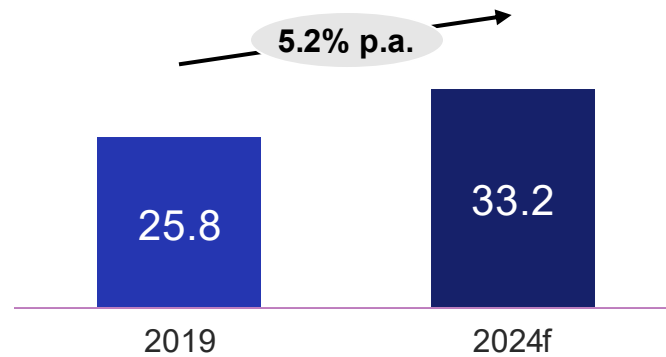
1. Assuming: value add of conversion (no raw materials) is 25-40% | weight of locally produced demand = to Brazil's current of ~75% | Today Africa imports 70% of what it consumes | Current life sciences market is worth ~\$30bn | CAGR of the life sciences market 2025-2040 = ~4% | 2. Assuming same revenue per FTE of India of ~\$140,000

Africa's life sciences industry is growing at ~5.5% p.a with therapeutics contributing ~90%



Therapeutics

African Therapeutics Market Size, \$Bn

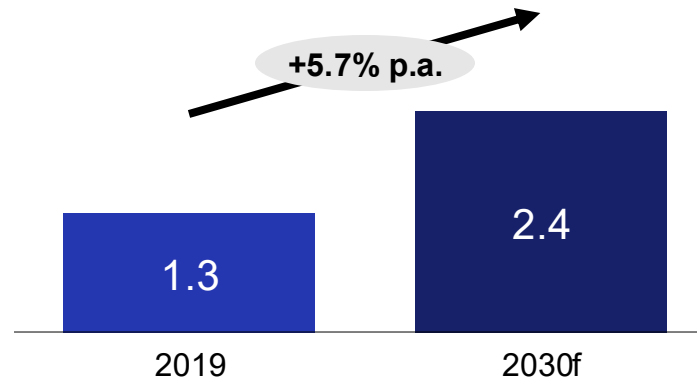


- **5 countries make up ~60% of therapeutics sales** (Algeria, South Africa, Egypt, Nigeria, Morocco)
- **~40% of total sales are from North Africa** driving the market in terms of volumes due to an increase of health coverage and public health expenditures, signaling **huge untapped opportunity in sub-Saharan Africa**



Vaccines

African Vaccines Market Size, \$Bn

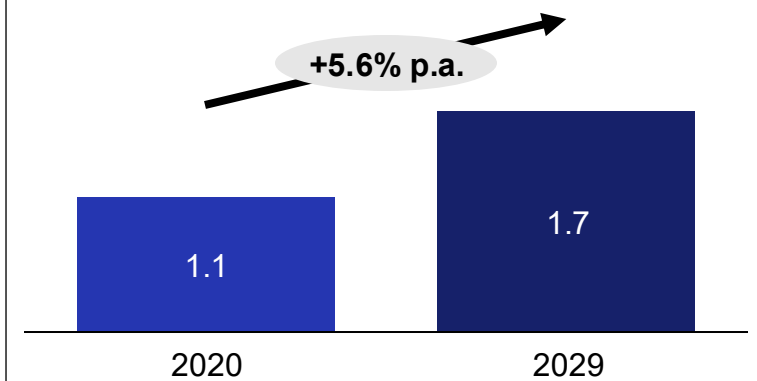


- The African vaccine represents **~4% of global market value but accounting for up to 25% of global volume**
- Top markets by value (\$M): Nigeria (176), South Africa (175), Ethiopia (113).
- Top markets by volume (M doses): Nigeria (367), Egypt (104), Ethiopia (92).



Diagnostics

African diagnostic market size, \$Bn



- Immunoassays represent ~35% of the total African diagnostic market, which includes RDTs and other lab technologies
- Molecular Diagnostics are expected to grow faster than the total market due the increased proliferation of the technology / accessibility, along with new use cases for molecular diagnostics

While Africa's therapeutics market is expected to grow substantially, local production remains low

Examples



Growth in the ~\$25 bn pharmaceuticals market is driven by the expected growth of NCD¹ burden

~5,2% p.a.

expected growth in sales of pharmaceuticals across Africa up to 2024 (from \$25,8 Bn in 2019)



~50%

of the market sales driven by three product areas: Gastrointestinal, Nervous system drugs and Anti-infectives



~40%

of total sales are from North Africa driven by an increase of health coverage and public health expenditures

2



Most African markets are still heavily reliant on imports

30-40%

of the total pharmaceuticals demand volume is locally produced in Africa



~50%

of pharmaceuticals are imported from 3 countries – India (22%); France (18%); Switzerland (9%)



~80%

of total production concentrated in 8 countries

3



The local production capacities focus mainly on relatively simple manufacturing processes

80-90%

of African pharmaceutical companies focusing on solid oral and liquid/gel forms



~70%

of the local manufacturing capacities dedicated to generics production



~85%

of the local production focused on the top 6 ATC²s, which represent >70% of the total demand

4



There are several ongoing efforts aimed at supporting the scale-up of local manufacturing

Increased support by African governments, international multilateral and donor agencies, and MNCs for local manufacturing



Several ongoing efforts to boost local production e.g., Manufacturing Africa which aims to understand demand and supply dynamics, identify barriers and enablers, and facilitate access to finance and expertise to promote local production; African Pharmaceutical Technology Foundation (APTF) by AfDB aims to advance and broker for sharing of IP-protected technologies, know-how and patented processes

Africa's vaccine market is expected to grow substantially; local production is growing but remains low

Examples



1 Demand for vaccines is expected to grow substantially

~4,3% p.a. to 8,3%
expected growth in demand for vaccines by value by 2040 based on conservative and optimistic scenario estimates (from \$1.3Bn in 2019)

~1,7% p.a. to 4,0%
expected growth in demand for vaccines by volumes by 2040 based on conservative and optimistic scenario estimates (from \$1.3Bn in 2019)

Growth in market volume and value largely driven by aggressive scale-up of novel vaccines and high prices (particularly in the optimistic scenario)



2 Local Vx production remains low with most of the local demand met by imported supplies and largely driven by Gavi support

~1%
of the total Vx demand volume is locally produced in Africa

& >60%
of vaccines volumes originate from Indian manufacturers

& 40
Gavi-supported countries on the continent. Within the next 10 years, ~9 African countries could transition from Gavi support²



3 Scale-up is occurring across the continent with multiple ongoing initiative aimed at spurring on local manufacturing

10
suppliers have existing manufacturing and a further 17 have plans to enter the market

& PAVM has made notable progress in contributing to a shift in the continental Vx ecosystem through the launch of 8 bold programs

& A lot of progress has been made across the Vx ecosystem including; **GAVI announcement of the investigation of an AMC** to enable local manufacturing; **3 countries have reached Maturity Level 3** for vaccines status since 2021

1. Key drivers of demand include; High population growth (2.5% p.a. compared to globally 0.7%) and ageing population; Expanded coverage of routine products and introduction of new ones (e.g., HPV, rotavirus); Emerging Vx products and novel technologies; Transitioning from Gavi | 2. Including Ghana, Kenya, and Nigeria, although COVID could decelerate this process | 3. Advance Market Commitment | 4. South Africa, Egypt and Ghana

Africa's diagnostics and medical devices market is heavily import dependent, with local manufacturing focused on low-tech products

Examples



The medical devices market is expected to maintain steady growth in some regions

3% p.a.
expected growth in South Africa's medical devices markets due to increased market access



5% p.a.
growth in Kenya's medical devices market to ~\$210Mn in 2024



7% p.a.
growth in Nigeria's medical devices market 2020-2025, slowing from 10% p.a. 2015-19

2



The diagnostics and medical devices market in Africa is mainly concentrated in South Africa and is heavily import dependent

2x
the diagnostics and medical devices market of Kenya, Morocco and Nigeria combined (\$1.5Bn by 2025)



~\$200Mn-\$300Mn
Estimated local manufacturing in South Africa with >50% exported



There is limited manufacturing activity on the continent with most leading multinationals focusing on sales, distribution, and services

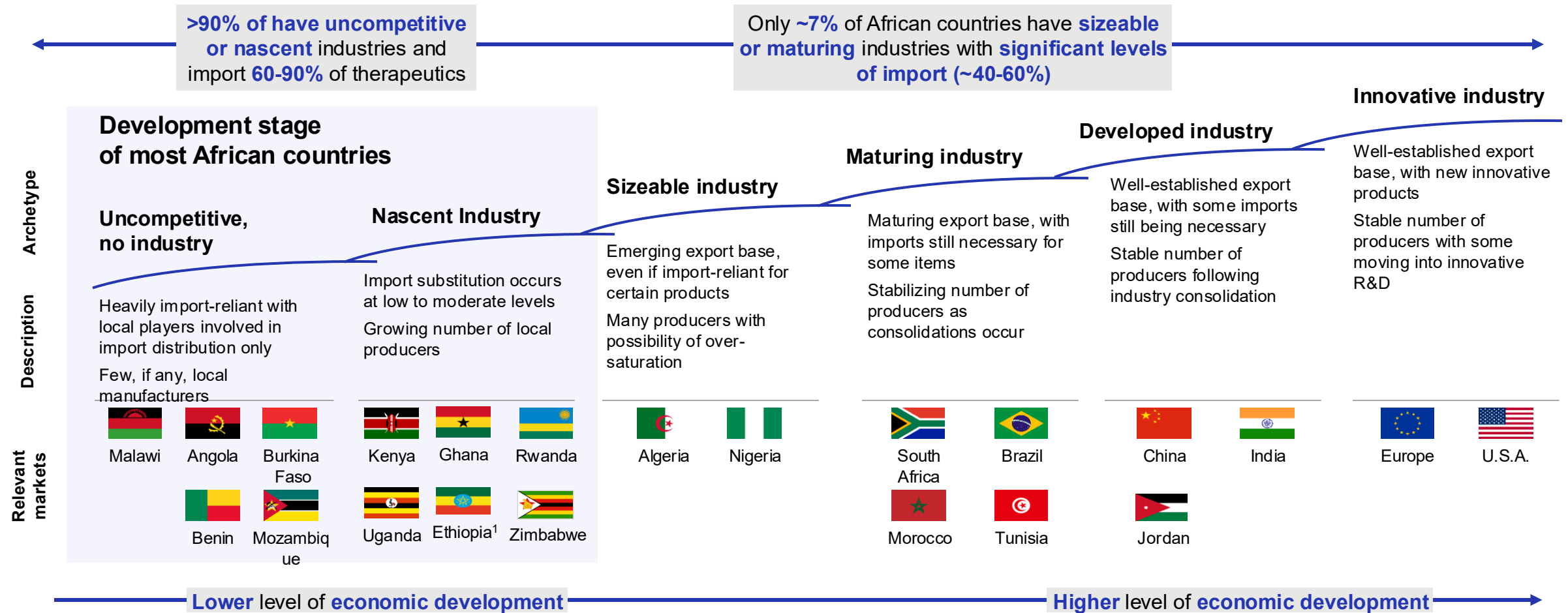
3



Local production is primarily focused on low technology items

Local production is primarily focused on consumables and basic medical devices

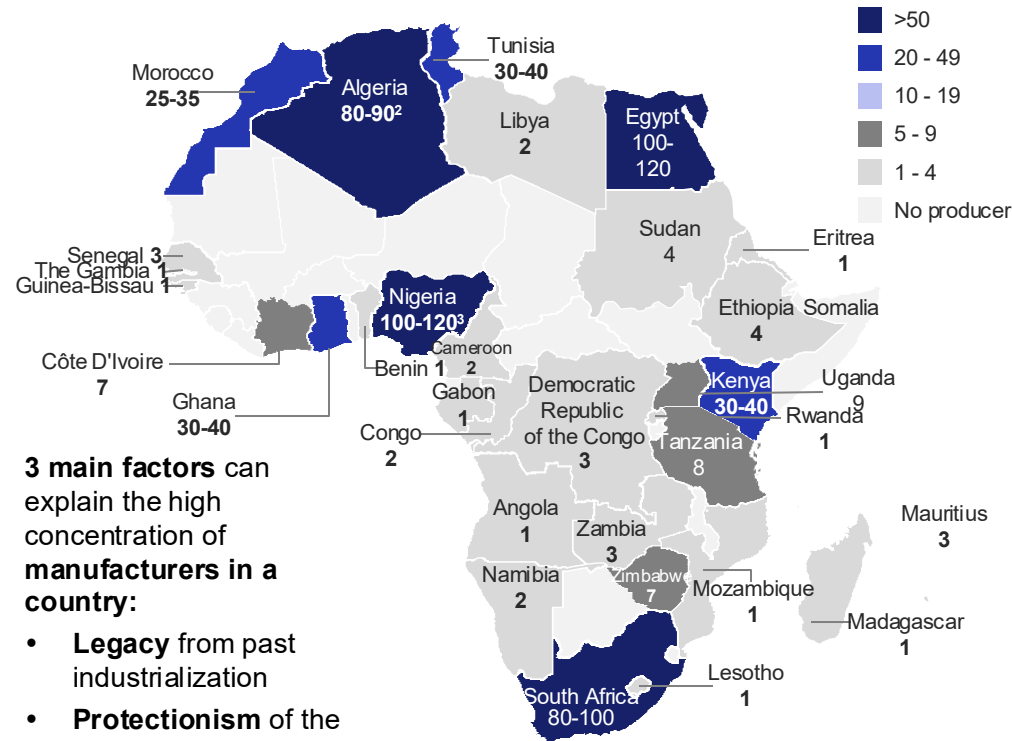
More than 80% of African countries are still heavily reliant on imports



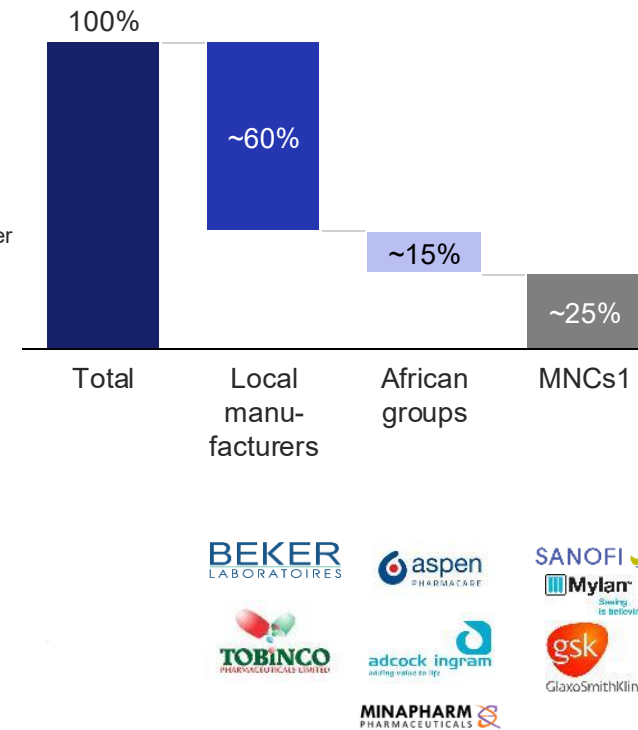
1. Within the nascent industry archetype, the Ethiopian market may be considered a distinct sub-archetype because of its sizeable domestic demand (~110 million population)

There are ~600 manufacturers in Africa, mostly concentrated in 8 countries, representing ~80% of the total production

Africa's pharmaceutical manufacturers by country
2020, total = ~600



Pharmaceutical manufacturers by ownership
2020, total sample = ~400



African manufacturing capacities are **concentrated in 8 countries**, agglomerating **~80% of the total local production**

Only 4 countries have more than 50 manufacturers, while **22 countries** have no local production

Local manufacturers tend to be **sub-scale**, especially in Kenya and Nigeria

However, Africa's health product manufacturing capacity is still limited, with a low complexity and integration along the value chain

Examples

1	Africa has limited manufacturing capacity, concentrated in a few countries		~1% of the total Vx demand volume locally produced in Africa	&	30–40% of the total therapeutics demand volume locally produced in Africa	&	~80% of total production concentrated in 8 countries
2	African companies show a low level of integration along the value chain, with limited to no R&D and input production capacities		~90% of the companies operating in Africa focusing on health product formulation and packaging activities	&	Less than 2% of worldwide pharmaceutical R&D projects happening in Africa	&	Less than 20 manufacturers producing APIs operating in Africa, compared with ~400 in India and China
3	The local production capacities focus mainly on relatively simple manufacturing processes		80–90% of African therapeutics companies focusing on solid oral and liquid/gel forms	&	~70% of the local manufacturing capacities dedicated to generics production	&	~85% of the local production focused on the top 6 ATC ¹ s, which represent >70% of the total demand
4	Nascent diagnostics and medical devices manufacturing activity on the continent with primary focus on the production of low technology items		Concentrated market Diagnostics and medical devices in South Africa, 2X the size of Kenya, Morocco and Nigeria combined	&	Low complexity Primary focus on the production of low technology items – consumables and basic medical devices	&	Inconsistent growth Market is expected to maintain steady growth in some regions (e.g., South Africa, Kenya) while other regions like Nigeria and Morocco are slowing down

1. Anatomical therapeutic chemical

Most of the African pharma and vaccine production is focused on downstream formulation and packaging, rather than upstream R&D and inputs

OUTSIDE-IN VIEW

Very limited (<10 manufacturers) Limited (10-49 manufacturers) Moderate (50-100 manufacturer) High (100+ manufacturers)

Status (# of manufacturers ¹)		 R&D	 Intermediates and API production ²	 Formulation	 Packaging	Distribution
Small molecule (e.g., packaged medicines)	Local	Very limited (<5)	Very limited (<5)	Moderate (~80)	High (>300)	High
	MNC ³	Very limited (<5)	Limited (~10)	Moderate (~100)	High (>150)	High
Large molecule (e.g., non-packaged medicines such as biosimilars, vaccines) ⁴	Local	N/A	N/A	Very limited (<10)	Very limited (<10)	Very limited
	MNC	Very limited (<10)	Very limited (<5)	Very limited (<10)	Moderate (~20)	Very limited

Along the industry value chain from R&D to product packaging, very few of the steps take place on the continent, resulting in a limited production integration level

Local manufacturers **focus more on small molecules and are less integrated** than MNCs along the value chain:

- **Less than 20 API manufacturers were identified** with limited product portfolios² – producing for example quinine, that is used to treat malaria
- **R&D capacities are very limited** on the continent and mostly located in South Africa, especially when it comes to local manufacturers

1. Possibility to have double-counting as companies can be involved in different part of the value chain; 2. API manufacturers are located in South Africa (e.g., Pharma Q), Ghana (e.g., Lagray Chemical), and Democratic Republic of the Congo (e.g., Pharmakina); 3. Multi-national company; 4. Out of scope of packaged medicines

Key barriers that limit local manufacturing of health products and medical technologies in Africa

Area	Key challenges
① Limited access to affordable financing	There is limited funding available and where it is available, the payment terms and rates usually do not favor local manufacturers
② Limited, uncoordinated market shaping efforts	• Limited offtake agreements (outside of HIV and Malaria RDT's) • Lack of a sizeable market preventing investment into new products • Limited end-user affordability for diagnostics products • Limited availability of market information on consumption and procurement
③ Limited talent and Know-how (R&D, Tech & IP)	• Limited R&D driven by high associated costs with less than 2% of total R&D activities in the world taking place in Africa • Difficulty in accessing advanced tech and expertise • Limited availability of skilled labor for drugs development and formulation • Limited access to much-needed technology to drive production
④ Operational inefficiencies	• Lack of cost competitiveness due to low volume market, smaller plants, lower plant utilization • High taxes and complex processes to secure input materials
⑤ Insufficient regulatory standards harmonization	• Lack of harmonized standards and regulations on manufacturing, distribution, authorization and quality across the continent
⑥ Transport and logistics barriers and limited trade policies	• Delays in cross-border movement (esp. customs delays) due to different standards between countries • Inadequate infrastructure, lack of quality transportation, limited ambient and cold chain warehousing, and other barriers result in logistics costs being 50-175% higher than other regions

1& 2. There are several demand-related challenges for countries and manufacturers

Challenges faced by countries



Non-Gavi supported countries

- Individual procurement can result in pricing ~2-4x higher than seen by Gavi-supported countries
- Late ordering can result in late shipments, delaying vaccination programmes
- Managing procurement processes with multiple manufacturers can create administrative burden and result in limited supplier diversification
- As new products are introduced and demand scales, countries may face vaccine financing gaps to meet demand



Across countries

- Limited supplier diversification for some routine products, which can make supply unreliable
- Global vaccine R&D is often not sufficiently focused on African priorities and with products thus not fully reflecting African disease burdens, which can limit the potential health benefits
- Unreliable access to outbreak/pandemic products in moments of emergency

Challenges faced by African manufacturers



Lack of adequate market intelligence and demand forecasting



“Catch-22” of competitive pricing as reaching price competitiveness would require offtake certainty to reach economies of scale, which in turn requires competitive pricing



Fragmented offtake outside of Gavi markets reduces efficiency as manufacturers need to negotiate with each country



Financial and payment risk when dealing with individual countries not backed by revenue or market guarantees



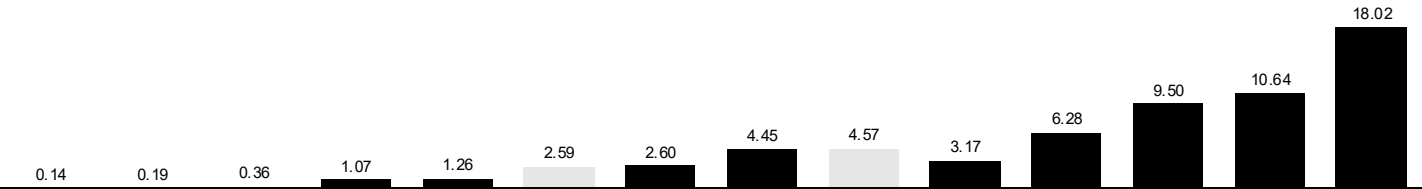
Offtake challenges from procurers (countries or otherwise) that might not fully trust the quality of the products produced

3. Africa is facing a large gap in pharma-related workers and a limited capacity to train new talent with industrial pharma knowledge

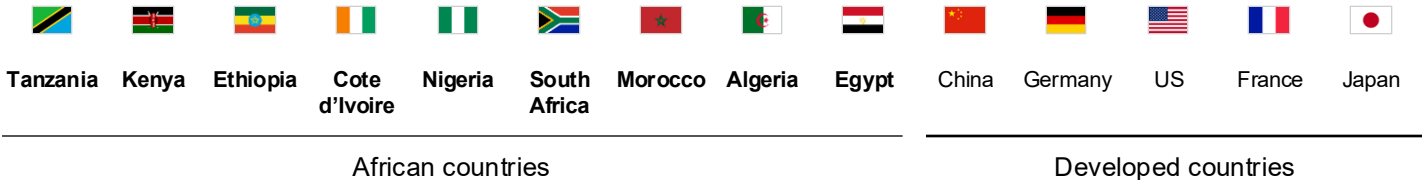
Africa has a large gap vs benchmark in the quantity of pharma-related labor ...

Pharmaceutical talent supply benchmarks, individuals per 10,000 population (2019 or latest available data)

Licensed pharmacists



Pharmacy technicians



... and a poor capacity to train of new talents with industrial pharma knowledge

Lack of schools and programs

Africa has one of the lowest training capacity and supply pipelines for pharma skills in the world

Mismatch of skills between education pharma industry's skill requirements

Pharmacy degrees on the continent focus on clinical pharmacy for hospitals, leaving limited exposure to industrial pharmacy

Newly-hired pharmacy graduates require extensive on-the job training

Employers report low productivity and capabilities from African employees compared to Indian and Chinese employees

Limited continued professional development

Few local training programs available to upskill pharma labor in Africa

Employers typically import senior labor from outside of Africa who train local staff for limited periods of time in specific technical skills

1. Because the profession of pharmacy technician does not exist in Japan, pharmacists are responsible for such varied tasks as drug dispensing and sterile preparation of IV total parenteral nutrition and chemotherapeutic agents

4. Competitiveness of African pharma manufacturers lags benchmarks due to smaller plants and lower labor productivity

FOCUS ON SOLID FORMS

X Top quartile

African pharmaceutical plants benchmarked vs other countries, median shown for each indicator, focus on oral solid forms manufacturing, 2020

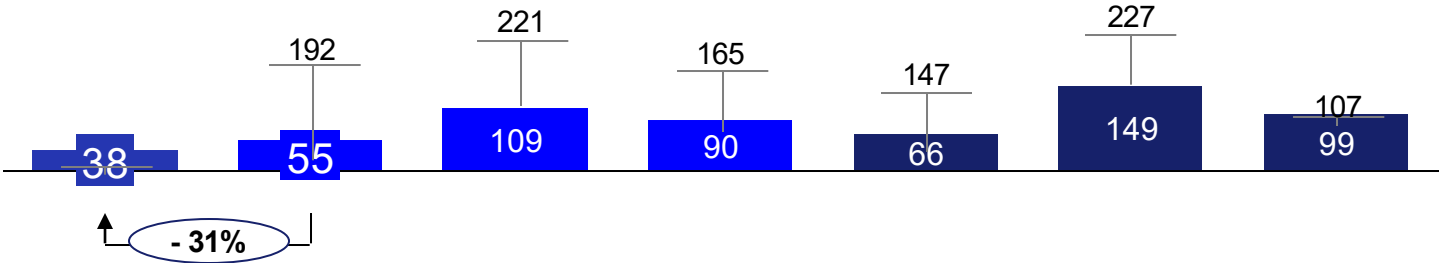
Overall cost per unit

Indexed to global median = 100



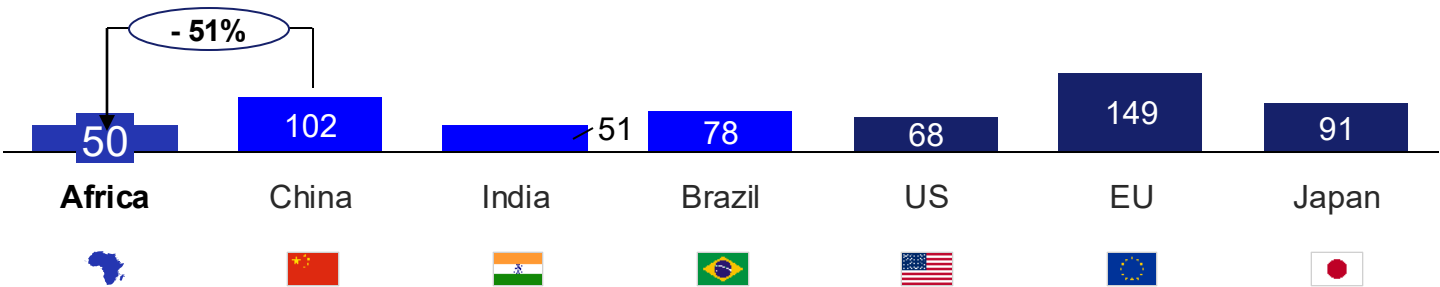
Plant size in units produced

Indexed to global median = 100



Productivity per employee

Units produced / employee, indexed to global median = 100



Africa

China

India

Brazil

US

EU

Japan

Emerging economies

Developed economies

- Overall cost per unit is higher in Africa than in emerging economies (+61% vs China), but in line with the EU for example
- Plants are also smaller in Africa than in other markets, for example China (-31%) – Africa also lacks the top-size (1st quartile) manufacturers that enable other continents to compete globally
- The productivity per employee of African manufacturers is also low compared to benchmark, but in line with Indian benchmarks
- One key explanation can be that large plants can specialize their production lines on one product and therefore produce almost 24/24h, whereas African plants – often of smaller size – produce several products on each line, and therefore will lose a few hours per day cleaning the lines (up to 1 shift, i.e. ~8h/day lost)

Key players and example programs across these barriers

Area	Key stakeholders leading ongoing programs / initiatives in area	Example programs
① Limited access to affordable financing	   Manufacturing Africa	AfDB and Afreximbank provide financing to pharmaceutical companies in the form of loans, equity investments, and guarantees
② Limited, uncoordinated market shaping efforts	  	AVAT pools resources and funds from AU member states to purchase vaccines in bulk from manufacturers. The trust also negotiates favorable terms for vaccine procurement
③ Limited talent and Know-how (R&D, Tech & IP)	   	PASET aims to develop the skills of students and professionals in the applied sciences, engineering, and technology
④ Operational inefficiencies	   Manufacturing Africa PMP A	AVMI aims to build and strengthen vaccine manufacturing capabilities in Africa, including the development of new facilities and the upgrade of existing ones
⑤ Insufficient regulatory standards harmonization	  	AMRH aims to improve the quality, safety, and efficacy of medicines in Africa by harmonizing the regulatory processes for approving and monitoring medicines
⑥ Limitations in trade policies and transport and logistics barriers	  	African Pharmaceutical Distribution Association (APDA) s a network of pharmaceutical distributors in Africa that works to improve the efficiency and effectiveness of pharmaceutical distribution in the region

There are numerous global donors and multilateral agencies feeding into initiatives across these areas

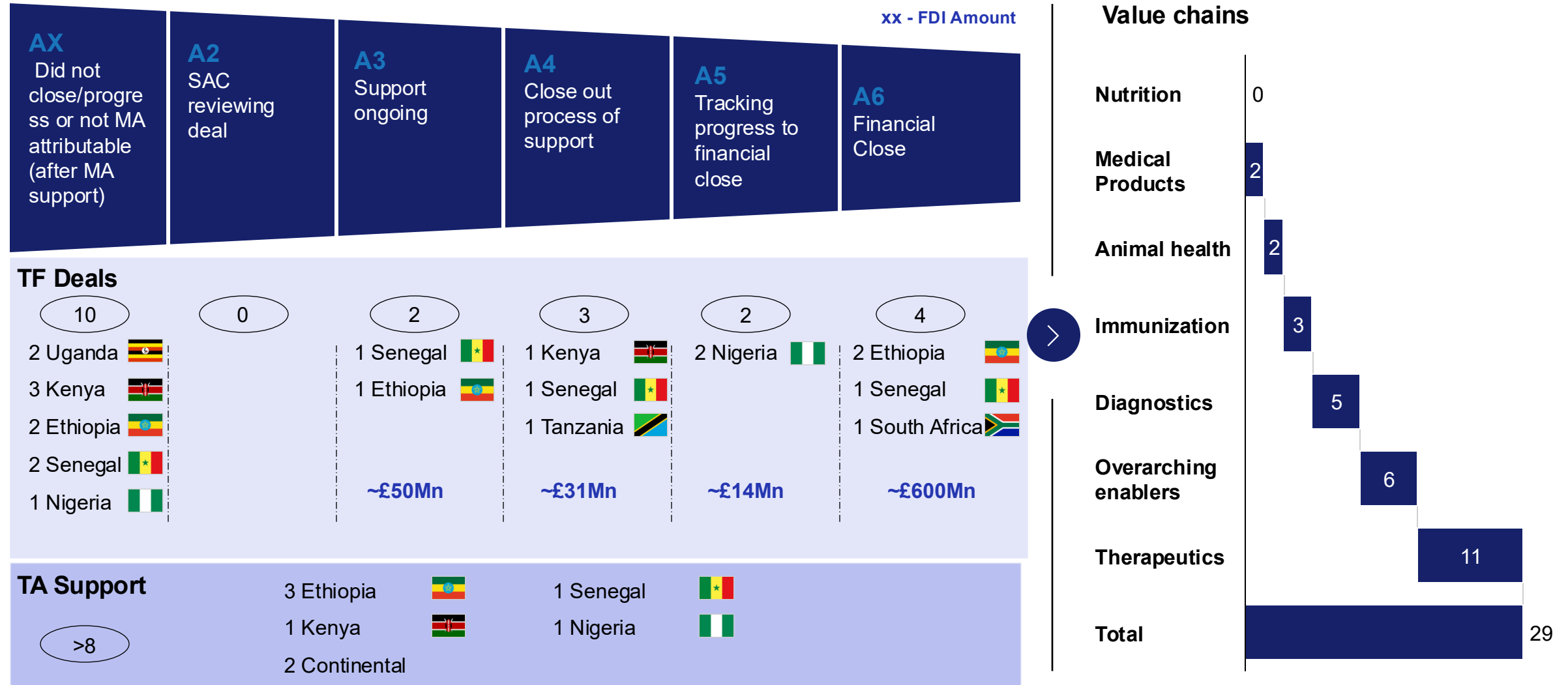


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- 3** Discuss the opportunities for further support and engagement in the pharmaceutical sector

MA has supported 21 manufacturers at different deal pipeline stages securing ~£600Mn in FDI with another ~£100Mn in the pipeline



Technical Assistance provided by MA has formed a strong knowledge base informing critical strategies across the continent

Country		Project name	Description	Impact
Continental		Africa Vaccine Manufacturing Demand	Provided technical support on a diagnostic of the Africa vaccine market and on the market design and demand intelligence workstream of the PAHM	Developed a fact base around African vaccine market which informed the design and launch of a continent-wide strategy to localize 60% of vaccines ; designed a concept for next-gen market shaping for African vaccines which was codified into a continental of pooled procurement mechanism
Continental		PAVM	Supported PAHM to validate demand forecasting approach and perform analysis on critical market intelligence questions	Developed a detailed demand forecast for pharmaceutical products across countries through 2040 , analyzed procurement and financing mechanisms, evaluated supply and manufacturing capacity across the continent, and developed 9 business cases for investment
Senegal		Senegal Pharma Sector	Support given to the Government of Senegal to define it's pharmaceutical strategy and prepare for execution	Analyzed seven government reforms required to unlock the pharmaceutical industry , contacted 50+ industrial players who may be interested in investing in Senegal and supported two players to conduct market studies to launch manufacturing projects
Ethiopia		Ethiopia Pharma sector	Support given to the Government of Ethiopia to define it's pharmaceutical strategy and prepare for execution	Developed the business case for local manufacturing , established an MoH taskforce to lead localization effort and developed business cases across 3 products to unlock short term investment

The deals supported by MA have had significant impact not only at a national but also at a regional level

Manufacturing Africa Pharma Technical Facilitation Country Coverage



Institut Pasteur Dakar (IPD)

Objective: Deal focused on supporting IPD bolster vaccine manufacturing capabilities and produce Covid-19 vaccines in Senegal

Impact: IPD is now in progress to establish one of Africa's largest vaccine manufacturing plants, with the capacity to produce up to 300 million doses a year



Biovac

Objective: Establish a COVID vaccine manufacturing hub as a foundation for developing an inoculation export industry. It includes building a 200-million-euro plant to produce APIs and manufacture various vaccines

Impact: Biovac has one of Africa's first functioning vaccine plants, with multiple tech transfer deals signed for vaccine manufacturing including the 14 valent pneumococcal conjugate vaccine and COVID-19 vaccine



Shanghai Pharma (*Deal is progressing slowly*)

Objective: Establishment of a factory to manufacture generic pharmaceutical products (Cephalosporin and Penicillin), with plans to scale-up to more advanced products

Impact: Production will substitute for annual drugs imports valued at about \$24M in the initial four years of production, with plans to start exporting 20% of products from 5th year



Kilinto Industrial Park

Objective: Establishment of major industrial park focused on the life sciences sector

Impact: Kilinto industrial park has been established and offers adequate and 'above market' infrastructure to life science manufacturers

These and other deals, have **delivered impact beyond national borders**, laying the groundwork for the continent to pivot to create local **capacity**. The continental efforts have **contributed to the development of GAVI's AVMA \$1.2bn financing instrument**



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Potential opportunities for MA support – preliminary list

NON-EXHAUSTIVE

Region of support		Organization	Topics/Gaps
Regional		AMA 	Developing investment case to become a world listed regulatory authority (est. 30-50 USD Mn) Support to identify & prioritize GenAI use cases to prioritize to better regulate manufacturers
		Africa CDC 	Market shaping support to PAVM and UNICEF to pilot the AU PPM (Pooled Procurement Mechanism)
		Continental	Market diagnostic and country business cases to scale manufacturing of animal health products
		Continental	Digital opportunity assessment of top 10-15 manufacturers to quantify digital/AI value at stake in pharma operations and use cases to capture the opportunity
Ethiopia		Ministry of Health 	Support development of a deal pipeline and investment attraction strategies to accelerate pharma manufacturing investments
		Hilina 	Develop business case for manufacturing of nutraceutical products e.g., plumpy nut
Rwanda		Bio Usawa 	Developing the business case to become the first manufacturer of mABs (monoclonal antibodies) on the Continent; recently announced their technology transfer partnership with Formycon (German biotech)
Nigeria		Innovative Biotech 	Greenfield vaccine manufacturing facility and diagnostics facility
		Emzor 	Greenfield anti-malarials API manufacturing facility (with tech transfer partner – Mangalam Drugs)
Senegal		IPD 	Commercial Support for MADIBA - Vaccine Manufacturing (i.e., commercial analytics for the UNICEF tender and engagement model for contract manufacturing business)
		Exphar Senegal 	Pharma operations benchmarking to inform manufacturing expansion and regional exporting business case



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