endeavor

The Inflection Point: Africa's digital economy is poised to take off

June 2022

About Endeavor Nigeria

Endeavor is the leading global community of, by, and for High-Impact Entrepreneurs — those who dream bigger, scale faster, and pay it forward.

Driven by our belief that High-Impact Entrepreneurs transform economies, Endeavor is on a mission to build thriving entrepreneurial ecosystems in emerging and underserved markets around the world.

Endeavor creates a Multiplier Effect by inspiring high-growth founders to dream bigger, supporting and investing in them to scale faster, and providing a platform pay it forward — thereby compounding their individual impact.

Endeavor screens, selects, and accelerates high-impact entrepreneurs building transformative companies in nearly 40 markets globally. Headquartered in New York City, Endeavor operates across underserved ecosystems throughout Africa, Asia, Europe, Latin America, the Middle East, and North America.

To sustain Endeavor's long-term operations in a mission-aligned way, Endeavor created **Endeavor Catalyst** — a rules-based, co-investment fund, set up to invest in the same High-Impact Entrepreneurs that Endeavor supports. Today. Endeavor Catalyst is among the world's top early-stage funders of startups-turned \$1B+ companies ("Unicorns") outside of the U.S. and China.

Endeavor Nigeria currently supports 30 Endeavor Entrepreneurs leading 15 companies in Nigeria.

Learn about Endeavor's global operations: www.endeavor.org Learn more about Endeavor in Nigeria: www.endeavornigeria.org

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Foreword

The emergence of a new generation of African innovators and entrepreneurs is heralding a new dawn of opportunities and development on the continent. Our stories are now as much about ingenuity and great technological achievements as anything else, and the most exciting thing about this emerging innovation narrative is that we have barely scratched the surface.

In 2021, our technology entrepreneurs raised more funding than in the previous two years combined. This year's numbers suggest that we would almost certainly break that record again in 2022. The record-breaking funding raised in 2021 was significant, but we don't want it to end there. Due to the quantum of deals in the 1-5mn USD range in 2021, relative to the 5-50mn USD range, it is unlikely there would be sufficient supply in the market to meet demand as companies from the 1-5mn USD range raise larger ticket sizes. With this report, we want to turn more global investors from being Africa-curious to being Africa-active. We want to help those unfamiliar with Africa to understand the scale of the problems our entrepreneurs are solving and create mental models that make it easier to connect the dots between what is happening and what is possible.

Supporting high-impact entrepreneurs to scale

The widespread fragmentation, informality and non-consumption across Africa has made many sectors ripe for disruption, and our entrepreneurs are rising to the challenge. However, as more innovation stories emerge, we need to make sure that as many of these ventures as possible scale.

Some of the infrastructure to support these entrepreneurs exist, but we need to identify existing gaps and work on bridging those gaps. Then, with the proper financial and strategic support, we can catalyze Africa's digital economy to drive higher GDP, create more jobs and address many of the other challenges that impact the lives and livelihoods of many on the continent.

Foreword

We reviewed the events of the last few years, identified trends (especially in the context of other technology ecosystems across the world) and offered a roadmap to connect with opportunities that are emerging in the most exciting sectors at this time.

At Endeavor, we believe that high-growth companies led by high-impact entrepreneurs are essential drivers of job creation and lasting economic transformation. High-impact entrepreneurs are those with the biggest ideas, the highest potential to build businesses that can scale, and the greatest ability to inspire others. Research shows that high-growth scale-ups (i.e. mid-sized companies with 50 or more employees) typically drive the bulk of economic growth, productivity and job creation in an entrepreneurship ecosystem.

The data gathered in this report is clear - Africa is the next growth frontier in technology. The combination of our young and digitally savvy population, increasing digital penetration, and the impact of the COVID-19 pandemic on behaviours, amongst others, has triggered an inflection point in our digitization journey. This report draws on multiple sources, including analysis from McKinsey & Company. We would like to thank all those who generously shared their time and insights.

Tosin Faniro-Dada

Managing Director/CEO Endeavor Nigeria



Executive Summary

Africa's digital opportunity is large and growing; the estimated size of the digital economy is \$115bn and is expected to be \$712bn by 2050. This growth is driven by strong underlying fundamentals, accelerated by COVID-19.

Investors are taking notice; between 2020 and 2021, funding for digital startups grew 2x faster than global rates, and investors are becoming increasingly active in Africa. Furthermore, we are seeing proven exit paths for early investors as illustrated by the increase in mega-rounds, liquidity events and unicorns.

However, **there** remains 'white space' for investors to consider. Due to the quantum of deals in the 1-5mn USD range in the last year, (600) relative to the 5-50mn USD range (~150), it is unlikely there will be sufficient supply in the market as companies from the 1-5mn USD range graduate to larger ticket sizes.

Opportunities for digital disruption abound across Africa. A number of sectors are underpinned by informality and fragmentation, limiting the availability and affordability of products and services. Digital disruptors address this problem in numerous sectors, including financial services, health, transportation, and others, by building a 'wedge' and then a '**bridge**'. A wedge solves a specific problem and builds a sticky customer base. After which, innovators build a series of solutions that cater to the adjacent challenges of the customer, in effect building an ecosystem of solutions.

Going forward, investors who are keen on investing in Africa should consider the wealth of opportunities available and also be prepared to adjust their business models accordingly to capture these opportunities.

Africa's digital opportunity: Setting the context

Summary

- 1. Africa is the next growth frontier in Digital although rapidly growing, the continent has barely scratched the surface of its potential relative to other regions.
 - Africa's digital economy has a size of \$115B. This number is expected to grow to \$712bn in 2050 (6x the current value).
 - However, Africa still lags other regions in key digital indicators (e.g. Africa lags the world average by a delta of 22% in individuals using the internet, 42% in Active mobile-broadband subscriptions).
- 2. The digital opportunity is concentrated in four countries and driven by the interplay of three factors growing economies, young digitally savvy population and increasing digital penetration.
 - Nigeria, South Africa, Egypt and Kenya represent ~50% of some of Africa's key digital indicators e.g mobile cellular subscriptions.
 - Africa is experiencing one of the fastest growth in GDP and consumer spending. By 2050, Africa could be home to a third of
 the world's young people and is also urbanizing faster than other regions. Additionally, 1 in 6 of the world's internet users could
 be in Africa in 2025.
- 3. Africa's digital economy is approaching its S-curve, accelerated by COVID and an increasing supply of tech talent
 - COVID led to accelerated digitization by necessity, with Africans engaging in more digital activities as a result of the lockdown. Additionally, Africans are getting more inclined to tech roles.

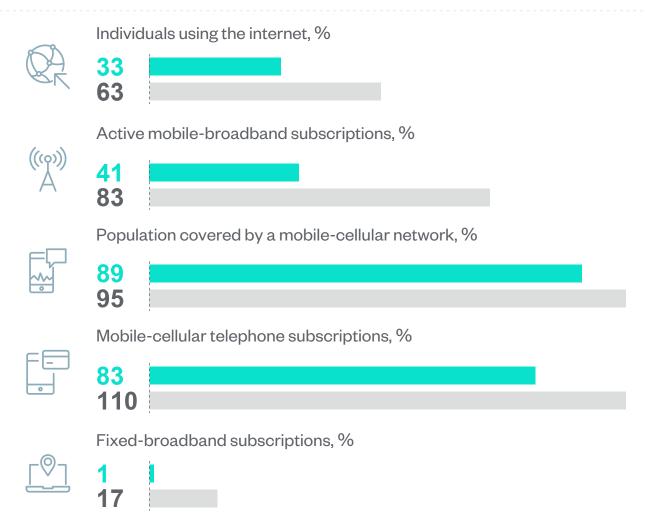
Going forward, Africa's digital economy is set to impact the continent in several ways; **higher GDP, more jobs, positive global recognition.**

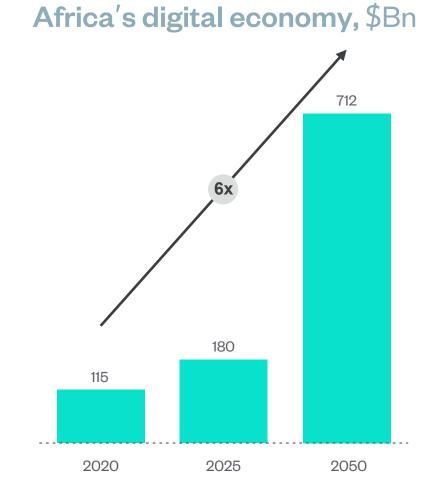
Africa's \$115B digital economy is in its early phases

Africa
World average

Africa's digital landscape is yet to reach its peak...

...and is expected to grow 6x by 2050



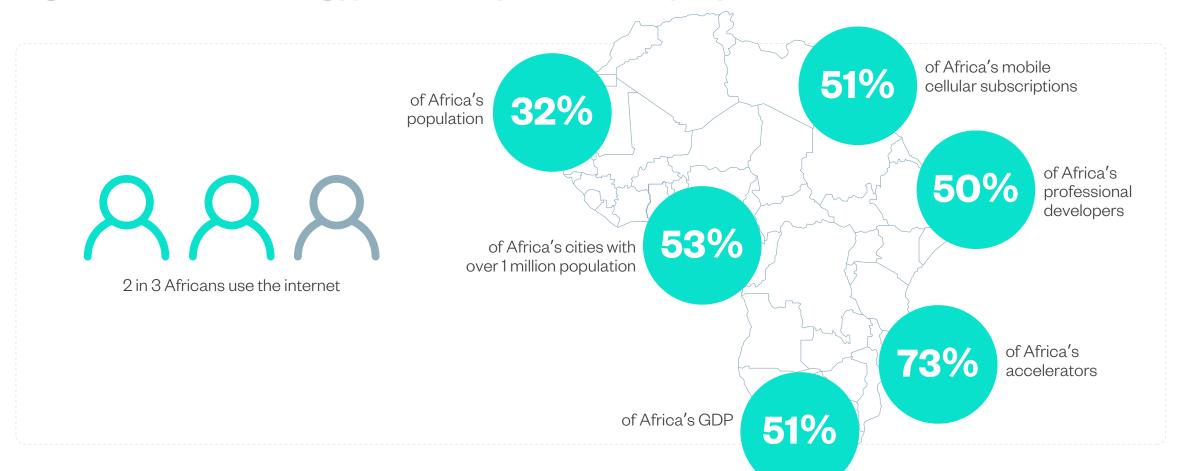


^{1.} The internet economy is defined as the internet's contribution to the GDP Source: Google/IFC e-Conomy Africa report, World Bank, IMF, ITU World Telecommunication/ICT Indicators database

The continent's digital opportunity is concentrated in four countries

Nigeria, South Africa, Egypt and Kenya collectively represent:





Growth is expected to be driven by underlying fundamentals accelerated by COVID and an increasing supply of tech talent

Fundamentals Accelerators





Economic Growth





COVID





A growing young, urban, and digitally savvy population





Tech Talent



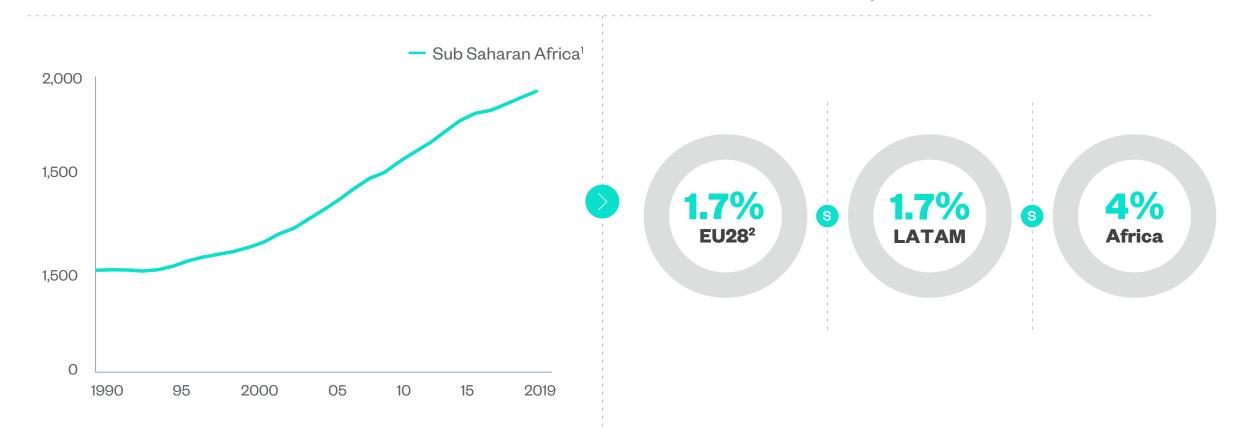


Increasing Digital Penetration

A. Africa is one of the fastest growing regions in the world; GDP has tripled since 1990

GDP (constant 2010 US\$), US\$ billions

CAGR, 2010 - 2019



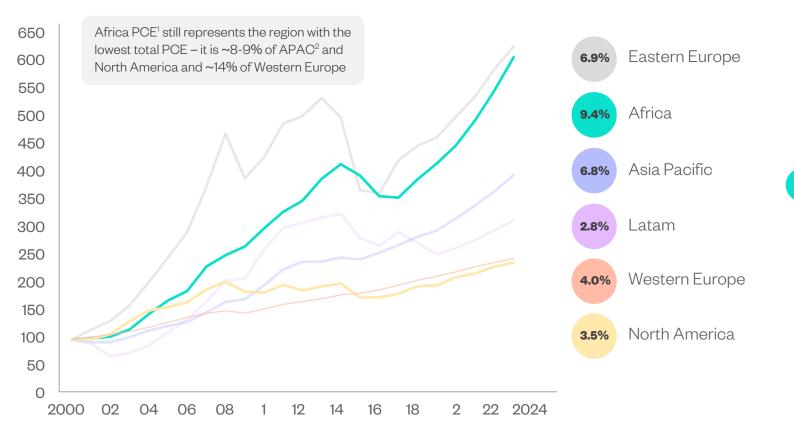
^{1.} Sub-Saharan Africa including South Africa

^{2.} The EU-28 is the abbreviation of European Union (EU) which consists a group of 28 countries Source: World Bank Statistical database, Google/IFC e-Conomy Africa report

A. The continent is also seeing faster growth in consumer spend than most other regions

PCE¹ growth index, Based on 100 in 2000, pre-COVID

X CAGR 2018-2023



Increasing consumer spend allows for more consumption of goods and services thus resulting in higher economic activity and by extension GDP growth.

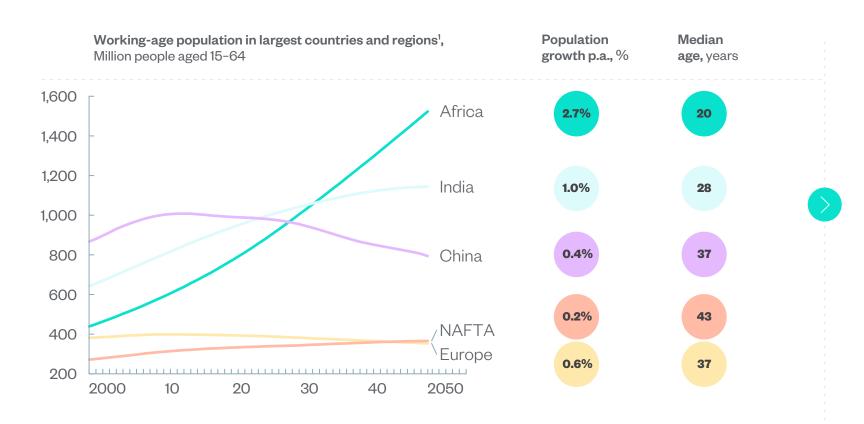
By 2030. Africa is expected to have a total of \$2.5 trillion in consumer expenditure from over 1.7 billion consumers.

^{1.} Private consumption expenditure

^{2.} Asia - Pacific

Source: McKinsey Global Banking Pools; Global Insights: World Market Monitor

B. By 2050, Africa is expected to be home to 1.6B working age adults and a third of the world's young people



Africa's population growth increases the **availability of skilled and unskilled labor** to contribute to the economy.

A growing working age population also results in **the birthing of more startups**; Africa currently has the highest rate of entrepreneurship in the world – **22**% **Of Africa's** working-age population are starting businesses⁴.

By 2050, 1 in 4 humans and 1 in 3 youths (aged 15 to 35) are predicted to be African².

Source: ILO; McKinsey Global Institute analysis, World bank, Our World in Data, Google/IFC e-Conomy Africa report

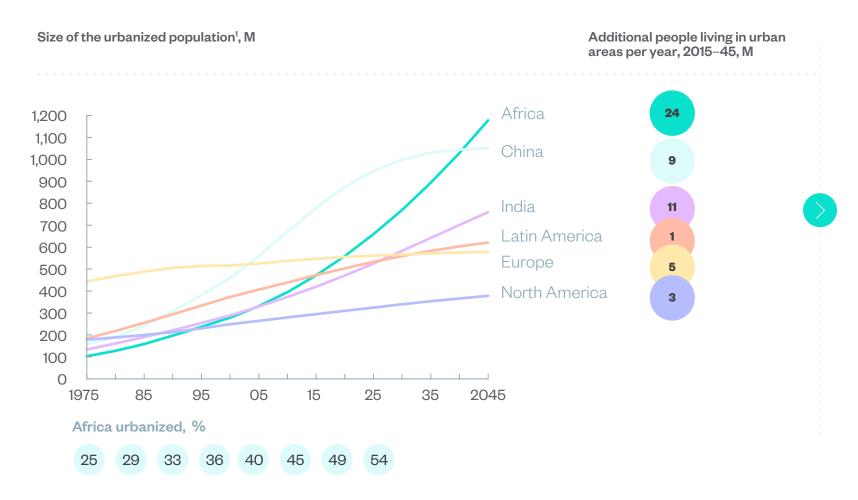
^{1.} Working-age population = individuals aged 15-64

^{2.} One in five humans will be Sub-Saharan African (by 2050)

^{3.} This refers to Sub-Saharan Africa. Two in five humans will be African (incl. North Africa) by 2100

^{4.} Africa currently has the highest rate of entrepreneurship in the world largely driven by high unemployment rates 60% of Africa's unemployed are youths. 3 countries in Africa have the highest unemployment rates in the world

B. The region is also seeing rapid migration from rural areas to urban cities



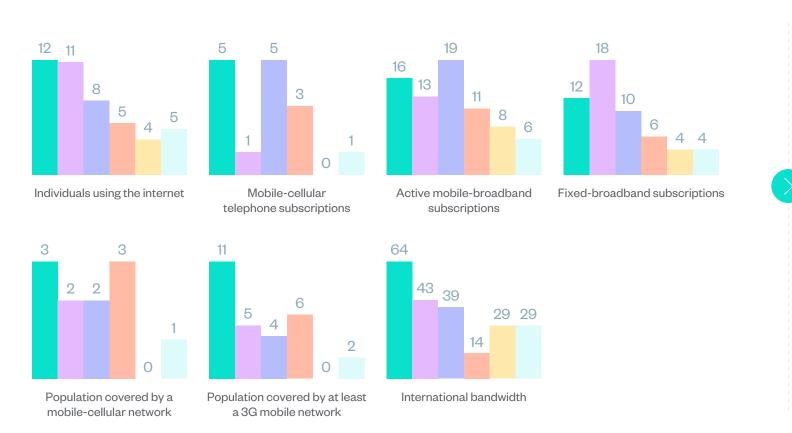
Africa's growing city population directly impacts the internet economy as individuals in cities have a higher consumer spend than those in rural areas; Africa's large metropolitan areas have up to 79% higher spending on consumer goods and services than the national average. Individuals in cities are also closer to better connectivity and new technologies.

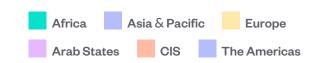
Currently, 68 cities in Africa have more than 1M people. This is expected to grow to 85 cities by 2050. By 2025 almost half of all Africans are expected to live in cities.

Population living in urban areas. UN forecasts last adjusted in 2014
 Source: World urbanization prospects, June 2014 revision, United Nations population division;
 McKinsey Global Institute analysis, McKinsey Global Institute Cityscope 2.0, Google/IFC e-Conomy Africa report

C. Digital penetration in Africa is accelerating faster than other regions

CAGR 2017 – 2019 of key indicators across global regions





Increasing digitization allows for more individuals as well as companies to actively participate in and grow the continent's internet economy.

Over 300 million people in Africa have gained access to the internet between 2010 and 2019.

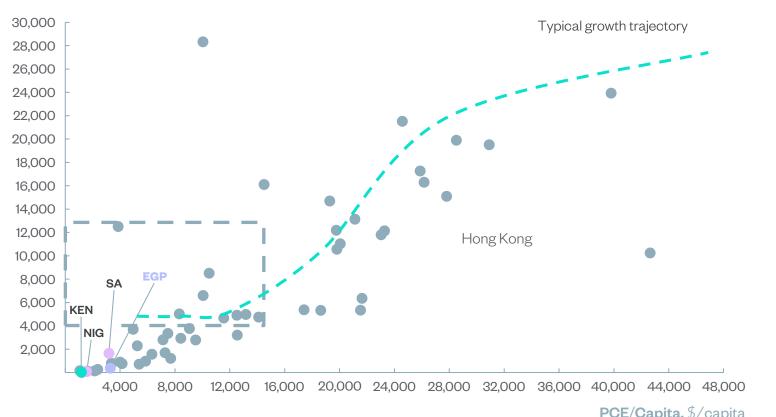
In 2025

- 1 in 6 of the world's internet users is expected to be in Africa in 2025
- ~1 in 3 of all new mobile subscribers globally could be from sub-Saharan Africa
- The number of smartphone connections in the region is expected have surpassed double the current capacity.

A lot of African countries are in the beginning stages of their s-curve; demonstrated by digital payments

Non-ATM card spend against private consumption expenditure, 2020





The placement of African countries on the digital payments s-curve exemplifies the growth potential ahead of the continent's digital economy.

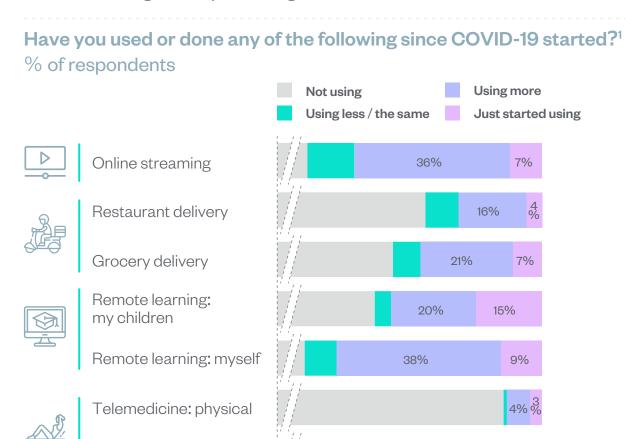
This growth is being accelerated by the impact of COVID as well as increasing supply of tech talent.

PCE/Capita, \$/capita

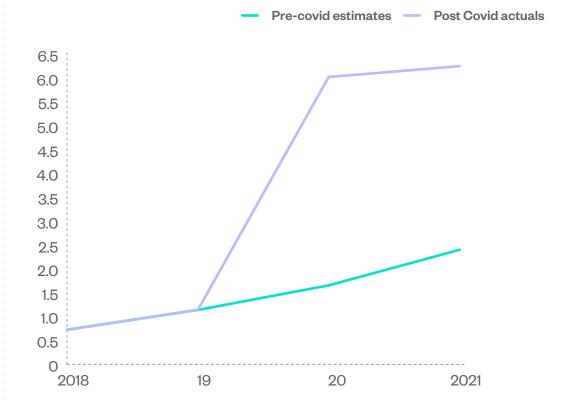
D. COVID accelerated digitization...

COVID drove higher adoption of digital activities...

...resulting into more transactions done digitally than in pre-COVID levels







Telemedicine: mental¹

^{2.} NIP account transfers – 2021 Volume based on Jan-Jun 2021 NIP (instant transfer payments) volumes annualised Source: McKinsey & Company COVID-19 Nigeria Consumer Pulse Survey 6/16–6/18/2020, n = 504, sampled and weighed to match Nigeria's general population 18+ years, McKinsey Global Payments Map



^{1.} Small sample (n<30).

E. ...and the African tech space is experiencing an increasing supply of talent¹



Of the top 5 fastest growing markets for GitHub Contributions are in Africa; Nigeria and Egypt

40%

Developers from Africa created 40% more open-source repositories on the software engineering marketplace in 2019 than they did in 2018 – recording a higher growth percentage than any other continent globally





Jobs will be created by digital platforms in Africa by 2025

Africa's growing digital economy is set to impact the continent in several ways



GDP per capita increases by 2.5% for every 10% increase in mobile penetration

• This is in comparison to a 2% GDP per capita growth globally

GDP per capita increases by 1.9% for every 10% increase in digitization (conversion of information into a digital medium)

• This is in comparison to 1% in OECD (Organization for Economic co-operation and Development) countries



44M jobs could be created if Africa's internet penetration reaches 75%

3M jobs in Africa will be created by online marketplaces by 2025

1.7M jobs expected in 2025 due to google's \$1bn investment to support digital transformation through new subsea cables between Europe and Africa leading to a multiplication of the continent's network capacity by 20X



The Digital space is **increasingly putting Africa on the map** with global investors, partners and renowned entrepreneurs **paying close attention as well as increasingly interacting with Africa**:

- Facebook plans to make \$57bn worth of impact in over five years through investments in connectivity and infrastructure across sub-Saharan Africa
- Microsoft plans to spend \$100 million over five years on its first African development center



Africa is where the future is going to be built – Mark Zuckerberg

Africa will define the future – Jack Dorsey

Source: International Telecommunication Union (ITU), "Economic Contribution of Broadband, Digitization, and ICT Regulation: Econometric Modelling for Africa", Deloitte, "Value of Connectivity: Economic and Social Benefits of Expanding Internet Access" Google/IFC e-Conomy Africa report, World Bank, IMF, Industry and market expert interviews, weforum, Analysys Mason



Summary

The digital opportunity in Africa is attracting funding at an accelerated pace; investments grew 18x between 2015 and 2021 and between 2020 and 2021, grew 2x faster than global rates.

- In general, investments are becoming more global in nature with non US startup funding increasing from 35% of total funding to 50% between 2011 and 2021.
- Africa funding trajectory between 2015 and 2020 is similar to where SEA and Latin America were 5 years ago and is set to accelerate faster than Latin America.

The investor landscape is evolving in response; from seed to growth stage, investors are becoming increasingly active in Africa.

- Early-stage investing in particular has witnessed significant traction with the likes of Y Combinator rapidly increasing the size of its cohort.
- In addition, the number of early-stage Africa-focused funds is increasing and global funds are also increasing activity in Africa.

The increase in mega rounds, liquidity events and unicorns are creating further comfort/excitement among investors about the digital opportunity on the continent.

- Since 2011, there have been 7 liquidity events above \$50mn and >20 mega rounds above \$50mn.
- Furthermore, Africa has produced 11 unicorns in the last 6 years and the time taken to become a unicorn is decreasing.

However, there still remains 'white space' for investors on the 'search for Gold'. Due to the quantum of deals in the 0.2-5mn USD bracket in the last year (600) relative to the 5-50mn USD bracket (~150); there is likely to be a dearth in supply when the companies in the 1-5mn USD bracket require additional capital to scale further.



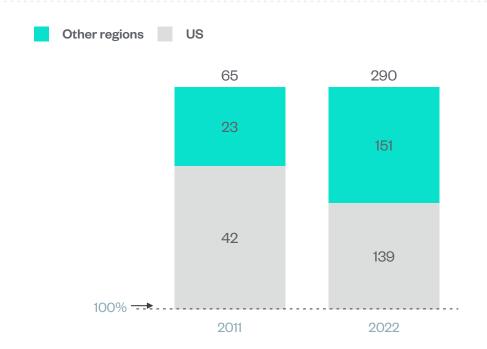
Venture capital funding is growing and becoming increasingly global

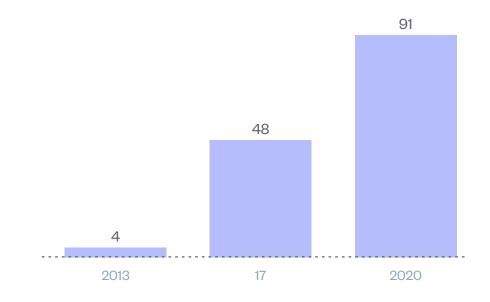
Non-US venture funding grew from 35% to 50% of funding within the last 10 years...

Global startups funding, by region \$B, 2011 – 2021 YTD



Similarly, Unicorns, no longer rare, are popping up all over the world Number of ecosystems globally that have produced billion-dollar startups, 2013 – 2020





African startups funding has grown 18x over the last 6 years; 2x faster than global startup funding in last year

Number of tech startups securing funding and total funding amount, 2015 – 2020

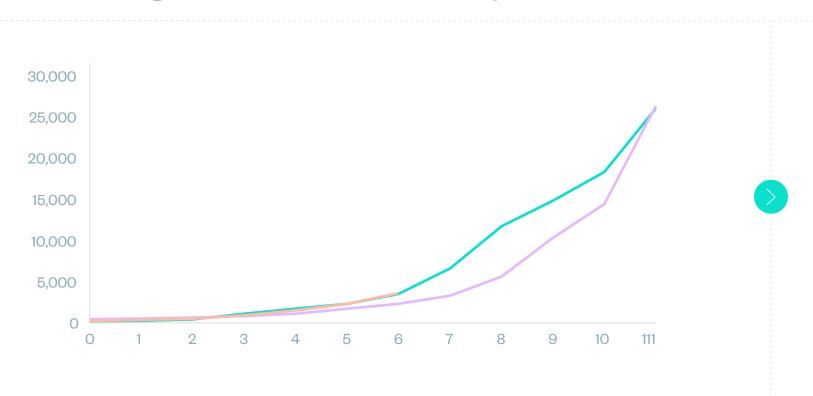


Africa startup funding is growing faster relative to other markets; between 2020 and 2021, Africa grew ~200% while global startup funding grew 100%, Europe grew 150%, North America grew 90% and Latin America grew 300%.

VC funding into the continent dropped in 2020 due to COVID-19. The drop was primarily limited to mega rounds (>\$50M), and we've seen a rebound in 2021.

African startup funding is where Southeast Asia (SEA) and Latin America (LatAm) were ~5 years ago and is set to follow an accelerated trajectory

Total funding of Africa and SEA startups, cumulative \$M



Africa's growth in line with comparable markets and set to accelerate faster.

— SEA — LatAm — Africa

In the past 5 years (2015-2020), Africa's funding trajectory is similar to where SEA and LatAm were between 2010 and 2015.

Going forward, Africa's trajectory looks in line with SEA and faster than Latin America.

1. Year 1-5 is 2010-2015 for SEA and Latam and is 2015-2020 for Africa Source: Crunchbase

There are a variety of investors in different investment brackets



Early stage





Incubators, Accelerators,
Angel networks, syndicates,
Africa-focused
venture firms

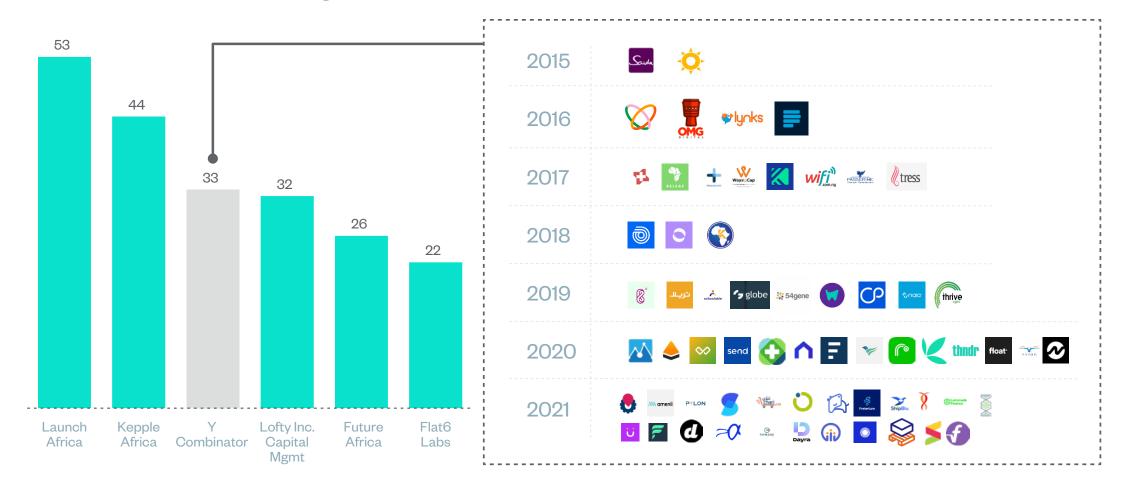


Africa-focused venture firms



Global investor funds

A. There is a thriving early-stage venture capital ecosystem; for example, Y Combinator has been investing in Africa for 7 years and has consistently increased the size of its African cohorts



B. An increasing number of early-stage Africa-focused venture firms are emerging; and raising sizable funds



Egyptian VC firm Sawari Ventures finally closes \$71M fund for North African startups Comment Tage Kene-Okafor @ulonnava / 11:00 PM PDT • April 5, 2021

After its first \$54M fund, Algebra Ventures launches \$90M fund for startups in Egypt Comment Tage Kene-Okafor @ulonnaya / 3:00 AM PDT • April 6, 2021

Novastar Ventures closes second fund at \$108m to back East and West African startups Tage Kene-Okafor | May 13, 2020

TLcom Capital closes \$71M Africa fund with plans to back 12 startups Jake Bright @JakeRBright / 1:00 AM PST • February 5, 2020

Partech announces the final closing of its Partech Africa fund above hard cap at €125 M Jan. 31, 2019

Other notable Africa-focused VC firms























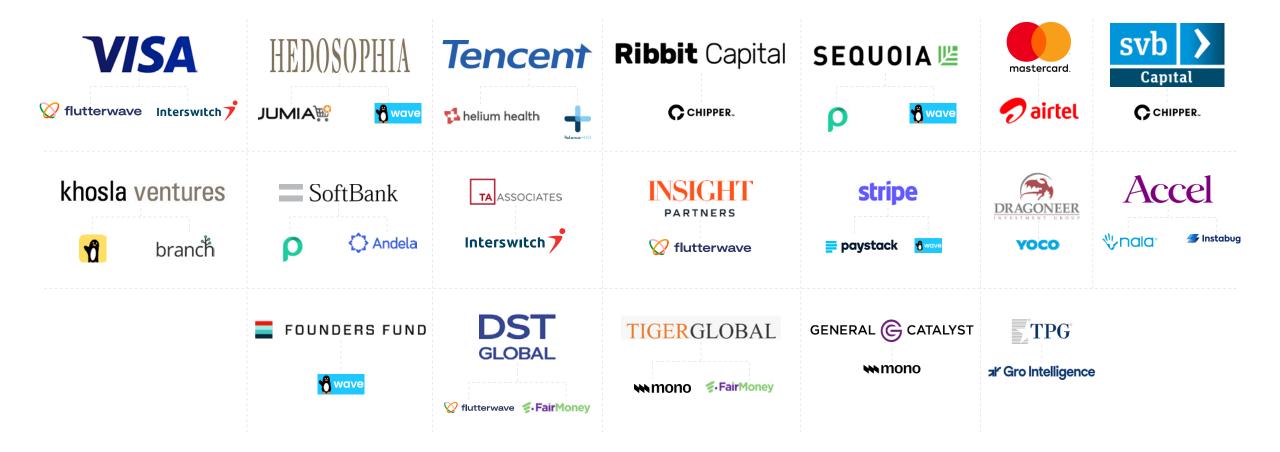








Global top quartile venture and growth investors are starting to invest in Africa

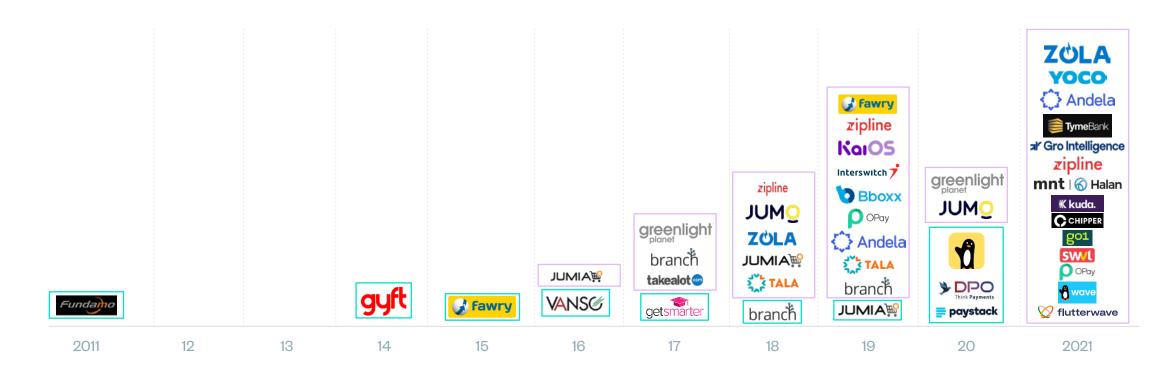


Along with increased funding, Africa is also experiencing more mega rounds and increased exits

Notable exits and mega rounds (>\$50M+), 2011 - 2021

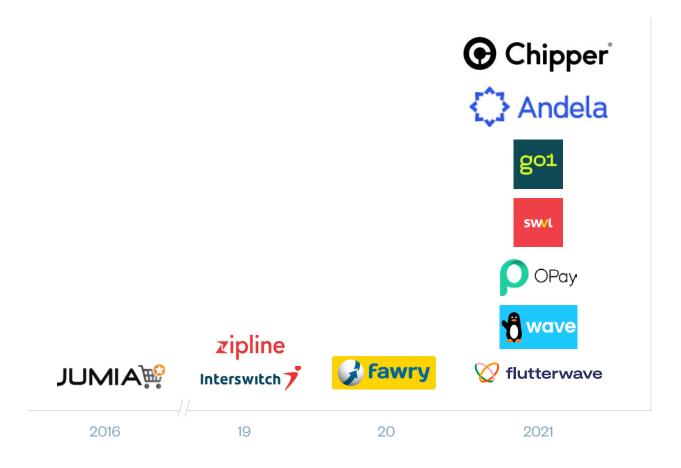
Mega Rounds

IPO/Acquisition



In the last 6 years, Africa has seen the emergence of 11 \$1B+ valuation companies

\$1B+ dollar valuation



8 of the 11 \$1B+ valued startups in Africa originated in 3 of the

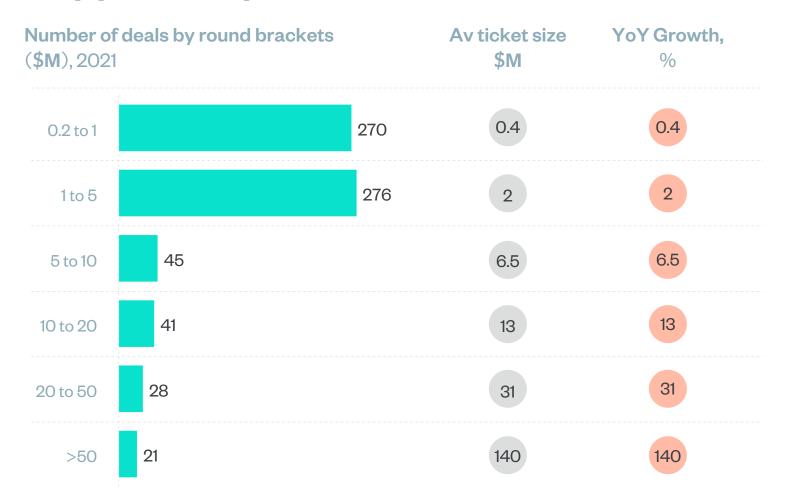
Big 4: Nigeria (Jumia, Interswitch, Opay, Flutterwave, Andela), Egypt (Fawry, SwvI), and South Africa (Go1).

6 out of the 11 companies are fintechs, with the other 5 spread across education/talent, mobility & logistics, and digital commerce.

...and African companies have been taking less time to hit a \$1B valuation

	Founded (year)	\$1B+ valuation (year)	Years to hit unicorn status
Interswitch	2002	2019	17
Fawry	2008	2020	12
JUMIA 🙀	2012	2016	4
Andela	2014	2021	7
∡ ipline	2014	2019	5
go1	2015	2021	6
<equation-block></equation-block>	2016	2021	5
sw/l	2017	2021	4
OPay	2018	2021	3
<mark>🐧 wave</mark>	2018	2021	3
⊕ Chipper	2019	2021	2

While there is significant activity in seed and pre-seed, there is opportunity for investors to double down in rounds >\$5m



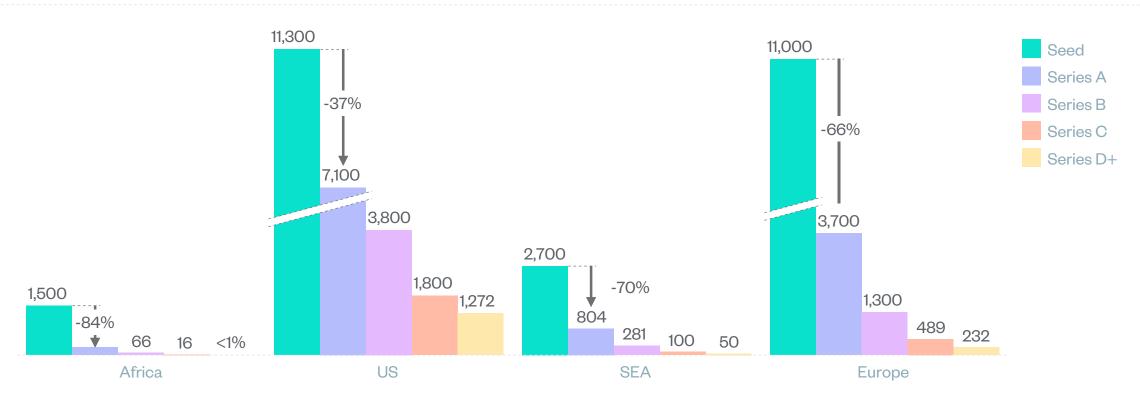
- Most deals in Africa are in the \$0.2-5m range with \$1-5m bracket growing the fastest;
- Over 600 deals in this bracket compared to <150 in higher brackets
- 1-5m round experienced the fastest growth compared to all brackets (142%)1
- Therefore, the demand in the \$5-50m bracket is likely to increase in coming years when these 600 companies 'graduate'
- However, given the significant drop in deal activity from \$5m onwards, it is likely that there will be insufficient supply to meet demand
- This presents an opportunity for investors in larger brackets e.g., >5m USD



^{1. 950%} growth in >50 bracket an outlier due to growth from a very small base as a result of a lack of large deals in 2020 as a result of covid-19 e.g in 2020 there were only 2 deals done above \$50mn Source: World Bank, CB Insights, Maxime Bayen & Max Cuvellier

Indeed, compared to global markets, there is an opportunity to increase number of Series A investments in Africa

Number of investments by funding type, up to Q3 2021



There is an 84% drop in the number of Series A rounds vs seed rounds in Africa compared to 37%, 70%, and 66% in US, SEA, and Europe, respectively



Summary

Financial services: Financial services in Africa is worth over \$165 bn and growing. However, many pain points such as limited access to financial services, reliance on informal financial service solutions, and fragmentation in digital payments create opportunities for disruption. Companies like M-Pesa have been able to offer solutions by providing a 'wedge' such as seamless P2P payments and eventually expanding into online and offline acquiring, lending and savings.

Commerce: MSMEs are critical to the African economy as they account for 83% of private-sector employment. However, several pain points such as informal operations and fragmentation in the supply chain and digital payments create opportunities for disruption. Companies like YOCO have been able to offer solutions by providing a 'wedge' such as offline acquiring and eventually expanding into online acquiring and business management tools.

Transport: In Africa, Transport generates ~\$50 bn in import value and logistics generates \$12 Billion in revenue. However, many pain points such as informal operations, fragmentation in the markets, and limited access to financial services create opportunities for disruption. Companies like KOBO360 have been able to offer solutions by providing a 'wedge' such as a truck hailing marketplace and eventually expanding into vehicle financing, trip financing, insurance, repairs, and maintenance.

Healthcare: Total annual health expenditure in Sub-Saharan Africa is ~\$90 bn USD and is primarily funded from private sources. Several pain points such as limited government expenditure, lack of access to healthcare services, and limited access to data create opportunities for disruption. Companies like HeliumHealth have been able to offer solutions by providing a 'wedge' such as core electronic medical records (EMR) and hospital management solutions and eventually expanding into billing, payments, lending, and data analytics services.

Education: There are 34 million out-of-school children in Sub-Saharan Africa. Pain points such as limited resources and poor learning outcomes create opportunities for disruption. Companies like uLesson have been able to offer solutions by providing a 'wedge' such as pre-recorded learning content and eventually expanding into online home tutoring, live classes, and offline learning centers.

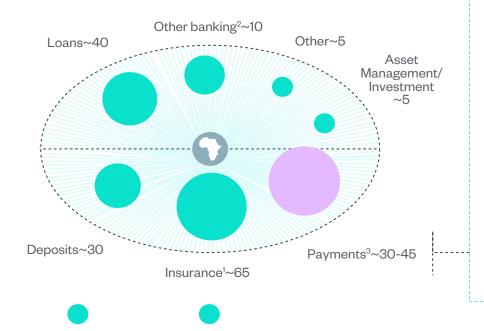




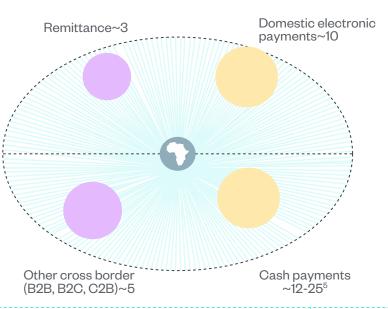
Financial services

The financial services industry in Africa is worth US\$165bn; payments, banking and insurance are the primary services

Financial services revenues by sector in Africa, 2019, US\$ bn, Total = US\$ 165bn



Zoom on the formal and informal payment revenues in Africa, 2019 US\$ bn



Informal payments captured within cash and hard to measure OTC Cash in terms of revenue The Financial services industry in Africa is worth US\$165bn; dominated by payments, banking and insurance

Within Payments: domestic payments contribute US\$10bn in revenue, remittances US\$3bn and other cross border trade is US\$5bn

Within banking: loans are an estimated US\$40bn and deposits US\$30bn

- 1. Insurance revenues driven mainly by large life Gross Written Premium (GWP) in South Africa
- 2. Includes securities services, documentary trade finance and Capital Markets & Investment Banking
- 3. Includes estimated OTC cash component
- 4. Collection and distribution components of financial services (loans, deposits and insurance)
- 5. Hypothetical revenue based on the flow of cash transactions in the economy and an assumption of 0.5-1% fee
- 6. Non-exhaustive list of use cases. These are a subset of domestic, cross border and financial services and shouldn't be added to the total payments market. The sizing is done for 2026 and would not be breakdown of the first two graphs Source: ILO; McKinsey Global Institute analysis, World bank, Our World in Data, Google/IFC e-Conomy Africa report

There are three important conditions that give rise to opportunities in the financial services industry





- 1 Limited access to financial services
 - Limited bank infrastructure
 (e.g., bank branches) for the
 large rural population.
- Limited access to financial services such as loans, insurance, savings and investment products.



- Reliance on informal financial service solutions
 - Dependence on cash and reliance on informal financial services (e.g., contributory thrift saving schemes 'ajo').



- Fragmentation in digital payments
 - Limited interoperability
 between financial service
 providers within countries
 and between countries.

The banking infrastructure is lagging in most African markets relative to peers



Key insights

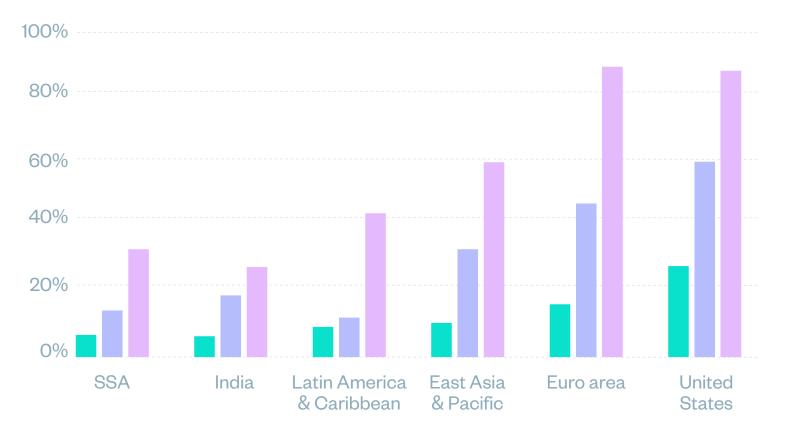
The banking infrastructure is lagging in most African markets compared to best country benchmarks, resulting in a high portion of the unbanked population.

Physical networks (through cash) and digital channels (mobile, prepaid cards) serve as an alternative to penetrate the large financially excluded population.

Population with a bank account data is from 2017; Bank branches per 100k adults and ATMs per 100k adults is from 2020 Source: World Bank

In addition, there is limited access to basic financial services such as savings and lending products for the banked and unbanked

- Borrowed from a financial institution (% age 15+)
- Saved at a financial institution (% age 15+)
- Made or received digital payments in the past year (% age 15+)



Key insights

Significant lending gap due to banks' inability to properly serve customers – limited credit rating data, difficulty in underwriting, monitoring and collecting loans.

Savings and digital payments gap in Africa largely linked to limited financial inclusion.

Working-age population = individuals aged 15-64 Source: The Global Findex Database

There are three important conditions that give rise to opportunities in the financial services industry





- Limited access to financial services
 - Limited bank infrastructure (e.g., bank branches) for the large rural population.
- Limited access to financial services such as loans, insurance, savings and investment products.



- Reliance on informal financial service solutions
 - Dependence on cash and reliance on informal financial services (e.g., contributory thrift saving schemes 'ajo').

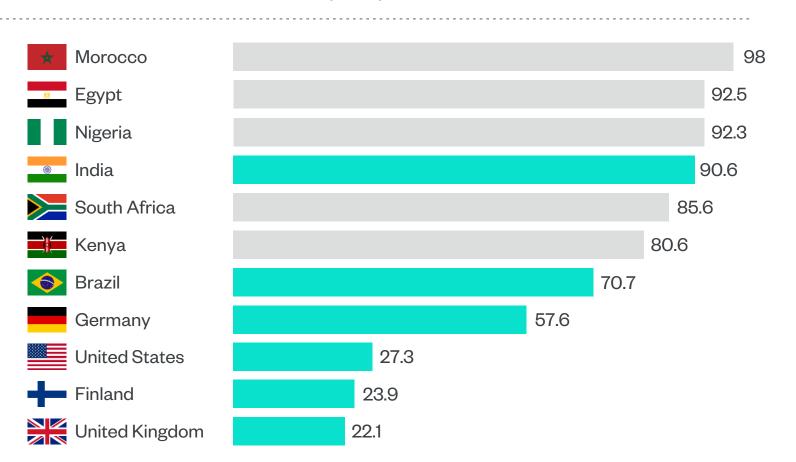


- Fragmentation in digital payments
 - Limited interoperability
 between financial service
 providers within countries
 and between countries.

Cash is still king, with over 80% of transactions still being done in cash in major African economies



Cash's share of total number of transactions, 2020, Percent



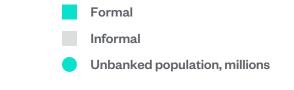
Key insights

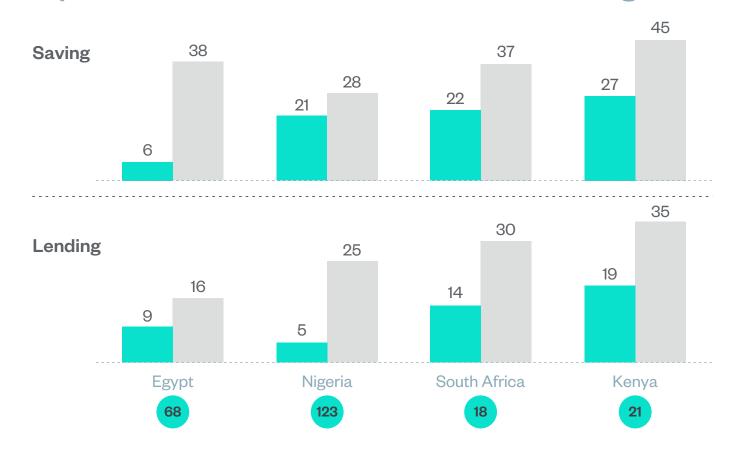
Cash is still dominant in African countries primarily due to **low urbanization rates** (e.g., only ~43% of the Egyptian population reside in urban areas) **and lagging banking infrastructure.**

There is an **opportunity to migrate from cash**, with only
~7% of transactions made
via e-payments on average.

A large portion of the population relies on informal and non-bank financial services providers

Comparison between formal and informal saving and lending¹, %





Key insights

Saving and lending in African countries is largely characterised by informality, which is due to a myriad of factors, most notably.

- A large unbanked population.
- High lending interest rates at banks.

^{1.} Formal is defined as saving or accessing credit from a financial institution; informal lending includes borrowing from family and friends and informal saving includes contributory saving thrift schemes (e.g. ajo)

There are three important conditions that give rise to opportunities in the financial services industry





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 (e.g., bank branches) for the
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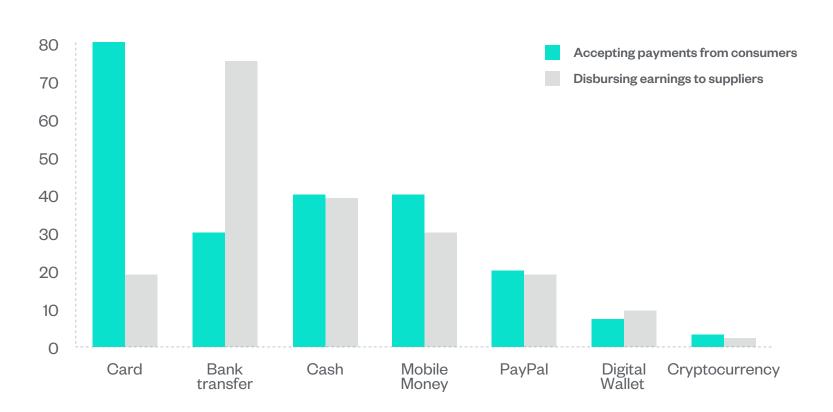
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- Fragmentation in digital payments
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 between financial service
 providers within countries
 and between countries.

Multiple payment methods have tried to displace cash, leading to a fragmented digital payments landscape

Payment methods accepted by % of digital platform (SSA)



Key insights

Multiple digital payment methods give rise to fragmentation. The fragmented digital payments landscape gives rise to challenges for customers and merchants:

- **Customers** are not always sure their preferred mode of payment is accepted.
- Merchants have an integration problem as they have to integrate multiple payment methods to avoid losing customers.

The fragmentation is increased across borders with different dominant digital payment methods in each country, often with limited cross-border interoperability

	遊			
	Egypt	Kenya	South Africa	Nigeria
Debit/credit card ownership	28%	44%	43%	35%
Mobile money account ownership	2%	73%	19%)	6%
Major players Card schemes	VISA mastercord.	VISA mastercard.	UnionPay Diners Club INTERNATIONAL WISA mostercord.	VSA mastercard.
Mobile money (Wallets)	Fawry ÖÜÜ	Marpesa 🦪 airtel	MTN Mobile Money	paga P OPay Firstmonie Agent
Banks		EQUITY National Bank BARCLAYS PTB == 1	(absa) FirstRand NEDGANK Standard Bank	ZENITH GTBank access FirstBank

Key insights

There are different dominant digital payment methods in African countries.
Additionally, major digital payment players differ between countries.
This gives rise to the challenge of expensive, slow cross border payments as there is limited interoperability between players (especially mobile money and banks).

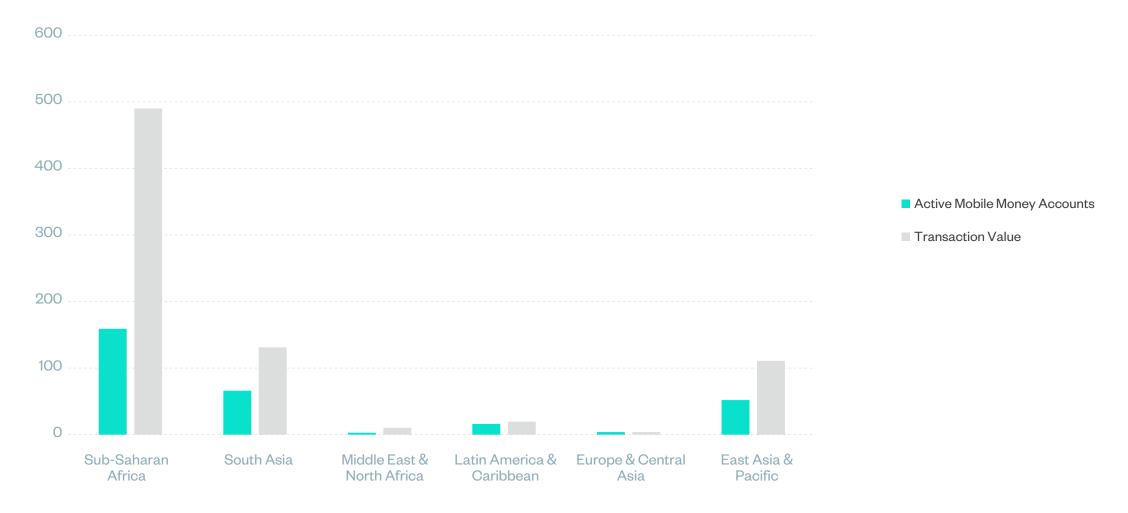
Fintech players with different value propositions are springing up to solve customer pain points



Categories	Value proposition	Example players
Mobile money	Cost effective way of reaching the last mile and have a wider footprint than banks	OPay : paga MPPESA wave palmpay
Remittance	Low cost and fast cross border payments	BitPesa
Digital banks	Access to value added services (e.g. savings and investment products, loans)	piggyvest Carbon Kkuda.

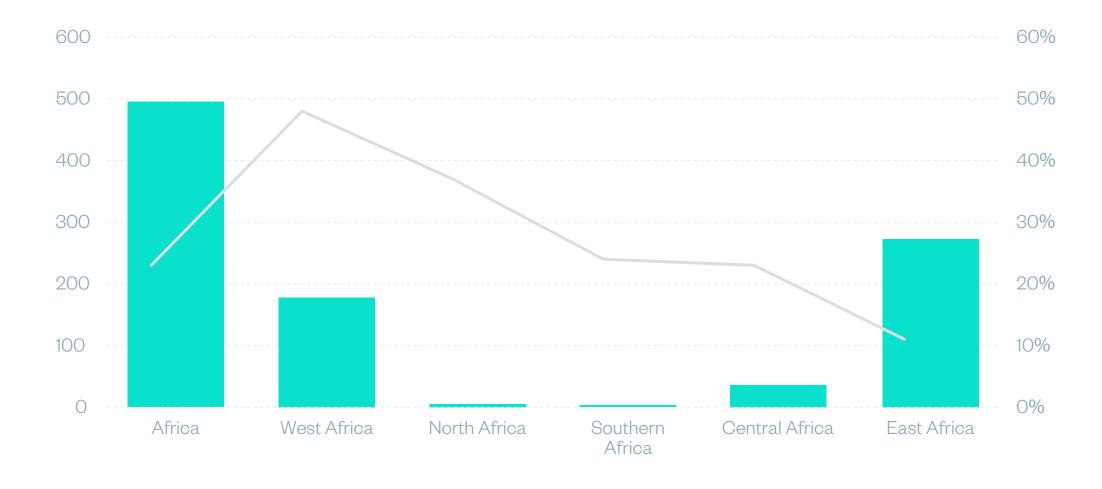


Africa is the world's leading mobile money market, with roughly half of active accounts and transaction value globally

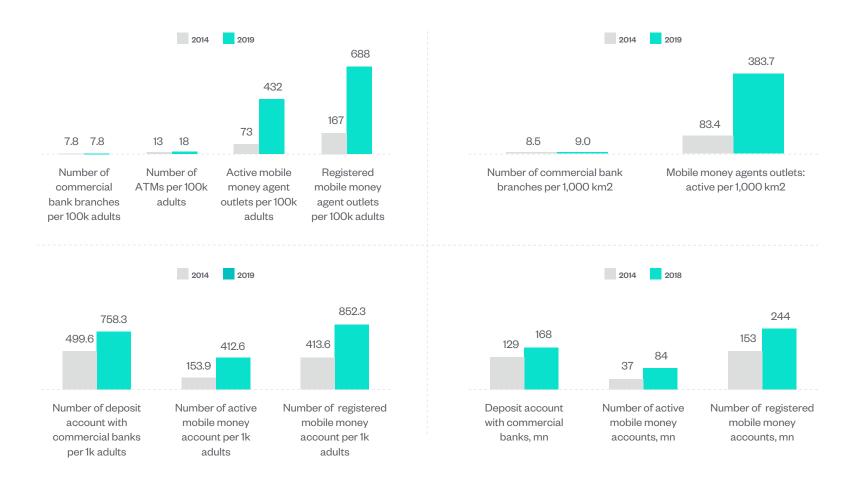


Mobile Money is experiencing fast growth across the continent and catching up to Kenya





In Africa, Mobile Money and agent networks are a cost-effective way of reaching the last mile and have a wider footprint than banks



Key insights

Mobile Money and agent networks have proved **effective in reaching the last mile and have a wider footprint than banks.**

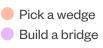
The next decade of mobile money will likely be very different from the last decade

Generation 1

Generation I				
	M-PESA	airtel money	MIN	7 Orange Money
Year Launched	2007	2010	2009	2008
Funding	Telco-driven	Telco-driven	Telco-driven	Telco-driven
Primary distribution	GSM (Sim toolkit/SMS/ USSD)	GSM (Sim toolkit/SMS/ USSD)	GSM (Sim toolkit/SMS/ USSD)	GSM (Sim toolkit/SMS/ USSD)
Capital raised	N/A	\$500M	N/A	N/A
Valuation	\$4.2B*	\$2.6B	\$5.4B*	\$3.6B*
Investors	Safaricom, Vodafone	Airtel, TPG, Mastercard	MTN	Orange

GOTOTATION			
4 wave	teamapt	P OPay	🛟 paga
2018	2015	2018	2011
Venture Backed	Venture Backed	Venture Backed	Venture Backed
Smartphone (Web, Mobile App, QR Card)	Smartphone (Web, Mobile App)	Smartphone (Web, Mobile App)	Smartphone (Web, Mobile App)
\$200M	\$5.5m + undisclosed series B	\$570M	\$36.7M
\$1.7B	Undisclosed	\$2B	Undisclosed
Sequoia Heritage, Founders Fund, Ribbit, Stripe, Partech, Sam Altman	Novastar, CDC, Endeavor Catalyst, Global Ventures	Sequoia China, Softbank, Redpoint China, IDG, Meituan	Flourish Ventures, Global Innovation Fund, Alitheia

Generation 2



MPESA - Case Study

Overview



M-PESA was launched in 2007 as a partnership between Safaricom, DFID, and Vodafone. Safaricom is partially owned by the government and is the largest telco in Kenya with a 65% market share. M-PESA leverages SIM toolkit, USSD, and SMS technology to turn a user's mobile phone number into a digital wallet. Users can deposit cash into or withdraw cash from their wallets through an M-PESA agent.

Value proposition



- Accessibility and convenience: low technology required (i.e. a basic mobile phone), ease of use, and no required transaction minimums to receive services
- Value-added services: Mshawari (digital bank), Lipa Na Mpesa (Point of Sales), Fuliza (Overdraft), and Pochi La Biashara (business accounts)
- Security: People can verify immediately whether or not the funds were transferred for the correct amount
- High penetration and adoption: there are more M-PESA agents in Kenya than ATMs, and 96% of Kenyan households outside Nairobi have an M-PESA account.

Competitive advantage



Safaricom's near-monopoly of the telecom sector, its relationship with the government, friendly regulations and partnership with DFIs helped drive the product's adoption.

Ecosystem timeline





28 million Customers

~14 million Users Outside Kenya



273 million Avg. Monthly Transactions

24% YoY Growth ('17-'18)



101,000 Active Merchants



156,000 M-PESA Agents

Fintech players with different value propositions are springing up to solve customer pain points

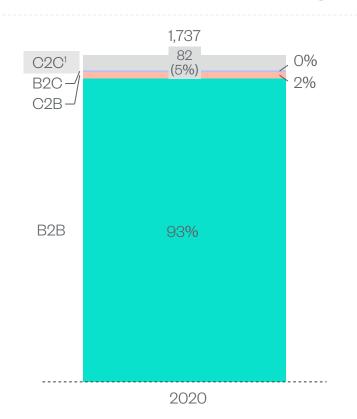


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Remittance	Low cost and fast cross border payments	BitPesa Mukuru Wari Maria Wari Wari 200NA
Digital banks	Access to value added services (e.g. savings and investment products, loans)	piggyvest Carbon Kkuda.

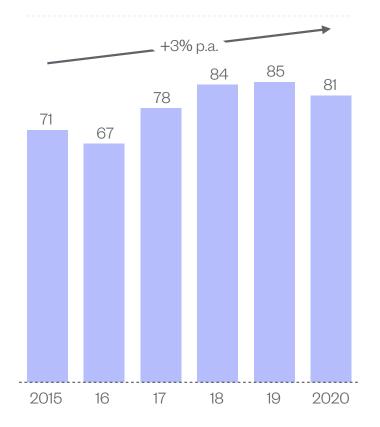


Inbound cross border payments are worth ~US\$2 tn, of which, remittances are 5%

Formal cross border values, Inbound to Africa, %, US\$ bn



Remittance transaction values, %, US\$ bn



African inbound payments are worth **US\$1.7tn.**

The **wholesale segment** dominates the African cross-border payment industry.

B2B heavily dominates the market (~ 93% of the total transactions), but has the lowest revenue margins Remittances (C2C) currently represent 5%, US\$81 bn and have grown 3% p.a. since 2014.

C2C is an increasingly competitive market with FinTech disruption.

Source: McKinsey Global Payments Practice; World Bank

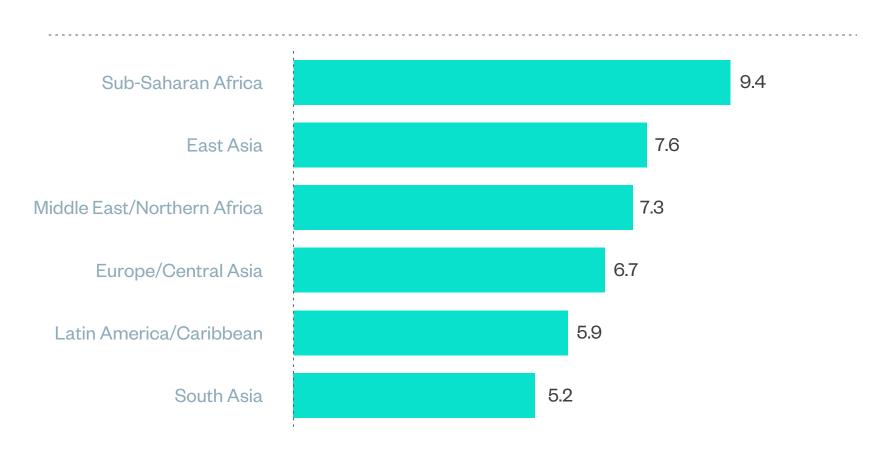
Remittances

^{2.} Includes mass pay-outs and payroll

^{3.} Includes cross-border commerce

Cost of receiving remittances in SSA is high relative to other regions, in addition, customers face multiple challenges

The average cost of sending a \$200 remittance around the world, %



Key takeaways

Fees paid to remittance service providers to send money to Africa is the highest rate globally.

B2B heavily dominates the market (~ 93% of the total transactions), This is due to limited interoperability between players and regulatory requirements that drive administrative costs up and limit competition.

In addition, to high cost, customers also face challenges related to last-mile delivery and speed of settlement.

Cross-border payment infrastructure companies are aggregating fragmented payment methods and building the rails to connect the continent



Launched: 2012 Capital raised: \$480m

Flutterwave allows African consumers and businesses send and receive money from each other and the rest of the world. The company has integrated multiple local payment methods across 10+ African countries, Europe, and North America.

Countries with local integrations: Cameroon, Ghana, Ivory Coast, Kenya, Malawi, Mauritius, Nigeria, Rwanda, South Africa, Tanzania, Uganda, Zambia, United States, United Kingdom.

Payment Methods: Debit and Credit Cards, Mobile Money, Bank Transfers, POS, Visa QR, USSD.





Launched: 2009 Capital raised: \$125m

MFS Africa's network allows interoperability among 180+ mobile wallets operated by telcos, banks and money transfer operators spread across 35+ African countries. This represents 320M connected mobile wallets and 600 payment corridors.

Countries with network members: Chad, Congo, DR Congo, Ethiopia, Gabon, Kenya, Madagascar, Malawi, Mali, Mozambique, Niger, Nigeria, Senegal, South Africa, Tanzania, Uganda, Zambia, Zimbabwe, plus many others.

Network Members: Paga, MTN Mobile Money, Orange Money, Airtel Money, Ecobank, MoneyGram, plus many others

Fintech players with different value propositions are springing up to solve customer pain points



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Digital banks	Access to value-added services (e.g savings, investment products and loans	piggyvest 🗅 carbon 🦹 kuda.



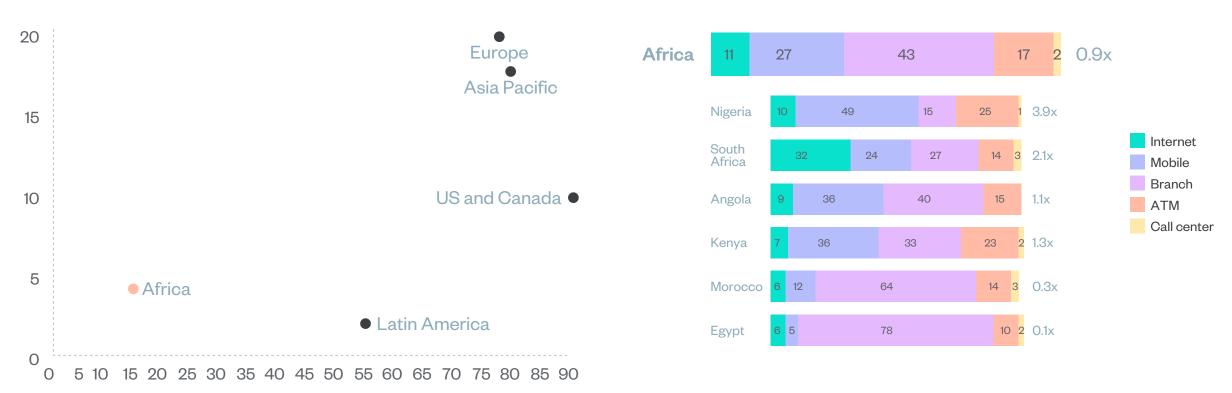
There is very low digitization in the African banking sector, despite consumer demand for digital products and services

Africa's banks still have room for growth in digital sales and transactions, relative to other regions

Share of total sales that are digital¹, 2016

Four in ten African banking customers prefer digital channels for transactions, and four major countries' customers prefer digital to branch

Q: Please indicate which channel you prefer for transactions² % of total customers



^{1.} Core products include current accounts, deposit accounts, credit cards, unsecured personal loans, non-life insurance, and mortgages

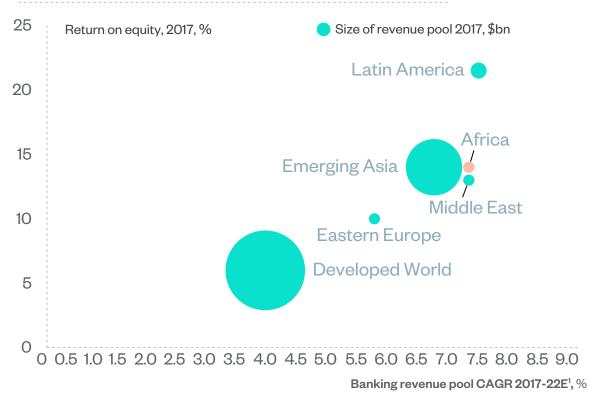
^{2.} Financial transactions include all customer initiated third-party payments and inter-account transfers, including set up of standing orders and direct debits.

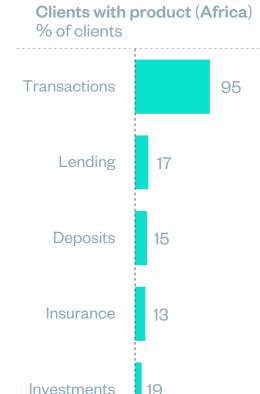
Actual subsequent automated transactions are excluded

Source: Finata. SNL

African banks have achieved growth and profitability through transaction banking, leaving a whitespace in other financial service products







Key insights

African banks have achieved growth and profitability through transaction banking, leaving a whitespace in other financial service products

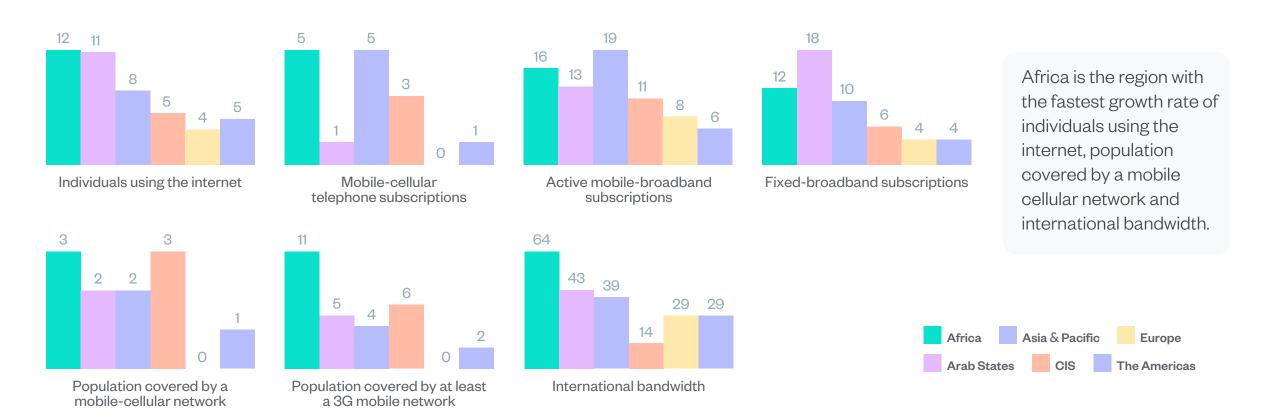
- Africa's banking market is the second fastest in terms of growth and is the second most profitable
- 95% of clients use transaction products, however, less than 20% have other financial service products (lending, savings, insurance or investments)



^{1.} Client-driven revenues revneues before risk cost, constant 2017 exchange rates Source: McKinsey Global Banking Pools

Digital penetration is growing faster than most regions presenting an opportunity to leapfrog

CAGR 2017 – 2019 of key indicators across global regions





Case Study

Pick a wedge Build a bridge

Overview



Kuda is a full-service digital-only bank and the first of its kind in Nigeria. Kuda enables users to access banking services on their smartphones without going out to a brick & mortar bank. In addition, Kuda leverage machine learning to personalize customer learning (Including credit rating). Kuda's predominant customers are young people (ages 18-25) who have a higher inclination for more convenient banking services.

Journey



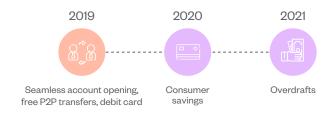
In 2019 Kuda launched a fully digital bank that appealed to customers in two major ways: (i). Customers were able to open new bank accounts seamlessly. (ii). Customers were able to perform many banking services for free. Building a fully digital bank was particularly important as the traditional banking system is faced with an Insufficient branch network, long queues, high transaction fees and stressful processes in obtaining banking services. In 2020 Kuda hit 300,000 customers acquiring \$10,000,000 in seed funding (which was Africa's largest seed funding round at that time). In addition, in their quest to meet more underserved banking needs, Kuda began introducing other financial services: consumer savings products and short term loans (overdrafts that don't require paperwork). Kuda is accelerating its mission to build the best bank for all Africans on the planet and is looking to expand into new African markets and develop new products in their existing market.

Value proposition

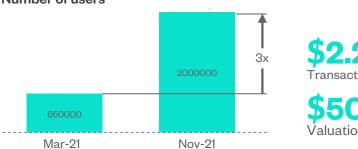


- Accessibility and convenience: easy onboarding, ability to perform a variety of services (e.g. getting a debit card) without going to a physical location
- No charges: on transfers, maintenance, SMS alerts
- Finance tools: tools for tracking spending habits, saving more and making the right money moves.

Ecosystem timeline



Number of users



Transactions per month





We're excited to usher in a new era in consumer banking and serve the many Africans, who we believe are frustrated with traditional banks Starting with Nigeria, we'll launch a new kind of bank with a continued focus on improving our members' financial lives rather than trying to burden them with hidden fees and excessive charges"

- Babs Ogundeyi - Founder & CEO



Commerce

MSMEs are critical to the African economy as they account for 83% of private sector employment

Africa employment by size¹ and type of employer Mn



- × Share of private sector
- X Avg. number of employees

Key insights

>50%

of all private sector workers in Africa are working for micro companies

83%

of all private sector workers work in MSMEs

There are three important conditions that give rise to opportunities in the commerce industry







- A third of commercial activity and over 80% of employment in Africa is in the informal sector.
- These informal businesses are often primarily operated manually (>85% of offline payments are in cash), with weak management practices, and with little regulatory oversight (84% of African MSMEs are unregistered).



Fragmentation in the supply chain

- The retail & commerce landscape in Africa comprises millions of small businesses operating at various points of the value chain with little coordination or centralization.
- The supply chain that serves SMEs in Africa is highly fragmented, with multiple intermediaries, each adding their margin.



3 High cost to serve

- Combined effect of informality, fragmentation and cash-based operations result in a high cost to serve, data asymmetry, and inability to extend credit.
- African SMEs are half as likely to have a loan from a financial institution, despite having the same amount of demand. They are also twice as likely to cite 'lack of access to credit as a significant barrier to growth.

A meaningful proportion of commerce in Africa goes through the informal economy

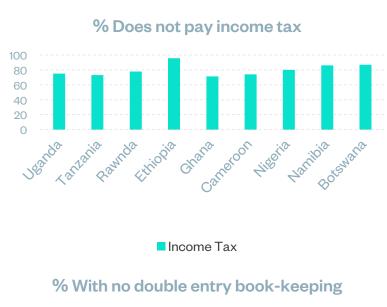
Shadow Economy's Share of Total Economy

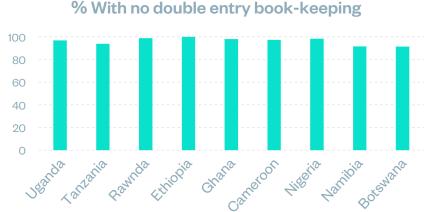


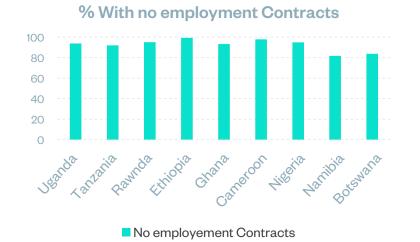
Informal Employment's Share of Total Employement



Informal business are predominantly run manually, with weak management practices and a heavy reliance on pen and paper

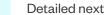








There are three important conditions that give rise to opportunities in the commerce industry





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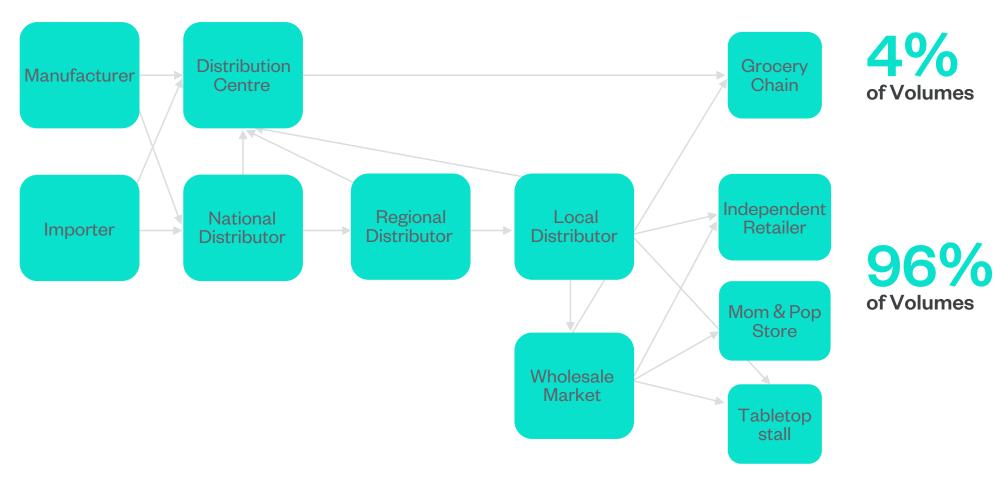


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The retail value-chain across Africa is highly fragmented

A bar of soap, leaving a manufacturers warehouse, will pass through up to 4 middlemen before landing on the shelf at a retail outlet



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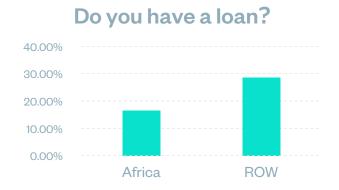


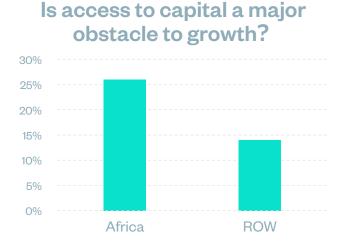
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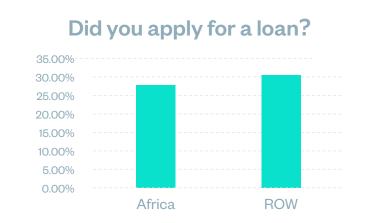
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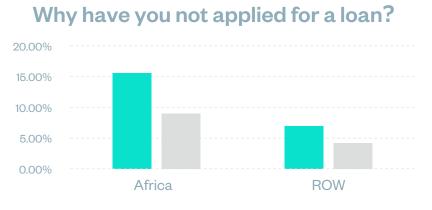
Informal businesses face significant barriers to financial inclusion

SMEs in Africa are half as likely to have a loan, and they are twice as likely to cite access to finance as a major barrier to growth. In addition, they are significantly more likely to have their loan application rejected or to refrain from applying due to complex application processes and high collateral requirements.











This informality and fragmentation presents challenges for last-mile distribution in Africa



Inefficient logistics/supply chain

The distribution network for retail products operates primarily manually with limited use of technology. Distributors often use simplistic approaches with very little route optimization when supplying retailers in their region. According to one estimate, route optimization can reduce the cost of delivering supplies by up to 66%.



Lack of reliable data

Manufacturer's visibility into their product penetration stops with the major distributors. Distributors operate manually giving manufacturers limited insight into their product coverage and stock levels across retail outlets. One study found that 9 of the top 10 best-selling products across Nigeria were present in less than 30% of stores.

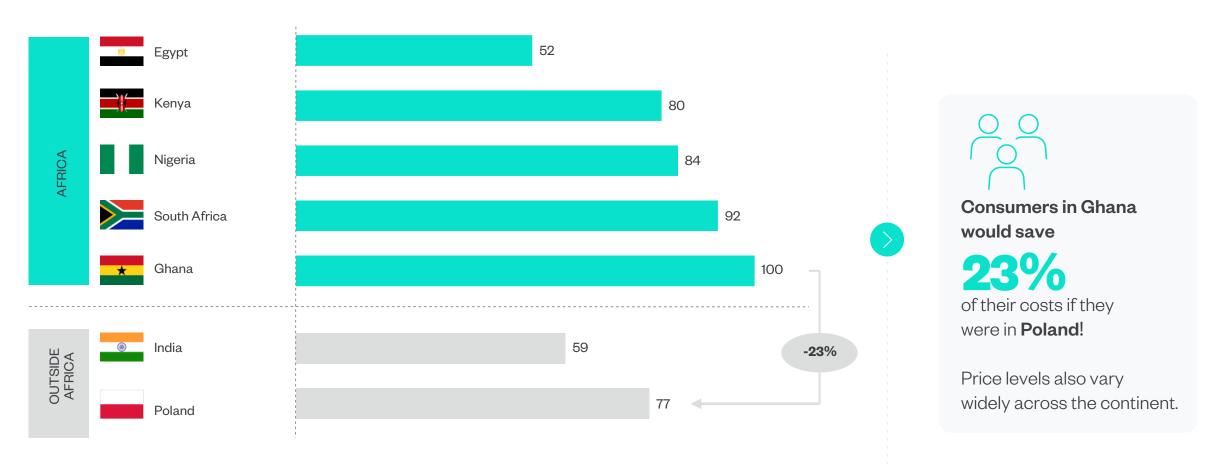


Lack of access to credit

The lack of data and visibility in the value chain excludes all but the large grocery chains and retailers from having access to supplier credit. Only 31% of MSMEs in Nigeria have every received a loan from a financial institution.

...resulting in higher prices for African consumers

2017 Price Level Index for Food and Non-Alcoholic Beverages, World = 100



Source: World Bank ICP Database, The Economist

NOTE: Price Level Index expresses the price level of a given country relative to another (or relative to a group of countries), by dividing the Purchasing power parities (PPPs) by the current nominal exchange rate



Using different initial wedges, digital platforms are attempting to digitise the entire commerce value chain and provide financial services to informal retailers across the continent

	YOCO	tradedepot	K ippa	₹ brass
	Mobile POS	Supply Chain	Book-keeping	Bank Account
	Business loans, digital wallet, savings products, savings, supply chain	Inventory financing, digital wallet, POS, data & analytics, advertising	Digital wallet, inventory financing, savings products, supply chain, POS	Cash flow management and forecasting, expense management and control, payroll, tax payment
Year Launched	2015	2018	2020	2020
Capital Raised	\$105M	\$123M	\$3M	\$1.7M
Investors	Dragoneer, 4DX, Partech	IFC, MSA Capital, Partech	Entrée Capital, Target Global, Alter Ventures, Rally Capital	Ventures Platform, Hustle Fund

YOCO - Case Study

Pick a wedgeBuild a bridge

Overview



Yoco builds tools and services to help small businesses accept card payments in-store and online, access loans, and manage their day-to-day activities. The startup generates revenue through margins on hardware and software sales and fees of around 2.95 percent per transaction on its Point-Of-Sales (POS) devices.

Journey



Yoco launched in 2013 and positioned itself among merchants in South Africa as the go-to platform to access offline payments. Yoco filled an essential gap as 80% of Yoco's merchants had never accepted card payments before joining the platform (due to issues related to accessibility and costs of traditional POS systems). In 2020, Yoco launched a suite of online payment solutions to help businesses scale through the pandemic. These online solutions had a customer base of 80.000 small businesses.

In 2021 Yoco served 150,000 of South Africa's 6 million small businesses with over 500 merchants per day. Yoco is looking forward to scaling offline and online offerings, expanding to new markets and reaching at least a million SMEs across Africa and the Middle East within the next four years. To make this happen, Yoco is increasing its team by 200 people remotely and has hired talent across companies such as Monzo, Paypal, Uber and Pagseguro.

Value proposition

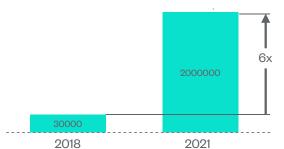


- POS payments: pocket-sized card machine "Yoco Go" and its smarter 4G/wifi device "Yoco Khumo"
- Online payments: get paid online without a website via "Yoco Link", take card payments on a website via "Yoco Gateway."
- Other SME support: Yoco Portal's free software to help manage sales, stock and staff, Yoco Capital's fast, flexible cash advance for small businesses using Yoco

Ecosystem timeline



Number of merchants







Working so closely with small businesses during a global pandemic, and in particular through a challenging socio-economic environment in South Africa, we have a firsthand account of how agile these small businesses need to be in a rapidly changing world. Removing barriers and levelling the playing field by creating access to financial tools is a big part of answering these challenges. Yoco is at the forefront of solving what is critical for small businesses and enabling them to thrive.

- Katlego Maphai - Co-founder & CEO



Transport

In Africa, Transport generates ~\$50 Billion in import value and logistics generates \$12 Billion in Revenue



^{1.} Across all categories, customs agencies and clearing agencies are relevant Source: UNCTAD Review of Maritime Transport 2019, Africa Development Bank, African Development Forum, PwC, International Growth Centre, TradeMap



Ride hailing platforms and digital logistics marketplaces have the opportunity to aggregate a highly fragmented sector, formalise existing operators, and provide much needed access to financial services



- 1 Informal operations
 - Informality in transportation is illustrated by limited access to public transport and the existence of numerous sub-scale private providers.



- Fragmentation in the market
 - The decentralized, informal, and fragmented nature of transportation and logistics in Africa means it is usually inefficient, with a limited ability to standardize routes, stops, and fares, contributing to higher costs for consumers and businesses.



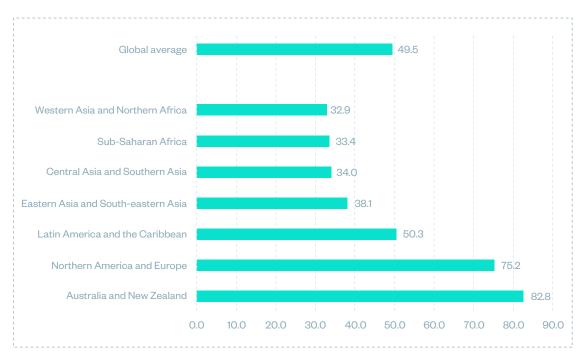
- 3 Limited access to financial services
 - The combined effect of informality, fragmentation and cash-based operations result in a high cost to serve, data asymmetry, and inability to extend credit therefore limiting growth.

In Africa, mass transit is limited, and consumers rely on informal, private operators

Africans have limited access to public transportation options

Private owner-operated minibuses, shared taxis, and moto-taxis are the dominant mode of 'public transport' across Africa



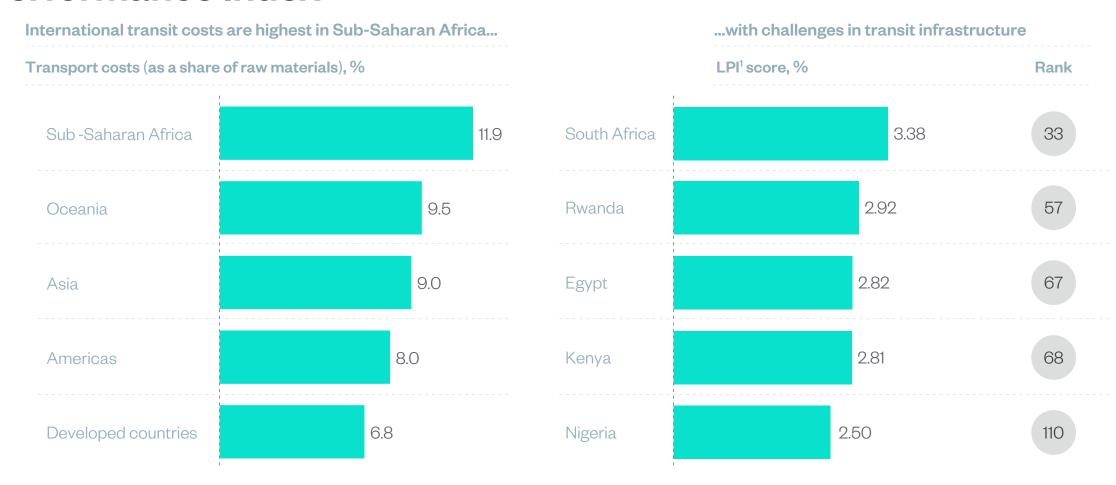




BRT - Bus Rapid Transit LRT - Light Rail Transit

SOURCE: UN-Habitat Urban Indicators Database, 2021

African firms also face higher transport costs, only 5 African countries are present in the 50th percentile of the Logistics Performance Index





This informality and fragmentation presents challenges for the transportation & logistics sector in Africa...



Lack of standards or regulation

Informal transportation and mobility operators are usually subject to little or no standards or regulations around training, vehicle quality, or insurance. This leads to a poor experience for consumers and contributes to Sub-Saharan Africa having a higher rate of road accidents than other regions.



High costs

The decentralized, informal, and fragmented nature of transportation and logistics in Africa means it is usually inefficient, with a limited ability to standardize routes, stops, and fares, contributing to higher costs for consumers and businesses.



Lack of access to credit

Informal, subscale, private actors are typically excluded from the financial sector, limiting their ability to access credit to purchase and maintain high-quality vehicles.

Digitising the informal retail sector in Nigeria is an opportunity that is being attacked from multiple points

	M max	mnt 60 Halan	Ж ково
	Package Delivery	Ride-hailing & delivery	Truck-hailing marketplace
	Ride-hailing, vehicle financing, wallet, insurance, licensing & registration, repair & maintenance	Wallets, bill payment services, e-commerce, Buy Now, Pay Later (BNPL), and micro & consumer loans	Vehicle Financing, Trip Financing, Insurance, Repair & Maintenance
Year Launched	2015	2017	2017
Capital Raised	\$40M	\$146M	\$38M
Investors	Lightrock, Global Ventures, Novastar, Proparco, Yamaha	Apis, DPI, Algebra Ventures, Wamda Capital	Goldman Sachs, TLcom, IFC, YC



KOBO - Case Study

Pick a wedgeBuild a bridge

Overview



Kobo360 is a tech-enabled digital logistics platform that aggregates end-to-end haulage operations to help cargo owners, truck owners, drivers, and cargo recipients move their goods effectively. Cargo owners can request any truck of their choice and have their goods picked up and delivered to the required location through Kobo360's Uber-like mobile and web applications.

Journey



Obi Ozor (a former driver operations manager at Uber) and Ife Oyedele, co-founders of Kobo360, first teamed up to build a last-mile deliveries service. However, they eventually pivoted (as a result of low volumes) in 2017 to an asset-free model around long-haul trucking; connecting truck owners and drivers with cargo companies. In a market where moving goods by 1,000 Km can take up to one week, Kobo works to cut that down to three days. In 2018, Kobo 360 had aggregated 5480 drivers and served 324 businesses. After establishing a solid base, Kobo continued to grow its product offerings and prioritize building excellent services for the startups drivers; offering the company's app in languages familiar to drivers, such as Hausa and Pidgin, as well as launching its driver working capital finance program, KoPay, KoboSafe insurance product and KoboCare: (a suite of driver services from HMO packages to family tuition assistance). Kobo has since then signed up a fleet of over 50,000 trucks serving more than 80 large enterprises as well as small and medium enterprises.

Value proposition

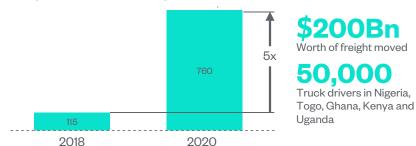


- Convenience and transparency: handles payment (including bidding tools) and scheduling while allowing clients to track their goods in real-time using Kobo's digital dashboard.
- Commitment to drivers: through Payfasta, KoboSafe and KoboCare; a suite of driver services including discounted diesel sales, vehicle financing, HMO packages and family tuition assistance.
- Great user experience: The app is available in languages familiar to users, such as Hausa, Swahili, French and Pidgin.

Ecosystem timeline



Freight moved ('Million kg)





From location-based technologies to temperature-controlled storage, we're investing in tech that gives businesses the necessary transparency and peace of mind over their cargo. These are issues that don't go away if you're a multinational. The AfCFTA makes the continent a much more attractive proposition to foreign companies who will need a partner who can deliver their goods on time and in the right condition

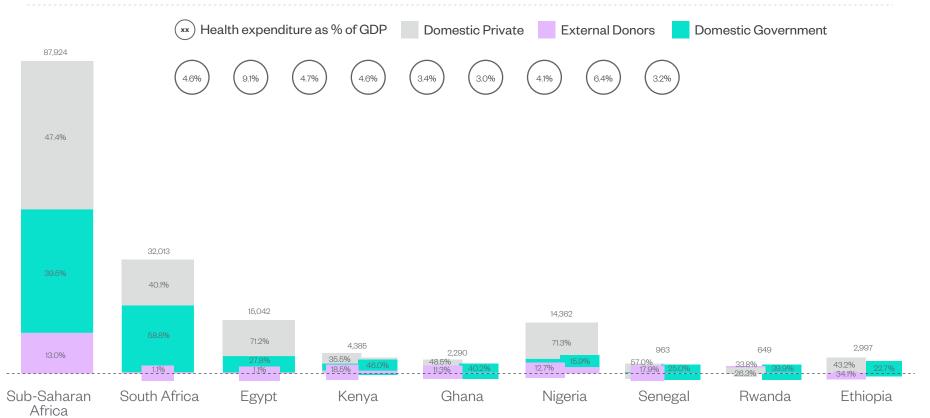
- Obi Ozor - Founder & CEO



Health Care

Total annual health expenditure in SSA is ~\$90bn USD and is primarily funded from private sources. However, there is variation across countries

Annual health expenditure and health expenditure as % of GDP (\$M USD, 2019)



Annual expenditure on healthcare is used as a proxy for the **value of the health sector** in each country given that there is limited cross-border trade of health products/services.

Role of the private sector in healthcare varies across countries; on average, the private sector is ~50% of the health sector, however, there are outliers like Nigeria with ~70% of health expenditures from private sources.

Out of pocket expenditures are typically the bulk of **private** sources of funding in healthcare.

There are three important conditions that give rise to opportunities in the healthcare industry



Limited government expenditure

- Government expenditure on healthcare in Africa lags WHO guidelines. As a result, citizens rely on private clinics and out of pocket expenditures for their healthcare.
- Higher private spending implies more significant inequalities as access is driven by the ability to pay.



Lack of access to healthcare services

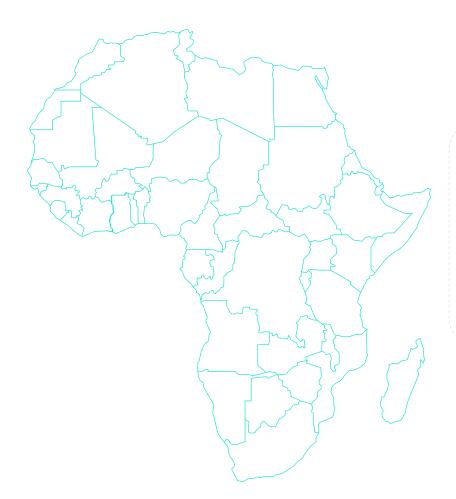
- While the private sector and charities try to bridge the gap left by inadequate government expenditure, Africa still lags other regions in terms of access to healthcare services such as hospital beds and physicians per 1000 people.
- Technology offers an opportunity to optimize and better leverage scarce healthcare resources.



Limited access to data

- The various players in the healthcare space, including governments, private hospitals, and charities, do not have a unified system for tracking data both at the patient level and at the population level.
- This lack of data leads to providers having a limited view of patients' medical history. On a broader level, this stifles the development of prevention strategies, advance treatment methods tailored to the region and restricts service efficiency.

In Africa, government expenditure on healthcare lags WHO guidelines



1.9%

Average Government Health Spend as % of GDP in Africa VS

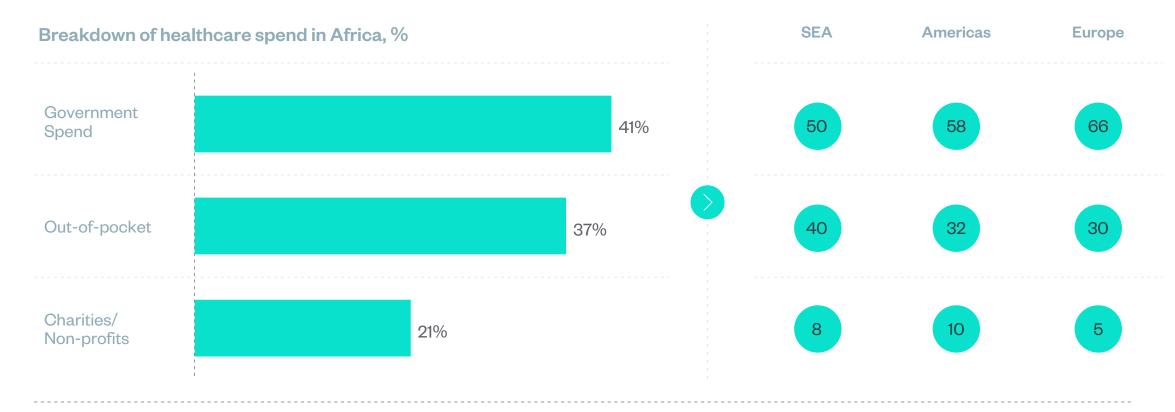
4-5%

WHO guidelines needed for universal health coverage

5.6%

Average Government Health Spend as % of GDP in high income countries

Government covers ~40% of healthcare spend, the rest is covered out of pocket and through charities/non-profits



Higher private spend implies greater inequalities as access is driven by ability to pay

Source: WHO Global Health Expenditure Database (GHED)

NOTE: Average 2018 figures. Variation exists across countries | Percentages may not add up to 100% due to an other category that includes unspecified financing;

The Americas includes North and South America



There are three important conditions that give rise to opportunities in the healthcare industry



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Lack of access to healthcare services

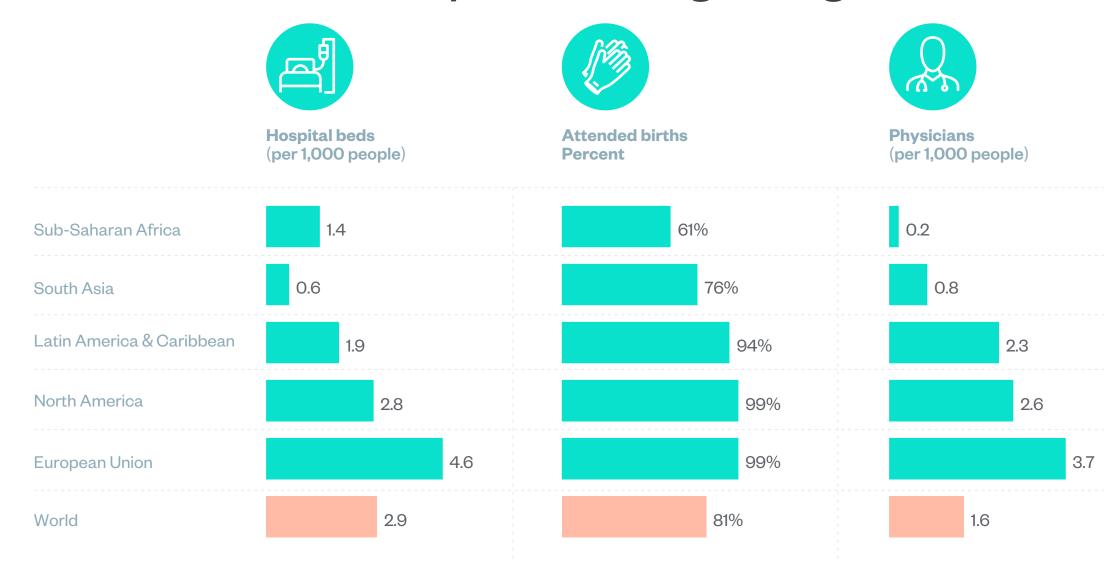
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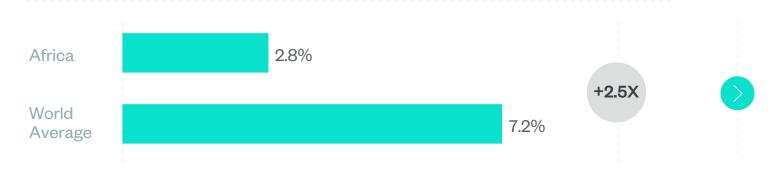
Healthcare service delivery indicators lags all regions





Additionally, insurance coverage is low

Insurance penetration (Premiums over GDP), %



The world insurance penetration is over **2 times higher** than Africa's average.

Within Africa, there is great variation in insurance penetration, with South Africa having the highest penetration.

Insurance penetration (total GWP divided by nominal GDP) in Africa by region in 2017

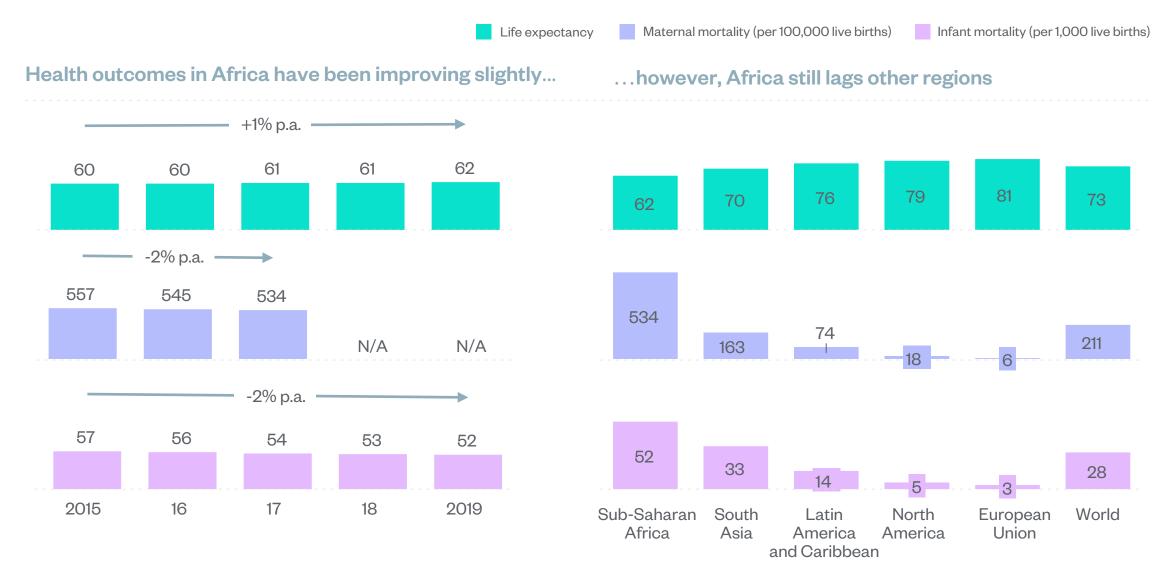


GWP - Gross written premium

Note: Figures may not sum to 100%, because of rounding. The boundaries and names shown on this map do not imply official endorsement or acceptance

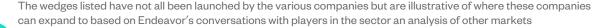
1. Francophone Africa data projected from 2014 | 2. Ethiopia, Libya and Malawi data projected from 2016, Southern Africa includes Lusophone Africa | 3. Angola data projected from 2017 Source: African Insurance Pulse; Insurance regulation reports, Swiss Ru

Unsurprisingly, outcomes are worse than other regions



Digital healthcare platforms are aggregating doctors and hospitals, improving service delivery, and enabling co-ordination

	Yezeeta.com	helium health	54gene
	Doctor booking platform	EHR	Gene Sequencing
	Telemedicine, online pharmacy, practice management software	Payments, personal health records, telemedicine, medical facility loans, public healthcare management	Drug discovery, Molecular Diagnostics, Clinical trial programs
Year Launched	2011	2016	2019
Capital Raised	\$62M	\$12M	\$46M
Investors	Gulf Capital, IFC, STV, BECO Capital	Draper Associates, Global Ventures, AAIC, YC	Cathay Innovation, Better Ventures, KdT, Adjuvant, YC, endeavor catalyst



helium health - Case Study

Overview



Helium Health provides vital digitized healthcare services such as electronic medical records, hospital management and insurance, billing, and analytics software for the continent's top medical providers and services. In addition, they provide simplification tools from clinical decisioning support and telemedicine, to administration and financial management.

Journey



Launched in 2016, Helium health focused on core electronic medical records (EMR) and hospital management solutions which gained wide adoption. After achieving a thriving base, Helium has since evolved to offer other services under its platform, including HeliumPay, a billing and payments solution; a collateral-free loan product, HeliumCredit; patient-provider and revenue cycle management service HeliumDoc; and data analytics services. In 2021, Helium acquired Meddy (a Qatar-headquartered and UAE-based doctor booking platform) to complement its B2B offerings with consumer-facing products such as telemedicine and appointment bookings. Helium health is currently present in about 6 African countries. It has signed more than 500 healthcare facilities with over 7,000 medical professionals from these facilities providing health care to more than 300,000 patients monthly.

Value proposition



- Comprehensive EMR-solution for providers: includes teleclinic, electronic prescriptions, billing, resource management and appointment management
- Quick, flexible loans for hospitals: loan applications are received online and disbursed within 24 hours
- Insurance administration for payers: help payers manage enrollment, identification, claims submission, claims processing and reporting

Ecosystem timeline



Key Figures (as of Mar '21)



500+
Healthcare Facilities



7,000+ Physicians



300,000+ Monthly patient visits



It's really about tackling three core problems that we see in the healthcare sector in Africa: inefficiency, fragmentation and a lack of data

"You don't have a lot of people who can provide a suite like ours in the GCC. If they do, they're doing it at a price point that's so high that they've already priced out the market in that sense

- Adegoke Olubisi - Co-founder & CEO



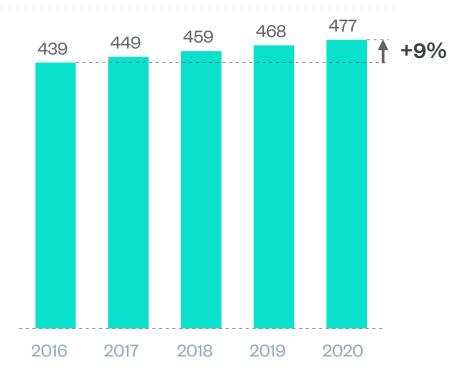


Education

There is a need and opportunity to harness private sector solutions to deliver education for Africa's young and growing population

Africa's young population is growing

Population ages 0 – 14yrs Million



34 Out-of-School
Children in 2020
in Sub-Saharan Africa



With the growing population, existing enrolment needs, and government spending the requisite share of GDP on education, there is a **need and opportunity for more private sector participation** in education to improve the impact of education spending.

Private solutions and investments may also address needs for **mid and low-income families.**





In the education sector, Africa has the opportunity to leverage technology to optimise its limited resources and improve on poor outcomes



1 Limited resources

- Schools in Africa have a limited number of teachers, and lags compared with other regions.
- School enrollment rates also lags other regions with 34M out of school children on the continent.



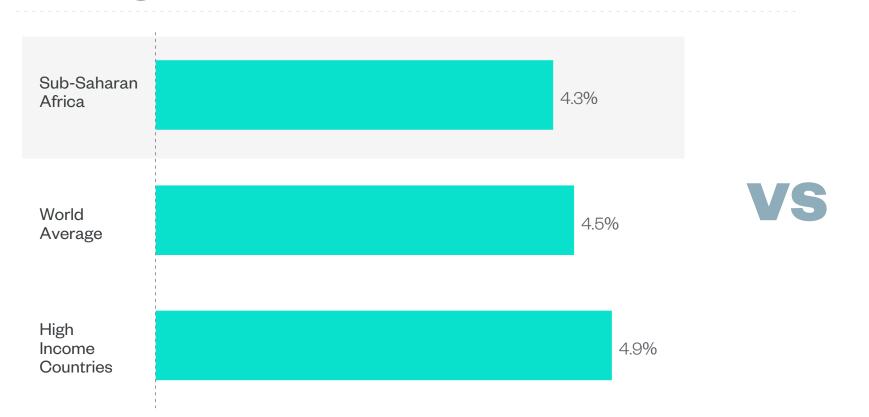
2 Poor outcomes

- Unsurprisingly, outcomes leave much to be desired. Africa lags other regions in math and reading proficiency.
- Similar to healthcare, technology offers the opportunity to reach previously underserved populations and improve on outcomes, particularly for lower and middle-income groups.

Detailed next

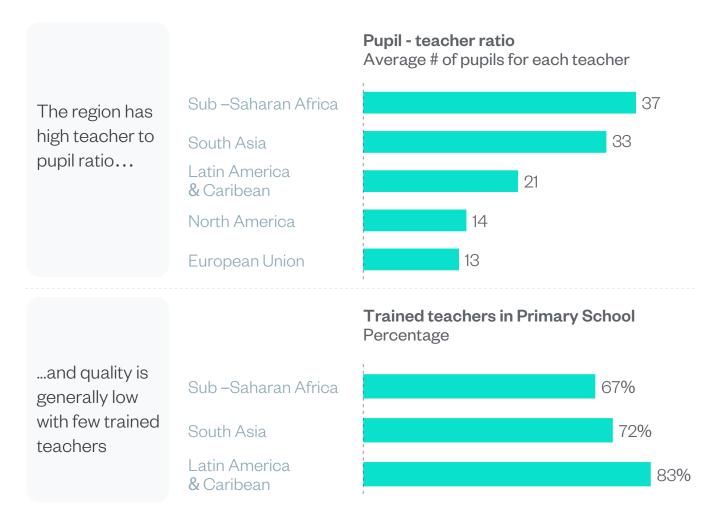
Though government spend on education are in line with United Nations guidelines...

Government Education Spend as % of GDP Percentage





...schools in the region generally have limited number of teachers and teacher quality is generally lower than other regions



Only 22%

Of Sub-Saharan African primary schools have electricity access

In the education sector, Africa has the opportunity to leverage technology to optimise its limited resources and improve on poor outcomes





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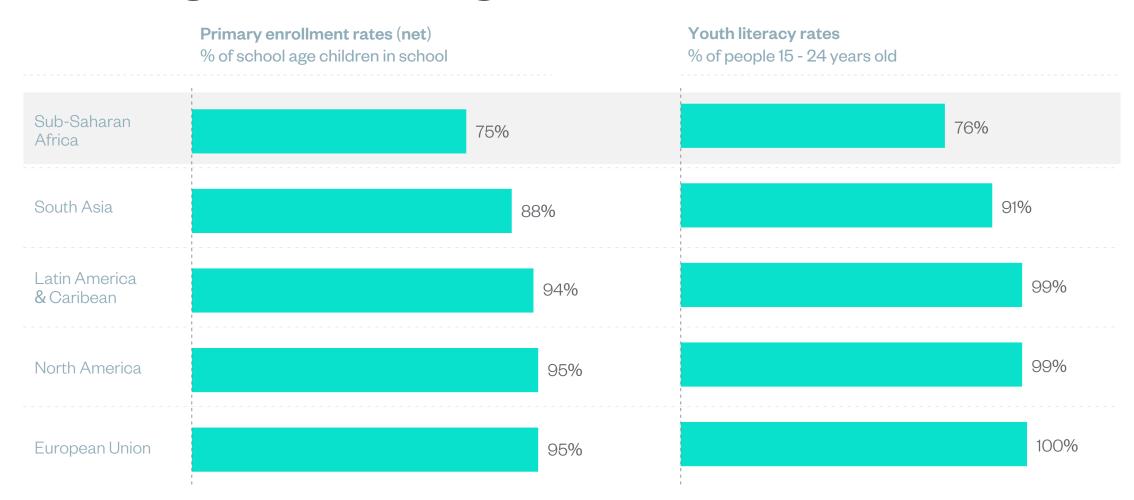


Poor outcomes

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Detailed next

School enrollment and literacy literacy numbers lag that of other regions

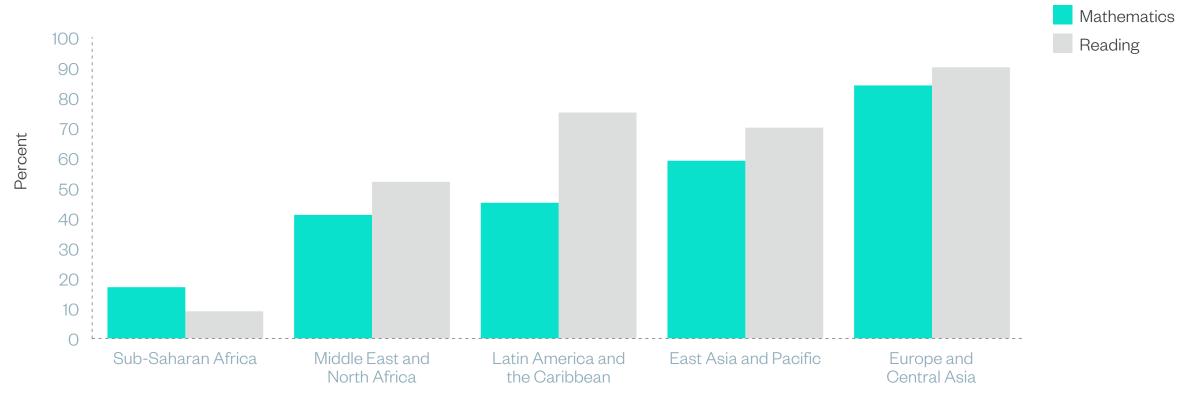


Source: UNESCO Institute of Statistics, World Bank Database (2017/2018 for primary enrollment rates and 2009 for SSA; 2020 data for Youth literacy rates in SSA, South Asia, LatAm & Caribbean); Global Economy, UNESCO (2018 Data for North American and European Union)

Mathematics and Reading scores in Africa are substantially lower than other regions

Median percentage of students in school who score above a minimum proficiency level on a learning assessment, by region

% of people 15-24 years old



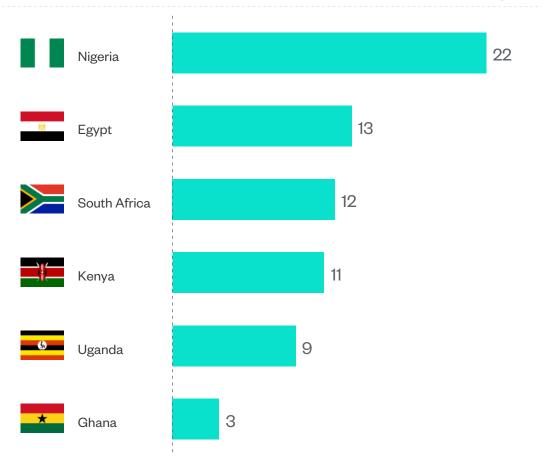


There are a variety of products in the EdTech space with majority being in tutoring and e-learning platforms

Category	Selected Global Startup(s)	Selected Africa Startup(s)
Tutoring Platforms	chegg CLO 2 Tutorhouse	BRIGHTSPARKZ S superprof proteach
E-Learning Platforms and MOOCs	T THINKFUL ■ BitDegree Coursero	go1 Producate Samaskull Control Samaskull Control C
School Management and Finance	S CREDENC	isams FlexiSAF FOUNDATION FOUNDATION FOUNDATION
Directory and Search Engines	Teachers Pay Teachers	edusko Scholar×
Educational Entertainment	disputer O O K!	GENIE gidimo
IT Training, Teacher Training and Work Experience	Future Learn	icog tabs Institution traindemy
Supporters	D	re:lean

With large and growing school children in Africa population, Education firms like uLesson have seen large traction

Number of school children in select African countries, mn



Product









uLesson by the numbers



Questions & answers

1m+
App downloads

11.4m+

Lessons watched

18k+
Interactive guizzes and

tests with solutions

uLesson – Case Study

Pick a wedgeBuild a bridge

Overview



uLesson is a Nigerian EdTech platform that leverages teachers, media, and technology to create high-quality, affordable and accessible education for students. uLesson leverages its network of tutors to bridge educational gaps for secondary school students in Nigeria and broader Africa. The uLesson app offers students in primary and secondary school a holistic learning experience in Mathematics, English Language, Business, Sciences, and Technology, while also preparing them for school-based, national, and regional examinations.

The start-up first launched in 2019 by providing a product pack of SD cards and dongles with pre-recorded videos for K-12 students. The start-up saw growth in user metrics due to the pandemic (up to 600% and 700% growth in paying users and monthly average users, respectively). Next, uLesson began to build a comprehensive EdTech platform as it ventured into the online home tutoring business by helping to connect students with tutors from universities and launching live classes.

Journey



uLesson managed to create stickiness and ensure growth even as students returned to school (the start-up had become a part of the everyday schooling activities for its users and have half of their subscribers using them in schools). In August 2021, uLesson introduced offline centres to challenge traditional classroom learning and build customized experiences for students.

uLesson hopes to create feedback loops between teacher and learner and parent and school that embraces virtuous cycles and feed themselves to the betterment of the educational system.

Value proposition



- Rich content:
 - A vast library of curriculum-relevant lessons for Primary and Secondary School learners.
 - —Daily Live interactive classes with expert tutors across various subjects and 18,000+ interactive quizzes and tests with solutions to help students perfect their understanding.
- Learning analysis dashboard to track progress and monitor performance.

Ecosystem timeline



Key Figures (as of 2021)



Over
500+
downloads



Paying users grew 600%



12.9N lessons



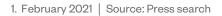
Monthly average users increased 700%



We have this massive gap...We're adding more babies in this country nominally than all of Western Europe...Even if the [Nigerian] government was super efficient, it couldn't catch up with the educational needs of the young people that are coming up

- Sim Shagaya - Founder & CEO







Going forward, investors interested in investing in Africa, should consider 5 things

1. Follow the money

In emerging markets, capital funnels typically have gaps. On the continent, the gap in the funnel is in the provision of capital for Series A/B (\$10m to \$50m) rounds. This gap exists because local funds provide the majority of the pre-seed to seed-stage funding, and global funds have typically focused on growth-stage financing, thus leaving a gap in the middle. Closing this gap may require investors to consider adjusting ticket sizing and risk preferences.

2. Build local market intelligence

Africa is not homogenous; therefore, market entry strategies should be developed with room for country-specific nuances. Local incubators and accelerators have focused on investing and providing support to early-stage ventures; they are great partners to work with to gain market intelligence, therefore mitigating the risks associated with investing in Series A/B companies.

3. Understand the market dynamics; Be willing to return to first principles

Evaluating investment prospects on the continent may require mental models to be refined. Informality and the gap in penetration of technology means that business models on the continent are likely to consist of complementary online and offline services. For emerging market native offerings, reasoning from first principles may be required to accurately size opportunities and evaluate the problem/solution fit.

4. Look beyond the 'usual' opportunities

For example, while C2C opportunities tend to get a lot of attention, B2B opportunities exist on the continent. In Kenya, Nigeria and South Africa, Micro and SME businesses contribute 40%, 49% and 52%, respectively, to the national GDP; therefore, it is common to find founders in these markets building products or bundles of services to serve this segment.

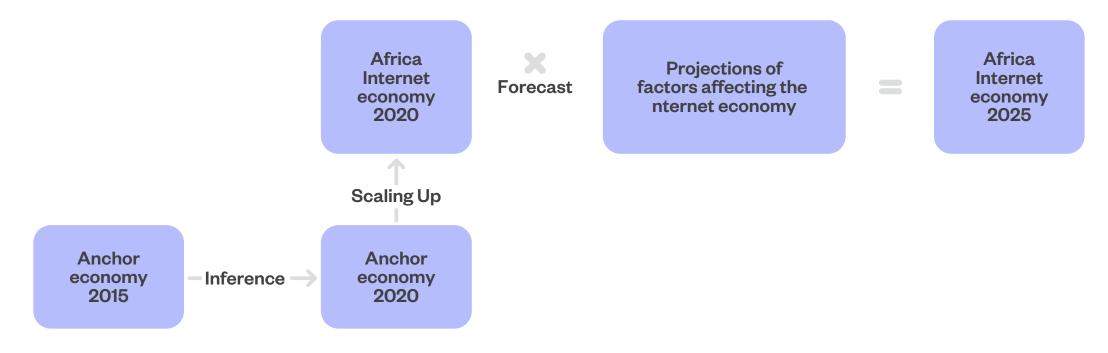
5. Map out exit pathways

The ecosystem is nascent; therefore, experienced investors play an important role in mapping out exit pathways. With a number of IPOs, Acquisitions and SPACs in the ecosystem, it has been proven that exits are possible. Investors and founders may have to collaborate on developing exit playbooks taking into consideration future investors or acquirers, building out the relevant governance and crafting the narrative around the opportunity.



Appendix

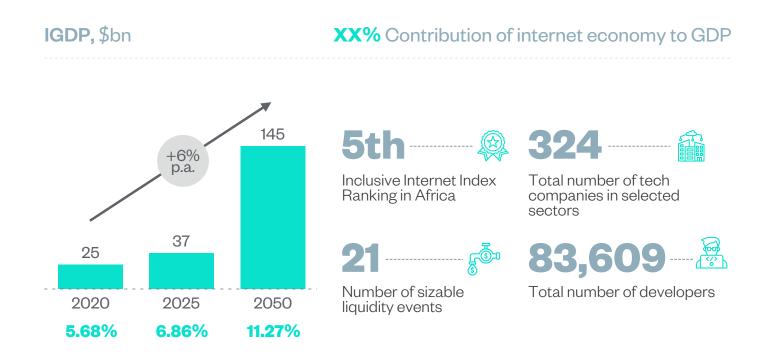
How the Internet economy is calculated

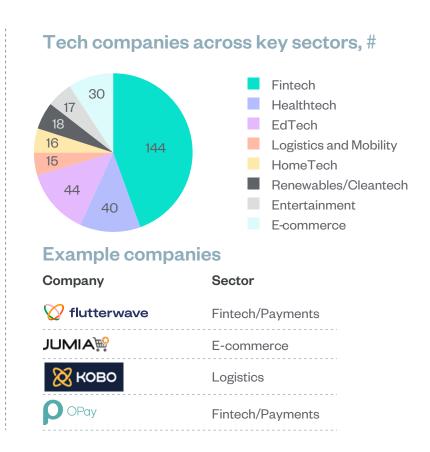


- Selected an anchor economy and estimated the internet economy with available data using the historical growth rate in the iGDP to project for 2020
- Estimated the size of the internet economy in other countries by scaling the iGDP of the internet economy based on key factors;
 - Labor share of the agriculture sector
 - Penetration rate of the Internet and social media
 - Population of developers

Country deep dives: Nigeria is Africa's largest internet economy







Nigeria's large population contributes to the country's status as no 1 in GDP, IGDP, as well as mobile market. Nigeria represents a major market in Africa today and has the highest number of tech companies under the classified sectors

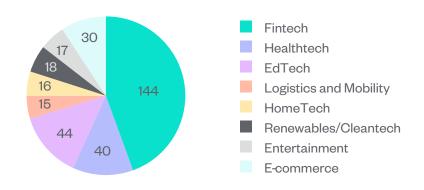


Country deep dives: Nigeria



Network readine	ss index		Rank (/134)	Rank (/ African peers) ¹
Access to tech	Mobile tarrifs	51.96	86	3
	Handset prices	20.01	117	4
	Fixed broadband subscriptions	8.16	102	3
	4G mobile network coverage	22.34	120	4
	International Internet bandwidth	46.89	130	4
	Adoption of emerging technologies	43.17	74	4
Future Technologies	Investment in emerging technologies	22.87	113	4
	ICT PCT patent applications	0.24	77	4
888	Internet users	40.56	98	3
	Active mobile-broadband subscriptions	10.86	115	4
Individuals	ICT skills	28.86	117	3
	Internet shopping	5.21	94	3
= <u>^</u> }	Firms with website	14.86	113	4
Businesses	Ease of doing business	47.13	109	4
	Business use of digital tools	68.38	50	4
Government and regulation	Publication and use of open data	20.97	69	3
		17.46	109	4
	ICT regulatory environment	77.99	87	3
	Legal framework adaptability to emerging technologies	22.70	99	4

Tech companies across key sectors,



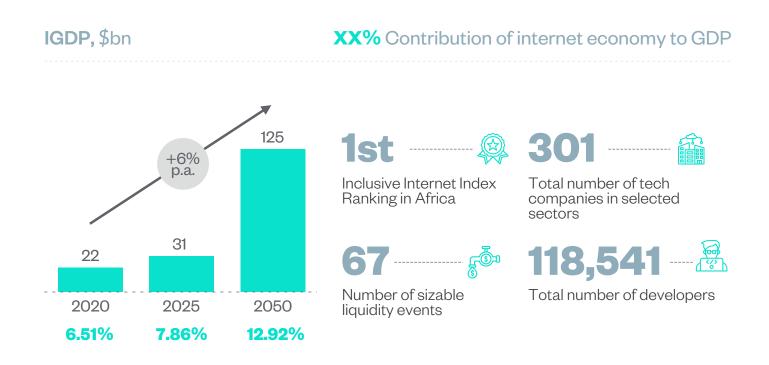
Example companies

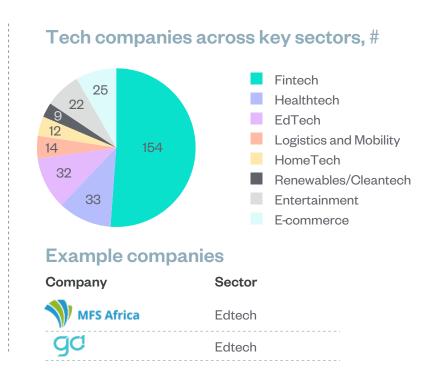
Company	Sector		
	Fintech/Payments		
JUMIA [™]	E-commerce		
Ж ково	Logistics		
O OPay	Fintech/Payments		

^{1.} Nigeria, South Africa, Kenya, Egypt Source: Network readiness Index 2020

Country deep dives: South Africa is Africa's most inclusive internet country



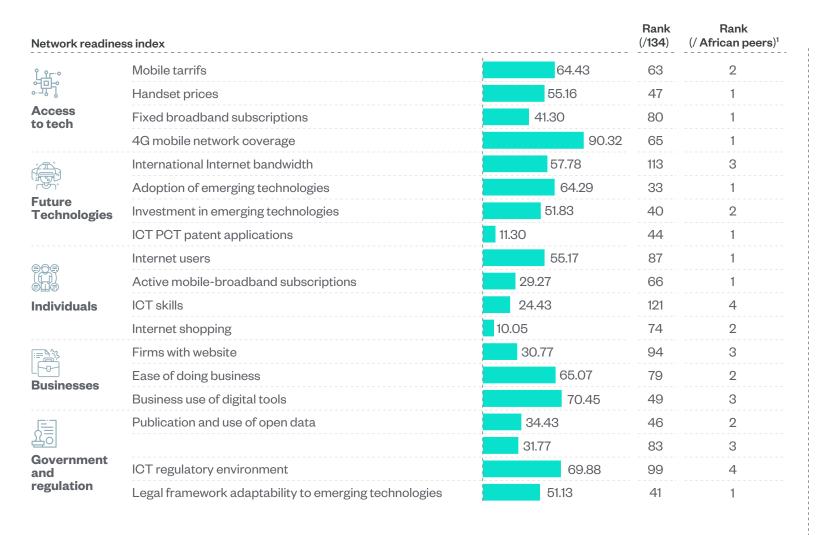




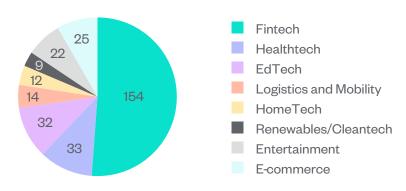
South Africa leads the pack in inclusiveness with a no 1 regional status internet usage, mobile penetration and broadband usage amongst others. South Africa is the continent's second largest internet economy just closely behind Nigeria. South Africa also has a more advanced tech ecosystem than many of its African peers; 2 out of the top 5 African start up ecosystems are in South Africa and the country also has the highest number of professional developers.

Country deep dives: South Africa





Tech companies across key sectors,



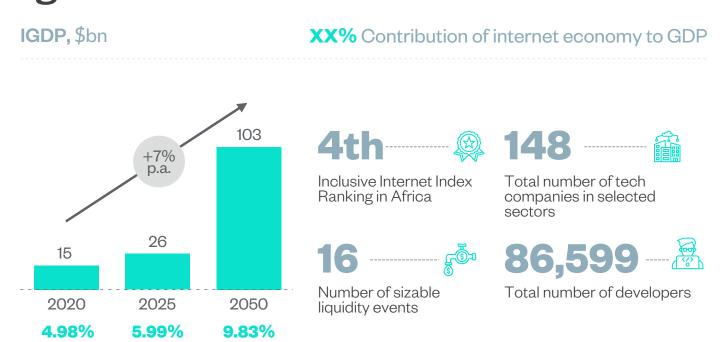
Example companies

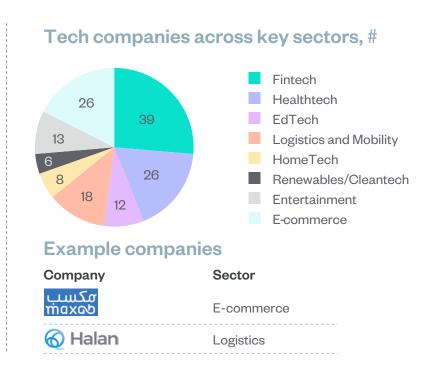
Company

MFS Africa	Edtech
ga	Edtech



Country deep dives: Egypt has one of the most diverse landscapes based on classification and ownership of digital businesses





Egypt has one of the most balanced distribution of tech companies (unlike its peers which are more skewed towards fintechs). Egypt is well connected digitally to the rest of the world with one of the highest number of distinct submarine cables in the continent (17). The Egyptian digital market is concentrated with many foreign participation as only about one third of of digital businesses are locally owned

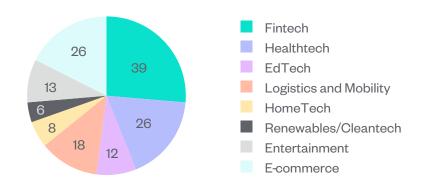


Country deep dives: Egypt



Network readine	ss index		Rank (/134)	Rank (/ African peers) ¹
Access to tech	Mobile tarrifs	77.03	32	1
	Handset prices	34.14	93	2
	Fixed broadband subscriptions	14.60	98	2
	4G mobile network coverage	89.00	70	2
	International Internet bandwidth	63.40	88	2
	Adoption of emerging technologies	54.92	48	2
Future Technologies	Investment in emerging technologies	37.05	74	3
	ICT PCT patent applications	1.01	71	2
	Internet users	45.64	94	2
	Active mobile-broadband subscriptions	20.30	97	2
Individuals	ICT skills	65.44	42	1
	Internet shopping	3.09	112	4
≔2 53	Firms with website	48.99	65	1
Businesses	Ease of doing business	52.75	97	3
Dusinesses	Business use of digital tools	70.60	48	2
Government and regulation	Publication and use of open data	13.89	83	4
		47.93	43	1
	ICT regulatory environment	80.89	78	2
	Legal framework adaptability to emerging technologies	45.87	55	2

Tech companies across key sectors,



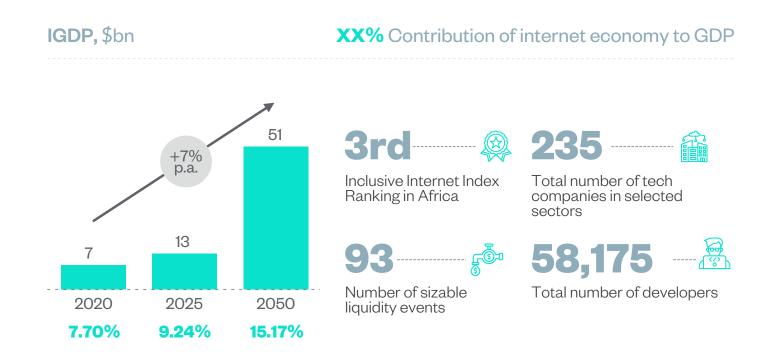
Example companies

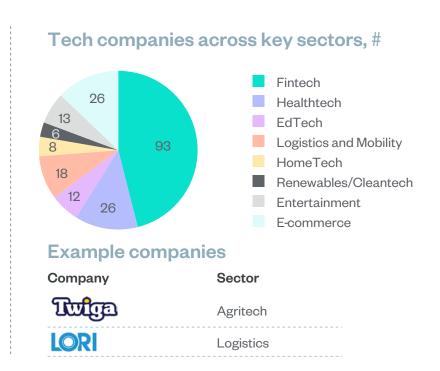
Company	Sector
مکسب maxab	E-commerce
	Logistics

^{1.} Nigeria, South Africa, Kenya, Egypt Source: Network readiness Index 2020

Country deep dives: Kenya's internet economy contribution to GDP is the highest in Africa







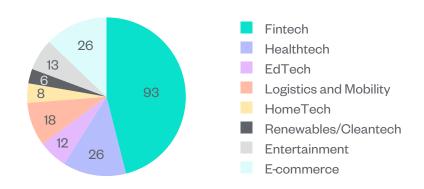
In Africa, Kenya's internet economy contributes ~8% to it GDP which is the largest in Africa. Kenya leads digital payments, has the largest international bandwidth per user and is no 2 in internet Usage. Kenya's prevalent mobile banking services has led to a high banking penetration which is higher than many of its peers in Sub-Saharan Africa.

Country deep dives: Kenya



Network readine	ss index		Rank (/134)	Rank (/ African peers) ¹
Access to tech	Mobile tarrifs	49.30	95	4
	Handset prices	33.14	94	3
	Fixed broadband subscriptions	0	122	4
	4G mobile network coverage	35.00	111	3
	International Internet bandwidth	80.73	7	1
	Adoption of emerging technologies	50.77	55	3
Future Technologies	Investment in emerging technologies	60.12	32	1
	ICT PCT patent applications	1.00	72	3
888	Internet users	15.64	122	4
	Active mobile-broadband subscriptions	15.43	107	3
Individuals	ICT skills	62.03	46	2
	Internet shopping	11.83	70	1
:= <u>}</u> %	Firms with website	43.88	74	2
	Ease of doing business	76.03	55	1
Businesses	Business use of digital tools	72.88	38	1
F	Publication and use of open data	40.42	35	1
Government and regulation		40.90	56	2
	ICT regulatory environment	88.61	44	1
	Legal framework adaptability to emerging technologies	37.75	74	3

Tech companies across key sectors,



Example companies

Company	Sector		
Twiga	Agritech		
LORI	Logistics		

^{1.} Nigeria, South Africa, Kenya, Egypt Source: Network readiness Index 2020

Using the wedge and the bridge strategy, innovative fintechs are delivering a broad suite of financial services to consumers

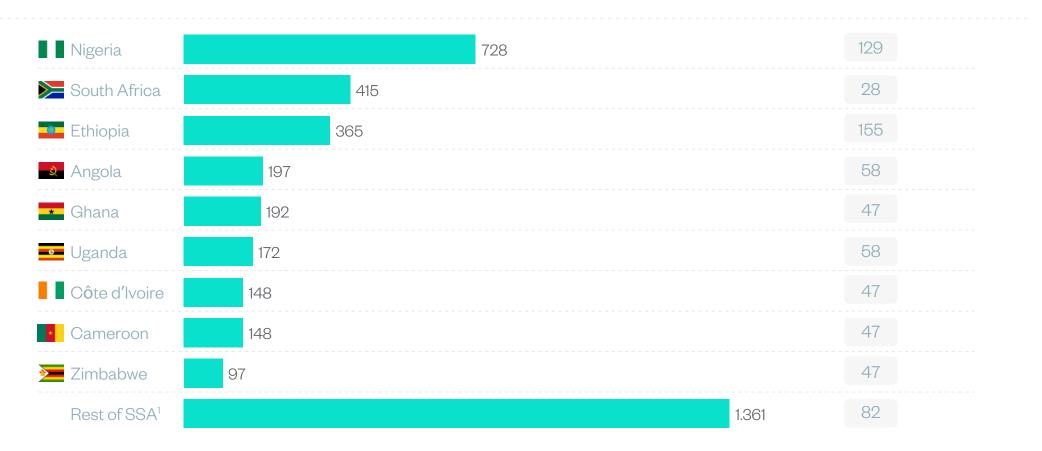
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	Seamless bank account opening & Free P2P transfers	High-interest savings products	Instant unsecured loans	Free cross-border P2P transfers	Low-cost P2P transfers and bill payments
	Overdrafts, loans, savings, bill payments, budgeting & personal finance	Investments, Digital wallet, bill payments, free P2P transfers	Digital wallet, high interest savings, P2P transfers, bill payments, BNPL	Cryptocurrency trading, bill payments, stock trading	Smartphone-based mobile money platform with pre-paid QR card option: clean, intuitive Ui, high reliability, and much lower prices (free deposits, withdrawals, bill payments, and a 1% transfer fee)
Year Launched	2017	2016	2012	2019	2011
Capital Raised	\$92M	\$1.1M	\$10M	\$300M	\$200M
Valuation	\$500M	Undisclosed	Undisclosed	\$2B	\$1.7B
Investors	Target Global, Valar Ventures	Ventures Platform, LeadPath, Village Capital	Net1	Ribbit, SVB, Bezos Explorations, FTX, Tribe Capital, 500startups	Partech, Y combinator, Founders Fund, Sequoia Heritage, Stripe



In payments alone, there is a \$3.6B opportunity if the rest of Sub-Saharan Africa's digital payments rate catches up to Kenya



Potential increase in revenue pool, %



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