Tech Startups in Dar es Salaam, Tanzania

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1 Overview

Tech startups are a crucial way of fostering new standards of productivity, skills and economic growth.

- They are essential in narrowing the Development Gap, as 70% of the productivity gulf stems from a lag in technological take-up [1].
- Startups, unlike corporations, are not constrained by rigid systems or a focus on margins, so they have the flexibility to be innovative.
- The exponential benefits that tech innovations can bring allows for entrepreneurs in underdeveloped countries to contribute to the global context of progress, rather than continuing to be its recipients [2].

Yet, most countries like Tanzania are seeing a worryingly small output of successful tech startups.

- While the global media celebrates the successes of tech startups in Africa more broadly, with headlines such as: "Africa's tech revolution" [3], the reality is very skewed. South Africa, Nigeria and Kenya attract 79.4% of funding in African startups [5] and account for 34% [6] of the tech hubs on a continent of 54 countries.
- Meanwhile, over in Tanzania, out of the 64 startups that we researched (37% of the entire startup ecosystem) [1], only 2 had raised seed funding [7].

If this lag persists, other SSA countries like Tanzania will be left behind as mere receivers of innovation.

- Countries' inability to develop their local tech industry will stunt the creation of tech-based jobs and limit the population's development of tech skills.
- In a world at the dawn of a "Fourth Industrial Revolution" [8], which will wipe out unskilled jobs, this suggests a worrying consolidation of the gap between givers and dependents.

This report seeks to unpack why this problem exists, and what can be done to tackle it more effectively, with a focus on Dar es Salaam, the business capital of Tanzania. Tanzania has a population size, economic growth and relative political stability comparable to Kenya and South Africa [9] [10] [11], who have successfully launched tech startups. Thus, it presents an opportunity to explore some of the deeper reasons - outside of often-cited exogenous factors [12] - behind this problem.

2 Approach

Our research method was multi-tiered, to develop a broad understanding of this problem:

- In-depth interviews with 26 startups at various stages of development
- Research of another 38 startups who had won local competitions.
- Site visits to local incubators such as BUNI & DTBI.
- Discussion with an East African investment fund.
- Data published by the Tanzanian National Statistics Bureau [13]
- Extensive HDIF & World Bank Reports.
- Online articles by publications and independent journalists.
- Key academic journals and books on the broader narrative.

3 Problem Landscape

3.1 Access to Capital

3.1.1 Scarce and costly bank credit

- Interest rates on loans are 20% on average and cheap government securities disincentivise banks from comparatively riskier business loans (40% of securities are owned by the three largest banks) [14].
- This is entrenched by the high rate of NPLs, leading to the introduction of a 265% asset requirement for collateral in some banks [14].
- Consequently, nationally, only 13% of SMEs borrow from banks [14] and just 1 out of the 26 startups we met with used debt funding [7].

3.1.2 No family loans or savings

- Families, primarily located in rural areas, are sources of dependence rather than support, as most live at subsistence level. [15].
- This makes it hard to build up any savings, illustrated by the fact that banks are primarily used for deposits that are extracted, on average, after just 136 days [14].

3.1.3 No angel investors

- According to a local investor, founders' lack of governance, skills and accountability mindset discourage angel investors from exploring the Tanzanian startup market.
- Foreign investors are also discouraged by the complex bureaucratic processes, such as getting a business visa, required to invest in local businesses[16].

3.2 Attitudes to Risk

3.2.1 Pursuing multiple ideas

- Many of the entrepreneurs we met with split their time and effort between multiple ideas concurrently.
- It is a strategy to counter market unpredictability [17] and maximise likelihood of sourcing funding.

3.2.2 Consumer Risk Aversion

- Aversion to risk and money loss is, for obvious reasons, particularly strong amongst those living in poverty [19], which accounts for most of the Tanzanian population [35].

- Innovation is therefore not easily taken up, as risk averse consumers avoid new - i.e. unpredictable - products.

3.2.3 Unprotected intellectual property

- A recurring theme in our interviews with startups was the perception that good tech ideas are regularly stolen by figures in positions of relative power - professors, business leaders and international corporations.
- This dissuades young people from innovating [20]. It also explains, in part, startups' low collaboration with business (15%) and academia (38%) [21], as founders fear that they will lose control over their idea.

3.3 Business Practices

3.3.1 Financial Management

- There is a distinct lack of accurate accounting and self-reporting amongst the tech startups that we surveyed, making it hard to self-analyse or share any of the data that potential investors may seek.
- One reason for this may be that 62% of tech founders have STEM backgrounds [1], who are unlikely to interact with business students, as the campuses are in different locations, or with business people, due to a lack of trust, as explored under 3.2.3

3.3.2 Cash Flow Mentality

- Tanzanians, in general, adopt a cash-flow mentality, focusing on earning revenue to cover immediate liabilities rather than investing for growth. This mentality is likely linked to the short-term thinking that permeates in a country where subsistence living is commonplace [15] [13].
- This mentality compromises building long-term systems to drive growth [22], negatively affecting investment prospects and sustainability.

3.3.3 Social Focuses

- Startups focus on social problems, in sectors like education and health, as this is where most needs go unmet.
- Yet, customers deprived of these basic needs rarely have significant disposable income. As such, margins are low, meaning financial sustainability is contingent on scale. This requires a type of long-term investment that does not exist in Tanzania (See 3.1).

4 Existing Solutions to the Problem

The breadth of problems underpinning the Dar tech system is matched by the breadth of solutions that a variety of actors have undertaken. We explore the solutions landscape and the main challenges they face.

4.1 Competitions & Grants

There are frequent one-off entrepreneurship competitions for tech startups in Dar, which are extremely popular. Winners at these competitions are offered a small grant and, at times, short-term mentorship. More long-term mentorship programs, such as the one offered by the Microsoft Africa Fellowship [37], were mentioned as being particularly helpful.

However, they don't actively monitor the applicants after the competition, so they have no way of ensuring that the grant is used for the intended purposes.

- The lack of accountability on a sudden burst of capital reinforces bad habits and creates what one interviewee referred to as 'fundpreneurs' - people who apply just to build up personal savings.
- Many of these competitions had a focus on a particular social problem further entrenching the problems outlined in 3.3.3.
- The variety in the social problems that these competitions focused on entrenched problem 3.2.1

4.2 Hybrid Models

To overcome a lack of capital, over 50% of the entrepreneurs we spoke to worked part-time on their idea, and part-time on commissioned software development projects for other companies [7].

However, these projects ate into the startups' time to focus on their own product, so it was common for startups to abandon their ideas in favour of running as a software agency full time.

4.3 Incubators & Accelerators

In partnership with grant-givers like HDIF [23] and the Finnish government [24], Dar es Salaam hosts incubators and accelerations like BUNI [25] and DTBI [26].

These organisations offer free workspace to their members, training sessions and small seed funding in the form of grants, as well as organising networking events. Unfortunately, we found that many of the startups listed on their website are no longer running, and of all the businesses that have been incubated at DTBI, only one is able to sustain itself financially.

However, much of the training offered at the main incubators is theoretical.

- Many of those in advisory positions at incubators like BUNI have academic backgrounds
- There is no older wave of successful tech startups in Dar, leading to a lack of experience-based mentors for the next cohort.

4.4 Consulting from abroad

International companies such as Balloon Ventures and Bridges for Enterprise link up startups in countries like Tanzania with volunteer business consultants from abroad, a model that, globally, has seen substantial success [38].

However, one of these companies mentioned that it is often difficult to maintain contact with the entrepreneur on the ground due to unreliability and connection problems.

4.5 E-learning

A number of entrepreneurs have turned to open online courses on sites such as Udemy [27] to make up for gaps in their business skill-set.

However, most of the e-learning content has not been created with the SSA context in mind, so some entrepreneurs complained that some of what they had learned was not relevant to their settings and customer bases.

5 Gaps & Levers of Change

Gap: No systems to keep entrepreneurs financially accountable

- No angel investors or loan-givers around to keep entrepreneurs accountable.
- Grant providers have basic (if any) systems of accountability.
- Lack of accountability doesn't encourage good financial management.

Lever of Change: Competence-based Loans

- Grants from incubators and NGOs should be issued as loans, managed in partnership with micro-financing banks like FINCA[36].
- These would be closely monitored using accountability technology such as Wave [28], to ensure that the loan money is spent on relevant items for the business.
- Subsequent loans would be dependent on previous repayment and use of the accountability technology.

Effects

- Immediate access to long-term financing options.
- Angel Investors will have evidence of accountability to invest on, increasing chances of investment in the future.

Gap: Lack of training material tailored to the SSA market

- Not enough focus on the perils of the cash-flow mentality and how to break it down.
- Not enough material exploring how to tackle markets with very high risk aversion.

Lever of Change: Online courses made for the SSA context

- Sites like Udemy [27] should create more programs like Acumen's "Marketing to the Bottom of the Pyramid" [30], in partnership with successful startups in relevant countries.

Effects

- Break down some of the skills gaps amongst founding groups, thereby enabling effective international skills-sharing.
- Founders adapt business models and consumer engagement to their contexts, increasing chances of success.

Gap: Not enough business expertise on startups' founding teams

- Science & technology students not interacting with people who have business experience.
- Unprotected IP discourages collaboration.
- Training offered by incubators is too theoretical.

Lever of Change: Partnerships between startups and business corporations, facilitated by Incubators.

- Corporations could run startups' operations in-house for a period of time, with the potential to integrate the innovation into their own systems and networks in the future.

- Incubators leverage their status to implement Non-Disclosure Agreements, to protect property rights and build trust.
- Corporations offer practical training to the startup founders, based on real business experience.
- Incubators could also run Board matching events, as ELBA [32] does in the UK, to get business leaders on startup boards.

Effects

- Partnering with corporations will make it easier to reach scale, which could help socially minded business models to attain sustainability through economies of scale.

Mini Lever of Change: Partnerships between incubators and "Consulting From Abroad" organisations

- Incubators with stable WiFi connections could enable organisations like Bridges for Enterprise to communicate with their beneficiaries more easily.
- This would offer incubators' members with more practical mentorship than is available in their immediate surroundings.

Mini Lever of Change Shared modules between business students and science/tech students

- Different colleges of the local universities could offer modules to be taken by both STEM and business students, to encourage different circles to meet at a key time for building relationships of trust.

6 Summary of Lessons Learned

- Access to funding, though often cited by startups as the biggest inhibitor to their success, may well be more a symptom of a failing ecosystem than its direct cause. As seen in Kenyan and Nigerian markets, success attracts investment.
- Too many existing solutions focus solely on providing capital - much of it charitable or grant-based, which fails to establish a truly entrepreneurial landscape of accountability and professionalism.
- Short-termism is a big problem in how capital is provided and in how solutions tackle the problem, which negatively affects how startups operate.
- Solutions that are more skills-based would do well to localise their advice and develop resources specifically on market conditions in developing economies.
- And finally, one of the biggest gaps we identified is a lack of effective collaboration, underpinned by mistrust and risk aversion. We would recommend further research on how to build trust between different stakeholders and buffer the dynamics of risk that are at play.

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Primary Data

In addition to the above secondary data, we conducted in-depth interviews with 26 entrepreneurs, an East African angel investor, 3 incubators and a competition organiser over the period from November 2017 to January 2018. Details of the 26 entrepreneurs and 38 others are on a database referenced below:

Shanmuganathan, A., Kalwizira, G., Bendel, A. (2018). *Database of Dar Entrepreneurs* [Database] Dar es Salaam.

For requests on this primary data, please contact us directly of this as some of this material is sensitive and cannot be publicly disclosed.