



Market Review | Tanzania

April, 2020

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Country Overview



Population & Economy

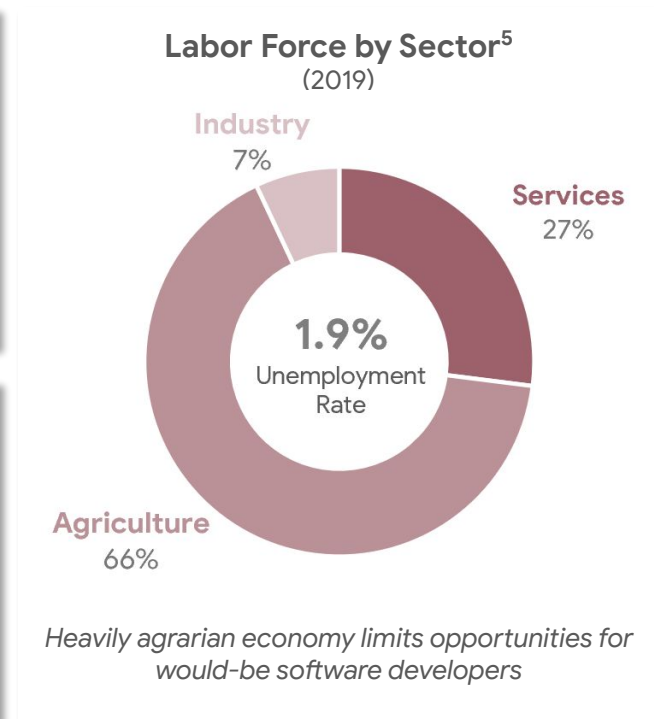
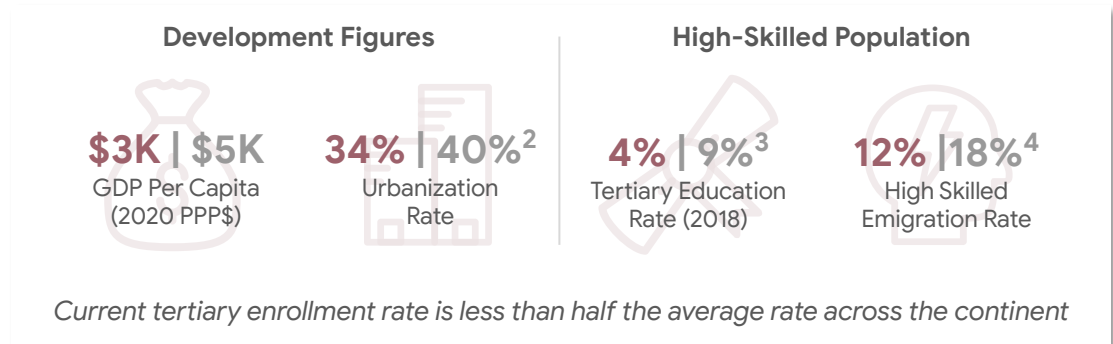
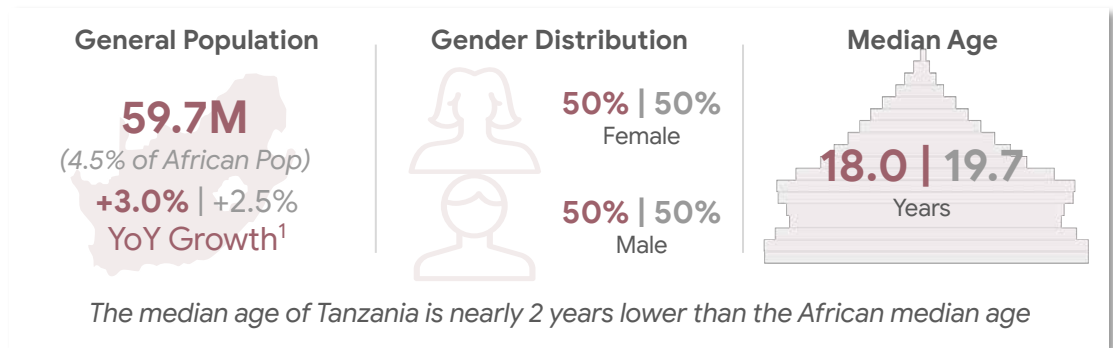


Technology Infrastructure



Government Involvement

Tanzania's young and growing population holds high potential for growth despite low tertiary education and urbanization rates



Lack of a developed, widespread internet infrastructure limits tech growth

Infrastructure Indicators

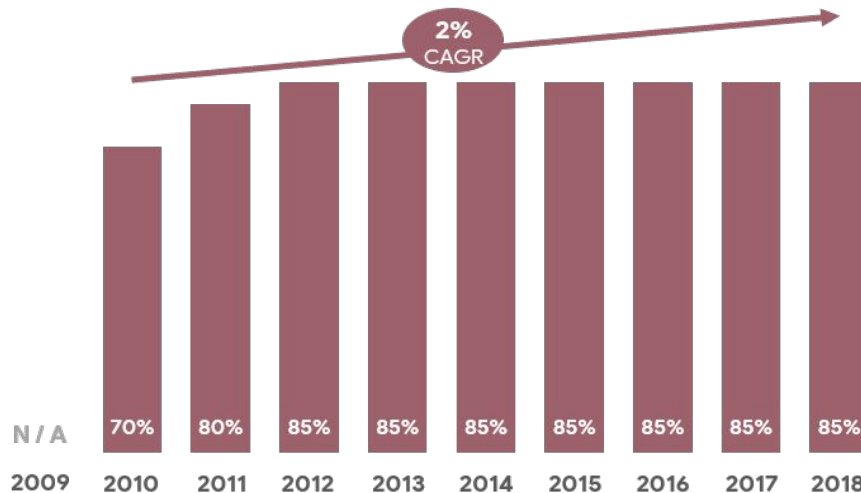
Above / Below Global Average | Global Average

35% 59%	77 69
Internet Penetration (FY20E)	Mobile Phone Subscriptions per 100 People
10.1 30.5	\$5.93 \$8.53
Mobile Internet Download Speed (Mbps)	Cost of 1GB Mobile Internet (PPP\$)
12.0 74.3	\$52 \$50
Fixed Internet Download Speed (Mbps)	Monthly Cost of 5GB Fixed Internet (PPP\$)
41 1,620	33% 89%
Servers shipped (FY20E)	Population with Access to Official Electric Grid

Internet infrastructure is weak and over half of the Tanzanian population is not connected to the electric grid

Population Covered by at Least 3G (2018)

(90% global average)



Tanzania's 3G coverage growth has been stagnant over the last few years, approaching the global average

The government has put few policies in place to foster a thriving technology ecosystem, but the environment is improving

Notable Government Policies



Tanzania Commission for Science & Technology (COSTECH) established the DBTi Tech Hub in 2011, which has **commercialized 29 innovations**



Tax incentives are **not provided for venture capital firms seeking to invest** in local Tanzanian businesses

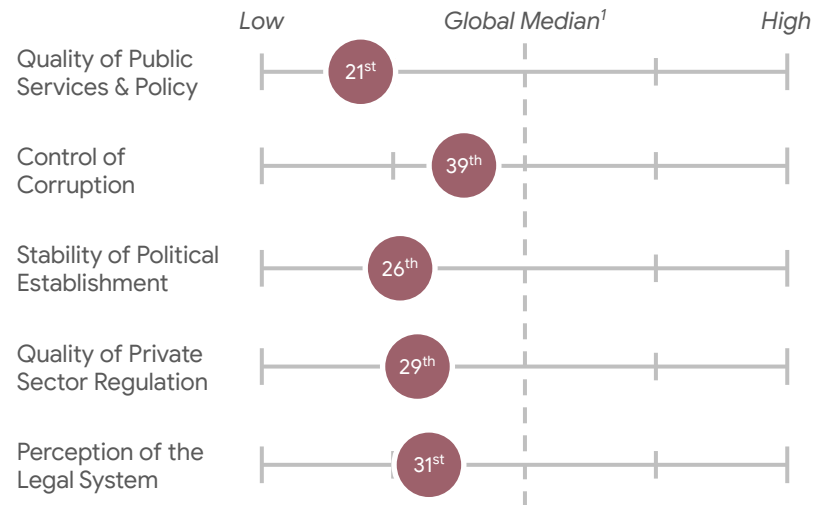


Current policy does not provide tax holidays or reduce antitrust scrutiny for startups, **creating financial & regulatory challenges** for founders



Electronic and Postal Communications law creates strict penalties for insufficient content moderation, **forcing many creators to shutter operations**

Governance Indicator Percentiles



Quality of private sector regulation is relatively low, highlighted by the lack of effective policies encouraging startup growth



Developer Population



Demographics



Education



Employment



Experience

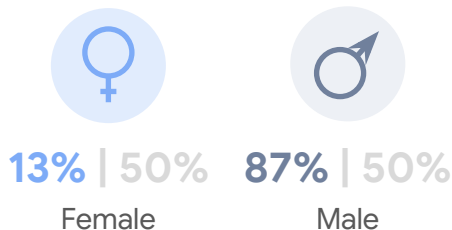
The Tanzanian developer population is predominantly young, male, and self-taught

Developer Population (FY20E)

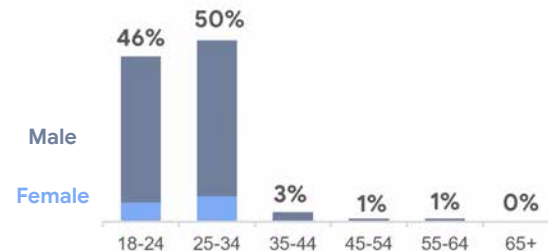


Gender Breakdown^{1,2}

Developer Pop | Tanzania General Pop



Age Distribution^{1,2}



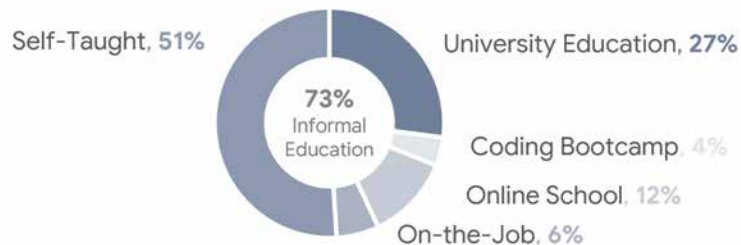
Top Cities for Developers

- 1 Dar es Salaam
- 2 Mwanza
- 3 Dodoma

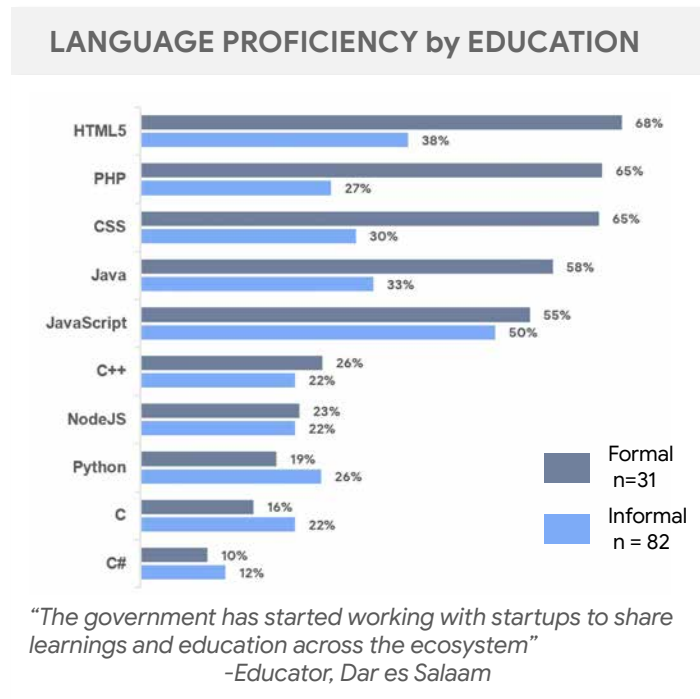
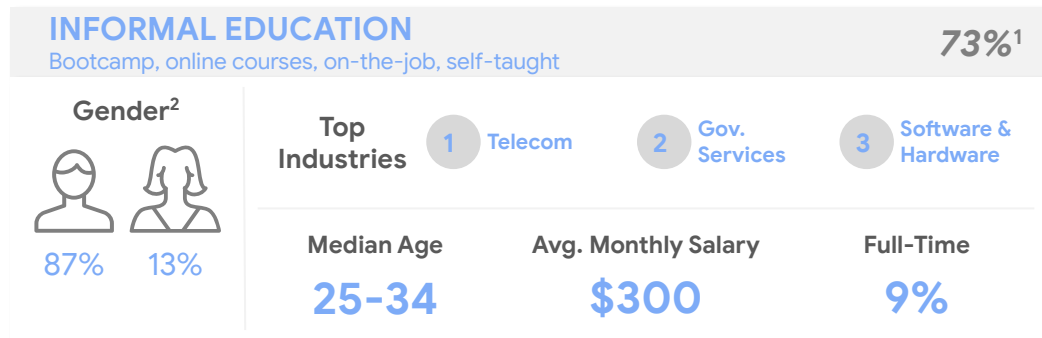
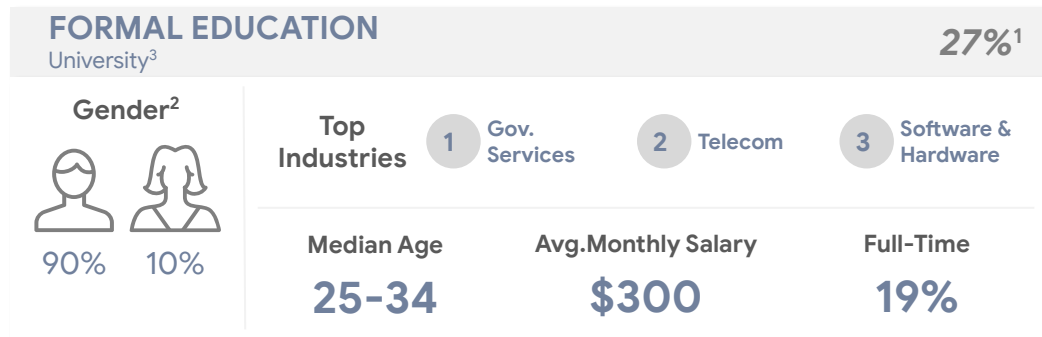
Activities¹



Technical Education

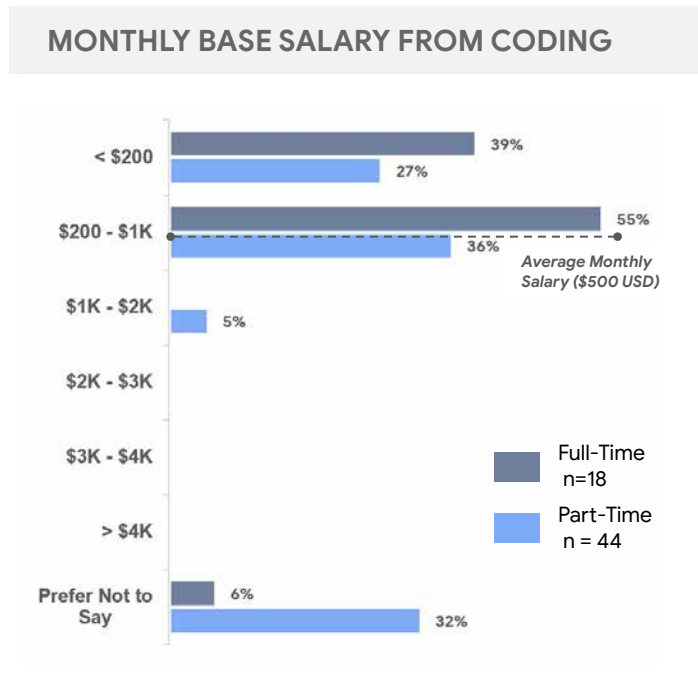
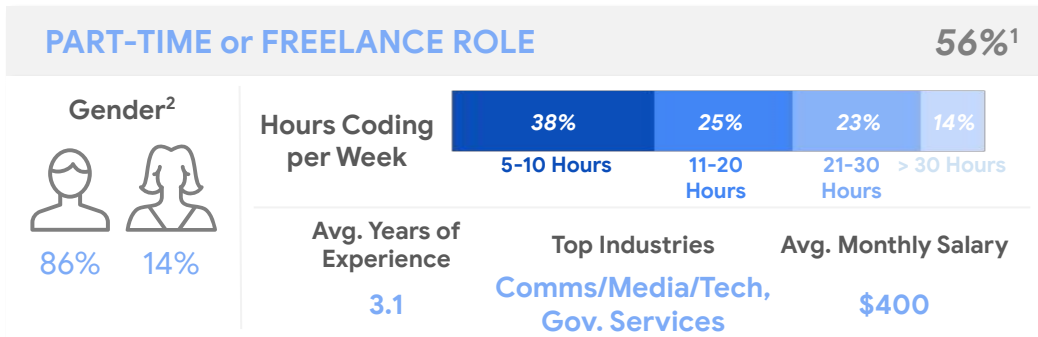
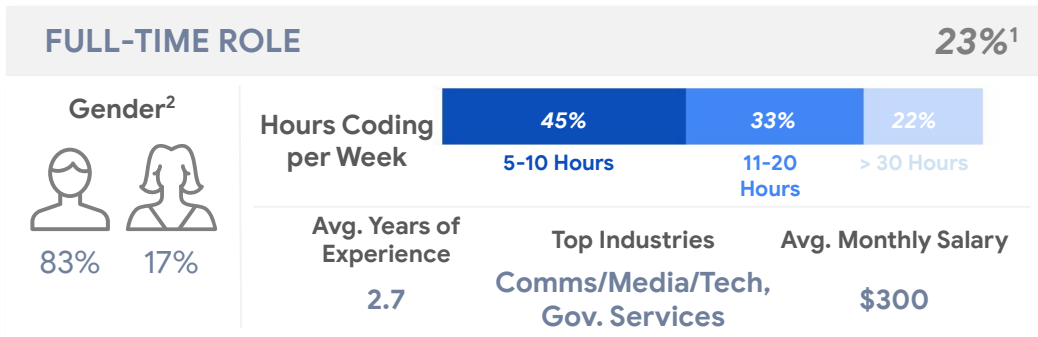


Most coders learn via informal channels and maintain lower proficiency across coding languages compared to formally educated developers



Question: How did you primarily learn to program or code?

Both full-time and part-time developers tend to be junior coders working in government services or the communications industry



Question: How do you spend your time coding or programming?

The vast majority of developers have less than 6 years of experience and are primarily focused on coding on Android & Windows

JUNIOR DEVELOPER

Less than 6 years of coding experience

93%¹

Gender²



Open Repository Contributions



Top Languages

1. JavaScript
2. HTML5
3. Java

Top Industry

Comms/Media/Tech

Avg. Monthly Salary

\$300

Full Time

17%

SENIOR DEVELOPER

Over 6 years of coding experience

7%¹

Gender²



Open Repository Contributions



Top Languages

1. JavaScript
2. HTML5
3. Python

Top Industry

Comms/Media/Tech

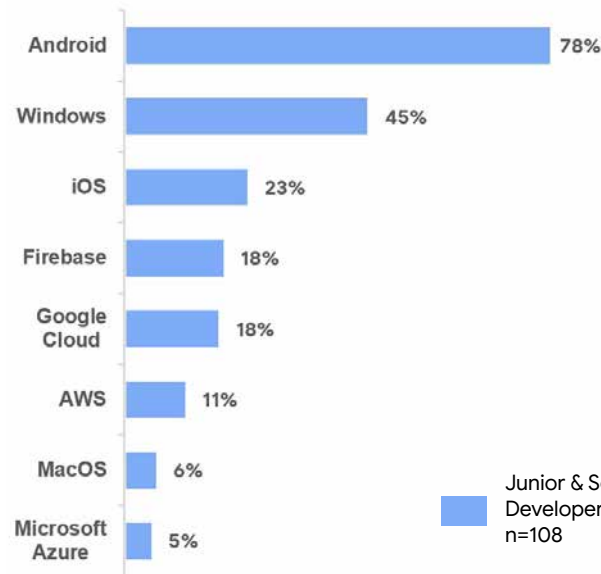
Avg. Monthly Salary

\$300

Full Time

13%

DEVELOPER PLATFORMS OF CHOICE



Junior & Senior
Developers
n=108

Question: How many years of professional coding or programming experience do you have?



Technology Ecosystem



Innovators (*focus areas*)



Innovators (*fundraising*)



Investors



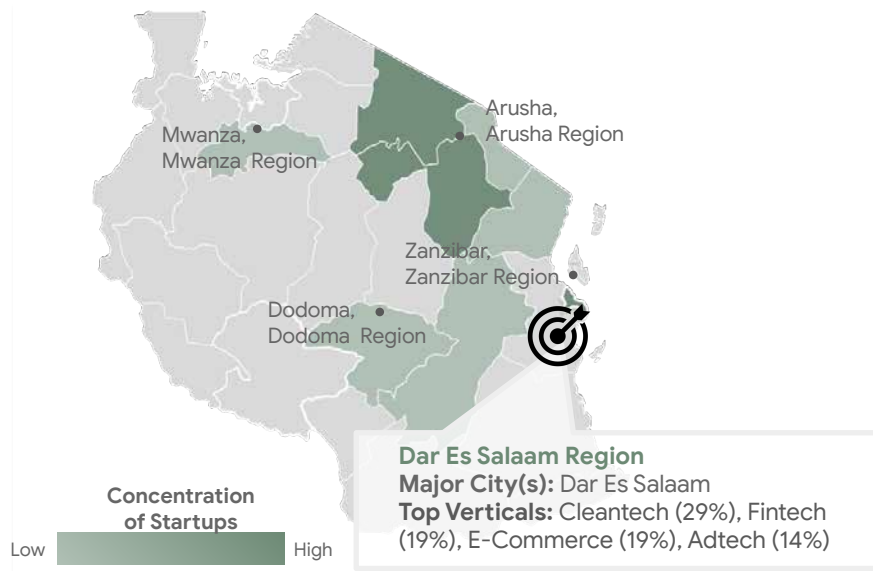
Educators



Enablers



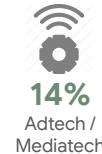
Solutions like cleantech and agritech lead new startup growth



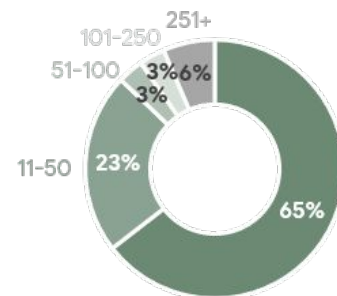
"The majority of growth opportunities are found in fintech, agritech and mobile solutions."

- Investor, Dar es Salaam

Breakdown by Top Verticals



Headcount & Founder Demographics (2020)



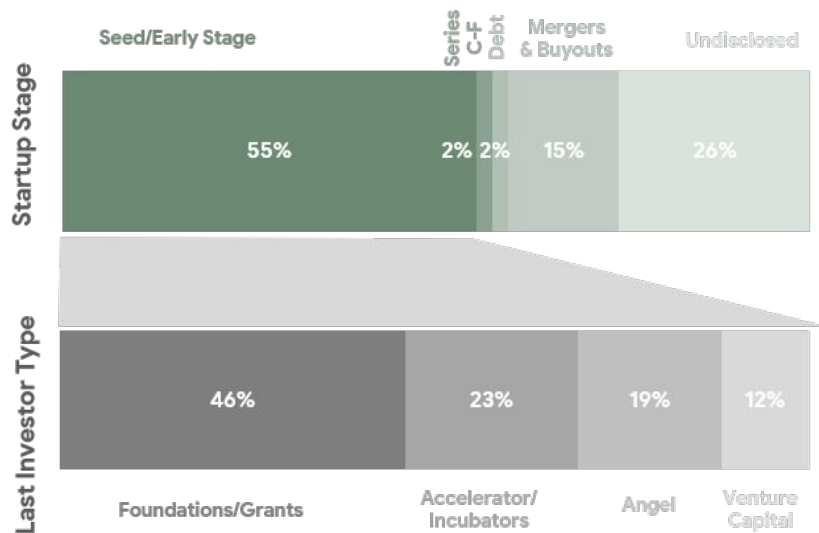
24%

Startups with **at least one woman founder**; of which cleantech & edtech are leading verticals



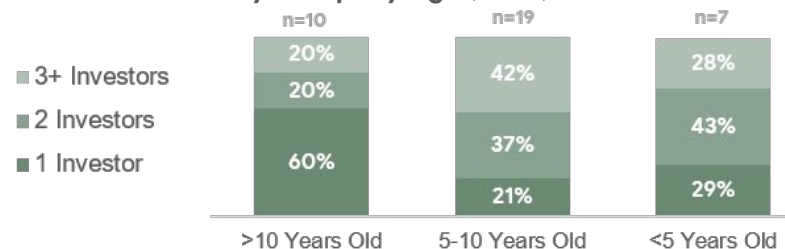
Almost half of startups in seed and early stages rely on foundation-provided investments or development-related grants for funding

Distribution of Startups by Stage (2020)



Unlike other regions, foundations and grants represent majority of the seed investors, followed by accelerators and incubators

Investor Count by Company Age (2020)



The majority of startups are between 5 and 10 years old and have had success in attracting multiple investors

Innovator Characteristics

51%



51%¹ of the startups operating in Tanzania are headquartered internationally

of the startups primarily focus on the B2B market



19% of the startups are part of the agriculture, forestry and fishing sector



While local investors represent a small fraction of the overall pool, investors from other African countries are actively engaged

Investor Geography

Investors



Leading Tanzanian Investors



Sahara Ventures is an accelerator, investor and consulting firm all-in-one, with 20+ seed investments



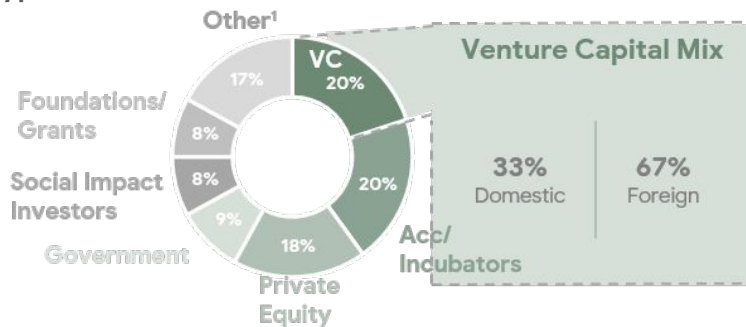
MTI Investment invests in SMEs with 15% return YoY, focused on East Africa and social innovation (and ask for university educated management)



Mara Foundation is a social enterprise providing mentoring, incubation and seed investments to startups, with a focus on women-led businesses

"My investment firm works directly with European development organizations and corporations to provide grants, loans or other funding. We primarily work with the Danish government and the UN."
- Investor, Dar es Salaam

Type of Investors (2020)



Areas of Focus



26% of foreign investors only invest in early stage vs more than 90% of local investors



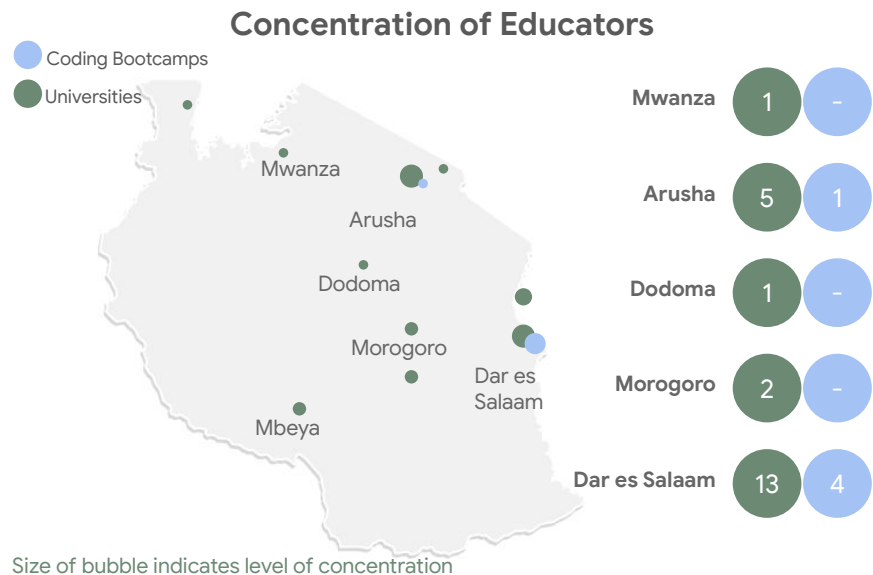
9% of investors active in Tanzania invest solely in energy sector



14% of investors active in Tanzania invest solely in cleantech

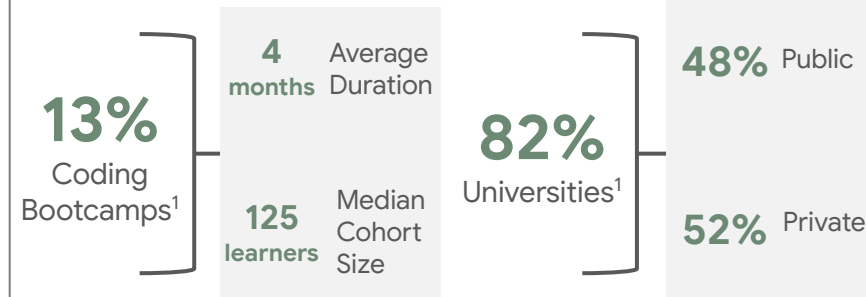


Bootcamps in Tanzania are concentrated in Dar es Salaam and have not expanded into the rest of the country



“Coding bootcamps are not so popular or available for people learning to code as they are in neighboring Kenya.”
- Entrepreneur, Dar es Salaam

Educator Type Breakdown



Case Study: dLab

Overview: A **data science** Center of Excellence that has developed a revolving curriculum on **data literacy and innovation**; curriculum continuously updated based on skill gaps in market and local communities.

Curriculum Areas (sample):



Machine Learning



Using APIs



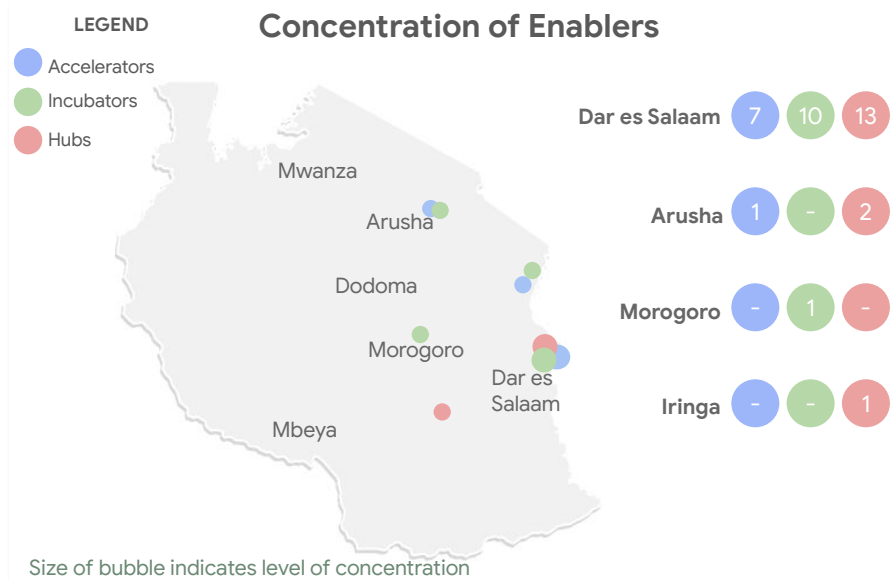
Big Data



Responsible Data Handling



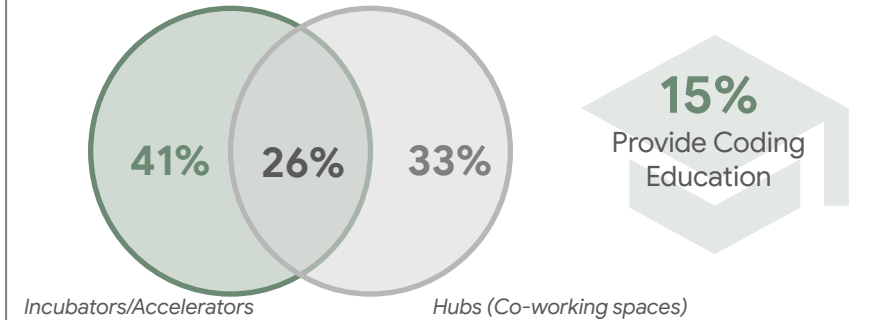
The startup and enabler network remains nascent outside of the largest population center, Dar es Salaam



"Most startups are getting started in early growth hubs and accelerators. Large, corporate backed incubators are also playing a large role in helping new companies launch."

-Investor, Dar es Salaam

Incubators/Accelerators vs Hubs



Case Study: Apps and Girls

Overview: An **award-winning social enterprise** that seeks to develop a digital generation of women entrepreneurs. They leverage an innovative process of advanced coding training, mentorship, and incubation, and have created **over 30 startups**.

Partners (sample):





Supporting Materials

Glossary

Term	Definition
Countries Analyzed	South Africa, Egypt, Morocco, Nigeria, Kenya, Ghana, Rwanda, Ethiopia, Uganda, Tanzania, Ivory Coast
African Startup	<p>A company that meets the following criteria:</p> <ul style="list-style-type: none"> • In growth stage of funding (e.g., seed round, series A - F) • Technology-focused • Headquartered in Africa or driving the majority of its revenue in Africa
Tech Ecosystem	The network of people, organizations and institutions that enable innovation
Innovator	African startup (see definition above)
Investor	Provides funding in the tech ecosystem (e.g. venture capital, corporate venture capital, angel investors, government funding, private equity)
Educator	Provides technical training or education (e.g. university, bootcamps, online courses, on-the-job training)
Enabler	Provides support in the form of work space, training, education, mentorship or funding (e.g. accelerators, incubators, work hubs)
Professional Developer	An individual that is employed in a job that involves coding and spends 5 or more hours per week coding
Junior Developer	An individual with less than six years of coding experience
Senior Developer	An individual with six or more than six years of coding experience
Formal Education	Universities or secondary schools that provide information communication technology (ICT) curriculum
Informal Education	Bootcamps, online course, self-taught or on-the-job curriculum to teach coding skills
Female Founded Startup	Startup with at least one female founder