

African entrepreneurship: An exploration of innovation hubs as development institutions

by

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*Dissertation presented for the degree of Doctor of Philosophy in Public
and Development Management in the Faculty of Economic and
Management Sciences at Stellenbosch University*



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April 2022

Declaration

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Abstract

Innovation hubs have emerged as key hybrid entrepreneurship spaces where certain important institutional arrangements are made. Yet their development impact has arguably remained elusive. To explore underlying issues, this research aimed to answer the main question: *How can hubs across Africa be reconfigured in ways that translate entrepreneurship into development?*

This investigation took an institutional approach to answering the research question. This was grounded on the argument that while evolutionary economic theory was an important contribution in crystallising the role of entrepreneurship in the formal economy, it reduced entrepreneurship to a micro-economic phenomenon by overly focusing on the individual entrepreneur and understating the mediating factors of institutional arrangements and the political economy.

By implication, this necessitated a redescription of entrepreneurship in line with a macro-economic development perspective. Drawing from the new conceptual redescription of entrepreneurship and literature reviewed, it was argued that hubs have the potential to be effective at supporting entrepreneurship that leads to development, but only if they employ an ecological approach. An ecological approach was argued to be more useful for African entrepreneurship because it meant acknowledging the importance of creating a dynamic ecology of support among hubs.

The choice of methodology was, by extension, based on its ability to embrace the relational and macro-economic perspectives of entrepreneurship. Thus, the study used an emergent transformative transdisciplinary research methodology involving five research design phases: co-design, stakeholder engagements, co-production of new knowledge, dissemination of results; and inspiring action. To complement the methodology, the study followed a narrative-based research method called SenseMaker®, which enabled the data collection of 100 stories across Ghana, Kenya and Rwanda.

To answer the research question, the investigation organised respondent data into factual knowledge of their current realities (systems knowledge), areas of possible levers that may signal strategic areas of intervening (transformation knowledge) and ideal results local respondents reported they want (target knowledge). The analysis execution of the qualitative dataset used to derive empirical findings, employed two but complementary statistical techniques namely thematic analysis and non-linear causality diagram.

One of the key empirical findings suggested hubs are potentially a key institutional vehicle that assembles resources such as talent, ideas and capital. Concurrently, the study highlighted an ongoing dominant perspective that while government is experienced as either absent or punitive, and private sector continues to be experienced as the lead force in coordinating ecosystem activities that drive entrepreneurship momentum and maturity; successful African entrepreneurs are essentially minority foreigners or diaspora with international education, past corporate experiences or upper-middle-class family backgrounds.

By providing a new theoretical redescription of entrepreneurship from a development perspective and a practical example of employing methodological agility in an empirical investigation, the study contributed an original narrative account of stakeholder's experiences evidencing the growing emerging view that even though the mainstream discourse in entrepreneurship is mainly about driving momentum and maturity across different ecosystems, locals and indigenous entrepreneurs do not have a sense of control or human agency to shape the directionality of African entrepreneurship toward development outcomes they want.

Opsomming

Innovasie-spilpunte het as sleutelruimtes vir hibriede entrepreneurskap te voorskyn getree waar sekere belangrike institusionele reëlins getref word. Tog het hulle ontwikkelingsimpak stellig ontwykend gebly. Om onderliggende aangeleenthede te ondersoek, het hierdie navorsing ten doel gehad om die hoofvraag te beantwoord: *Op watter wyses kan spilpunte regdeur Afrika hersaamgestel word om entrepreneurskap in ontwikkeling te omskep?*

Hierdie ondersoek het 'n institusionele benadering gevolg om die navorsingsvraag te beantwoord. Dit is gegrond op die redenasie dat, hoewel evolusionêre, ekonomiese teorie 'n belangrike bydrae lewer om die rol van entrepreneurskap in die formele ekonomie te laat uitkristaliseer, dit ondernemerskap tot 'n mikro-ekonomiese verskynsel verminder deur in oormaat op die individuele entrepreneur te fokus en die bemiddelende faktore van institusionele reëlins en die politieke ekonomie te onderskat.

By implikasie het dit 'n herbeskrywing van entrepreneurskap, belyn met 'n makro-ekonomiese ontwikkelingsperspektief, genoodsaak. Op grond van die nuwe konseptuele herbeskrywing van entrepreneurskap en literatuur, wat hersien is, is geredeneer dat spilpunte die potensiaal het om doeltreffend te wees om entrepreneurskap te ondersteun, wat tot ontwikkeling lei, maar dan alleenlik indien hulle 'n ekologiese benadering volg. Daar is geredeneer dat 'n ekologiese benadering vir Afrika-entrepreneurskap van groter nut is omrede dit daarop neerkom dat dit belangrik is om 'n dinamiese ekologie van ondersteuning onder spilpunte te skep.

Die keuse van metodiek is – met toevoeging – gebaseer op die vermoë om die verbandhoudende en makro-ekonomiese perspektiewe van entrepreneurskap te aanvaar. Die studie maak derhalwe gebruik van 'n opkomende, transformatiewe transdissiplinêre navorsingsmetodiek, wat vyf navorsingsontwerpfases insluit, naamlik mede-ontwerp, betrokkenheid met belanghebbendes, mede-produksie van nuwe kennis, verspreiding van resultate en inspirerende optrede. Om die metodiek aan te vul, volg die studie 'n narratief-gebaseerde navorsingsmetode genaamd SenseMaker®, wat die data-insameling van 100 verhale in Ghana, Kenia en Rwanda moontlik gemaak het.

Om die navorsingsvraag te beantwoord, het die ondersoek die data van die respondente georden in feitlike kennis van hulle huidige werklikheid (stelselskennis), terreine van moontlike rigtingwysers wat strategiese gebiede van ingryping kan aandui (transformasiekennis) en ideale resultate wat plaaslike respondente vermeld het hulle verlang (teikenkennis). Die analise-uitvoering van die kwalitatiewe datastel, wat aangewend is om empiriese bevindings af te lei, het twee aanvullende statistiese tegnieke toegepas, naamlik tematiese analise en nie-lineêre kousaliteitsdiagram.

Een van die belangrikste empiriese bevindings dui daarop dat spilpunte moontlik 'n sleutel institusionele voertuig is wat bronne soos talent, idees en kapitaal versamel. Terselfdertyd het die studie 'n deurlopende, dominante perspektief benadruk. Dié kom daarop neer dat, hoewel die regering as afwesig of tugtigend beskou word, en die privaatsektor steeds as die leidende krag erken word ten opsigte van die koördinering van ekostelselbedrywighede (wat die momentum en volwassenheid van entrepreneurskap dryf), suksesvolle Afrika-entrepreneurs in wese 'n minderheid buitelanders, of diaspora, is – met internasionale opvoeding, korporatiewe ervaring of hoër middelklas-gesinsagtergronde.

Deur 'n nuwe teoretiese herbeskrywing van entrepreneurskap – uit 'n ontwikkelingsperspektief – en 'n praktiese voorbeeld van die gebruik van metodologiese behendigheid in 'n empiriese ondersoek te voorsien, het hierdie studie 'n oorspronklike, narratiewe weergawe van die ervarings van belanghebbendes gelewer. Dié bewys die toenemende en sigbaarwordende siening dat, hoewel die hoofstroomgesprekke oor entrepreneurskap veral oor die bevordering van momentum en volwassenheid in verskillende ekostelsels handel, plaaslike inwoners en inheemse entrepreneurs oor geen mate van beheer, of menslike bemiddeling, beskik om Afrika-entrepreneurskap in die rigting van die ontwikkelingsuitkomst, wat hulle verlang, te giet nie.

Acknowledgements

I am deeply grateful to Professor Johan Burger for his tireless commitment and tutelage to see me through this research journey. My PhD journey was far from linear, but your steady leadership and kindness went a long way guiding me to the end.

To the School of Public Leadership, thank you for introducing me to a world of amazing PhD fellows and staff. Your resources, scholarship and staff introduced me to complexity science, systems thinking, alternative management literature and inclusive research methodologies and tools.

To Phindile, thank you for being an ever kind partner and a patient ear to all my rants and flashes of unexpected ideas whenever the process got difficult and tricky to navigate.

To Dr John van Breda, thank you for introducing me to the world of epistemic justice. I benefitted immensely from your methodological agility, expertise and connection with Cognitive Edge and the Cynefin Centre.

To Professor Babette Rabie, thank you for introducing me to the world of developmental evaluation and for your continued professional endorsements into the workspaces you influence.

To Professor Arnold Wentzel at the Universidad Antonio Narino, Colombia, thank you for introducing me to the world of “argumentative research writing and thinking”.

To my late mom, Ms Abigail Nomathemba Gumede, I see you in some of my dreams; and in my simple or limited understanding of life that is evidence that you are forever watching me as you committed to ever doing in your final words.

To Professor Mark Swilling, I am grateful for your seeding support during the start of my doctoral research journey. It was through your institute, The Centre for Complex Systems in Transition (CST), that I was introduced to alternative intellectual projects and to Dr van Breda.

To Mr Anthony Farr at The Allan and Gill Gray Philanthropy, thank you for not only funding my doctoral studies through a comprehensive scholarship, but also for providing a laboratory to test and pilot alternative modes of African entrepreneurship

promotion approaches. Thank you for showing genuine interest in my intellectual project.

Nkulu, Ngcebo and Mathuba, I hope that this work will one day inspire, dignify and catalyse your own varied journeys in ways that make you proud.

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List of Acronyms and Abbreviations

AfDB	African Development Bank
AUC	African Union Commission
CESA	Continental Education Strategy for Africa
EU	European Commission
GDP	Gross Domestic Product
ISSC	International Social Sciences Council
MSMEs	Micro, small and medium enterprises
OECD	Organisation for Economic Co-operation and Development
STISA	Science, Technology and Innovation Strategy for Africa
UNDP	United Nations Development Programme

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Chapter 1 – Introduction

1.1 Introduction

The International Social Sciences Council (ISSC) argued that mainstream development thinking cannot explain why ‘trickle down’¹ economics has not worked for the poor, leading to the multidimensional, multi-layered and cumulative nature of inequalities in Africa (ISSC, 2016). The global community has since turned to entrepreneurship that some see as a viable strategy for addressing chronic African development problems such as youth unemployment, poverty and inequality (Akinyoade, Dietz & Uche, 2017; Gough & Langevang, 2017). African states have consequently started to promote entrepreneurship more visibly than ever before, but with a strong focus on micro, small and medium enterprises (MSMEs) (Jiménez & Zheng, 2017).

The focus on MSMEs has seen continental development and education strategies put youth development and entrepreneurship at the centre of the debate as reflected in recent African Union policy documents. These policy documents include Agenda 2063 (African Union Commission (AUC), 2015a); STISA 2024 (African Union Commission (AUC), 2015b); and CESA 2025 (African Union Commission (AUC), 2016). All these policy documents acknowledge the need for entrepreneurship and human capital transformation in order to harness the demographic dividend of African youth to achieve development goals.

At the same time, ‘hubs’ have emerged as institutional spaces that foster entrepreneurship and innovation in Africa. At a basic conceptual level, hubs represent centres and spaces – physical or virtual – that provide co-working facilities, as well as financial and non-financial support to promote technological innovations and entrepreneurship (Jiménez & Zheng, 2017). Hubs are also seen as institutions that assemble resources in order to add value and catalyse growth to entrepreneurs and MSMEs (Friederici, 2017).

¹ The economic paradigm and thinking which posits that countries first have to achieve economic growth and use growth returns to achieve development.

These are spaces where certain important institutional arrangements are being made, and which may be relatively ‘independently’ forged from state and market forces depending on the real-world contexts in which they have emerged and operate in. With some recent studies pointing out that MSMEs create about 70% of net jobs and contribute 60% of GDP in most African countries (Atiase, Mahmood, Wang & Botchie, 2017), the importance of hubs as critical spaces nurturing MSMEs should not be underestimated.

Some studies suggest hubs emerged out of optimism and excitement about grassroots entrepreneurship, digital technologies and social innovation in the international development space (Friederici, 2017; Steiner & Teasdale, 2016). Although modern technology and innovation hubs sprung up in the early 2000s, a significant growth of hubs – ‘the hub phenomenon’ – emerged between 2010 and 2016 (Friederici, 2017). Yet the development impact of hubs has arguably remained elusive (Steiner & Teasdale, 2016) as Friederici (2017) reflected: “despite the great attention that a number of development organizations, governments, and technology corporations have paid to the phenomenon, no effort had been made to rigorously and clearly discern opportunities and limits of hubs”.

The complexity of African entrepreneurship stems from a multiplicity of issues including, but not limited to, lack of knowledge about how hubs connect promotion activities with the broader sustainable development discourse. In particular, Africa as a region has no coherent policy on entrepreneurship, lacks visible domestic entrepreneurship strategies and is characterised by limited access to capital, especially early-stage funding (African Development Bank (AfDB), 2018; African Development Bank (AfDB), Organisation for Economic Co-operation and Development (OECD) & United Nations Development Programme (UNDP), 2017; Herrington & Kew, 2017). Furthermore, and despite emerging in such challenging conditions, indigenous African entrepreneurs are arguably inadequately incentivised and supported compared to the counterparts in the Global North *within* and outside the continent (Ndemo & Weiss, 2017).

The complexity abounds if one adds market structural issues such as limited capital accumulation and the way intergenerational family wealth establishes platforms for

subsequent generations. The result is the classic uneven playing field and well-known inhibitors of development through entrepreneurship. In other words, while some positive results are there as MSMEs continue being formed, with a few also succeeding, existing practices mainly following the ecosystem approach are simply hailing the few successful cases of new innovations driven by elite educated society members from upper-middle-class family backgrounds, with very little development actually resulting from entrepreneurship (Akinkugbe & Wohlmuth, 2016; Valdez, 2016).

Implementation misfits continue as hub practitioners employ borrowed entrepreneurship promotion paradigms and templates and apply them to African entrepreneurship ecosystem contexts that need more nuanced approaches (Achtenhagen & Brundin, 2016). What constitutes entrepreneurship and whether entrepreneurship is a suitable practice for catalysing Africa's transition to a thriving development trajectory are highly contested. Therefore, to speak of African entrepreneurship promotion forces one to confront issues associated with the terms or conceptions of 'development' and 'entrepreneurship'. As Mkandawire (2011: 9) pointed out:

In some views 'development' is seen as Eurocentric and as a bastard child of the enlightenment, in whose names heinous crimes, slavery, wars of aggression, genocide, Gulags have been committed. For some the linear understanding of development gives a teleological direction to history. One should immediately point out here that to argue that history has no specific destination towards which humanity is going is not the same thing as to argue that a people cannot, at any given time, choose to go somewhere while fully cognizant that their choices will be circumscribed by the prevailing circumstances. Development or 'Catching up' is scathingly criticised as a repressive meta-narrative that privileges certain forms of knowledge while denigrating local ones. Its advocacy in the developing countries is thus seen as acceding to notions of Western superiority.

Meanwhile, entrepreneurship is also associated with creating winners and losers (Darity Jr., Hamilton, Paul, Aja, Price, Moore & Chiopris, 2018). Like development, hubs arguably also perpetuate the phenomenon of winners and losers in that the

financial, technological and human capital resources mobilised are inaccessible or exclusionary in most African settings, as will be shown and argued below. This is because the institutional set up to access entrepreneurship resources through hubs is often dysfunctional or inaccessible to the poor, who are often uneducated and live very far from big cities or have no access to networked individuals (Kelly & Firestone, 2016).

Within this development context, a reimagination of hubs can potentially provide an institutional vehicle through which innovation and entrepreneurship intersect for development (Gryszkiewicz, Lykourantzou & Toivonen, 2016). This discussion of the background also allows us to critically look at hubs through development lenses in the problem statement section. I use a development perspective to sift through the hype on the trending technological imperative dominating start-up formation in Africa.

1.2 Background

The discourse around technology and innovation hubs across Africa reflects a mixed blessing. On the one hand, hubs have been hailed for pioneering a new continental era of digital entrepreneurship. Behind this hype is the belief that digital technologies democratise access, reduce consumer prices and contribute to African economies by increasing productivity levels through efficiency. It is believed the future of this form of entrepreneurship will continue to dominate as consumption patterns are increasingly determined by digitisation (Sussan & Acs, 2017). Digital entrepreneurs are taking advantage of this pattern by producing smartphone technologies that make it efficient to agglomerate tastes, patterns and data trends on the demand side, thereby enabling the development of customised niche products around various emerging digital citizenship clusters (Song, 2019).

On the other hand, some scholars have criticised hubs for lacking an accompanying development perspective in their varied efforts and approaches (Friederici, 2017). Specifically, it has been pointed out that the discourse on technology growing in the form of digital entrepreneurship cannot be viewed outside the wider continental

discourse of African development toward inclusive innovations and the integration of unskilled youth (Friederici, 2018).

Critics suggest large-scale, successful technological innovations and start-ups are synonymous with the activities of White males and educated individuals mainly living in certain large cities of Africa (Darity Jr. *et al.*, 2018: 31). In other words, race, gender, education and locality arguably play a critical role in the kinds of institutional arrangements facilitated through hubs. This is to say that one expects White males and affluent, well-educated or globally networked individuals with an international education or work experience to be more likely to come up with different kinds of innovative institutional arrangements than, for example, Black women educated somewhere in Africa, or local Black men without international networks or work experience. Moreover, it can be argued that beyond technological advancements and demographic issues of access, Africa equally needs diversified forms of progress such as civic innovations and process innovations, among others.

To date (See *Table 1.1*), there are between about 643 hubs across Africa depending on different conceptions and counting methods (Bayen & Giuliani, 2018; Friederici, 2017; Giuliani & Ajadi, 2019; Kelly & Firestone, 2016; Walker & Mainwaring, 2018). The hub proliferation can be explained by three main drivers:

- i. Continental policies viz. STISA 2024 (African Union Commission (AUC), 2015b), CESA 2025 (African Union Commission (AUC), 2016) & Agenda 2063 (African Union Commission (AUC), 2015a) have put youth entrepreneurship and innovation at the centre;
- ii. 4th industrial revolution proponents tipped the skills development debate toward technology and digital transformation (World Economic Forum, 2017);
- iii. The emergence of institutional entrepreneurship (Isenberg, 2010; Stam & Spigel, 2017) challenged practitioners and scholars to think beyond individual agency in business management and also pay attention to external moderating factors that enable or constrain venture success.

Table 1.1: Hub proliferation across Africa between 2013- 2020.

Year	Number of hubs	Source
2013	90	Kelly & Firestone (2016)
2015	117	Kelly & Firestone (2016)
2016	173	Kelly & Firestone (2016)
2017	314	Friederici (2017)
2018	442	Bayen & Giuliani (2018)
2019	618	Giuliani & Ajadi (2019)
2020	643	Afrilabs & Briter Bridges (2019)

Source: Author, 2021.

Among other consequences, these drivers have repurposed hubs to be mainly about the twin goals of creating spaces for youth digital skills development and technology start-up formation, arguably at the risk of mono-entrepreneurship and the exclusion of other entrepreneurship perspectives. The researcher discusses four main problems that seem to characterise innovation hubs operating in Africa.

Problem 1: Hubs have an obsession with technological innovation and digital entrepreneurship.

Private equity investors and venture capital firms behind hubs have an obsession with technological innovation and digital entrepreneurship (Welsum, 2016) because these are easily scalable, with capital realising a return on investments in shorter time frames as opposed to other sectors or forms of entrepreneurship (Stokoe, Bunder, Kelso & Essomé, 2016). For example, of the US \$725.6 million start-up funding that was invested in Africa in 2018 financial technology (fin-tech), clean technology (cleantech), eCommerce, education technology (EdTech) and agricultural technology (agritech) make up 79.69% of those investment deals (See *Figures 1.1 and 1.2*) (WeeTracker, 2018a).

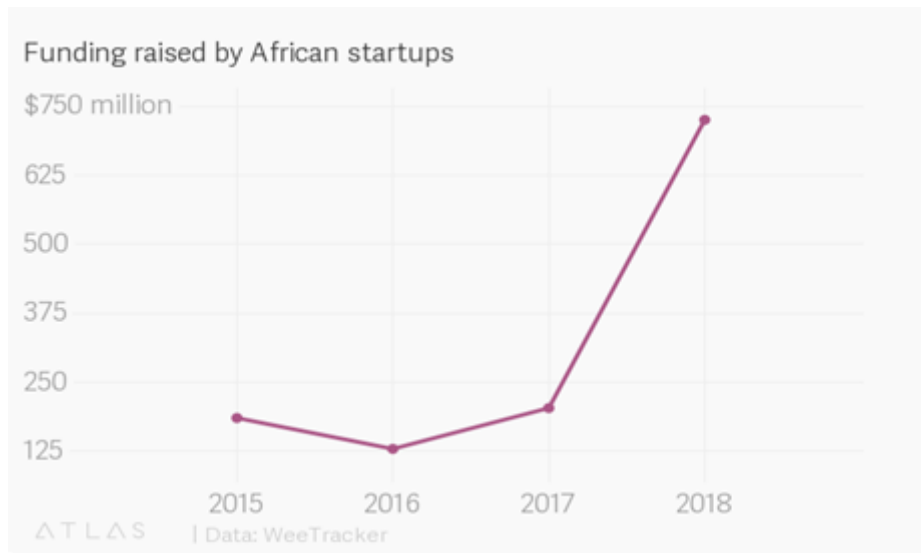


Figure 1.1: Total amount (in USD \$ millions) raised by African start-ups for 2015–2018

Source: WeeTracker, 2018a

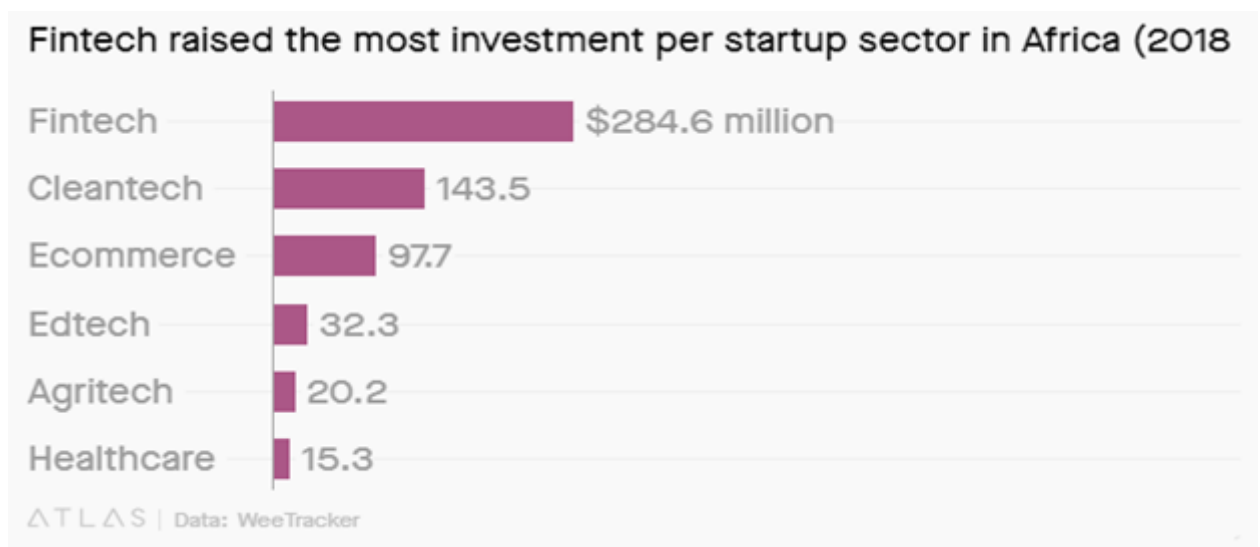


Figure 1.2: Total African start-up funding raised per sector during 2018

Source: WeeTracker, 2018b

Problem 2: Hubs are concentrated only in wealthy African cities.

Hubs lock funding flows and entrepreneurship resources within very few select shining-star African countries and what is now referred to as the “innovation quadrangle”: Nigeria, South Africa, Egypt and Kenya (See *Figures 1.3 and 1.4*). Within these countries, hubs are also located in large cities and not easily accessible to

the poor, rural and uneducated (Kelly & Firestone, 2016: 203), thus representing an exclusionary African innovation ecosystem. Moreover, although the international funding community facilitates deals across the continent, 80% of those investment deals, as shown in *Figure 1.1*, are concentrated mainly in South Africa, Nigeria and Kenya (WeeTracker, 2018b).

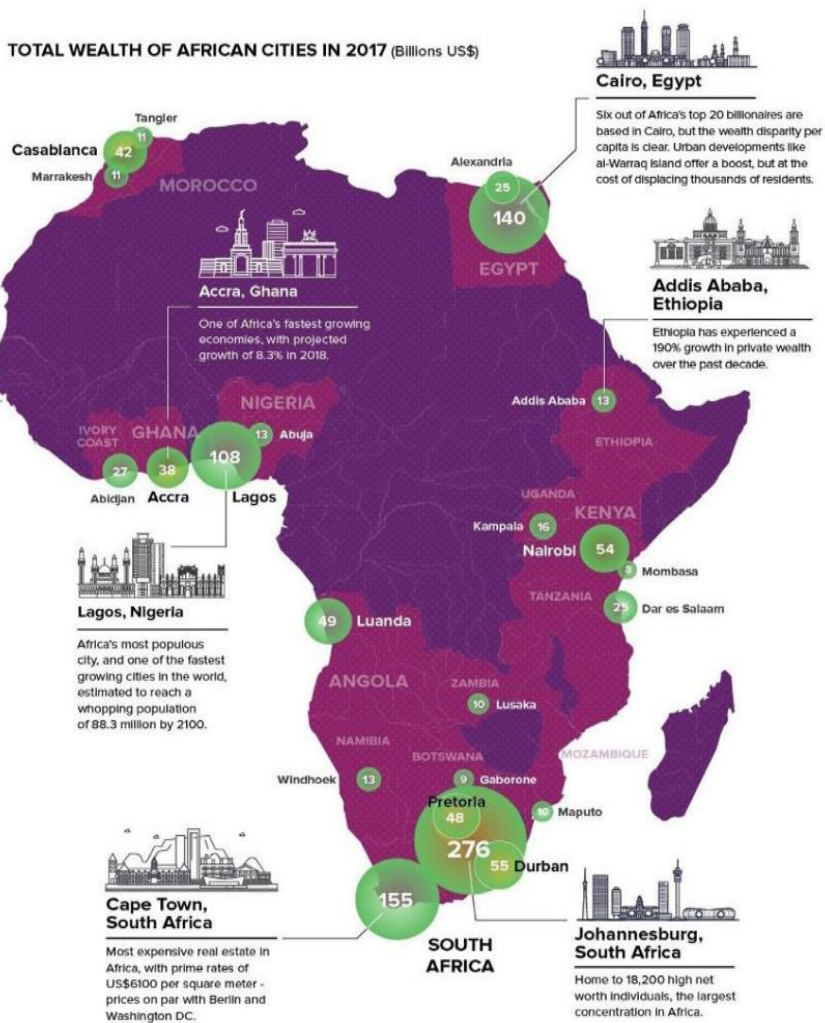


Figure 1.3: Geographic spread of wealthy African cities

Source: Scribani, 2018

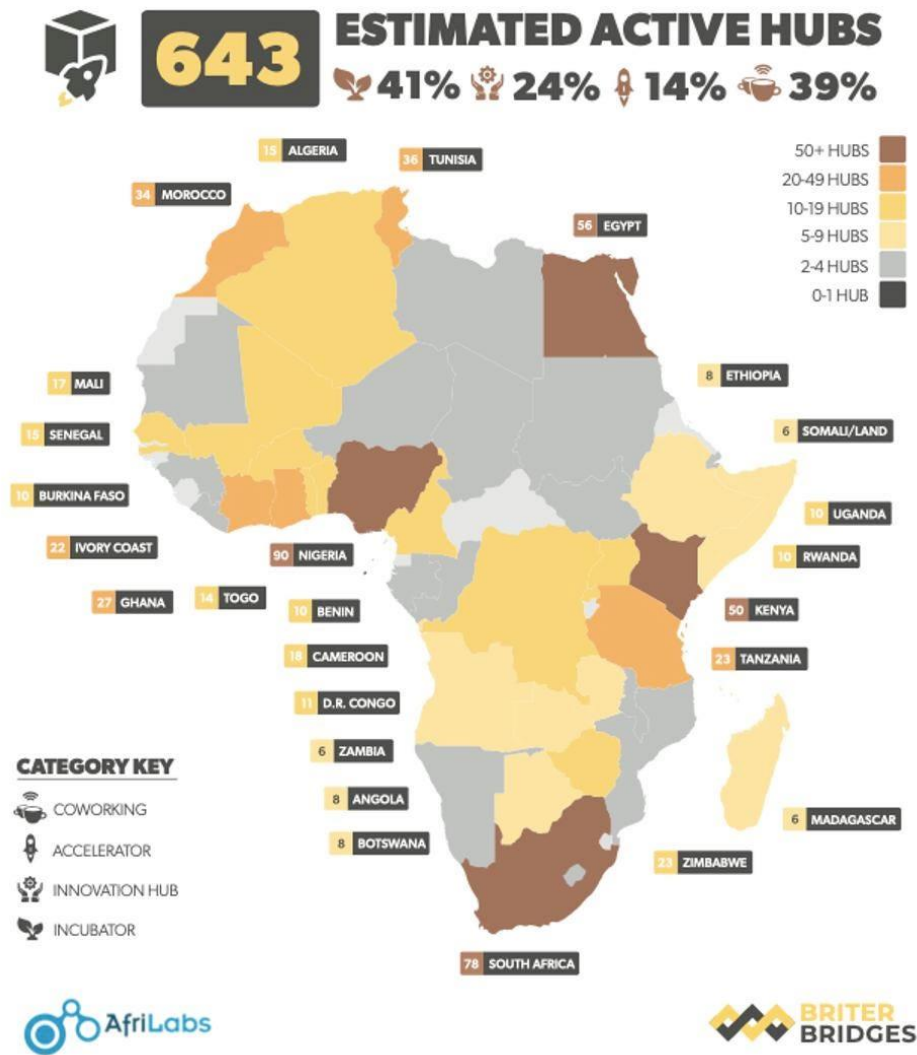


Figure 1.4: Geographic spread of hub locations across Africa

Source: Afrilabs & Briter Bridges (2019)

Problem 3: Lack of hub practice guidelines owing to weak or absence of country-specific entrepreneurship policy.

The continental policies on entrepreneurship do not provide insight into how hubs can achieve the goals of “the Africa we want”² on the ground. Outside continent-wide policy documents, little policy direction and practice guidelines exist for the successful advancement of entrepreneurship in different country conditions. Specifically, continental documents are thin on appropriate nuances, approaches and practices that hubs can follow to successfully identify, launch, support and grow MSMEs in ways that achieve sustainable development. Different African contexts

² Borrowed from African Union’s Agenda 2063 policy document subtitle.

suggest that ecosystem-specific minimum practice standards can potentially help hubs to facilitate development successfully. The consequence of weak or lack of country-specific entrepreneurship policies has been that local hubs operate without regulated standard development practices, risking approaches that in most cases produce technological innovations and successful entrepreneurs, but without necessarily achieving development. As will be argued in Chapter 2, innovation or entrepreneurship do not necessarily equate to development.

Problem 4: A lack of understanding of the inner dynamics of ‘institution-making’ *within* current hubs themselves.

In other words, hubs do not understand how and what it means to be involved in the developing, constructing or facilitating of some context-relevant *institutional arrangements* around navigating capital, technology, competition and other support resources on the ground.

At a time when recent voices have emerged to criticise hubs for importing borrowed entrepreneurship-promotion paradigms and templates into African contexts that need different, more nuanced approaches (Achtenhagen & Brundin, 2016: 2), Jiménez and Zheng (2017) point out that hubs can be viewed as heterogeneous spaces of global processes and flows interacting with local narratives and grounded practices.

By linking hubs to local context, these voices suggest hubs must go beyond mere start-up formation and producing of technology innovations but also contribute to addressing the systemic challenges of African development. This is because, as is the case for economic growth, entrepreneurship for technological advancement (innovation) does not automatically equate to entrepreneurship for development. The two are related but not the same, even if it is arguably convincing that innovation may be a vehicle to development.

Despite the World Bank’s linking of digital entrepreneurship with the twin goals of ending poverty and increasing shared prosperity, Kelly and Firestone (2016) highlight that the relationship between innovation, entrepreneurship, job creation and sustainable livelihoods is a subject of ongoing inquiry. In other words, the relationship

between entrepreneurship and African development remains elusive (Steiner & Teasdale, 2016: 203).

Recent studies have provided evidence to support the claim that entrepreneurship in Africa have yet to yield developmental outcomes. As is argued earlier, most of the successes scholars refer to are the exclusionary technology start-ups, mainly led by White males in big cities. Additionally, evidence from the Venture Capital and the Gender Financing Gap report of 2020 showed, among other issues, that women have been systemically excluded from entrepreneurship, with female-led start-ups in emerging markets raising only about \$1 of seed funding for every \$9 raised by all-male teams (Sonneborn, Burns, Chandrasekhar & Matranga, 2020).

Moreover, even those overwhelming male-led ventures are failing in huge numbers. The recent Better Africa Report 2020 revealed empirical evidence of high shutdown rates from 500 new ventures in 10 African countries during the period of 2010 to 2018 (GreenTec Capital Africa Foundation, 2020). They show that continentally Africa has a 54.20% failure rate of new ventures created. Countries with the highest failure rates are Rwanda (75%), Ethiopia (75%), Ghana (73.91%) and Zimbabwe at 66.67%. In comparison, the African countries with slightly lower failure rates are Nigeria (61.05%), Kenya (58.73%) and South Africa (54.39%).

These results highlight the environmental challenges that hubs find themselves operating within across Africa, compounded by the fact that hubs have only recently emerged as a topic of research interest less than half a decade ago. They became an area of research interest only when the World Bank started its continental mapping project in 2014 (Bayen & Giuliani, 2018). An average hub is about five years old (Du Boucher, 2016). Current research output has focused on financial sustainability, operational efficacy, venture growth and the role that hubs play in growing digital entrepreneurship (Du Boucher, 2016; Kelly & Firestone, 2016). Outside these focus areas, very few studies link hubs and development.

Walker and Mainwaring (2018: 7) have recently described hubs as places of “misplaced optimism” with “dangerously overblown hype”. As is the case with entrepreneurship (Gryszkiewicz & Friederici, 2014: 9; Gryszkiewicz *et al.*, 2016: 76),

few studies have critically investigated the relationship between hubs and development (Jiménez & Zheng, 2017). Development within the context of hubs means the inclusion of African youths outside big cities, producing more African Black local entrepreneurs, balancing gender dynamics so women are not only significantly represented in hubs but also have equal access to capital, and an equal focus on labour-absorbing industries. Currently, evidence from cited studies suggests the relationship between hubs and development is murky. This could be because of the lack of understanding the role or function of hubs in institution-making so that the criticism is not so much about technology per se, but more about orchestrating context-relevant institutional arrangements between entrepreneurs on the ground and technology development opportunities, capital and competition, among other important ecosystem challenges facing entrepreneurs on the ground. Venture capitalists and private equity firms behind hubs are seen as self-interested institutions largely concerned with a hub producing a winning venture (i.e. a “Horse”) that can scale without paying attention to the demographics of the founder “Jockey” behind the venture or the diversification of start-up innovations beyond technology.

Technology start-ups are indeed needed and helpful, but as hubs continue emerging as key spaces for entrepreneurship and the focus on technology continues to dominate, they risk undermining the development perspective needed to supplement the hype around these key institutions. Andrews, Pritchett and Woolcock (2016) argue that development cannot merely be achieved through mere design of policies, programmes and projects, but hinges largely on the capability for implementation – the implementation imperative. In the light of recent voices such as Andrews *et al.* (2016), there seem to be an ongoing view that suggests African hubs as institutions lack the capabilities for implementing development through their varied policies, programmes and projects. With “best practices” stemming from the perspective of those who hold the power and thus stifling alternative narratives of African development (Beek *et al.*, 2017: 308; Jiménez & Zheng, 2017), this study aims to navigate beyond the hype and critically explore hub practices and approaches that can embed the capabilities required to translate the promise of entrepreneurship into developmental outcomes.

1.3 Problem statement

At a time when recent voices have emerged to criticise hubs for importing borrowed entrepreneurship-promotion paradigms and templates into African contexts that need different, more nuanced approaches (Achtenhagen & Brundin, 2016: 2), Jiménez and Zheng (2017) point out that hubs can be viewed as heterogeneous spaces of global processes and flows interacting with local narratives and grounded practices.

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1.4 Research Aim and Question

The main research question is: *“How can hubs across Africa be reconfigured in ways that translate entrepreneurship into development?”* To add nuance to this question, the following secondary questions were formulated:

- how has the literature on African economic development addressed the relationship between entrepreneurship and development, both explicitly and implicitly? *This was addressed using literature review in chapter 2.*
- what are different hub approaches and practices in Africa? *This was addressed using literature review in chapter 2.*
- what is the link between hub practices and development? *This was addressed in the introduction, background and problem statement in chapter 1 as well as in the theoretical discussion section in chapter 2.*

- what is the most appropriate typology of development for further reconstituting the relationship between entrepreneurship and development? *This was addressed using synthesis of SenseMaker® empirical insights in chapter 5.*
- how can different stakeholders in different countries help transition hubs into development institutions? *This was addressed using SenseMaker® methodological approach in chapter 5.*
- what is the most appropriate methodology and accompanying method(s) to help generate knowledge on the main research question? *This was addressed by the transdisciplinary methodology and SenseMaker® method in chapter 3.*

1.5 Research design, methodology and methods

The study used an emergent transformative transdisciplinary research (ETTDR) methodology involving five broad research design phases, namely co-design, stakeholder engagements, co-production of new knowledge, dissemination of results, and inspiring action (van Breda & Swilling, 2019; Lang, Wiek, Bergmann, Stauffacher, Martens, Moll, Swilling & Thomas, 2012; Regeer & Bunders, 2009). To complement the methodology, the study followed a narrative-based research approach through a design process and method called SenseMaker®. The study specifically draws insights from stakeholders of 3 hubs in Ghana (Accra), Kenya (Nairobi) and Rwanda (Kigali) with additional perspectives from AfriLabs in Nigeria. This study boundary will be discussed in detail in Chapter 3.

SenseMaker® also follows a roughly similar set of processes, logics and principles as ETTDR with iterative non-linear stages and steps. These stages involve co-design and preparation, narrative-based data collection, analysis and sense-making, narrative return (returning of stories back to sample respondents) and finally implementation (van Breda, 2019). The *Figure 1.5* below provides a brief overview of Jahn's (2008) adapted version of ideal-typical phases, stages and processes involved in this study's research design, methodology and method respectively.

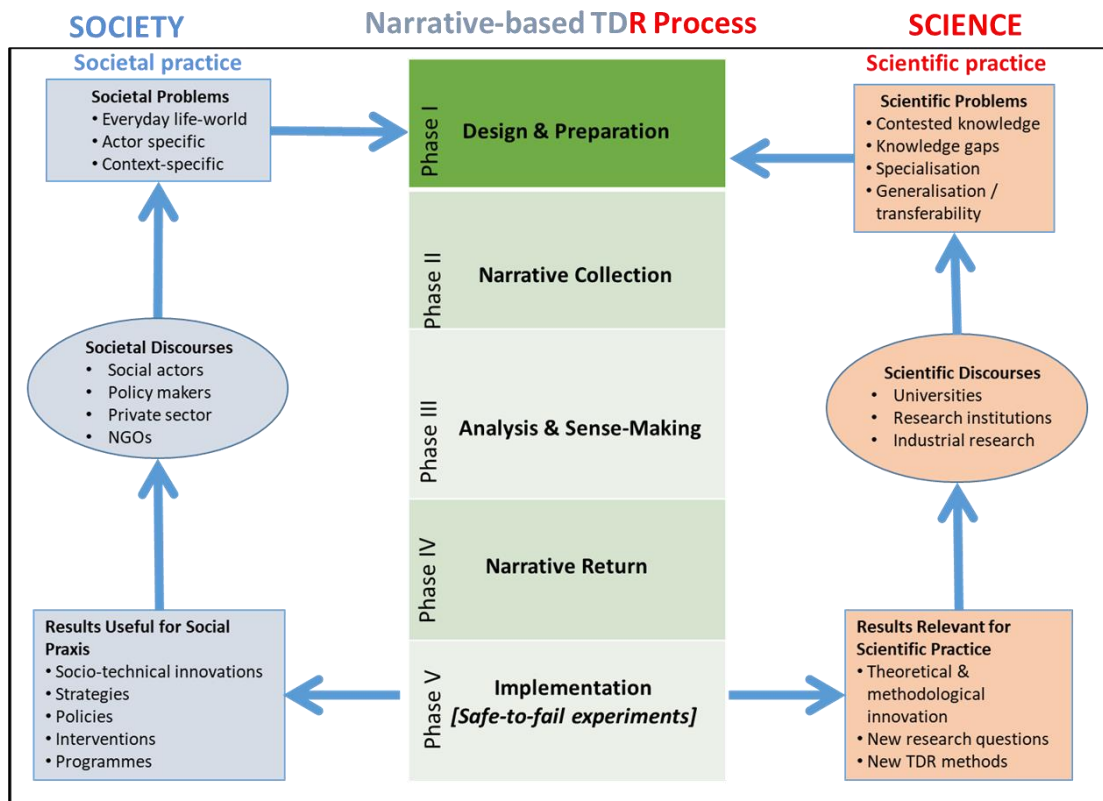


Figure 1.5: Narrative-based transdisciplinary research (TDR) process.

Source: van Breda (2019)

The research design, methodology and SenseMaker® method are explained in a lot more detail in the methodology chapter (Chapter 3). The researcher discussed how the above phases and processes were followed and slightly adapted, where applicable, given that the study was conducted during a difficult global period of the COVID-19 pandemic, which meant that the researcher could not travel and therefore perfectly apply the transdisciplinary principles in some stages. However, this was in the end advantageous, as it developed an innovative approach and agile in collecting data from multiple stakeholders spread across Africa. For example, one key advantage was that more data could be collected (i.e. 100 respondent stories) through online surveys than originally anticipated. Furthermore, the researcher could easily convene online meetings that helped with the collective sensemaking process detailed in Chapters 3 and 5.

1.6 Rationale for the study

The mission behind this study was to explore hubs as development institutions in order to reinforce approaches and practices that are appropriate for the African context and development. To this end, the following contribution was made:

- African entrepreneurship arguably requires Afrocentric hub approaches rooted in local narratives because it was argued that borrowed approaches and practices are not succeeding;
- to construct appropriate approaches and practices in Africa, it was necessary to learn from existing successful hub practices and approaches from continental experiments;
- the dominant approaches and practices that are employed in various hubs were examined and assessed from the perspective of development;
- emerging developmental approaches and practices were argued to chart a new direction for hubs in Africa;
- finally, newly constructed, and co-created development perspectives on hub practices and approaches were presented as new knowledge for potential adoption and real-life application.

1.7 Chapter outline

The rest of the dissertation attempted to follow both a discursive and argumentative research thinking and writing style using guiding logics and principles by Wentzel (2017). Chapter 2 starts with outlining the relevant theories and literature strands used later to argue for an original entrepreneurship conceptual framework rooted in the ideologies, practices and aspirations of development. The researcher then used that newly constructed conceptual framework to argue for an ‘ecological approach’ to African entrepreneurship. In the main discussion section, the researcher argued that hubs have the potential to be effective at supporting entrepreneurship that leads to *development*, but only if they employ a dynamic ecological approach. Chapter 2 strengthens this argument by highlighting the limitations of the existing dominant approaches to supporting entrepreneurship in Africa.

Chapter 3 provides the rationalisation for the choice of research paradigm, methodology and method used in this study. The researcher mainly argued that the

relational and complex nature of African entrepreneurship necessitated for an abductive research paradigm, which followed a hybrid of constructivist and interpretivist reasoning logics. Through related arguments, the researcher situated ETTDR and SenseMaker® as most suitable tools in co-producing African nuanced knowledge *with* (and not merely *for*) relevant stakeholders.

Chapter 4 formally presents the empirical findings. Chapter 5 provides a deeper analysis of the empirical findings by exploring opportunities and possibilities for systems change in African entrepreneurship. This reflective chapter explored the results and emerging insights through the theoretical and reviewed literature lenses in a dynamic way that addressed the research aims and relevant secondary questions.

The researcher then provides concluding remarks in Chapter 6 by outlining the key empirical findings, the theoretical contribution of the dissertation, implications for future studies and make certain policy recommendations.

The study used various terms to capture the different meanings of concepts, processes and approaches that were relevant to or stemmed from key arguments throughout the investigation. Even though most are explained in text, the researcher provided a few definitions of key terms in Appendix A for convenience.

Chapter 2 – Literature Review on Entrepreneurship for development

2.1 Introduction

Chenery and Syrquin (1975) define development “as a systematic variation in any significant aspect of the economic or social structure associated with a rising level of income or other index of development”. Those systematic or structural shifts must result in the long-term changes in the composition of the aggregate from sectoral, geographic and other interdependent economic activities (Singariya, 2014). However, if *development* processes ended there, Africa would have long ago addressed associated issues of high levels of poverty and inequality. *Development* processes need to go beyond structural transformation, but also contribute to institutional and human transformations, which make up the often understated “other index of development” piece in Chenery and Syrquin (1975)’s definition. Some hubs in Africa have similar ambitions but arguably, few employ *developmental* approaches on the ground. For the purposes of this work, the “other indices of development” requiring attention are demographic inclusion and diversity of industry.

Demographic inclusion is worth devoting attention to because it has been argued elsewhere by the African Union Commission (AUC) (2015a) that economic efforts should seek to address youth unemployment and inequality challenges by harnessing the demographic dividend that exists in the continent’s diversity of race, gender, age and geographies. The importance of diversity of industry has been argued in detail by McMillan, Page, Booth and te Velde (2017), highlighting that Africa must devote adequate attention to growing productivity in labour-absorbing industries such as retail, agriculture and tourism, if it is to address mass employment challenges facing the continent.

Yet development is viewed through the lenses of mainstream economic theories of growth based on globalised and largely Western paradigms of vertical economic flows and massive consumer markets (Beinhocker, 2007), which have arguably failed African youth. This critique of growth-led development as a conceptual basis for human progress has led to the rise of post-development scholars, who have inspired a

‘degrowth’ movement as a call for reimagining and repoliticising relationships between the economy, society and the environment (Asara, Otero, Demaria & Corbera, 2015; Mkandawire, 2011).

As such, this study interrogated relevant mainstream and alternative theoretical paradigms to tease out their underlying assumptions about the link between development and entrepreneurship. The chapter is structured in three parts. First, the theoretical framing (section 2.2) provides the reader with theories that better situate the work of hubs and contribute to appropriate conceptions of development to help answer the research question. The second part explores relevant literature strands (section 2.3) that argue for heterodox developmental perspectives in entrepreneurship studies. Finally, the researcher drew ideas from the theoretical framing and selected literature strands to contribute an original discussion (section 2.4) suggesting that hubs have the potential to be effective at supporting entrepreneurship that leads to development, but only if they employ a dynamic ecological approach.

2.2 Theoretical framing

By making hubs a unit of analysis, this study took an institutional approach to answering the research question. An institutional approach emphasises the role of enterprise support organisations and the broader macro-economic environment in growing entrepreneurship in Africa. By extension, a macro-economic perspective also means this work drew from a multiplicity of theories, not just economic theory. Specifically, this work mainly drew from economic theory, human capital theories of growth, innovation systems (IS) theory and complexity theory to apply appropriate interdisciplinary knowledge to a complex social phenomenon that entrepreneurship was argued to be.

More importantly, these theories were viewed and used in this work as “rest stops” or lenses to help with the methodology and analytical approach to data analysis as inspired by the work of Simone and Pieterse (2017: xii). A central idea argued throughout their work is that young people in developing regions like urban Africa and some parts of Asia approach *formality through informality*, suggesting that

development opportunities in such cities are explored through experimental, nonlinear pathways outside the prescriptions of traditional economics.

This is to say, under-resourced youths who typify Africa live in the paradoxes of the urban realities, forced to use experimentation to explore formal opportunities that explain the dynamics of inhibiting dissonance in their contexts. Simone and Pieterse (2017) use the term *makeshift* to describe a set of informal arrangements that characterise the majority of youth dynamics with formal systems and economic opportunities across urban Africa and Asia. They argue that "...whatever [the youth] come up with is rarely institutionalised into a fixed set of practices, locales or organisational forms. This does not mean that relationships and economic activities do not endure, that people do not find themselves rooted in the same place and set of affiliations over a long period of time. Rather, these stabilities come from constant efforts on the part of inhabitants to redefine the boundaries and interfaces between work, leisure, home, neighbourhood and elsewhere" (Simone & Pieterse, 2017: xi).

To build their argument, they use the concept of 're-description' to articulate the constant negotiations that are often implicit between formal sets of practices and the informal realities of poor urban youth, into what they call "n-dimension spaces or states of existence that might be" (Simone & Pieterse, 2017: 11). Such a constant re-description is in itself a *doubleness* that "involves a sense of aspiration, of making things different, but also of seeing in what exists something other than what we think we are seeing" (Simone & Pieterse, 2017: 11).

To concretise their arguments, they argue that part of this dynamic is created by the reality of how hard infrastructure (what they call biophysical or landscape infrastructure), e.g. roads, information systems, transportation, energy, water, sanitation services, etc., continues to be built for and around those who can mainly provide investment for it. However, the informality of African and Asian youths is made up of invisible social-cultural infrastructure and networks, explaining the dissonance they must navigate daily (Simone & Pieterse, 2017: 127–128).

By extension, the general logic of discovery in this work was rooted in *abduction* which befits the reality of African youth who face the daily agonistics of exploring the

n-dimension spaces that might be through ‘makeshift’, experimental, and informal approaches. While the researcher used abduction as a logic and approach in the study design and analysis, this work did not explore the origins of abduction theory. However, the reader is referred to the work of Park (2017) for a deeper account of abduction.

Park (2017) positioned abduction in epistemological terms as a constructivist approach to knowledge generation. To be specific, Park (2017: 35) described abduction as “the act of bringing relevant, often innovative, concepts [hypotheses] to bear in creative ways on the plausible explanation of previously unexplained phenomena”. Such an approach to knowledge generation was useful in an exploratory, solution-generating study such as this one, which argued that entrepreneurship as a phenomenon requires reimagination or creative ideas to generate equitable value for society and inspire social impact, particularly as applied to urban African youths inhabiting dissonant times.

The implications of an abductive approach in this study were covered in much more detail in the methodology and analytical chapters 3 and 5, respectively.

2.2.1 Economic theory

Investigating the relationship between entrepreneurship and the economy has a long history in economic theory. However, classical economic theory was largely unsuccessful at integrating the role of entrepreneurship in their static equilibrium models and methodologies, which assumed perfect rationality about input resources and perfect knowledge about industry (Hands, 2015; Kaldor, 1975). Classical economic theory became the orthodox economic perspective applied to the kind of entrepreneurship that saw entrepreneurs as rational economic agents (*homo economicus*) merely seeking to maximise their utility and profitability (Grebel, 2004).

The idea of entrepreneurship as an economic phenomenon driven by rational individuals who could easily be modelled by neat mathematical frameworks such as marginal costs and benefits has long been criticised by evolutionary economists as too simplistic; as entrepreneurs started to be acknowledged as more than simply perfect

rational economic agents but as individuals seeking higher levels of efficiencies and optimality (Grebel, 2004). The first set of prominent scholars to inspire evolutionary economic theory were Kirzner (1973, 2008), Knight (1921) and Schumpeter (1911, 1934), who emerged to criticise the economic orthodox view to entrepreneurship, arguing that it was simplistic and static, because it neglected the role of market dynamic processes, innovation and uncertainty in theoretical treatments (Dequech, 2007).

However, it was argued in the main discussion that while evolutionary economic theory made an important contribution towards crystallising the role of entrepreneurship in the formal economy, it reduced entrepreneurship to a micro-economic phenomenon by focusing too exclusively on the individual entrepreneur and understating the mediating factor of institutional arrangements and the political economy. A macro-economic perspective befits entrepreneurship better, because it acknowledges the importance of institutional arrangements and the political economy as enabling or constraining factors.

More importantly, it was argued that economic theory is limited in explaining entrepreneurship for development, meaning one must explore more heterodox theories outside of conventional economic theory. The ecosystem literature, for example, is one scientific perspective to explicitly acknowledge the importance of geography (i.e. location dynamics) and multi-disciplinarity in entrepreneurship studies. Similarly, sustainability literature emphasises values-based and ecological notions of entrepreneurship arguably more in line with a developmental perspective, while dismissing the limited ideas from economic theory that sees entrepreneurship largely as a conduit for economic growth.

2.2.2 Human capital theories of economic growth

Investment in education as a measure of human capital contributes to economic growth (Psacharopoulos & Woodhall, 1985), all other things being equal. Empirical studies have also found that new venture creation is partly related to the natural capabilities a person is born with and partly to skills internalised through education and experience (Roberts, 1991). Career theory, derived from Adam Smith's human

capital theory, is the overriding theory that cites education, or the lack of a specific type of education, as the contributing factor for individuals entering certain professions (Rideout & Gray, 2013: 331).

In addition to Smith and Cannon (1937), human capital theory was also championed by Mincer (1958) and Becker (1975). Mincer (1958) and Becker (1975) postulated that industry, gender, race or city incomes vary with investment in education and training of individuals. More recently, though, human capital theory closely linked to entrepreneurship has dominated recent entrepreneurship promotion efforts; this is the theory of planned behaviour postulating that individuals are likely to pursue a career in a field if they have strong intentions and behavioural competencies toward that field (Icek, 1991).

If one couples perspectives from human capital theories and theory of planned behaviour with social cognitive career theory which states that amid internal and external factors, people can determine their own careers and futures (Segal, Borgia & Schoenfeld, 2002); then these views suggest that entrepreneurship like other careers is a function of choice when people are exposed to it as an option. The significance of these insights is that any individual can intend to be an entrepreneur provided they have the abilities, aspirations and attitudes to pursue a commercial idea on their own or within an existing corporation.

However, earlier and popular conceptualisations of human capital theories neglected entrepreneurial competencies, as if embracing uncertainty and risk, for example, would be possible through merely consuming more education or training. These popularised conceptualisations made it possible for practitioners to divorce social or institutional forms of innovation from human transformations. This is in part explained by the limitations of human capital theories of economic growth that largely saw human capital only through the lenses of labour markets (Asamoah, 2014; Rideout & Gray, 2013), and not necessarily for new venture creation purposes. This theoretical limitation is problematic as the art of commercialising innovation or entrepreneurship in Africa demands that entrepreneurs not only mobilise individualistic educational knowledge expertise, but also partner with public policies

and other private institutional partners in order to achieve a socially desirable impact (Edoho, 2015).

Furthermore, entrepreneurship dynamic capabilities models, grounded on the evolutionary theory of the firm, postulate that entrepreneurial behaviour is not only determined psychologically but also situationally (Zahra, Sapienza & Davidsson, 2006). In these models, key social and economic factors such as family background, friends, suppliers, local community, government agencies, economic climate and training affect the propensity of entrepreneurs to start and manage businesses effectively (Shapero & Sokol, 1982).

Aggregated, these respective theories suggest that situational factors also impact on the entrepreneur's perception of his or her ability to exploit the available opportunities and therefore their intention to start a business (Abbas, 2013; Bacigalupo, Kamylyis, Punie & Van den Brande, 2016). The implication of the dynamic capabilities' perspective is the idea that being an entrepreneur has to do with understanding the nexus of situational variables around a particular product, service or process. In other words, the propensity to start and run a business is a function of understanding the interaction of the above external factors, among other things, for which one develops internal and external capabilities rather than being born with. Therefore, it is possible to promote entrepreneurship.

2.2.3 Innovation systems theory

The discussion also drew from innovation systems (IS) theory, which purports that entrepreneurship is not only a function of individual capabilities to recognise and exploit opportunities, but largely a function of an interplay between structural features of the economy and institutional processes (Radosevic & Yoruk, 2013). The IS theory thus sees entrepreneurship as a macro-economic phenomenon whose propensity is determined by complementary synergies between the political economy and institutions (List, 1909).

Nelson and Nelson (2002) define an innovation system as an interplay between social and technological innovations, where institutional structures take advantage of, or

support, technological innovation and vice versa. This suggests that an innovation system can be seen, for example, as operating *adjacent to* the national political economic system as it is operating *within* the broader regional biophysical system, while reinforcing the marriage between technical and institutional innovations necessary for the transformation of hubs towards becoming *developmental* institutions. Schumpeter (1934) put innovation at the centre of evolutionary economic theory by integrating the role of uncertainty and lack of experience, among other systemic constraining factors, in the economic development process. However, his concept of innovation has been developed further by other scholars such as Nelson (2008) to emphasise the role of different imperfect institutions in the innovation system.

Imperfect or underdeveloped institutions often characterise developing economies across Africa. To this end, Srinivas and Sutz (2008) and Stirling (2014) warn that innovation should be seen as renewal beyond technological inventions or commercial entrepreneurialism, so that the public sector and civil society feature alongside business, service industries, the wider culture, universities, research labs and high-tech companies as important instruments or channels of innovation. They see innovation as a gradual process of learning and experimentation, as it is driven by a contextual embeddedness in which scarcity is a driver.

Put differently, this means innovation is an outcome of an entrepreneurial process where risk, uncertainty and learning by doing are championed by change agents. The view that innovation should be seen as a phenomenon beyond scientific or technical knowledge, but also an outcome of practical experimentation from tacit knowledge rooted in local micro-cultures and narratives, is also supported by Arthur (2009: 159–160). This opens a fruitful field of research that will be the focus of this research endeavour, namely the possibility that this notion of innovation could possibly be the means through which *developmental* outcomes are achieved.

Moreover, this conception of innovation as the outcome of an entrepreneurial process envisages a role for the public sector, the private sector, civil society, universities and individuals. In practice indeed many nations, particularly in the Global South, have witnessed more innovations emerging from the private sector or civil society, but with

the state playing more than a mere facilitation role through incentives, funding, coordination or related means (Mazzucato, 2013). This may therefore suggest more emphasis on state involvement in hubs across Africa in order to achieve *development*.

2.2.4 Complexity theory

Complexity theory purports that no one system operates independently of other systems, but that systems are dynamic, complex, interdependent and context-embedded (Juarrero, 1999, 2010). A whole systems knowledge approach in African entrepreneurship is useful for promoting effective communication of scientific knowledge in order to mobilise grassroots, solutions-based participation as well as ensuring better informed policy making (Fressoli *et al.*, 2014; Ahmed, 2017).

Developing countries across Africa require competencies to launch, grow or strengthen local hub systems, while at the same time collaborating with the international entrepreneurship community. The relationships between African hubs and international stakeholders span across politics, education, civil society and the private sector in a dynamism that is largely emergent and non-deterministic. This reality and African contextual specificities that situate hub practices can be best examined through the lens of complexity theory.

This work drew insights from the work of complexity scholars such as Preiser, Biggs, de Vos and Folker (2018), while at the same recognising that cities across Africa have different entrepreneurship ecosystems. While African entrepreneurship ecosystems are not all chaotic, many are characterised by non-linear dynamics with some elements of path dependencies. This means that African entrepreneurship can be seen through the lenses of complex adaptive systems (CAS), where practitioners need to use emergence as an approach towards reimagining and patterning the dynamics of change (Schneider & Somers, 2006).

Recent studies in entrepreneurship have increasingly acknowledged that while the literature on the entrepreneurship ecosystem has helped crystallise the importance of individual components in initiatives that bring together economic activities, practitioners have not fully appreciated the importance of understanding how

ecosystem interdependencies emerge to better orchestrate resources (i.e. emergence) (Curzio & Fortis, 2012; Iñigo & Albareda, 2016; Roundy, Bradshaw & Brockman, 2018). Consequently, the lack of a strong grounding in complexity as a theoretical lens has for a long time prevented a way to approach dynamically the contestations, contradictions and opportunities that characterise African entrepreneurship ecosystems (Roundy *et al.*, 2018).

2.3 Reframing the developmental perspective of African hubs

Now that an overview of relevant theories has been provided, the researcher provides an overview of the main literature this work reviewed and drew on to argue for a more developmental approach among African hubs. In each of the literature strands, the researcher provided a justification for why and how each contributes towards the argument for a developmental perspective among African hubs. These selected literature strands are African anthropology and relationality, transformative innovations and entrepreneurship ecosystem.

2.3.1 Entrepreneurship ecosystems

Isenberg (2010: 43) defines an entrepreneurship ecosystem as the strength of the relationships that exist between the six broad domains including policy, finance, culture, support, human capital and markets. The concept of an entrepreneurship ecosystem has been further developed by recent scholars to mean a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory (Stam & Spigel, 2017). These conceptions suggest that an entrepreneurship ecosystem needs to be purposefully set up with the necessary dynamic governance to make it a success. Based on these conceptions, hubs are key levers as institutions that at least at the surface provide ‘support’ and develop the required ‘human capital’ necessary for the productivity and success of the ecosystems.

The literature on entrepreneurship ecosystems was explored in order to understand how hubs can reconfigure their institutional support to achieve vertical and horizontal linkages with other stakeholders in ways that achieve development. This is important to understand scientifically as some recent voices have emerged to suggest

entrepreneurship promotion alone is not enough without ecosystem contribution to deal with the systemic challenges of development (Gough & Langevang, 2017).

As is indicated in *Table 2.1*, there is no conceptual consensus on what entrepreneurship or entrepreneurial ecosystems are. Some scholars attribute this conceptual fluidity to its dual fields of origin in the literature on business strategy and regional economic development (Malecki, 2018). Given this dual historical origin from two separate fields, Brown and Mason (2017) have critically highlighted the theoretical and application limitations of entrepreneurship ecosystems following their rapid adoption and integration into policy in an attempt to delineate main components of the concept. Their critical review provides an original contribution that addresses definitional limitations, measurement issues and broader policy implications.

Table 2.1: Selected definitions of an entrepreneurship ecosystem

Cohen (2006)	Sustainable entrepreneurial ecosystems are defined as an interconnected group of actors in a local geographic community committed to sustainable development through the support and facilitation of new sustainable ventures. (p. 3)
Isenberg (2010)	The entrepreneurship ecosystem consists of a set of individual elements—such as leadership, culture, capital markets, and open-minded customers—that combine in complex ways. (p. 43) Ignoring the interconnected nature of the ecosystem elements can lead to perverse outcomes. (p. 50)
Isenberg (2011)	This entrepreneurship ecosystem consists of a dozen or so elements (which we consolidate into six domains for convenience sake; see the diagram) that, although they are idiosyncratic because they interact in very complex ways, are always present if entrepreneurship is self-sustaining. So although the combinations are always unique, in order for there to be self-sustaining entrepreneurship, you need conducive policy, markets, capital, human skills, culture, and supports. (p. 6)
Feld (2012)	The Boulder thesis states that a prosperous ecosystem has four characteristics: (a) it is led by entrepreneurs; (b) it is inclusive where everyone is welcomed; (c) the involved people are committed long term (at least 20 years) to the ecosystem; and (d) there are many opportunities for

	gathering, that is, a lot of events. (pp. 25–28)
Isenberg (2014)	By definition an ecosystem is a dynamic, self-regulating network of many different types of actors. In every entrepreneurship hotspot, there are important connectors and influencers who may not be entrepreneurs themselves.
Mason and Brown (2014)	A set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organisations (e.g., firms, venture capitalists, business angels, and banks), institutions (universities, public sector agencies, and financial bodies), and entrepreneurial processes (e.g., the business birth rate, numbers of high growth firms, levels of “blockbuster entrepreneurship,” number of serial entrepreneurs, degree of sell-out mentality within firms, and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment. (p. 9)
Stam (2015)	A set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship (p. 1765) The entrepreneurial ecosystem concept emphasises that entrepreneurship takes place in a community of interdependent actors. (p. 1761) The systemic conditions are the heart of the ecosystem: networks of entrepreneurs, leadership, finance, talent, knowledge, and support services. The presence of these elements and the interaction between them predominantly determine the success of the ecosystem. (p. 1766)
Audretsch and Belitski (2017)	We define systems of entrepreneurship (further ecosystem) as institutional and organisational as well as other systemic factors that interact and influence identification and commercialisation of entrepreneurial opportunities. (p. 2)
Cukier <i>et al.</i> (2016)	We define a start-up ecosystem as a “limited region within 30 miles (or 1-hr travel) range, formed by people, their start-ups, and various types of supporting organisations, interacting as a complex system to create new start-up companies and evolve the existing ones.” (p. 1)
Mack and Mayer (2016)	EE are defined as the interacting components of entrepreneurial systems, which foster new firm creation in a specific regional context. (p. 2120)
Gauthier, Penzel, and Marmer (2017)	We defined ecosystems ... around the concept of a shared pool of resources generally located within a 60-mile (100-km) radius around a center point. (p. 24)

Roundy, Brockman, and Bradshaw (2017)	Communities of agents, social structures, institutions, and cultural values that produce entrepreneurial activity (p. 99)
Spigel (2017a)	<p>Entrepreneurial ecosystems ... are the union of localised cultural outlooks, social networks, investment capital, universities, and active economic policies that create environments supportive of innovation-based ventures. (p. 49)</p> <p>Entrepreneurial ecosystems are combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative start-ups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures. (p. 50)</p>
Theodoraki and Messegem (2017)	<p>The entrepreneurial ecosystem includes three dimensions: actors who form it and their interactions (formal and informal network), physical infrastructure, and culture. (p. 50)</p> <p>The entrepreneurial ecosystem may be described as a generic context aiming to foster entrepreneurship within a given territory. Therefore, it consists of a horizontal network (customers and providers) and a vertical network (competitors and complementors). It also includes organisations supporting entrepreneurs: public or private funding agencies (banks, business angels, venture-capital, etc.); support entities (business incubators, consultants, etc.); research organisations (research centres, laboratories, etc.); and businesses' consortiums (active businesses, associations and trade unions, etc.). (p. 56)</p> <p>The entrepreneurial ecosystem seems to be composed of both physical and non-physical elements. The latter includes elements such as regulation and entrepreneurial culture, which are, for instance, connected to geographic specificities. (p. 57)</p>

Source: Malecki (2018: 6)

Hubs services include but are not limited to entrepreneurship events, rental, training, working spaces, access to finance and access to markets (Friederici, 2017). *Figure 2.1* below illustrates a basic relationship between a hub and broader enterprise support organisations (ESOs) within an innovation ecosystem.

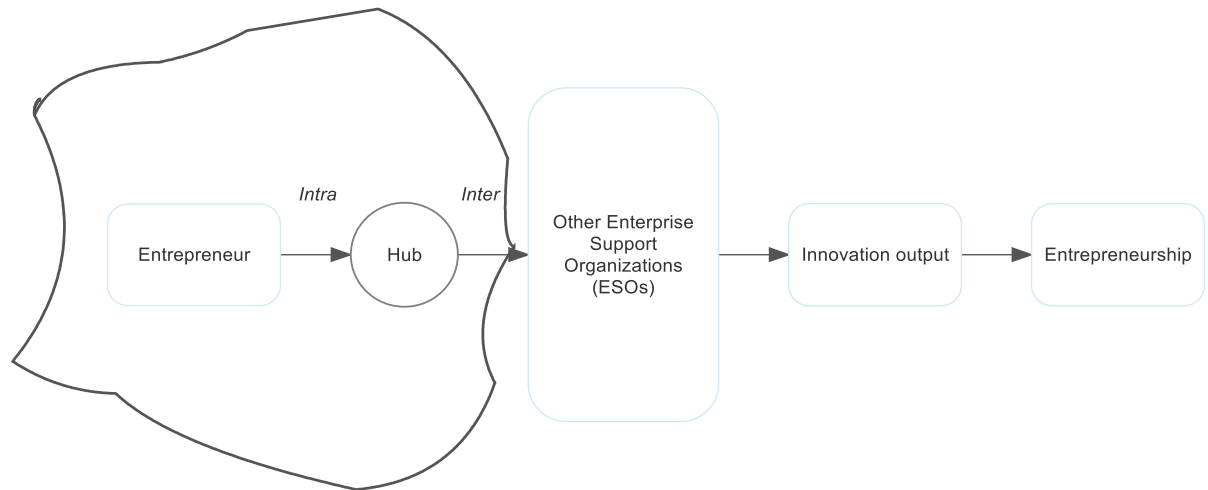


Figure 2.1: A basic relationship between a hub and an entrepreneurship ecosystem

Source: Author, 2021

As a “symbolisation of entrepreneurship purpose”, hubs act as hybrid institutions collaborating with private equity, venture capital, government agencies, universities and international development organisations to facilitate access to skills, finance, markets and related services (Friederici, 2017: 7). It is in this way that hubs are not only ‘support’ and ‘human capital’ levers, but also institutions that connect other interdependent actors and networks (viz. finance, policy, etc.) of an ecosystem in order to launch, scale and strengthen entrepreneurship in a particular region. This was depicted through the notions of ‘intra’ and ‘inter’ in *Figure 2.1*, meaning that in practice hubs play dual roles of supporting local entrepreneurs who participate in their programmes (the intra-function) and an orchestration role with other enterprise support organisations (the inter-function) in order to influence environmental factors that enable or constrain success.

2.3.2 Transformative innovations

To imagine hubs in different African contexts as development institutions means a genuine appreciation of complexity. In African economies with many distinct countries and socio-political complexities, this has become more critical than ever before. Transformative innovations are concerned with issues of scaling new ideas and approaches in order to make durable or profound change (Westley, Antadze, Riddell, Robinson & Geobey, 2014). Westley *et al.*, (2014) do not refer to “scaling”

as used in the mainstream start-up literature per se, but rather “cross-scale” interactions required for innovative ideas and approaches to achieve systems change in a complex world. This is in contrast to mere “scaling out”, which takes a horizontal perspective of products or services reaching out to as many consumers and regions as possible.

Transformative innovations differ from other forms of innovations in that their sustainability or success is dependent on a multiplicity of actors rather than on a shining “hero” individual or organisation. Instead, it seems the organisation or individual becomes an attractor that inspires but also empowers other societal actors to embrace, harness, tweak and sustain the novelty idea over time. Another way of stating this is to say that a successful transformative innovation will invariably be dependent on the ability to formulate and harness social capital in order to nurture it. This means, among other interpretations, that knowledge transfer of the processes that make up or hold the transformative innovation together are key and the social innovator – which may be public, private or individuals – need to pay attention to that for sustainability reasons (Lundvall, 2016). If the success of a transformative innovation is largely dependent on externalising the ‘operating software’³ and not on the organisational intellectual property that characterises other forms of innovation, then building a social infrastructure or system which can manage the maintenance as well as the various applications of the innovation is critical.

Transformative innovation does not refer to technological innovation. Technological innovations are often criticised for taking place in “niche” local or “protected” spaces of experimentation that still have to undergo what Slayton and Spinardi (2016) refer to as socio-technical transitions that take into account complex, heterogeneous and interdependent network of organisations, government policies and society. Instead, transformative innovations are concerned with the agonistics of integrating and adapting novelty ideas for multi-scale application and impact. An argument can be

³ The concept of an ‘operating software’ as an example of what is core in social innovation came from a discussion with Prof. Mark Swilling. This was after he invited me to an African-based social enterprise, R-Labs, that embraces principles of transformative innovation. In our chat back in 2018, he made a comment on how the founder of R-Labs had found and externalized an “operating software” which explained the scale and success of the social enterprise.

made that a re-imagination of hubs across Africa as development institutions is not possible without them embracing transformative innovations (Sambuli & Whitt, 2017).

Transformative innovations are also viewed through the lenses of resilience theory or regenerative cultures. Recent work by Wahl (2016) suggests that transformative innovations have regenerative properties. This means, on the one hand, they embody resilient properties such as persistence, adaptive capacity and transformability, while on the other hand, they embody properties of living organisms such as the ability to interact with their environment at different spatial and temporal scales and, where necessary, re-patterning under different conditions. In other words, if transformative innovations are about practising adaptive approaches for “durable” and “profound” change, as Westley *et al.* (2014) suggest, then they need to emulate what Sharpe (2013) describes as self-maintaining and self-propagating properties built on dissipative social structures that allow for constant configuring and rebuilding over time.

In many ways, hubs across Africa need to embody these dissipative properties so that promotion initiatives and ecosystem services are not only durable and profound, but also dissipate and rebuild as demanded by local conditions in different African countries.

2.3.3 Developmental evaluation of institutional performance

The traditional management approach to leading organisations was centred on hierarchy and static processes, mainly in the service of top management who operated according to the paradigm of control and linear thinking (Aghina *et al.*, 2017). This top-heavy organisational management style meant that the “rest” of the employees were told what to do, and how, in a rhetoric that created stable organisations but with a rigid culture (Patton, 2011).

By implication, the conventional way of running organisations assumed static linear external environments where change or innovation rarely occurred. It created an organisational culture of high conformity, rules, reward and punishments (Mohelska

& Sokolova, 2015). In this conventional culture, the organisation was divorced from the external environment so that the only measures of success were mainly client satisfaction, profitability and shareholder value (Jati, Hassan, Harman, Jabar & Majid, 2015).

These measures of success involve putting together known input resources such as specific skillsets, technology and internal processes to create clear outputs around set performance targets (Patton, 2011). By extension, a conventional organisation evaluates its success by tracking the performance of the internal environment. If the staff achieves the set performance targets, the conventional organisation is deemed successful.

One of the drivers of the conventional approach to running organisations can be explained by transactional leadership, where staff unquestionably follow, accept and comply with the rules in order to compete for praise, raises, resources and avoid disciplinary action (Ali, Jangga, Ismail, Kamal & Ali, 2015). To improve performance targets, top leaders in a conventional organisation incentivise managers and staff to improve input resources that achieve incremental outcomes within the set performance matrices. In this way, innovation is reduced to mere improvements of the existing system (Gamble, 2008).

However, innovation hubs as the hypothetical institutional agents of change in this study operate in environments characterised by complexity and instability, and in which their success depends on multiple external stakeholders (Feld & Hathaway, 2020; Snowden, Turner, Blignaut, Greenberg & Thurlow, 2020). Unlike the conventional organisation where change parameters are known and stakeholder environment is bounded, innovation hubs are riddled with non-linear external conditions where organisational boundaries and responsibilities are blurred.

The complex external conditions that hubs operate under mean that their organisational ways of working and culture need to be agile if the leadership is to have a developmental impact in the form of high-impact ventures. If, as Yuan and Lee (2011) suggest, leadership is a fundamental driver for organisational culture and performance, it is arguably the prerogative of management to inspire a dynamic

culture of innovation, especially in development projects faced with increasing complexity and instability. To better support local entrepreneurs, innovation hubs would need to flip the conventional organisational paradigm and practices so as to embrace both agility and openness.

To become agile is possible if innovation hubs employ developmental evaluation approaches to their entrepreneurship promotion practices. This is because developmental evaluation helps organisations challenge their own assumptions about the reality of the environment they operate in and be reflexive about how their ways of working (or values) relate with what the environment deems important (Hatch, 1993).

Whereas conventional organisations are evaluated by positivist, timebound key performance indicators (KPIs) and predetermined targets following some micro focus, linear logic or theory of change, organisations operating in non-linear environments often have to employ complex adaptive analytical frameworks or theories of transformation by embracing cooperation with multiple actors across different levels or perspectives so as to better track emergent outcomes in real-time (Scott & Hejnowicz, 2020).

By extension, conventional hubs need to let go of the traditional evaluation practices which merely measure insular, annualised and often quantitative indicators such as, among others, growth in start-up revenue, number of jobs created, number of funding rounds, value of external funding raised, types of funding provided, number of start-ups funded per year, percentage of participating youths and percentage of participating women (Afrilabs & Briter Bridges, 2019; van der Steen & van Twist, 2020). While one might argue such a list of indicators is comprehensive, with some developmental indicators such as employment indicators along with age and gender demographics, the argument could be made that these are nevertheless insular because of the exclusive focus on the micro-level organisational performance.

If the external environment affects the achievement of internal or micro-level organisational goals, then an agile innovation hub, operating in development environments where the path and destination are unknown or evolving, needs also to

be concerned with not only how it manages the effects of the external environment, but also how it contributes to making the environment better. Developmental evaluation practices benefit innovation hubs because in order to have an external social impact in the form of innovative entrepreneurship promotion practices, policies, programs or resource flows, innovation hubs would need to go beyond chasing mere improvements within clearly defined internal target indicators and configure how they contribute in ways that improve the environment (Gamble, 2008).

Developmental evaluation indicators that would apply to hubs looking to go beyond traditional insular performance measurements could include but are not limited to, among other things, change-oriented and relational indicators such as new design approaches that generate key data or insights to learn from, innovative management practices that enhance the agility required to fine-tune developmental approaches that lead to social change or new collaboration methods to better optimise, catalyse and orchestrate enterprise support (Gamble, 2008).

At the same time, embracing developmental evaluation indicators that attempt to internalise contextual conditions and related location economic issues (Brown & Mason, 2017) implies that a huge aspect of innovation hub practices should be about openness. Openness is fundamentally a management strategy that refers to the willingness to collaborate through the provision of safe environments to facilitate dialogue among different stakeholder groups and encouraging partners to learn from each other (Sambuli & Whitt, 2017). Coupled with a healthy direct policy relationship and market linkages with a sharp focus on mission-orientated firms fetching the future of new industries, conventional hubs can go beyond mere start-up formation but also facilitate development outcomes.

Organisational management literature is vast and tends to focus on various aspects of strategy. For the purposes of focussing on innovation hubs and their management challenges not only to remain collaborative and innovative but also impactful as is necessary for developmental evaluation, the researcher focussed on open innovation as a management paradigm with the aim of distilling institutional strategies that can be adopted by the leadership in conventional hubs. Open innovation was originally conceptualised as *"the use of purposive inflows and outflows of knowledge to*

accelerate internal innovation and expand the markets for external use of innovation" (Chesbrough, Vanhaverbeke & West, 2006).

A key feature of open innovation is that the company may discover innovations through looking beyond its own strategic framework and by observing and paying attention to what others are doing in the external business landscape (Almirall & Casadesus-Masanell, 2010). Open innovation principles and strategies embrace and champion knowledge sharing, trust and multi-stakeholder collaborations (Chesbrough, Kim & Agogino, 2014). Given the role of hubs in the entrepreneurship ecosystem and innovative value-chain management across developing countries, developmental evaluation rooted in open innovation principles can aid deeper and useful organisational strategies to improve impact.

Dubbed as the father of open innovation and credited with first coining the term in 2003,⁴ Chesbrough (2012: 26) observes a wider adoption and application of the concept to also include innovation management across multiple stakeholders:

Open innovation was first understood and implemented as a series of collaborations between two organizations to open up the internal innovation process. Today, though, we see many instances in which the concept is being used to orchestrate a significant number of players across multiple roles in the innovation process. Put simply, designing and managing innovation communities is going to become increasingly important to the future of open innovation.

Chesbrough and Crowther (2006: 229) suggest there are two main dimensions or types of open innovations. These are inbound or outside-in as “the practice of leveraging the discoveries of others”, and outbound or inside-out which recognises that “rather than relying entirely on internal paths to market, companies can look for external organisations with business models that are better suited to commercialise a given technology”. The former is about establishing networks with external organisations with the aim of leveraging their technical and scientific capabilities in

⁴ See Chesbrough (2003).

order to improve innovation performance and success, while the latter is about establishing relationships with others in order to exploit commercialisation opportunities (Chiaroni, Chiesa & Frattini, 2011).

Against the background that the external or regional institutional environment moderates the ability of organisations to commercialise or take advantage of innovations (Barasa, Knobon, Vermeulen, Kimuyu & Kinyanjui, 2017), innovation hubs have to design business models, platforms and systems in such a way that a portion of shared value is created from open innovation processes (Chesbrough, 2012: 21). This suggests that open innovation may necessitate a reconfiguration and in some cases a restricting of internal management procedures and systems (Chiaroni *et al.*, 2011: 36) in order to reflect translocality⁵ in decision making (Kelly & Firestone, 2016), so as to leverage distinct external features and strengths that make high-impact ventures thrive.

Unfortunately, while some studies suggest some few hubs are already showing a propensity to radically embrace openness (Gryszkiewicz *et al.*, 2016), *conventional hubs are largely dominated by old fashioned neoliberal management paradigm and traditions that undermine openness, especially in complex environments.* Consequently, conventional hubs have become extractive platforms that champion mono-entrepreneurship in some ‘tech winners take all’ facilitated processes, while undermining sector diversity and inclusivity (Darity Jr. *et al.*, 2018).

Viewed this way and perhaps unintentionally, conventional hubs indirectly facilitate a lottery-type winners and losers process servicing short-term orientated financiers and only technology entrepreneurship (Darity Jr. *et al.*, 2018; Parker, Alstyne & Choudary, 2016). Open innovations, on the other hand, are fundamentally concerned

⁵ Greiner and Sakdapolrak (2013) describe translocality as “socio-spatial dynamics and processes of simultaneity and identity formation that transcend boundaries – including, but also extending beyond, those of nation states”. It is used here as a concept to highlight the translocal nature of resourcing and organizing in order for high-impact ventures grow in diversity and numbers. The term gets credibility in practice as high-impact ventures tend to embody translocal properties in that they tend to be formed or discovered in one place, but validated and scaled in another locality, and by hybrid international organizations representing mobility of finance and enterprise support. Enterprise support organizations like innovation hubs cannot win without fully embracing translocality.

with the transformation and agonistics of adapting novelty ideas for multi-scale application and impact (Curry & Hodgson, 2008; Sharpe, Hodgson, Leicester, Lyon & Fazey, 2014; Slayton & Spinardi, 2016; Westley *et al.*, 2014); this means an argument can be made that *a re-imagination of hubs as development institutions is not possible without practitioners embracing developmental evaluation and open innovations* that operate across scales, i.e. micro, meso⁶ and macro⁷ levels, all at the same time (Sambuli & Whitt, 2017). This argument is grounded in and supported by complexity theory that argues working in dynamic, interdependent and context-embedded ways can achieve both effective policy and development outcomes (Juarrero, 1999, 2010; Fressoli *et al.*, 2014; Ahmed, 2017). Given the ‘wicked’ nature of high-impact ventures, embracing a complexity perspective is fundamental if hubs are to promote a type of entrepreneurship that facilitates local progress and prosperity.

Hubs cannot simply facilitate the prosperity and progress of international investors by extracting local talent value from very few entrepreneurs that in most instances are not even representative of the demographics in those developing nations. Some studies, for example, show that in Africa family background explains the most variance among successful entrepreneurs, but sadly these entrepreneurs tend to come from upper-middle-class families making a mere population average of 3% in most countries (Akinkugbe & Wohlmuth, 2016; Valdez, 2016). For these reasons, *a hub paradigm shift rooted in a development perspective is important for bridging the divide between the formal economy and disadvantaged citizens*, especially youths and women for the purposes of inclusivity, skills development and employability (Pantea, Raluca & Podlasek-Ziegler, 2014; Pantea, 2014). A development perspective is desirable therefore, because it is grounded in relationality and rootedness from the context one is trying to change and embraces a translocal outlook by championing open innovation principles.

Behind the call for developmental evaluation in entrepreneurship promotion is a long-standing observation that globalised and exclusively nationalised approaches to

⁶ Peer-to-peer institutions working locally and abroad to achieve similar entrepreneurship goals.

⁷ State or policy-level linkages helping to protect or enable entrepreneurial potential in a region.

development are failing to take into account complex specificities associated with the development agenda in distinct developing settings (Beek *et al.*, 2017). For hubs, deeper conceptions from cultural (anthropological) and relational (*ubuntu*) perspectives of what is distinctly spatial about the localities their entrepreneurs operate in are key to inform entrepreneurship promotion in ways that can contribute to the balance of power between international funders and sometimes contradicting narratives, nuances, experiences or voices of the stakeholders representing local conditions (AfDB, 2011; Beek *et al.*, 2017).

The work of Praeg and Magadla (2014) sheds significant light on the importance of anthropological and relational perspectives in development projects such as conventional enterprise development. Equally important is the work of Simone and Pieterse (2017: 1–30) that highlights how young people in some developing parts of the world daily relate to one another and find innovative ways to navigate formal and informal structures in order to access formal resources, information and opportunities. For them, paying attention to the agonistics of the non-harmonious idiosyncrasies of how people in developing nations create resonance with formal and informal political and social structures has a lot to teach practitioners and policymakers about a retheorisation of development dynamics. These anthropological and *ubuntu* perspectives are not just relevant theoretical contributions to the hub discourse, but important voices to integrate if hubs are to successfully work across different scales in their promotion efforts.

Combined, the ideas from the reviewed theories and literature in developmental evaluation, in short, crystallise the need for *process* innovations in growing productive entrepreneurship. They are about an exploration of *scaling out, up* and *deep*⁸ cross-scale approaches that can foster the ingenuity or institutional know-how for setting up a successful region to produce not just sustainable but also diversified and equitable high-impact ventures over time in complex environments.

Given the varied nature of location economics, no one hub approach can be emulated or is replicable. However, there may be fundamental or intangible cornerstones

⁸ See Chapter 5 for a detailed discussion on the concepts and implications of scaling out, up and deep.

presenting knowledge transfer and cross-learning opportunities involving certain replicable process innovations such as leadership required to inspire complex working groups to unite behind common goal, to guide how a hub transitions to openness and innovative implementation (viz. capacitation, business development, resource mobilisation), and produce designs for better supporting entrepreneurs (Daniel, Medlin, Connor, Statsenko, Vnuk & Hancock, 2018; Mason & Brown, 2014). An ecological approach, which will be argued for more in detail in the theoretical discussion section, can therefore help conventional hubs change from being extractive and short-term orientated to becoming more inclusive practitioners, employing long-term orientated open innovation approaches and embracing a cross-scale ecology of support that in turn makes them more developmental.

2.4 Conceptual Framework: Entrepreneurship for development

The purpose of this section was to reflect on heterodox development theory that would inform a conceptual framework for ‘entrepreneurship for development’ or ‘entrepreneurship-led development’ to further provide the reader with an appropriate worldview emphasising the importance of a development perspective in entrepreneurship. Theoretically, the researcher contrasted development as ‘technological advancement’ with *development* as ‘governance processes’ and *development* as an ‘outcome’. These three theoretical aspects highlight, among other things, conceptual differences that help to discern an appropriate concept of development that practitioners may use in order to translate the promise of entrepreneurship into sustainable impacts in Africa.

2.4.1. Development as technological advancement

Development⁹ has traditionally been understood as forces of change associated with significant waves of technological advancement, often instigated in the Western

⁹ The researcher expresses gratitude towards Professor Mark Swilling and Dr Megan Davies at the Stellenbosch University’s Centre for Complex Systems in Transition (CST) for the introduction to a distinction between development with a normal ‘d’ and development with an italic ‘*d*’.⁹ The former is about large-scale infrastructure or politically inspired projects often instigated by governments in partnership with private sector or third parties for implementation and roll out (Kaplan, 1999). This form may result in increased incomes (economic growth) and jobs, but tends to do so without paying attention to demographic issues of those benefitting from projects at the risk of abounding equity issues (Fioramonti, 2017). It is also often associated with corruption (Bhorat *et al.*, 2017). Meanwhile,

economies. This technological perspective has led to a reductionist notion of development as a process of ‘catching up’ with industrially advanced countries (Mkandawire, 2011; Palan, 2013). However, despite unparalleled levels of accompanying acceleration in economic growth, this orthodox perspective of development is problematic because it fails to address why the big technological revolution waves create economic growth that is accompanied by extreme income inequalities, poverty and environmental damage (Fioramonti, 2013; Steffen, Broadgate, Deutsch, Gaffney & Ludwig, 2015).

According to Mazzucato and Penna (2015), trends in development (see *Figure 2.2*) can be explained through five major economic bubble prosperities and golden age periods since the first industrial revolution in Britain. These economic transitions each first inspire a process of technological advancement leading to a new techno-economic paradigm resulting in new industries, new infrastructure and new productivity possibility frontiers; these are in turn followed by significant recessions and income inequalities before a golden age of prosperity emerges (Mazzucato & Penna, 2015: 52–53).

development is about designing large-scale projects that facilitate household or individual progress toward better livelihoods and prosperity (Stiglitz, Sen & Fitoussi, 2010). It is about facilitating freedoms and participatory engagements that break barriers between those with the power to transfer resources and those receiving resource transfers (Sen, 1988). The major difference between the two is that with the latter, inclusion of all stakeholders is not an end-of-project tick-box exercise but a deliberate, intentionally woven effort from project definition to the implementation and evaluation phases.

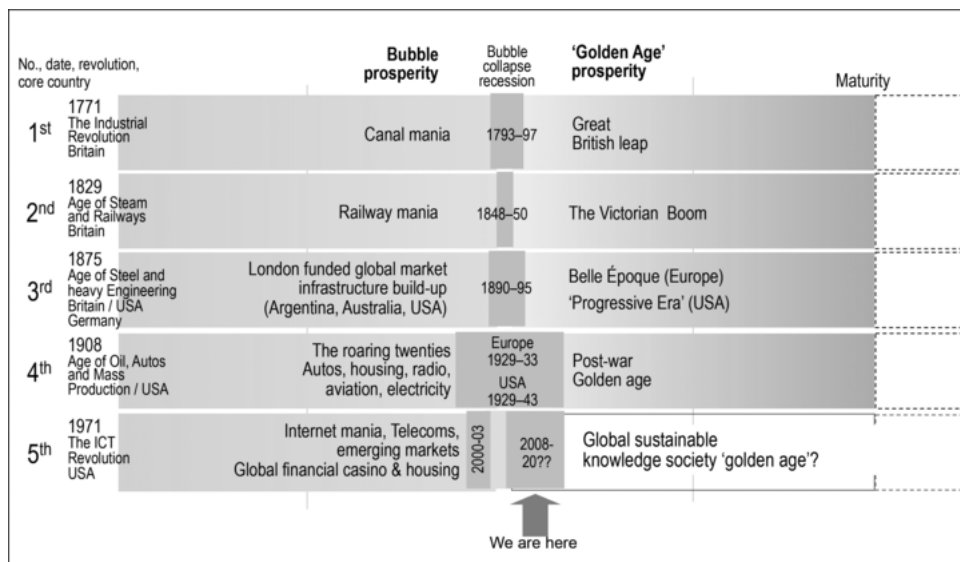


Figure 2.2: Trends in development

Source: Mazzucato & Penna (2015)

Mapping these development trends led to Mazzucato and Penna (2015) to argue that the recent and latest global ICT Revolution of the early 1970s has equally followed the same cyclical patterns, leading to a global recession since 2008, and with an emerging sustainability transition as the new golden age of prosperity that would deliver on development goals. This emerging sustainability perspective of development is in line with the Paris Agreement that saw the world adopt the Sustainable Development Goals (SDGs) in 2015, thus committing world leaders for the first time to eradicating poverty and doing so within the limits of the planet's capacity (Osborn, Cutter & Ullah, 2015).

2.4.2. Development as governance

However, if one views *development* as a social theory involving mediating diverse activities that inspire unity and diversity of human action in the process of structuring and recreating patterns in the social world order (Preston, 2010), then *development* implies the importance of governance in the processes of social engagements (Offe, 2009). Governance means processes that in many cases involve managing never-ending contestations and negotiations between those in power and those affected by it. Some scholars suggest we understand these processes of social engagements through three metatheoretical levels of adaptive complex systems, namely micro, meso and macro (Swilling, Musango & Wakeford, 2016). This means governing constated

engagements in development through all societal, private-sector institutional and policy lenses simultaneously and without privileging one level over another.

As such, if development is viewed as a grand discourse¹⁰ as some proponents suggest by linking it to job creation and economic growth (Ács, Audretsch, Strom & Strom, 2009), then the challenge of its governance is about translating its ambitions to local outcomes by discerning relational ontologies and contextualised meso-level institutional arrangements from and against decontextualised global approaches. Given the importance of governance, the ongoing *d*iscourse¹¹ in the scholarly field of development as a grand discourse has been about who should be responsible for governing related processes of engagements in ways that are equitable, just and deliver on social progress (Offe, 2009).

As is illustrated in *Figure 2.3*, to achieve just and equitable engagements in complex social phenomena like entrepreneurship, some argue human agency is a critical driver and equilibrating factor between society's sense of control and 'reified' socio-institutional state and market forces (Bauwens, Kostakis & Pazaitis, 2019; Hobbes, 1970; Lukács, 1972; Slater & Tonkiss, 2013).

To illuminate this governance argument, *Figure 2.3* shows two sets of diagrams, drawing from the literature where state and market forces are viewed against human agency. The left-hand side quadrant positions state forces against human agency, while the right-hand side relates market forces against human agency. Both state and market forces are formative contexts that are not only resilient and reified, but also traditionally the main drivers of innovation and entrepreneurship. Whereas human agency represents local citizens' sense of control of the directionality of entrepreneurship outcomes.

¹⁰ The researcher uses a distinction between discourse with normal 'd' and *d*iscourse with italic '*d*' as is inspired by Friederici (2018), where the former means macro-level universal expectations from assembled *d*iscourses; ordered and presented as an integrated frame, whereas '*d*iscourse' means typical narratives and imagery painted by meso-level practitioners to make sense of patterns in a complex social phenomenon.

¹¹ See preceding footnote.

Conceptually the two diagrams in *Figure 2.3* are connected by the argument that entrepreneurship for development is possible but likely improbable without human agency. This means that if entrepreneurship is to be truly a force for social change, and facilitate that change within the planet’s capacity, market forces would need not only to work with state forces, but also with human agency as a significant factor nudging innovations and new industries in a *just* direction.

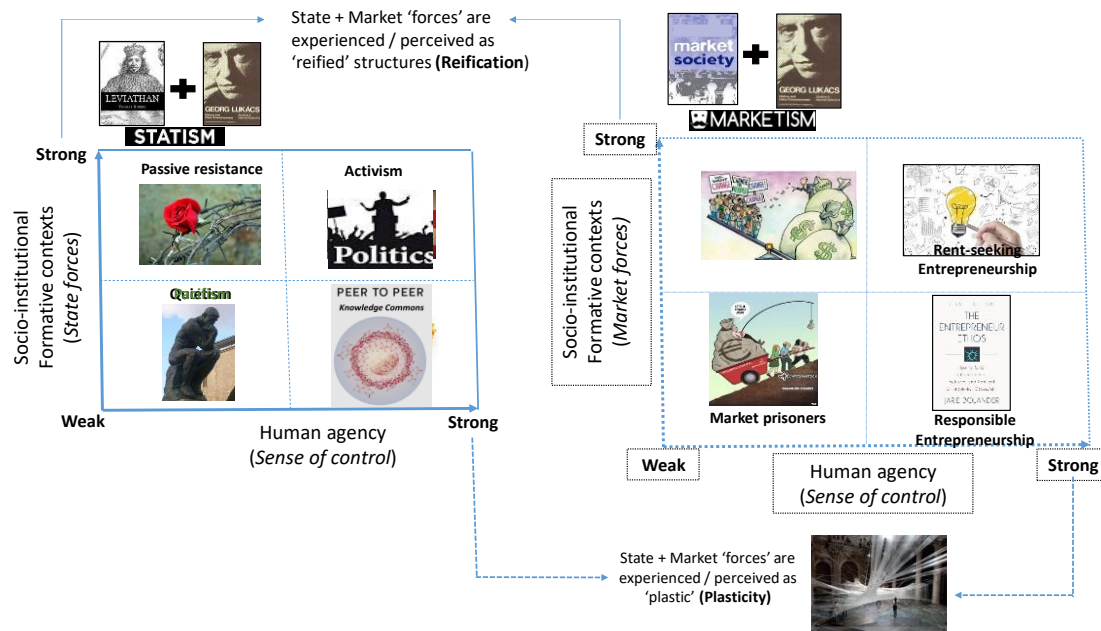


Figure 2.3: Conceptual framework: Entrepreneurship for development

Source: Author, 2021

At the same time, human agency does not necessarily suggest a position on governance that imply people become unruly or undermine the rule of law and related individual rights to creatively express themselves commercially. Instead, factoring in human agency is an attempt to experience or perceive state and market forces as ‘plastic’ or permeable so that local citizens can also influence their directionality.

Yet scholars are divided on the bounded rationality of the state governance in legislating, driving, delegating or responding to issues relating to the patterning of the social world order and human agency. Offe (2009) posits that employing meso-analytical approaches through institutional partners in the private sector should not necessarily be mutually exclusive to strong policy signalling at macro level, especially if one sees complex social engagements in the transdisciplinary lenses in which both

formal and informal stakeholders are seen as important partners or custodians *in the process* and *of* development, so that they go beyond merely following rules but also translate rules into societal norms and values.

These perspectives suggest *development* involves input activities injected into the economy in order to achieve some desired local outcomes that address societal and environment needs. Development as a grand discourse which is associated with input activities and related governance processes is therefore a means to desired social change, as is emphasised in the next subsection.

2.4.3. *Development as outcomes*

Conceptualised in this way, *development* is therefore seen as an intentional outcome from development as a technological advancement and *development* as governance processes. In this study, *development* is therefore seen as dynamic and dialogical processes of creating pathways to a just, equitable and sustainable social change (Swilling & Annecke, 2012) in ways that are experimental, non-extractive and within the planet's capacity (van den Bergh & Kallis, 2012).

Furthermore, the researcher does not perceive these dynamic and dialogical processes of development in an orthodox economic sense that assumes private sector-led exponential growth. Instead, the researcher see development through the heterodox sustainability *discourses* and perspectives of planetary boundaries (Raworth, 2017), and in which the roles of human agency (Swilling, 2020) and government are amplified to also drive outcomes beyond the *laissez-faire* facilitation and correcting of market failures, as is argued by Mazzucato and Penna (2015) and Offe (2009). In this way, development projects as input should inspire sustainable development outcomes, as projects degenerate and regenerate appropriately over time (Wahl, 2016).

2.4.4. *Entrepreneurship for development*

To connect development to entrepreneurship and in order to make the conceptual position on entrepreneurship for development clearer, the researcher will therefore make a scholarly contribution distinguishing entrepreneurship with normal letter 'e' and entrepreneurship with italic letter '*e*'. This distinction is partly inspired by the

already discussed distinction between development versus *development*, and discourses versus *discourses* in the introduction above. It is also useful as “entrepreneurship” much like “development” means very different things to different people.

Using this new distinction, entrepreneurship will be used in this research to mean a large-scale, politically inspired and acontextual grand development discourse, whereas *entrepreneurship* will mean a complex relational *discourse* aiming to achieve social change within the planet’s capacity. By implication, entrepreneurship (or entrepreneurship for economic growth) is then associated with the orthodox pursuit of growth-led development, while *entrepreneurship* (or entrepreneurship for *development*) will be associated with the heterodox pursuit of sustainable wellbeing and social change.

This way of conceptualising *entrepreneurship* is related to emerging alternative views of related literature in line with sustainable development. These heterodox entrepreneurship perspectives include Raworth’s (2017) ‘doughnut economics’ as a departure from linear economic thinking of pursuing exponential growth; Ploum, Blok, Lans and Omta’s (2018) and Vallaster, Kraus, Kailer & Baldwin’s (2019) concept of ‘sustainable’ or ‘responsible’ entrepreneurship as a future-orientated new global perspective of responsibility in line with sustainable development, and Janez Potocnik, Joachim Spangenberg, Blake Alcott, Veronika Kiss, Anna Coote, André Reichel, Sylvia Lorek’s (2018) concept of ‘sufficiency’ as a transformative development agenda and principles of sustainable consumption and production.

Regarding *development* as sustainable progress, policymakers behind entrepreneurship promotion imply there is a causal relationship between entrepreneurship and development – in some cases with an underlying assumption that entrepreneurship leads to development. These tacit assumptions have resulted in many seeing entrepreneurship as a viable strategy for addressing chronic *development* problems such as youth unemployment, poverty and inequality (Akinyoade *et al.*, 2017; Gough & Langevang, 2017). Various developing nations have since started to promote entrepreneurship more visibly than ever before (Jiménez & Zheng, 2017).

However, in reality, *entrepreneurship* faces many complexities and tends to be moderated by the quality of the local institutional environment that characterises different African cities (Barasa *et al.*, 2017; Malecki, 2018). Practitioners may as well facilitate *entrepreneurship* leading to economic growth (Kreft & Sobel, 2005; Naudé, 2008), but the literature suggests the challenges of converting economic growth to *development* are quite complex (Boettke & Coyne, 2003; Leff, 1979; Naudé, 2010). As such, whether *entrepreneurship* adopted as business as usual is a suitable strategy for catalysing an economic transition to a sustainable *development* trajectory, therefore, remain highly contested.

The murky relationship between *entrepreneurship* and *development* has also been complicated by scholarly gaps in disaggregating *entrepreneurship* as a complex social phenomenon. This disaggregation can help to highlight the policy insights needed to successfully grow the activity in differentiated environments or business lifecycle; and without it, public policymakers and practitioners risk making erroneous implementation assumptions, arguably explaining mass failure rates and poor uptake (McMullen, Wood & Kier, 2016). *Entrepreneurship* has also not led to *development*, because conventional promotion efforts employ decontextualised linear approaches leading to new young firms (or start-ups) that in many instances do not produce the consistent and significant growth that proponents of *entrepreneurship* argue is a necessary condition for *development* to occur (Isenberg & Onyemah, 2016).

At the same time, mainstream scholars such as Sussan and Acs (2017: 62) still promote *entrepreneurship* for growth, as “activities necessary to create a high-growth venture where not all markets are established or clearly defined and in which the relative part of the production function is not completely known.” This view is further supported by the Global Entrepreneurship Monitor (GEM), which conceptualises the same as a type of “ambitious” *entrepreneurship* with “high growth expectations”, innovative characteristics and an international orientation (Bosma & Kelley, 2019: 22–28).

Yet the prevailing failure of public policymakers and development institutions to think beyond economic growth and the often implicit distinction between *entrepreneurship* and *entrepreneurship* risks mass formation of destructive,

unproductive or unsustainable ventures; these could lead to businesses without prospects of producing quality jobs, wellbeing or sustainable progress (Asara *et al.*, 2015; Baumol, 1990; Upward & Jones, 2015; Venture Capital for Africa, 2018).

Consequently, while business growth is desirable to an end, entrepreneurship for growth can concurrently lead to destructive and unproductive economic activities without the desired development effects. This is because entrepreneurship for growth promotes a progressive business mindset that goes beyond survivalist aspirations, but without necessarily steering new innovations or fetching the future of industry that achieves sustainable development. For these reasons, Baumol (1990) argued that promotion efforts should be about the formation of productive entrepreneurship, a type of growing venture driven by genuine innovations and not rent-seeking or free-riding through extracting value from existing innovations. This especially occurs where strong human agency blindly follows market forces as is illustrated at the top right of *Figure 2.3*.

Recently, Christensen *et al.* (2019) have resurfaced old dusty ideas from Baumol's original and pioneering contributions of productive entrepreneurship by arguing that entrepreneurship should be about creating non-consumption innovations and not opportunity exploitation of, or mere repurposing of, existing technological value. Baumol's productive entrepreneurship was a direct antithesis to Kirzner's 'opportunity-based' entrepreneurship that understood entrepreneurship through exploitative market competitive lenses. Rent-seeking in entrepreneurship shows itself through the exploitation of existing technological platforms leading to what others have now called a 'sharing', 'subscription' or 'platform' economy, driven by mainly by software technology start-ups (Bule, 2017; Parker *et al.*, 2016).

The labour, inequality and environmental consequences of the platform economy have been argued in detail by Schor (2018), with the scholarly debate tipping more toward precarious development effects. While the consumer economics of sharing along with consequential price reductions have been attractive, among other issues, these companies have been criticised for using already existing technologies to extract more and more value from consumers while leaving the economy devoid of new value creation. This means these companies merely focus on addressing existing

consumption inefficiencies in the market, but arguably fail to do the real work of innovators, as envisioned by Schumpeter (1934) – that is to fetch the future of the industry by driving new value levers in the economy. This is a problem because it does not only create what other scholars have termed ‘platform extractivism’, as the new epitome of rent-seeking in the platform economy because of information asymmetries and unbalanced power relations between the individual consumers and technology companies (Gurumurthy, Bharthur, Chami, Vipra & Anwar, 2019), but also because this widely growing rent-seeking platform economics appears also to distort investments away from long-term, mission-orientated industry innovations (Mazzucato & Penna, 2015).

Productive entrepreneurship as a mission-orientated form is consistent with the views by heterodox innovation scholars such as Bauwens *et al.* (2019), Bolander (2017) and Mazzucato and Penna (2015), who are calling for new governance approaches in entrepreneurship, driven not only by market forces, but also by state-led mission-orientated development finance institutions (DFIs) and civil society in some peer-to-peer fashion in order to steer market innovations in line with sustainable development. Accordingly, entrepreneurship cannot be seen only through micro lenses with the individual entrepreneur as a unit of scholarly analysis, but should equally be seen through institutional meso-analytical lenses, while at the same time assessing the macro political economy strength of policy signalling not only to de-risk follow-on investments through patient capital, but also to drive responsible entrepreneurial norms and values from the ground (Mazzucato & Penna, 2015; Offe, 2009).

2.5 Theoretical discussion on different forms of entrepreneurship and how an ecological approach can help facilitate development

Drawing from the theoretical framing and supporting literature strands, *it was argued that hubs have the potential to be effective at supporting entrepreneurship that leads to development, but only if they employ a wider ecological approach.* The discussion follows an argumentative structure that draws connections between entrepreneurship and development as depicted in *Figure 2.4*. The first part of the discussion focuses on the developmental impact of entrepreneurship. It shows that there are different forms of entrepreneurship, with different implications for hubs and other forms of entrepreneurship promotion. While some can lead to growth in absolute terms, not all kinds of entrepreneurship have the desired effect, because economic growth does not automatically translate into development.

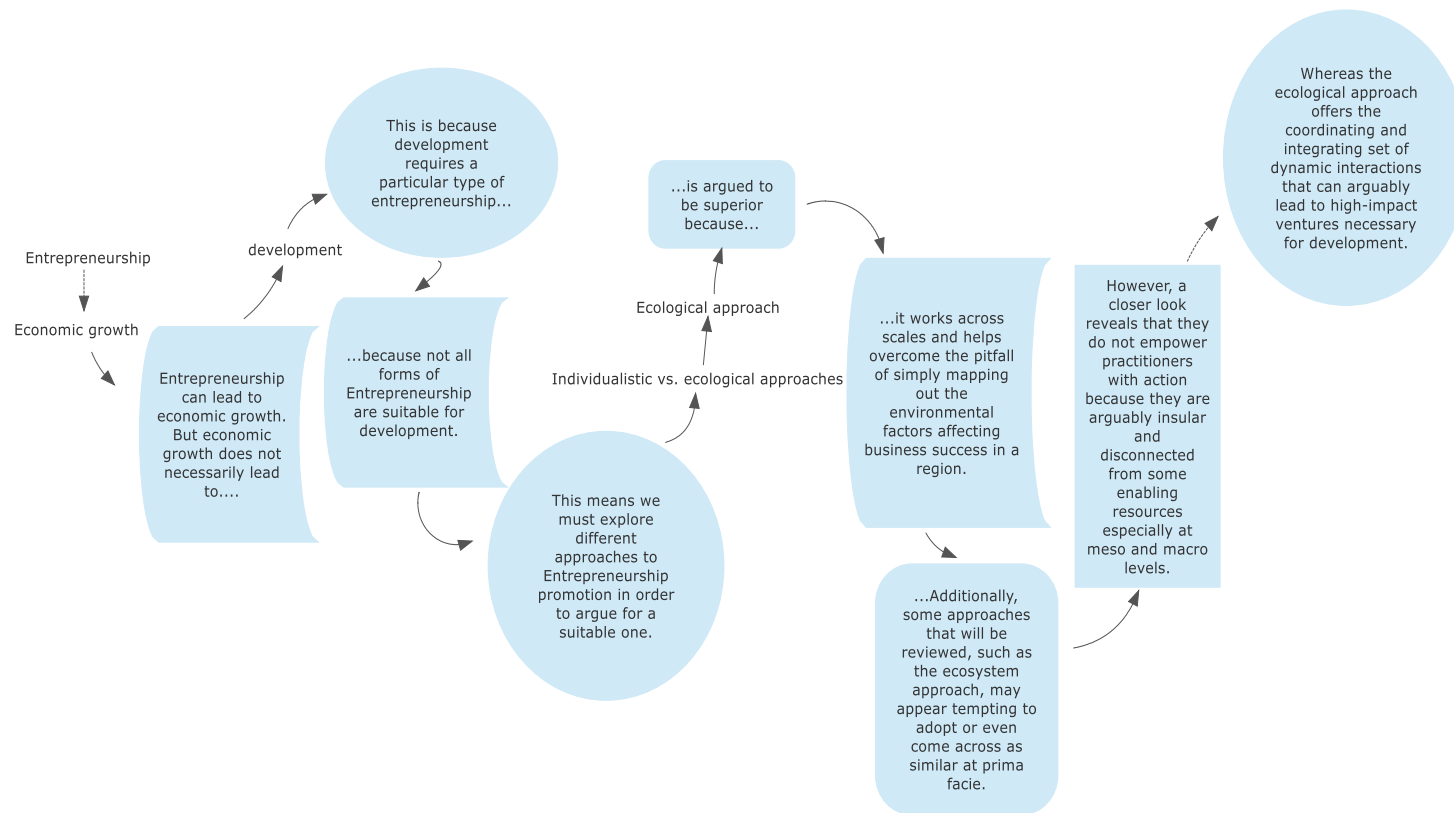


Figure 2.4: A visual depiction of discussion arguments that draw connections between entrepreneurship and development

Source: Author, 2021

The second part focuses on the approaches to promoting entrepreneurship. All approaches promoting entrepreneurship assume not only that it is important to promote entrepreneurship, but that it is possible to promote it.

However, these approaches have not been equally successful. This, it is argued, is because promoting entrepreneurship is not simple as it is not merely an individual activity, but rather a social activity that occurs within a complex interacting system. By extension, if we want more entrepreneurship, we should therefore recognise that supporting it is more than merely identifying promising individuals, changing incentives, or replicating past successes.

Rather, promoting entrepreneurship is principally about managing a dynamic ecology of supportive, interacting factors, which will be referred to as the ecological approach. Hubs emerged in recognition of the importance of creating an ecology of support so that entrepreneurs can focus on their already difficult venture issues, but not all of them put this recognition in practice. The most effective hubs are the ones that are good at creating and maintaining this ever-changing ecology.

By drawing together the two parts of the discussion, one can conclude that hubs therefore need to be ecological to be effective in promoting entrepreneurship, especially the entrepreneurship that leads to economic development.

2.5.1 Entrepreneurship and economic growth

Economic growth is a key objective of most countries. Studies have pointed out that many factors such as climate, education, property rights and saving propensity contribute to economic growth (van Stel, Carree & Thurik, 2005). Economic growth is a driver of job creation, which in turn is a function of competitiveness and high levels of productivity (Baumol & Strom, 2007). Competitiveness and productivity are often linked with fast-growing firms that bring about innovative products, services and new ways of production that push performance frontiers to new heights (Acs, 2006). Empirical studies have provided compelling evidence, especially since the mid-1990s, that new growing firms have been the main source of net new jobs, leading to public policy prioritisation and mainstreaming of entrepreneurship in recent years (Thurik & Wennekers, 2004).

According to economic theory, entrepreneurship is one of the key contributors to economic growth. However, some empirical studies have found that while significant

correlations between technological innovations and economic growth exist, there is insufficient evidence that entrepreneurial activities specifically contribute to economic growth in the same countries and period (Wong, Ho & Autio, 2005). This is partly because there are well-documented challenges in measuring entrepreneurship. Chief among these is the challenge to aggregate and isolate the way that individual entrepreneurial activity contributes to macro-economic level output (van Stel *et al.*, 2005).

This is important to understand, because it explains why *economic scholars have traditionally based their explanations of how entrepreneurship generates economic growth on an individualistic view*. Economic theory reduces economics to physics, with society seen as nothing more than individuals, individuals as atoms that can be modelled and quantified, and self-interest as the force that makes them interact (Lo & Mueller, 2012). This atomistic approach is consistent with the oversimplified view of entrepreneurs as individuals who only try to maximise their own utility (Davis, 2003; Tittenbrun, 2013), as if value-creation processes take place in isolated, safe laboratories without ever encountering environmental issues or needing to negotiate scarce resources with other competing individuals.

The idea of opportunistic individuals is consistent with orthodox economic theory and suggests that these individuals are utility-maximising economic agents pursuing narrow self-interest. *When individuals pursue narrow self-interest, this can have negative consequences*, e.g. environmental damage, social harm, social unrest from income inequality, rent-seeking behaviour, among other negative spill-overs (Bhorat, Buthelezi, Chipkin, Duma, Mondli, Peter, Qobo & Swilling, 2017; Newbert, 2003; Vallaster, Kraus, Merigó Lindahl & Nielsen, 2019). Some empirical studies have shown this to be true of entrepreneurs. They reveal that left to their own, self-interested, profit-maximising entrepreneurs have done more societal harm than good (Hwang, Golemon, Chen, Wang & Hung, 2009), leading to others even questioning whether entrepreneurship is an appropriate pathway to serving the collective interest (Bacq, Hartog & Hoogendoorn, 2016).

Approaches to entrepreneurship promotion are influenced by the theoretical frameworks they adopt, and the measures derived from such frameworks

(Mitchelmore & Rowley, 2010). The orthodox view of entrepreneurs dominates most approaches to entrepreneurship promotion (Tatli, Vassilopoulou, Özbilgin, Forson & Slutskaya, 2014), and hence such approaches tend to ignore the collective causes and negative effects of individualistic entrepreneurship.

Entrepreneurship promotion based on the idea of entrepreneurs as self-interested individuals, who operate independently from society, may increase growth but harm a country's development. Sen (1988) pointed out that while the exercise of economics involves a great deal of macroeconomic engineering and logistics. The concept of *development* suggests that those efforts should be judged on whether they achieve fundamental outcomes that enhance living conditions for human beings e.g., reducing poverty, addressing inequality and improving quality of life. However, while Sen's concept of *development* represents the common economic usage focusing *development* to the outcomes, it does not emphasise the importance of process (1988).

Development is not just about outcomes but also about the processes of human engagement, negotiation, contestation and experimentation, which ultimately determine whether outcomes are achieved in the end. In this study, *development* is seen as a dialogical process with the affected people, aimed at forging people-centric interventions that create multiple pathways to a just, equitable and sustainable social progress (Swilling & Annecke, 2012) in ways that are experimental, non-extractive and within planetary boundaries (van den Bergh & Kallis, 2012).

Individualistic promotion of entrepreneurship can harm *development* because a self-interested utility maximiser tends to undermine collective process. In fact, recent studies provide robust empirical evidence that economic development is positively correlated with individual responsibility (Davis, 2016). Thus, viewing *development* through the lenses of 'process' can help policymakers and practitioners improve or design innovative stakeholder engagements and interventions early on and not passively await impact outcomes.

2.5.2 *Development and entrepreneurship*

It has been established that economic growth does not always translate into *development*, and that economists' one-dimensional view of entrepreneurship is of limited use in guiding entrepreneurship promotion that can enhance *development*. Historically, such old ideas of a one-dimensional perspective on entrepreneurship as a mere conduit for economic growth were predominantly inspired by Kirzner (1973, 2008), Knight (1921) and Schumpeter (1911, 1934) and created a culture of entrepreneurship that has not emphasised a *developmental* perspective.

Schumpeter (1934) focused exclusively on how individuals introduce 'creative destruction' in the market process, but he was thin on the systemic constraints moderating and enabling success. Arguably this undermined the leadership role needed for institutional environment building, as if disruptive entrepreneurs simply relied on their individual abilities alone to win and be successful in new business formations (Douhan, Eliasson & Henrekson, 2006). Kirzner (2008) focused on how 'alert' individuals build new businesses by initiating and reacting to one another's competitive actions, while Knight (1921) emphasised the role of risk and uncertainty in entrepreneurship.

While these contributions filled a vacuum created by neoclassical economists who had treated entrepreneurship as a black box in their theories of the firm, based on the assumption of static equilibriums and firm production functions whose input variables were well known (Grebel, 2004; Leibenstein, 1968), they overemphasised the role of individuals. This led to the tipping of research output and practice toward individualistic or firm-level analysis (Dejaeghere & Baxter, 2014), further limiting an understanding of entrepreneurship dynamics to individualistic perspectives that explain the dominant conventional knowledge. Consequentially, most entrepreneurship studies have based their investigations and measurements on individual competencies (Farrington, Venter & Louw, 2012), further atomising entrepreneurship science to mere profit-maximising individuals.

Some, like institutional economists, have tried to take a broader perspective, but have not gone far enough. By 1968, economists started to see that the classical way of

seeing entrepreneurship could not be the only perspective. In particular, Baumol (1968) introduced an institutional approach, situating entrepreneurship outside individualistic or firm-level analysis. Baumol (1968) wrote about what individuals would need in order to navigate the institutional environment that Kirzner (1973, 2008) and Schumpeter (1911, 1934) had neglected, as if the environment did not matter.

We therefore need to look beyond economic theory toward fields that are more consistent with a developmental view. To date, there are alternative views that overcome the shortcoming of not recognising that entrepreneurship functions within a system that works across different sciences (Audretsch, Kuratko & Link, 2015) and scales. Working across scales means entrepreneurship requires not just understanding of multiple sciences, but also collective systemic effort to achieve productive results. Alternative entrepreneurship perspectives recognise that collective systemic effort means the phenomenon cannot be seen as a mere profit-maximising endeavour. Like the old African adage that ‘it takes a village to raise a child’, a systems perspective is about acknowledging that it takes a village to raise an entrepreneur (Danes, 2013). In turn, that the entrepreneur also helps co-create the village. This means the external factors matter but, more importantly, that entrepreneurial success cannot exclude the evaluation of how the entrepreneur also in turn cyclically responds or becomes responsible for nurturing the very environment that contributed to the venture success in the first place.

Progressive fields that look at entrepreneurs beyond economic theory and psychological sciences include geographic and sustainability sciences. Geography and sustainability sciences adopt progressive *developmental perspectives toward entrepreneurship by shifting the mission of entrepreneurship away from growing individual wealth to growing regions and pursuing that mission in just and environmentally friendly ways.* Additionally, there are also growing voices of heterodox scholars that hold a systems view of entrepreneurship, emphasising the importance of a multiplicity of factors that must work together to achieve collective interest beyond profit maximisation or market paradigms. These alternative perspectives see entrepreneurship as *developmental* and desired if it embodies

responsible properties that create additional societal or environmental value beyond profit maximisation (Vallaster, Kraus, Kailer *et al.*, 2019).

Geographical sciences have helped to link locality issues of proximity or spatial connectedness in enabling support, thus helping entrepreneurship promotion efforts to address issues related to resource constraints, mobility of finance and intentional communities. The basic proposition of these scholars is that the environment is more important to investigate and understand than merely fixating on individual entrepreneurs, because spatial conditions can enable or constrain new business formation (De Falco, 2019; Greiner & Sakdapolrak, 2013; Malecki, 2018).

The sustainability view on entrepreneurship, on the other hand, was recently inspired by the Paris Agreement that saw world leaders commit and adopt sustainable development goals (SDGs) in 2015 (United Nations, 2015). This view has inspired a shift toward the ‘greening’ of business practices. Beyond SDGs, the call for greening businesses has also been inspired by the bigger global sustainability discourse of living within planetary boundaries to aid environmental restoration and longevity (van den Bergh & Kallis, 2012; Raworth, 2017; Steffen *et al.*, 2015). Scholars behind the sustainability view in entrepreneurship have started to map out drivers of ‘sustainable entrepreneurship’ that would engender values and attitudes promoting sustainability (Vuorio, Puumalainen & Fellnhofer, 2018), while a number of support organisations have started to dedicate their missions to green entrepreneurship or producing ‘ecopreneurs’. These perspectives help encourage new businesses to focus on addressing some SDGs by innovating to balance social, economic and environmental gains.

These alternative researchers with geographical and sustainability worldviews have shown that entrepreneurship emerges from a system and has effects on the system (Ács, Autio & Szerb, 2014; Harrington, 2017; Matt & Schaeffer, 2018). Chirchiatti (2018), for example, has argued that Kenya is able to produce successful entrepreneurs based on its geographical or ecosystem strategy, created by favourable economic reforms and a mature support environment. It is therefore impossible to promote entrepreneurship without considering the systemic factors that influence

entrepreneurs, and without considering the effects that entrepreneurship has on the system.

Thus, alternative perspectives on entrepreneurship are most likely to accrue organic developmental impacts because they challenge entrepreneurship stakeholders to think beyond limited market-based paradigms or superficial impact. Instead, they help challenge entrepreneurship promotion efforts to think in communities, and to produce entrepreneurs who are responsible and responsive to systemic issues undermining social progress and environmental restoration (Bloom & Chatterji, 2009; Rae, 2010: 595; Upward & Jones, 2015).

Having established that there are scientific fields beyond economics that are more consistent with a *development* perspective, one can now explore if there is an entrepreneurship promotion approach that draws from these fields and is also consistent with *development*. In the next section the researcher explores an approach that draws its theoretical foundations from fields beyond economics and is consistent with *development*. The researcher contends that such an approach is ecological in nature and embraces other fields, as covered in this section, beyond the sciences traditionally linked with entrepreneurship.

2.5.3 *Development and ecological approach*

Entrepreneurship is important to promote, and it is possible to promote it. Policy makers and prominent development institutions have long advocated for entrepreneurship. It is believed that entrepreneurship can absorb young people into employment opportunities and contribute to reducing the related social issues that undermine development (African Development Bank (AfDB) *et al.*, 2017). Much has been written about the link between entrepreneurship and economic outcomes such as economic growth and employment (African Union Commission (AUC), 2015b; Atiase *et al.*, 2017; Olafsen & Cook, 2016). Yet, while there is a general agreement that entrepreneurship can (Henry, Hill & Leitch, 2005) and should be promoted (Acs, 2006; Pantea *et al.*, 2014), there is no consensus on which entrepreneurship promotion approaches are working better than others in different contexts in order to achieve development outcomes.

The ecological approach to entrepreneurship promotion is a departure from the conventional approaches emanating from the default inward-looking neoclassical economic theory (Auerswald, 2015), because it is rooted in aggregation and optimisation of multiple institutional efforts. Auerswald (2015: 3) argues that mainstream neoclassical theory is not well suited to describing the dynamics, assessments and policy implications of entrepreneurship, because of its limited theoretical assumptions reducing the activity to known factors that can easily be copied in a simple production function. The ecological approach embraces the view that entrepreneurship ecosystems which make up the ecology of support factors to new venture creation are a highly complex, “variegated, multi-actor and multi-scalar phenomenon” (Brown & Mason, 2017: 1), “whose function can be reduced only with a high degree of imperfection to a single index or even to an array of indices” (Auerswald, 2015: 3).

Furthermore, the researcher contends that there is a mutually reinforcing relationship between an ecological approach and development (see *Figure 2.5*). On the one hand, a development science perspective arguably makes institutions transition more quickly to an ecological approach. On the other hand, being ecological can facilitate development processes better.

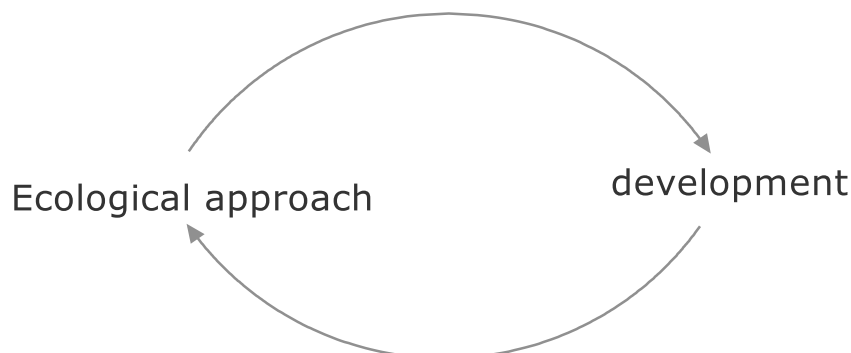


Figure 2.5: Dynamic interaction between an ecological approach and development

Source: Author, 2021

As is visualised in *Figure 2.6*, it is first contended that high-impact ventures that facilitate productive entrepreneurship cannot take place without intentionally embracing the cross-scale nature of support that makes it possible for high-impact

ventures not only to start but also to grow and win. High-impact ventures are important because they bring about new socio-economic value leading not only to economic growth but also development (Bosma & Kelley, 2019; Sussan & Acs, 2017). An enabling regulatory environment is important for understanding the dynamics of mainstreaming the ecological approach that has been argued to facilitate openness and working across scales, i.e. micro, meso and macro levels (Sambuli & Whitt, 2017).

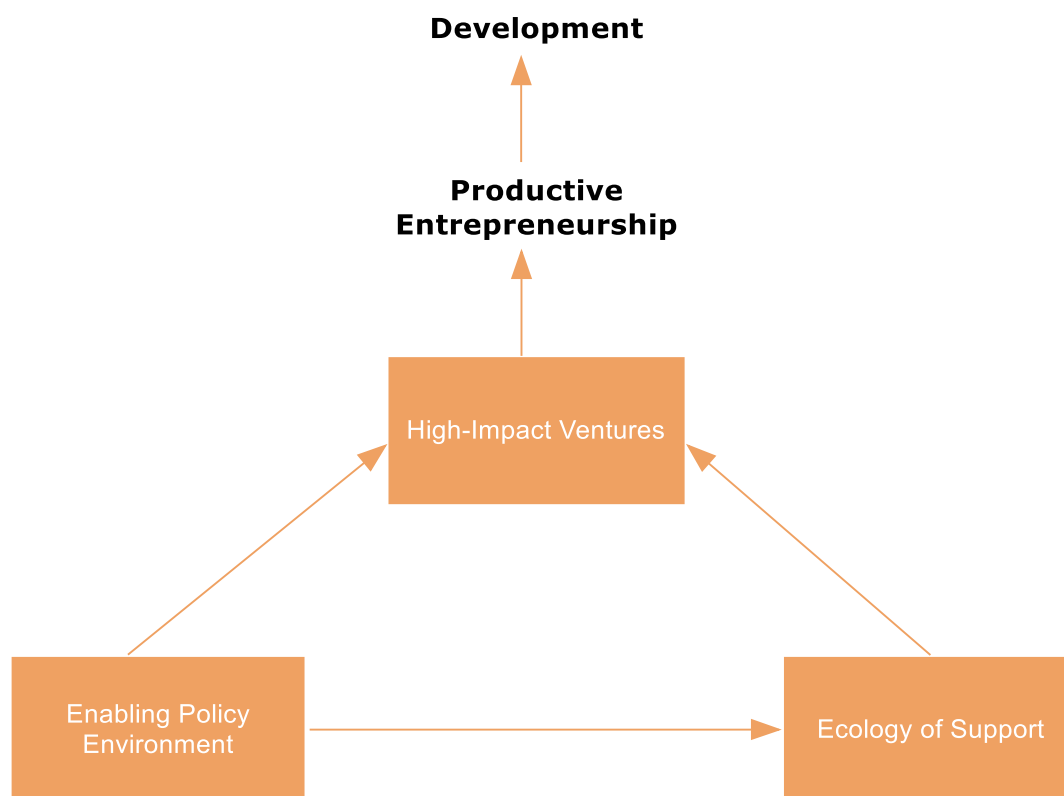


Figure 2.6: Systemic conditions that facilitate productive entrepreneurship

Source: Author, 2021

This is because the wicked nature of creating high-impact ventures necessitates for enhancing a dynamic and mutually reinforcing relationship between development practice and ecology of support. One implicit claim put forward is that a development perspective can help conventional hubs take advantage of external experiences, transferrable approaches and dialogic practices, which in turn makes them ecological; the other claim offered is that being ecological leads to the creation and sustaining of

high-growth ventures which in turn contribute to productive entrepreneurship that is theoretically linked with development, according to Baumol (1990).

However, although the researcher argued that promoting entrepreneurship requires a different approach, *different approaches already exist but not all have been equally successful*. As a way of providing a basis for the contrast, the following section explores different entrepreneurship promotion approaches along with a discussion of which ones have been more successful than others. The discussion starts from the basis that the ecological approach is not a binary concept, meaning that different approaches may have differing degrees of being ecological and are not seen in categorical terms as being either ecological or not. Instead, the claim is that some approaches show more properties of being ecological than others. The section concludes by arguing how existing approaches are failing to realise fundamental elements of the ecological approach, thus making them less suitable to facilitate entrepreneurship for development.

2.5.4 *Different approaches to entrepreneurship promotion*

Historically, *traditional* approaches such as research and development (R&D) and business venturing have led to successful large-scale business formation. The traditional R&D approach involves intellectual property (IP) development, mainly from public-funded research institutions or dedicated large company laboratories (Vanhaverbeke, Van de Vrande & Chesbrough, 2008). This is essentially what has made entrepreneurship so successful in the United States of America (USA) by introducing huge innovations into the market through university-government based tech innovations, often experimentally tested in the military economy before they are refined and taken to the wider market. This approach helps form new businesses through the commercialisation of the IP.

The second traditional approach is business venturing, where a large corporation ventures into independent business units by investing in a new business revenue model in the same or different industry (Burgelman, 1983, 1984). This approach can often lead to the formation of large-scale companies more quickly as the new venture enjoys the financial and market access of the bigger sister corporation. The successful

famous mobile money system called M-Pesa, conceptualised and launched by Safaricom, a Kenyan Vodafone corporate brand, is a good example (Amankwah-amoah, Osabutey & Egbetokun, 2018). While these traditional approaches have enjoyed success in terms of achieving growth-orientated firms, their success is largely attributable to government or large corporation support that only goes to assist fewer individuals or organisations.

As is shown in *Table 2.2*, beyond *traditional* approaches there are *conventional* approaches largely used by civil society, universities and private organisations. Conventional approaches can be broadly categorised into didactical and immersive (InfoDev, 2014; Kelly & Firestone, 2016: 5; Wangari & Crawford, 2019). Didactical approaches are generally concerned with how one instructs or teaches entrepreneurship in ways that translate into the acquisition of a skill. Immersive approaches are concerned with achieving a behavioural shift. The latter tend to be place-based or residential, where an enterprise support organisation (ESO) seeks to embed real experiences, guts, grit and will for what it takes to become an entrepreneur, usually in some fellowship or values-based style. Immersive approaches are about character building as opposed to mere skills development.

Table 2.2: Entrepreneurship promotion approaches.

Approach	Methods	Examples	Sources
Traditional	Focus on large-scale or growth-orientated businesses	R&D; Corporate Venturing	(Burgelman, 1983, 1984; Vanhaverbeke <i>et al.</i> , 2008)
Didactical	Instructive, classroom-based skills development	Conventional incubators and accelerators	(InfoDev, 2014; Kelly & Firestone, 2016: 5; Wangari & Crawford, 2019)
Immersive	Place-based and values-based fellowships	Residential incubators and accelerators	(InfoDev, 2014; Kelly & Firestone, 2016: 5; Wangari & Crawford,

			2019)
Grassroots	Focus on micro to small businesses	Stokvels, Credit Unions, Cooperatives	(Buijs, 1998; Tewari, 2011)
Emerging and Experimental	Focus on high-growth businesses with patient capital	Venture Philanthropy	(Schramm, 2006)

Source: Author, 2021

The abounding need for net new quality jobs has necessitated an exploration of other grassroots business formation approaches that mobilise not only government and corporate resources, but also civil society and media groups alike. As is shown in *Table 3*, popular grassroots business formation approaches are stokvels that grow into credit unions over time (Buijs, 1998; Groenewald & Jordaan, 2012). These credit unions often grow to what is known as ‘*cooperatives*’ in some emerging markets and successful ones tend to create new businesses (Tewari, 2011).

Finally, an emerging but experimental approach is venture philanthropy, which usually takes the form of a well-endowed and dedicated organisation investing in specialist development institutions that grow ventures by providing patient capital, thus allowing for longer-run market learnings and de-risking of follow-on investments for short-term-orientated, impatient venture capitalists and private equity firms (Schramm, 2006).

Nonetheless, many of these different approaches fail to realise that *promoting entrepreneurship is not simple, because it is not merely an individual activity, but rather a social activity that occurs within a complex interacting system* (Tatli *et al.*, 2014). Most of them tend to focus on identifying individuals with talent and incentivising them to pursue entrepreneurship through training institutional programmes that have been criticised for copying each other (Malunda, 2012), or for failing to produce growing ventures (Dutt, Ganesh, Bauer, Singh, Loharchalwala & Pulpudi, 2015), when there is a maturing understanding that it takes a village to raise an entrepreneur (Danes, 2013; Harrington, 2017). Entrepreneurship takes place within specific social, business and policy environments that moderate or enable success. Yet few support organisations dedicate some of their functions to brokering, optimising,

aggregating or facilitation so that support programmes organise and create impact in a systemic fashion (Stam & Spigel, 2017). The interaction between social context, business landscape and policy environment determine the type and trajectory of entrepreneurship in a region.

Building on the foundational arguments of this discussion, the next section offers further arguments on why existing individual-based or so-called “ecosystem-based” conventional and emerging approaches are not only less ecological but also less effective in supporting new ventures. The argument starts out by outlining why these approaches are reductionist in atomising entrepreneurship to capacitating individuals and neglecting the work of making ecosystems aggregate and optimise efforts.

2.5.5 *Ecological versus individualised approaches*

While entrepreneurship can be promoted, not all approaches are consistent with the ecological approach. Invariably the theoretical origins of entrepreneurship discussed earlier explain the individualistic nature of conventional approaches in promoting entrepreneurship. The consequence of viewing entrepreneurship this way has led to the reductionist type of thinking which posits that simply identifying promising individuals, changing incentives or replicating past successes will grow entrepreneurship. This view undermines the external social, institutional and policy conditions, thereby treating the external stakeholder environment as exogenous variables outside their control (the classic way of thinking). More critical is that these individualistic conventional approaches are largely yielding failing start-ups and very few high-growth firms necessary for *productive* entrepreneurship (Herrington & Kew, 2017).

In contrast, 21st-century scholars have increasingly recognised the broader social system or context outside the operational confines of the individual entrepreneur or firm. According to Brown and Mason (2017), this systems view was popularised after the work of James Moore (1993) emphasised the role of the external environment in business science and management literature. That contributed significantly to scholars employing a systems approach to entrepreneurship research in what is now referred to as ‘systems of entrepreneurship’ or systemic entrepreneurship; this has been described

as entailing forces beyond the boundaries of an organisation but within those of a region that can contribute to a firm's overall competitiveness (Daniel *et al.*, 2018; Olafsen & Cook, 2016). A systems approach to entrepreneurship is largely related to the industrial district, cluster, and regional innovation systems (RIS) approaches (Malecki, 2018), with a distinct emphasis on entrepreneurs and new venture creation.

The view that entrepreneurship promotion requires development practitioners to strengthen the relationship and interaction between policy, finance, culture, support, human capital and markets (Isenberg, 2010) has shifted the debate away from a mere human capital perspective to *a recognition that if regions want more entrepreneurship, supporting it is not simply about identifying promising individuals, changing incentives or replicating past successes*. Globally, empirical studies have shown that the bottleneck to growing high-impact entrepreneurship is not lack of human capital and the related skills gap per se, but lack of access to finance, especially the missing-middle or gap within the gap in finance provision for market tests or prototyping, lack of quality specialist mentorship to aid SGBs, and lack of access to experienced and skilled management-level talent which also tends to undermine new venture growth (Ács *et al.*, 2014). These gaps cannot easily be filled by one institution and therefore require a catalytic pooling together of multi-stakeholder resources, through some advocacy, facilitation and orchestration of meso and macro-level support activities (Danes, 2013).

2.6 Summary

In summary, the conventional approaches are largely inward-looking with modest tones resembling individualistic properties that externalise individual entrepreneur bottlenecks to market processes, thus leaving bottlenecks to somewhat take care of themselves under neo-liberal equilibrium or linear assumptions discussed in the chapter (Bula, 2012; Reisman, 1991).

While some conventional approaches have an appreciation of the impact of external factors, they fail to guide practitioners on how to be proactive in interacting and managing meso-level and policy stakeholders. For these approaches, identification of entrepreneurial talent, fundraising, delivering off-the-shelf programmes and reporting

to funders are the core functions. This has therefore attracted criticism around lack of integration, poor lobbying of government policy support, and not responding to entrepreneur journey challenges making up barriers faced by local entrepreneurs (Mason & Brown, 2014).

It was argued in the main discussion that, while evolutionary economic theory made an important contribution in crystallising the role of entrepreneurship in the formal economy, it reduced entrepreneurship into a micro-economic phenomenon by overly focusing on the individual entrepreneur and understating the mediating factor of institutional arrangements and the political economy. A macro-economic perspective benefits African entrepreneurship better, because it acknowledges the contextual importance of institutional arrangements and the political economy as enabling or constraining factors.

Building on this foundational basis, the researcher went on to argue that if entrepreneurship is to achieve development outcomes, scholars needed to first go beyond economic theory and expand their conceptual understanding through other relevant scientific areas such as geography and sustainability. Such an interdisciplinary perspective was attractive because it would inspire a conceptual redescription of entrepreneurship with an explicit link to development.

To seed a future debate on what would be an appropriate conceptual redescription, it was important to offer a new theoretical framework for entrepreneurship. Using development theory, the researcher argued for a new conceptual redescription distinguishing Entrepreneurship with normal letter 'e' and entrepreneurship with italic letter 'e'. This distinction was offered as a useful scholarly contribution, because "entrepreneurship" much like "development" means very different things to different people.

Using these newly constructed denotations, entrepreneurship in this research was redescribed as a large-scale, politically inspired and acontextual grand development discourse, with *entrepreneurship* conceptually positioned as a complex relational *discourse* aimed at achieving social change within the planet's capacity. By implication, entrepreneurship (or entrepreneurship for growth) was then argued to be

associated with the orthodox pursuit of growth-led development, while entrepreneurship (or entrepreneurship for *development*) was associated with the heterodox pursuit of sustainable wellbeing and social change.

Furthermore, this theoretical contribution was used in the subsequent discussion to associate theoretical limitations of foundational theory holding entrepreneurship as the basis for 'solo' institutional approaches that continue to characterise hub practices and approaches in Africa. If the foundational theories behind entrepreneurship were in and of themselves individualistic, it was not inconceivable that practitioners employing the theories would also be individualistically oriented, as heterodox scholars have convincingly debated.

As such, the ecological approach is more relevant because it recognises the importance of creating a dynamic ecology of support among hubs, so that African entrepreneurs can focus on their already difficult venture issues. However, not all hubs put this recognition into practice. Thus, the most dynamic hubs are the ones that are good at creating and maintaining this ever-changing ecology.

Chapter 3 – A Transformative Transdisciplinary Research Methodology to Developmental Entrepreneurship in Africa

3.1 Introduction

This chapter discusses and argues for the appropriate research design paradigm, methodology and methods that are agile enough to incorporate the multidisciplinary and relational aspects of entrepreneurship in line with a developmental perspective. This is because this research endeavour was undertaken to intentionally facilitate transformational changes that can translate entrepreneurship into development in Africa. The choice of research paradigm and methodology is discussed within the context of the main argument presented in the preceding chapter, namely that an ecological hub approach is arguably more appropriate for promoting entrepreneurship than conventional approaches, because of its ability to embrace the relational and macro-economic perspectives of entrepreneurship. By implication, the choice of research design and methods follow from the selected paradigm and methodology.

3.2 Research design paradigm

It has recently been argued by van Breda and Swilling (2019) that empirical studies in social science require an appropriate methodological agility in order to effect social change in a complex world. Van Breda (2019: 11) defines methodological agility as

the ability to switch between the four different kinds of methodologies – of mono-, multi-, inter- and trans-disciplinarity – when facing different kinds of contextual challenges – without falling into the trap of committing some category errors along the way by ensuring that the different kinds of contexts are approached in terms of context-relevant methodological concepts, logics, principles, practices and methods, and not in terms of the concepts, logics, principles, practices, methods etc. that are relevant in / for another context.

It is already argued in the theoretical chapter (Chapter 2) that entrepreneurship is a complex social phenomenon that cannot be understood through reductionist conceptions of individual agency that understate the importance of environmental

factors that moderate structures. Yet some scholars have argued that most entrepreneurship studies lack methodological agility by employing positivist paradigms, based on deductive ideologies assuming individual entrepreneurs simply require psychological strength and agency to navigate known parameters or ‘truths’ that can arguably be quantitatively modelled in order to successfully start and run business ventures (Morgan, 2014).

This deterministic positivist paradigm has not only stunted the necessary theoretical contributions in the field of entrepreneurship, but also led to alternative scholars calling for more constructivist paradigms that acknowledge the importance of structure, based on the ideological perspectives that entrepreneurship is a relational phenomenon that requires less presumptive research methodologies and methods (Denzin, 2009; Tatli *et al.*, 2014).

This study therefore took a constructivist ontological stance, acknowledging that knowledge is created in social realities (Cresswell, 2014). At the same time, an interpretivist epistemology was employed with a worldview that assumes effective understanding of social phenomenon is possible mainly through interpretation (Leitch, Hill & Harrison, 2010) and observation (Willig & Rogers, 2017).

For these reasons, this study embraced pluralist approaches to knowledge-generation methods, acknowledging that research paradigms go beyond the dualistic dichotomous choices between post-positivism and constructionism (Molina-Azorín, López-Gamero, Pereira-Moliner & Pertusa-Ortega, 2012). This allowed the analysis to also draw from a grounded pragmatist paradigm, where knowledge generation is abductively constructed based on interpretation of stakeholder beliefs about what choices and actions are appropriate to determine what they deem to be an ever-changing state of action-based reality (Kaushik & Walsh, 2019).

The abductive logic followed in the study means that, where applicable, a healthy or agile use of different reasoning logics was applied to make sense of generated theoretical and empirical insights at various stages of the investigation. In other words, the abductive reasoning process of discovery followed in the study was not an antithesis to inductive or deductive reasoning; where applicable, the latter were

employed for complementary analysis or synthesis. In fact, the value of following an abductive logic lies in the ability to switch between inductive, deductive and abductive reasoning logics. In the concluding chapter the researcher highlighted in detail how and where in this investigation a healthy pivoting across these three reasoning logics was applied.

According to Simone and Pieterse (2017: xii–xiii), grounded pragmatism “denotes theoretical rest-stops that store conceptual resources to support sense-making of highly fluid contexts” in order to “articulate the generous engagement” with the details of data and provide a “re-description [of] what might be going on while keeping an eye on clarifying resonant propositions”.

This epistemological worldview fits the reality of African entrepreneurs, which requires deep engagements with a stakeholder group who often experience not only disempowering political and social contextual boundaries to their actions, but also intergenerational burdens, limiting the way that they can act and view reality, as has been argued in preceding chapters.

3.3 Transdisciplinary research methodology

The study objectives were addressed through a transdisciplinary research (TDR) methodology that aims to integrate scientific and societal knowledge in exploring hubs as development institutions in Africa. This means both academic and non-academic literature were reviewed with the aim of undertaking a meta-analysis of the concepts and strategies applied to study and operationalise entrepreneurship in Africa. This was followed by engaging scientific and social actors (policymakers, the funding community, enterprise support organisations and development practitioners) in a participatory mapping of the approaches and practices used to implement entrepreneurship promotion through hubs.

The research project drew on the extensive networks of social actors such as the African Entrepreneurship Collective (trading as Inkomoko),¹² AfriLabs,¹³ Nairobi

¹² See, <https://africanentrepreneurcollective.org/>.

¹³ See, <http://www.afrilabs.com/>.

Design Institute (NDI),¹⁴ African Union Commission (AUC),¹⁵ Ashesi University Incubator (AVI)¹⁶ and Allan & Gill Gray Philanthropy Africa (AGGP).¹⁷ These development institutions have a continental presence in many African countries and provide a gateway for academics and relevant stakeholders. In this way, a conceptual understanding of hub practices was grounded in the lived experiences of local actors involved in African scholarship and practice.

The rationale behind using TDR methodology was to enhance partnerships that can advance African scholarship and advocacy on entrepreneurship-led development, especially towards the realisation of Sustainable Development Goals 8¹⁸ and 9¹⁹ of the UN's Agenda 2030 (Osborn *et al.*, 2015). TDR thus uses implementation challenges to anchor the rationale, so that projects bridge implementation knowledge and social co-learning processes between stakeholders by using experimental pilot projects and the elimination of global 'best practice' for organising structures as well as practices that do not work in African settings (Moser, 2016).

3.3.1 TDR Phases

TDR empirical studies suggest the methodology and associated processes are nonlinear but iterative, and may differ for each TD project. Regeer and Bunders (2009), Lang, Wiek, Bergmann, Stauffacher, Martens, Moll, Swilling and Thomas (2012) and Mauser, Klepper, Rice, Schmalzbauer, Hackmann, Leemans and Moore (2013), however, propose five broad phases in following a TD research methodology. These involve *Problem framing and stakeholder engagement (co-design)* as framing and reframing of the inquiry; *co-production* of new knowledge; *dissemination of results* as bringing results to fruition; and *inspiring action*.

Problem framing and stakeholder engagement (co-design) or the embedded enquiry involves actor and context analysis to identify relevant stakeholders, collaboratively defining the societal problems and goals to be addressed by the project, developing

¹⁴ See, <https://nairobi.design/>.

¹⁵ See, <http://au.int/>.

¹⁶ See, <https://www.nexti2i.com/ashesi-venture-incubator/>.

¹⁷ See, www.jasiri.org and www.entrepreneurshipchallenge.africa.

¹⁸ Implementation of sustained, inclusive, and sustainable economic growth.

¹⁹ Resilient infrastructure along with the promotion of inclusive and sustainable industrialization and the fostering of innovation.

research questions according to the goals and scientific novelty, building a collaborative research team and designing a strategy for collaborative knowledge co-production.

Co-production of new knowledge involves bringing scientists with different backgrounds and stakeholders together in a structured way to reach project goals; applying and adjusting methods for knowledge co-production according to the project goals; developing bridging concepts/boundary objects that are tangible for the actors involved; carefully designing, preparing and facilitating interactions; and assigning and supporting appropriate roles for practitioners and researchers, referring to the interests, needs, wishes (and fears) of the actors.

Bringing results to fruition involves integrating results to resolve or mitigate the problem addressed, as well as integrating the results into the scientific body of knowledge. This is done by producing targeted products for science, policy and practitioners through relevant products with exponents from the target group and long-term stakeholder interactions through following up projects, and establishing organisational or appropriate platforms in order to build long-term cooperation, intensify social learning processes and achieving long-term impact.

Finally, *inspiring action* involves designing micro pilots of safe-to-fail experimentations that translate the knowledge product from TD processes into tangible impacts for the society. This phase is often about using knowledge products to inspire action for the achievement of societal impact. This means connecting knowledge to *development actors* and policymakers behind entrepreneurship promotion in Africa.

Below an autobiographical journey is provided to outline how this research inquiry has emerged from embeddedness with key stakeholder institutions in the African entrepreneurship space. The researcher reflects on this journey using autoethnography. Autoethnography is a reflective method of inquiry that involves one's account of one's own experiences, learning and meaning making through self-narratives (McMillan & Price, 2010). It is useful because it helps the reader see the

research through the reflexive lenses of the researcher, by connecting that personal journey or experience to its cultural, social and political context (Chang, 2016).

For this study, the research journey involved developing an own experience between 2016 and 2018, while visiting different hubs in Ghana, Kenya, Rwanda and other African innovation ecosystems such as Tanzania, Ethiopia and Algeria. During these visits the researcher developed a deep desire and commitment to understand African entrepreneurs' cultural experiences and narrate them within the broader social sciences and entrepreneurship literature. This enabled the researcher to study entrepreneurship with an appreciation of practical realities on the ground.

3.3.2 Autoethnography

Much of this research inquiry has largely emerged from my embeddedness with the above development institutions (see section 3.3) promoting African entrepreneurship. A list of initial probing questions was inspired by months of interaction with the executive team of AfriLabs. These discussions led to invitations to attend AfriLabs' annual gatherings of member hubs in 2018 (in Tanzania) and subsequently not only attending but also speaking at the 2019 gathering (Ethiopia). The AfriLabs annual gathering convenes about one quarter of the continent's total entrepreneurship and innovation hubs.

Furthermore, when the researcher commenced the study as an international entrepreneurship consultant for the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) to assist with the conceptualisation and setting up of the new entrepreneurship and innovation hub in the city of Tlemcen in Algeria. The researcher also worked closely with Allan and Gill Gray Philanthropy, mandated to deepen entrepreneurship promotion efforts in ten African countries since 2019.

Embeddedness in these entrepreneurship development actors did not only inspire this research endeavour, but also helped deepen the contextual understanding of the entrepreneurship landscape in Africa and informed my initial probing questions. From this point, the researcher began engaging informally with several hubs in Kigali (Rwanda), Nairobi (Kenya) and Accra (Ghana) to garner their inspiration and purpose

of existence in support of African entrepreneurs. Not only was the information about these hubs read up online, but it was also gathered through in-person visits to informally observe their activities without formally documenting information or insights. It was after such rich informal engagements that an early research agenda and possible research sites were identified. This informed the data collection strategy.

3.4 Data Generation Strategy

The study generated data from three African hubs situated in the cities of Accra (Ghana), Nairobi (Kenya) and Kigali (Rwanda). These hubs are called AVI, NDI and Inkomoko, respectively. Outside these three research sites, the researcher also observed pertinent broader continental themes, issues and opportunities affecting hubs from continued engagements with AfriLabs. AfriLabs is an independent development practitioner institution, based in the capital city of Nigeria, Abuja. It exists to facilitate transnational knowledge sharing of practice, as well as the collaboration of hubs across the continent to better promote African innovation and entrepreneurship. With an Africa-wide entrepreneurship network of over 170 technology and innovation hubs from 45 African countries, AfriLabs convenes about a quarter²⁰ of hubs on the continent.

Given this is a ETTDR process that took place during the Covid-19 pandemic, bringing together stakeholders in workshop settings was impossible as travel limitations had impacted on visiting the research sites (Rwanda, Kenya and Ghana). The researcher needed instead to draw on pre-Covid-19 contacts in these countries who, in turn, helped forward the online site for data collection to their own contacts and entrepreneurs on the ground. This research strategy helped generate sufficient quantitative and qualitative stakeholder data for generating evidence-based decision-making, policies for taking action, and practical plans for further developing entrepreneurship on the African continent.

To be specific, Covid-19 emerged at the beginning 2020 at a time that the researcher was preparing to visit Ghana, Rwanda and Kenya for stakeholder interviews and focus group discussions which would form part of my broader data-collection process.

²⁰ Based on Afrilabs & Briter Bridges's (2019) estimation that Africa has about 643 hubs.

However, travel restrictions meant that no travels could be undertaken. This experience required the researcher to be more agile and explore alternative data-collection methods and technologies that would still achieve the research objectives. One of these technology and methodological alternatives was SenseMaker®, which had been introduced two years earlier at a Stellenbosch University Transdisciplinary Methodology Summer Course that was co-facilitated by Ms Zhen Goh from the technology owner, Cognitive Edge, and Dr van Breda of Stellenbosch University's Centre for Complex Systems in Transition.

Whereas the researcher had expected to conduct a limited number of 'expert' interviews and focus groups before the pandemic, through this experience the study ended up collecting 100 stories across Ghana, Kenya and Rwanda, which would never have been possible without a creative online data-collection tool such as SenseMaker®'s Collector™.

For data collection, the study used nonprobability sampling strategy known as convenience sampling. Convenience sampling is a common nonprobability sampling technique used in exploratory studies looking to establish the existence of a problem while also attempting to achieve diversity of experiences about a phenomenon (Skowronek & Duerr, 2009: 413). By extension, convenience sampling is not designed for studies looking to establish predictive models or so called 'robust' findings. Instead, with convenience sampling the researcher uses practical or serendipitous criteria such as ease of access, proximity, availability and budget constraints, among other non-purposive strategies to target study participants (Etikan, Musa & Alkassim, 2016).

This sampling technique befitted the study more because of the embedded inquiry and abductive principles of transdisciplinary research studies explained in sections 3.3.1 and 3.3.2. The researcher used networks and contacts gathered from informal observations, conferences and consulting work across Rwanda, Kenya and Ghana, among other African contexts such as Algeria, Ethiopia, Tanzania and Nigeria to determine sampling strategy. The choice of Rwanda, Kenya and Ghana as opposed to the other countries was merely for convenience of time, budget and ease of access at

the time that the study was conceived as the researcher frequently travelled these three countries more than other African contexts.

The other motivation for adopting this nonprobability sampling technique was because as is a challenge in other social sciences, predicting entrepreneurial behaviour is difficult (Farrokhi & Mahmoudi-Hamidabad, 2012). Entrepreneurship in Africa is a complex social science needing a lot of effort to make sense of rather than claiming to predict any aspect. Equally, studies employing a relational perspective to entrepreneurship are scarce (Tatli *et al.*, 2014) and this study makes a unique relational contribution to the existing body of knowledge. Given that the hub phenomenon is fast growing, the attempt was to contribute empirical knowledge on the nature of the respondent experiences and how a reimagination of current practices and approaches can help facilitate development pathways for the future.

3.5 A narrative-based research method

The study employed SenseMaker® (SM), a narrative-based method and tool that facilitates online data collection based on people's many different and lived experiences of a particular problem situation (Merwe, Biggs, Preiser, Cunningham, Snowden, Brien, Jenal, Vosloo & Blignaut, 2019). According to Girl Hub (2014), SenseMaker® draws upon anthropology, complexity theory and neuroscience to create a narrative-based research method that enables the capture and analysis of a large quantity of stories in order to understand complex change. It is a form of meta-analysis of qualitative data that bridges the gap between case studies and large-sample survey data. The approach offers a methodological breakthrough for recognising patterns and trends in perceptions, emotions, behaviours and relationships.

SenseMaker® was developed by Cognitive Edge and Dave Snowden to provide “near real-time” mapping of individual opinions, attitudes, perceptions and motivations that allow for both adaptive project management and knowledge generation for effective organisational change and policy formation (Cognitive Edge and Dave Snowden, 2019). According to the developers, the sensemaking method draws on *self-signified* micro-narratives to understand the evolutionary potential of the present in order to provide stimulus to those behaviours that are beneficial and to modify those that are

unfavourable. A self-signified micro-narrative is a short personal story that a respondent tells as an answer to a prompting question – a question related to the issue being analysed. The story is then categorised by the respondents themselves by locating their story within triangles (or other shapes or sliding scales) consisting of broad variables (for example, in relation to entrepreneurship, finance, policy and mentorship/coaching).

Gathering many of these micro-narratives and running them through the SenseMaker® software enables the creation of a map of clusters of common narratives. Through the examination of these clusters, an insight can be gained into the specific attitudes, perceptions or motivations concerning the question being analysed (IUCN, 2020). Most importantly, the process of collective reasoning and learning through stories can detect “weak signals” (small clusters or outliers) and allows for wider and deeper scanning of these specific narratives to identify whether there are underlying potentials that need to be scaled or mainstreamed, e.g. financial inclusion innovations for asset-less and first-time African entrepreneurs (Cheveldave, 2015).

This tool thus allows for both an examination of dominant behaviours and emerging trends. Based on the analysis of the clusters, organisations are not only able to assess the quantitative data, but also the qualitative data through a direct sampling of the narratives. This can be useful in aiding decision-making in complex working environments.

Although the other secondary questions were addressed by either the introduction, background and problem statement in chapter 1, literature review in chapter 2 or transdisciplinary methodology in chapter 3 (see *Table 3.1*), SenseMaker® was used to particularly address the two secondary questions, namely;

- what is the most appropriate typology of development for further reconstituting the relationship between entrepreneurship and development?
- how can different stakeholders in different countries help transition hubs into development institutions?

Both secondary questions were addressed in detail using the SenseMaker® approach in Chapter 5.

Table 3.1: A breakdown of methods used to address secondary questions

Secondary question	Method used	Section
How has the literature on African economic development addressed the relationship between entrepreneurship and development, both explicitly and implicitly?	Literature review	Chapter 2
What are different hub approaches and practices in Africa?	Literature review	Section 2.5 in Chapter 2
What is the link between hub practices and development?	Introduction, Background, Problem Statement and Literature review	Chapters 1 and 2
What is the most appropriate typology of development for further reconstituting the relationship between entrepreneurship and development?	SenseMaker® method	Chapter 5
How can different stakeholders in different countries help transition hubs into development institutions?	SenseMaker® method	Chapter 5
What is the most appropriate methodology and accompanying method(s) to help generate knowledge on the main research question?	Emergent and Transformative Transdisciplinary Methodology and SenseMaker®	See sections 3.2, 3.3, 3.4 and 3.5 in Chapter 3.

Source: Author, 2021

3.6 Signification framework

The topics (i.e. modulators or factors) of investigation (known as the signification framework in SenseMaker® studies) that made up the online survey (see Appendix B) were adapted from a *Rainforest* survey instrument proposed by Hwang and Horowitz (2012), outlining the key elements of an ecological entrepreneurial ecosystem that fosters innovation and successful entrepreneurship regions. Hwang and Horowitz (2012) use the metaphor of a ‘rainforest’ to describe building a successful thriving entrepreneurship region, which requires builders first to draw a high-level picture of the environment (i.e. the ‘rainforest’) within which entrepreneurs operate. Generally, this exercise is undertaken in order to develop an understanding of the key building blocks of an entrepreneurship ecosystem that successfully transitions local entrepreneurs from seeding their ideas, to cultivating and nourishing them for scale and impact. The signification framework translated the ecological building blocks that represent critical pieces of the support environment into sense-making topics that are interdependent, just like the flora and fauna in a natural rainforest.

A signification framework is a set of questions based on predefined topics of interest for investigation that allows the storyteller to analyse his or her own story. For this study, the framework also sought to elicit possible emerging stories that would support or challenge the conceptual framework constructed in the literature reviewed in Chapter 2 (refer to *Figure 2.3*). *Figure 3.1* is exactly similar to *Figure 2.3* in chapter 2 but attempts to visualise possible emerging respondent stories as illustrated by the different colourful dots, each representing different experiences of how state or market forces shape human agency in entrepreneurship promotion on the ground.

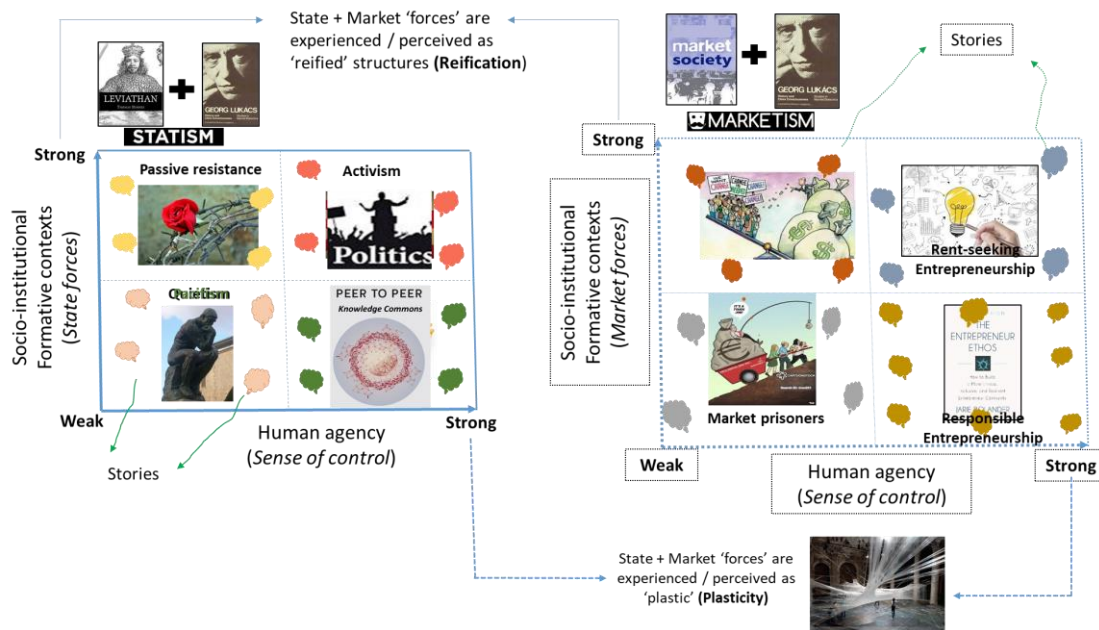


Figure 3.1: Possible emerging respondent stories

Source: Author, 2021

To be specific, the main research question for this study was: *How can hubs across Africa be reconfigured in ways that translate entrepreneurship into development?* In order to follow the ETTDR processes and principles outlined in section 3.3, the signification framework (see Appendix B) sought to help set up a collection of respondent stories that would combine three forms of knowledge, namely *systems knowledge, target knowledge and transformation knowledge* (Pohl & Hadorn, 2007; Wiesmann, Biber-Klemm, Grossenbacher-Mansuy, Hadorn, Hoffmann-Riem, Joye, Pohl & Zemp, 2008). According to van Breda (2019) and van Breda & Transdisciplinarity (2020), these knowledge forms illustrated in *Figure 3.2* have the following meanings:

- systems knowledge – refers to factual knowledge of what ‘is’ (current reality);
- transformation knowledge – refers to strategic/transitioning knowledge of how to get from the current reality to a (yet to be determined) future reality;
- target knowledge – refers to normative knowledge of what is desirable or ‘ought to be’ (future reality).

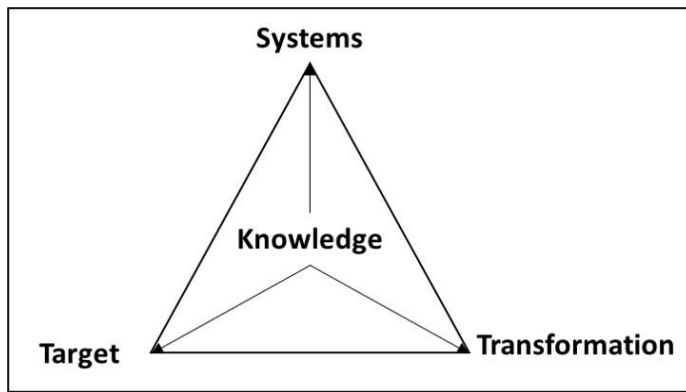


Figure 3.2: Three types of knowledges

Source: Adapted and visualised by van Breda & Transdisciplinary (2020) from the original work of Pohl & Hadorn (2007) and Wiesmann *et al.* (2008)

These forms of knowledge related not only to the introduction chapter but also the literature review because *systems knowledge* harvested the contextual realities local entrepreneurs face as well as their structure of ecosystem support which explains some of the systemic problems outlined in Chapter 1. At the same time, *transformation knowledge* links back to the strategic areas of exploration of possible intervention to aid an ecological approach argued in detail in Chapter 2. Given that this is a transdisciplinary research study which seeks to go beyond mere academic problematisation, through *target knowledge* the researcher needed to explore possible solutions toward normative or desired development pathways from respondents.

As shown in Appendix C, to explore answers to the relevant secondary questions with SenseMaker®, the researcher constructed ecosystem-based and literature-based questions that would elicit *systems, transformation and target knowledge* involving a combination of MCQs, Dyads, Triads and Open-ended questions.

To design the signification framework, the first three set of design phases were structured as follows. As a first step, the first draft of the signification framework sought to curate modulators (or factors of investigation) that reflected what emerged out of literature review in Chapter 2. The second step was co-designing the framework. Owing to COVID-19-related travel restrictions, stakeholders involved in African entrepreneurship contributed both virtually and individually through emails, WhatsApp and other online platforms, leading to some refinement of the initial

signification framework. As a third step, the signification framework was converted into an online survey through the creation of a unique data-collection research website enabled by SenseMaker®'s Collector™ software i.e., applicable *only* to this research project. The fourth step involved story (data) collection for a period of about five weeks. The fifth step entailed collective sense-making webinars. The first Webinar on the preliminary results took place with relevant stakeholders involving academic, entrepreneurship support community and entrepreneurs on 13 August 2020.²¹ The second Webinar took place on 15 October 2020,²² involving key players in the African entrepreneurship development space. The third and final Webinar took place on 30 October 2020 with the Africa tech research group.²³

After returning the stories to the relevant stakeholders, the sixth step was to document the whole process and related pathway possibilities as a PhD knowledge product. The seventh and final step involved inspiring action among the relevant institutional stakeholders in the African entrepreneurship circles through various sharing platforms and project implementation design efforts.

3.7 Summary

The study used an emergent transformative transdisciplinary research (ETTDR) methodology involving five research phases, namely co-design, stakeholder engagements, co-production of new knowledge, dissemination of results and inspiring action. To complement the methodology, the study followed a narrative-based research approach through a design process and method called SenseMaker®.

SenseMaker® also follows roughly a similar process, logics and principles as ETTDR with iterative non-linear stages and steps. These stages involve co-design and preparation, narrative-based data collection, collective sense-making (returning stories to stakeholders), documentation of pathway possibilities and finally implementation. *Table 3.2* below provides a brief overview of the phases, stages and processes involved in this study's research design, methodology and method respectively.

²¹ See, <https://www0.sun.ac.za/cst/event/sensemakingsystemschangeforentrepreneurship/>

²² See <https://www0.sun.ac.za/cst/event/developmental-entrepreneurship-in-africa/> .

²³ See, <https://www.africatechresearch.org/>.

Table 3.2: Summary of the research design, methodology and method

TD Phases	SenseMaker® Stages	Process Details	Target Respondents/ (Institutional Actor)	Strategy/Instrument
Goal and problem framing (Co-design)		<ul style="list-style-type: none"> Co designing the signification framework. Decide on sampling strategy. Operational plan for data (story) collection. Design the SenseMaker® Collector application. Training enumerators (co researchers). Decide on capturing strategies (formal / informal social networks; gatekeepers). 	Hub managers, financiers, coaches, mentors and local entrepreneurs.	Phone calls, emails, WhatsApp messaging and online video calls.
Stakeholder engagements		<ul style="list-style-type: none"> Decide on capturing methods (audio, paper, online, interviews, iPads, Smart phones). Decide on ways of collection (indirect questions, text, anecdote circles, journaling, naïve interviewing etc.). Doing field work. 	Hub managers, financiers, coaches, mentors, local entrepreneurs, policymakers, trainers and community citizens.	SenseMaker® Collector Online Tool.
Co-production of new knowledge		<ul style="list-style-type: none"> Using software for detecting and visualizing emerging narrative patterns. Returning stories to story tellers and do joint sense making. 	Hub managers, financiers, coaches, mentors, local entrepreneurs, policymakers, trainers and community citizens.	SenseMaker® Analyst Tool. Online Webinars.
Dissemination of results		<ul style="list-style-type: none"> Discuss and develop social change strategies. Process reflection. Exploration of pathway possibilities. Policy recommendations. 	Hub managers, financiers, coaches, mentors, local entrepreneurs, policymakers, trainers and community citizens.	PhD Dissertation. Written Articles. Blogging.
Inspiring Action		<ul style="list-style-type: none"> Co design & implement small scale safe to fail social change experiments Amplify what works, dampen what does not work Conduct on going monitoring & evaluation 	(Afrilabs). (African Union). (Allan & Gill Gray Philanthropy). (Ashesi University) (Inkomoko). (Nairobi Design Institute). (Digital Opportunity Trust). (National & local governments)	Online Webinars. Fundraising for more context-specific African research. Produce case studies

Source: Author, 2021

Chapter 4 – Empirical Findings from A Narrative-Based Method of Knowledge Co-Production

4.1 Introduction

The main research question for this study was: *How can hubs across Africa be reconfigured in ways that translate entrepreneurship into development?*” As detailed in chapter 3, the signification framework (see Appendix B) sought to help set up a study that would combine three forms of knowledge, namely *systems knowledge*, *transformation knowledge* and *target knowledge* (Pohl & Hadorn, 2007; Wiesmann *et al.*, 2008).

As such, the investigation questions to address the two relevant secondary research questions were broadly structured into *systems knowledge* (ecosystem practitioner demographics, traction and momentum drivers, entrepreneur motivations, sources of ideas, capital and talent, lived experiences of government, local barriers, local perspectives on entrepreneurship, entrepreneurship success factors, geographies of local entrepreneur education backgrounds and access to financial support); *transformation knowledge* (strategic resource focus areas, custodians of targeted results and issues of class origins to help signal action areas for intervening); and *target knowledge* (exploration of not only scenarios for the future but also the associated emerging themes in order to identify development pathways in African entrepreneurship).

Integrating the three types of knowledge into the signification framework this way allowed for a deeper exploration of the following subset of relevant secondary research questions used to construct the knowledge necessary to answer the main question empirically:

- What is the most appropriate typology of development for further reconstituting the relationship between entrepreneurship and development?
- How can different stakeholders in different countries and in regional institutions help transition hubs into development institutions?

The objective of this chapter is mainly to present the empirical findings, with the next chapter providing a deeper analysis. In the next chapter these findings will be used to answer the main research question while situating them within the context of the broader literature review in Chapter 2.

4.2 Systems knowledge findings

4.2.1 Respondent demographics

As a context to the study and while the response rate was very positive with a healthy participation of 100 respondents, the significance of this level of participation is not so much in the numbers, but that responses were elicited during the peak of the Covid-19 pandemic, August to October 2020. This was a time of individual fear and uncertainty in a world whose basis had shifted abruptly and unexpectedly. To achieve these results the researcher had to tap into relationships and networks of institutions and individuals that was built over a period of 3 to 4 years prior to the study. Data were collected while international travel restrictions were high with no travels allowed to Rwanda, Kenya or Ghana. To connect with the contacts and entrepreneurship stakeholders in these three countries, the researcher relied on virtual meetings, emails, WhatsApp messaging and WhatsApp calls.

Table 4.1 below indicates which countries study respondents were born from against where they currently practise entrepreneurship. It highlights African entrepreneurship practitioners are not merely domiciled in the countries where they experience entrepreneurs, but also draw from the expertise, experiences and perspectives of other global contexts. This then makes for a useful respondent context to remember when interpreting results, because implicit within this table is arguably that stakeholder templates, tools, practices, principles or approaches may very well not be entirely shaped by local African contexts.

Table 4.1: Respondent country demographics

Country of Origin and Site of Practice	Count
Ghana	7
Ghana and other African countries	1
USA	1
Ghana	5
Kenya	52
Cameroon	1
Eswatini	1
South Africa and Tanzania	1
South Africa	1
South Africa and other African countries	1
Kenya	47
Other	23
China, UK and France	1
Nigeria	1
South Africa	2
Tanzania	1
Respondents did not indicate	18
Rwanda	18
South Africa	3
Rwanda	15
Grand Total	100

Source: Author, 2021

Table 4.1 indicates that 52% of the respondents were Kenyan born and mainly based within Kenya with a few also practising in Cameroon, South Africa, Tanzania, Swaziland and other African countries. Rwandan respondents made up 18% of the sample data and mainly operate within Rwanda, with a few also practising in South Africa. Ghanaian respondents were the least at 7%, with some reporting to also be practising entrepreneurship beyond domestic borders across the rest of Africa and in the USA. Twenty-three per cent (23%) of the respondents were either born or mainly practising entrepreneurship outside the three main countries of investigation, in countries such as China, UK, France, Nigeria and Tanzania.

It is also worth remembering that our study design, methodology and related SenseMaker® approach sought to integrate both formal and informal voices into the study as elaborated more in Chapter 3. Related to this is that three main hubs were the targeted laboratory sought by the researcher to explore as a window into the broader local ecosystems. This explains why of the 100 responses, 2% were hub managers in the study as shown in the diagram below (*Figure 4.1*).

Each of these hub managers was approached to not only participate in the study but to also invite relevant stakeholders (financiers, policymakers, trainers, etc.), including local community members and other professionals, all of whom are in principle affected directly or indirectly by entrepreneurship. This adds to the credibility of the empirical findings on the reality on the ground and whether in fact hubs play a significant role in the space. The alternative would have been to gather data in the classic way from only hub members and managers, risking issues that arise with self-reported data, but also risking a contribution to science without the voices of the community members and the ‘other’ groups that experience entrepreneurship outcomes perhaps in unrelated contexts but tangentially nevertheless.

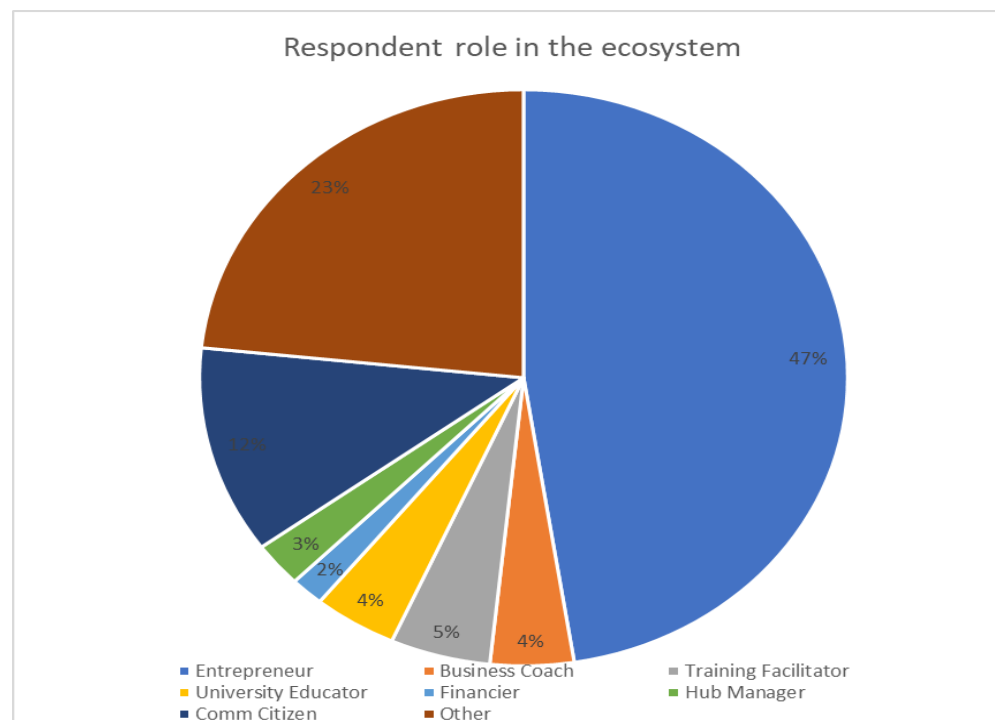


Figure 4.1: Respondent role in the ecosystem

Source: Author, 2021

The percentages in *Figure 4.1* show that while the majority (48%) of the respondents were entrepreneurs, the second highest figure (23%) reported playing ‘other’ roles in the local ecosystem beyond ‘formalized’ contributions such as coaching, training, financing or managing a hub. These ‘other’ roles included university students, software developers, government employees, ecosystem builders, monitoring and evaluation advisors, community workers, IT personnel, humanitarian aid workers, researchers, stock and forest traders, development practitioners and other professionals. Additionally, another so-called “informal” stakeholder is a ‘community citizen’, who make up a significant 12% of the respondent total. Therefore, in balancing not only the number or diversity of respondent perspectives but also the combination of formal and informal stakeholders, the sample data makes study both inter-and trans-disciplinary in nature, as indicated in Chapter 3.

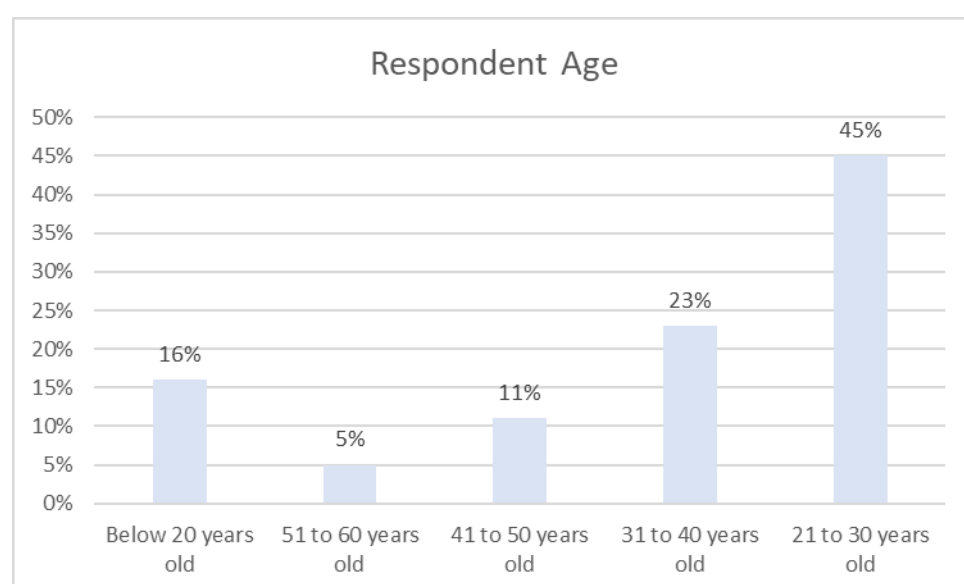


Figure 4.2: Respondent age

Source: Author, 2021

The majority (45%) (see *Figure 4.2*) of the respondents were between the ages of 21 and 30 years. They were followed by 23% of the respondents between 31 and 40 years, 16% below 20 years, 11% between 41 and 50 years and 5% between 51 and 60 years. Therefore 61% of the total respondents were under the age of 30! If you take into account that the 31 to 40 category includes other youth members up to the age of 35 years, as categorised by the African Youth Charter (African Union Commission

(AUC), 2006) and Continental Framework for Youth, Peace and Security (African Union Commission (AUC), 2020), then this study can be seen as one dominated by African youth perspectives and experiences. This is important as the problem statement in Chapter 1 made development arguments based on the integration of idle youths who seem to be continually unproductive without decent jobs or formal integration into the economy.

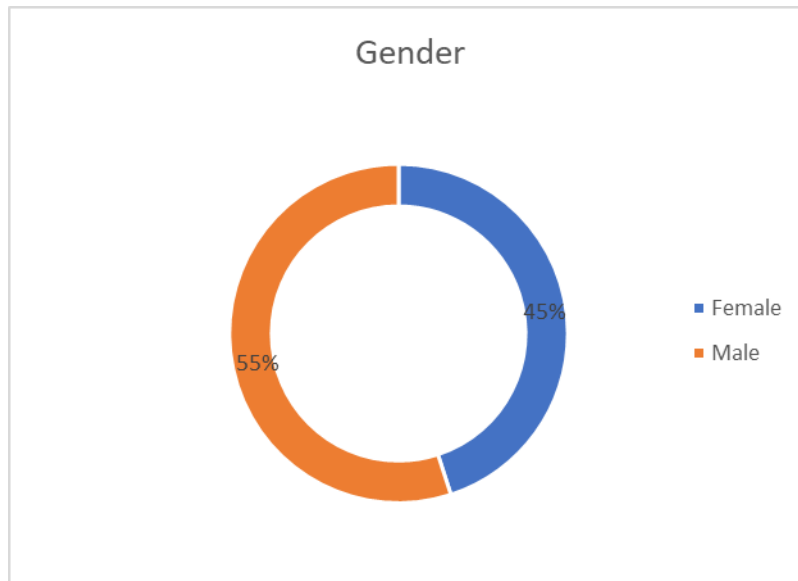


Figure 4.3: Gender

Source: Author, 2021

Figure 4.3 depicts that 55% of the respondents were male and 45% were female.

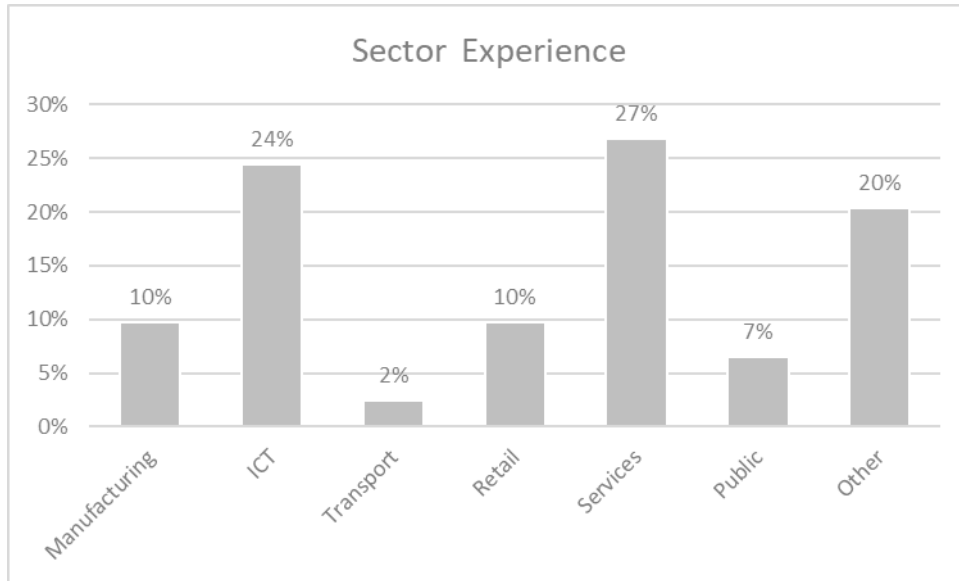


Figure 4.4: Sector experience

Source: Author, 2021

Figure 4.4 depicts that most of the respondent experiences were mainly based in the Services (27%) and ICT (24%) sectors. The third sector indicating most experiences was in the category of 'Other'. This 'Other' category included experiences and perspectives from agriculture, the creative industry, health, climate change and energy, international trade and education. This further confirms the interdisciplinary perspectives the empirical results below derive from.

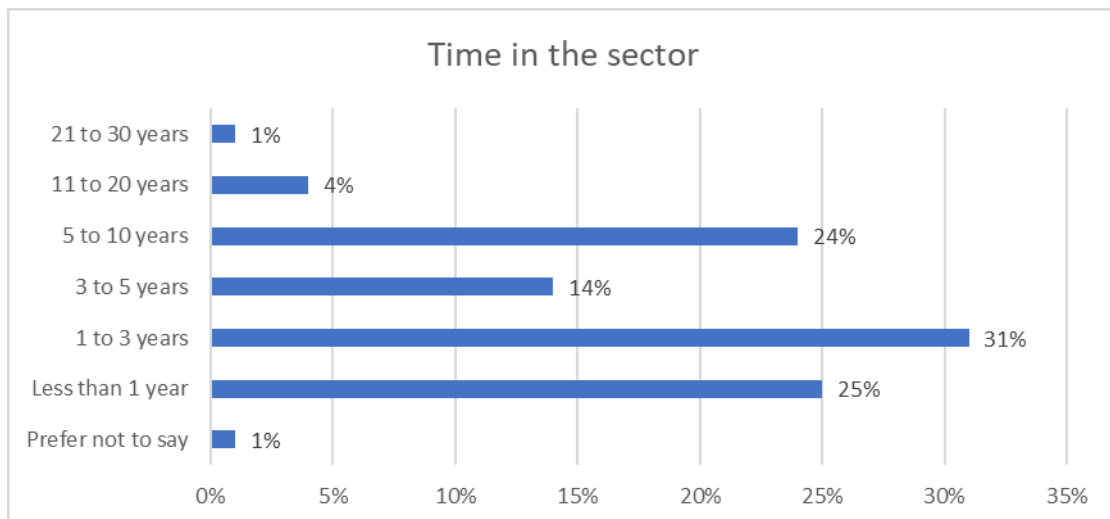


Figure 4.5: Time in the sector

Source: Author, 2021

Most participants (31%) reported their stories were based on experience of 1 to 3 years in the sector. This was followed by respondents (25%) with less than 1 years' experience in their sector. Yet a significant number of respondents based their stories on 5 to 10 years (24%) and 3 to 5 years (14%) of sector experience (See *Figure 4.5*).

The widely different years of experience shows a combination of fresh and seasoned perspectives that respondents were sharing their experiences about, although the majority (56%) had only spent less than 3 years in the sector, demonstrating the youthful nature of the respondents.

4.2.2 Entrepreneur motivations

To further deepen the understanding of the environment that hubs operate in, respondents were prompted to share their experiences on what motivates African entrepreneurs in their local context. The statement respondents were asked to respond to was, "In my experience, entrepreneurs in my context are motivated by... (choose the 3 most important)". Respondents could select top three motivations from a list of seven options namely: money, reputation, lifestyle, self-expression, making a community difference, making an environmental difference or other (See *Figure 4.6*).

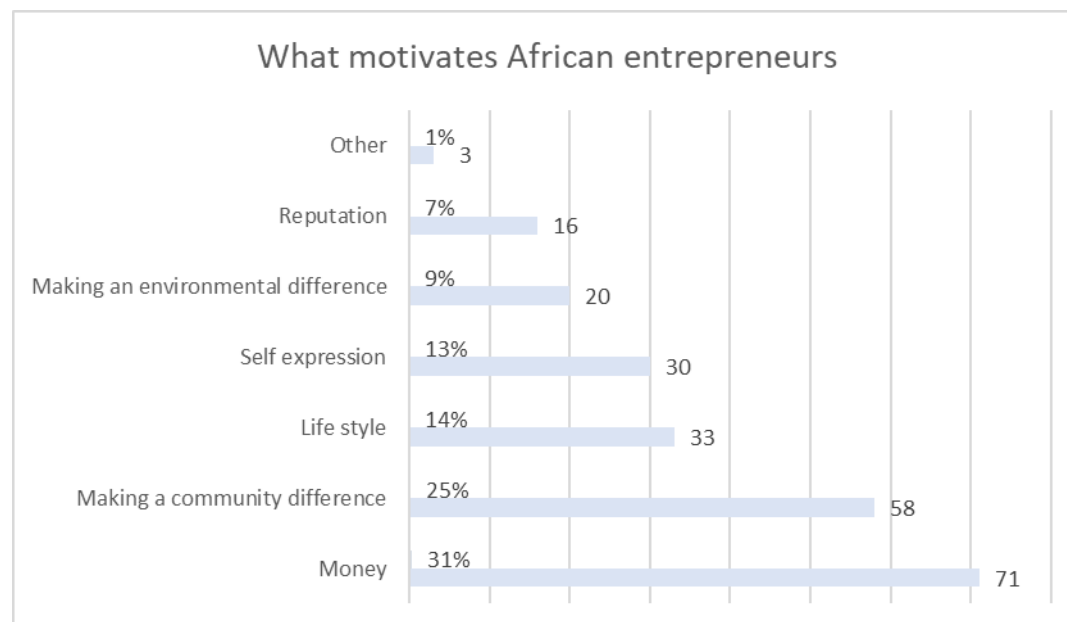


Figure 4.6: What motivates African entrepreneurs

Source: Author, 2021

Money, making a community difference and lifestyle were cited as the three main factors motivating entrepreneurs in Ghana, Kenya and Rwanda. This finding suggests that African entrepreneurs have a desire to create businesses that are not only growing but are also helping their societies.

4.2.3 Traction and momentum

It was important to gauge local view on traction and momentum in their ecosystem. To gather this ecosystem temperature check, respondents were prompted to respond to the statement, “In my local context, the best way to describe entrepreneurship is...”. Respondents had to choose one response from multiple options, viz. poor, struggling to get there, getting stronger each year, on a great momentum, mature, thriving, dark and gloomy, or not sure what to say.

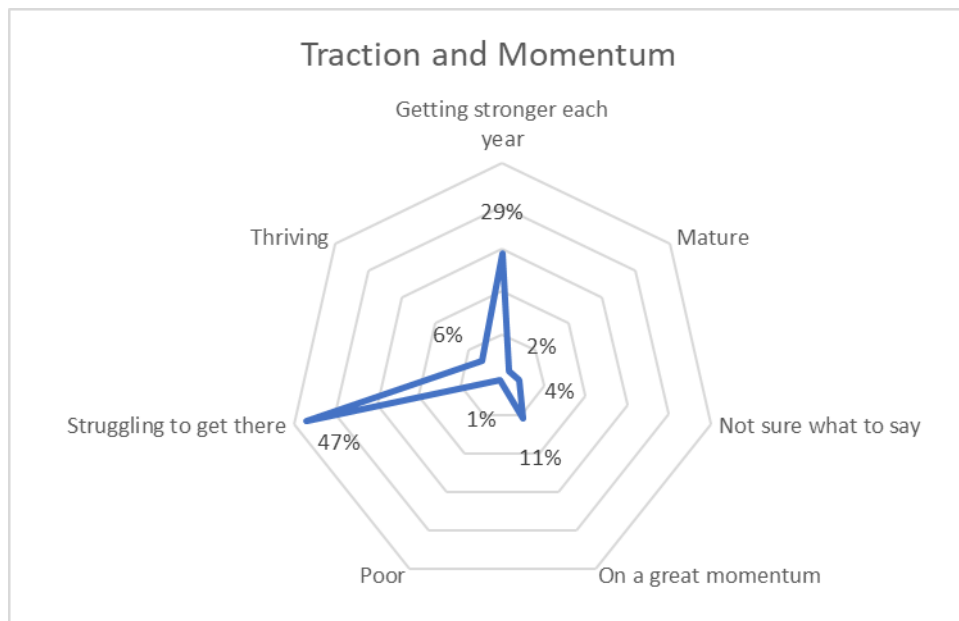


Figure 4.7: Traction and momentum

Source: Author, 2021

In reflecting on their local experiences, most respondents mainly perceive entrepreneurship ecosystems in Ghana, Kenya and Rwanda as “struggling to get there” but “getting stronger each year” (See *Figure 4.7*).

4.2.4 Sources of ideas, capital and talent

To complete the first part of ‘system knowledge’, respondents were asked to share their experiences of how ideas, capital and talent come together in the ecosystem. This question was a key issue to raise in order to assess how local practitioners perceive hubs importance of hubs in their context. Yet the statement was structured in a way that it was not leading but included hubs as a number of options to choose from. The reflective statement used to prompt responses was: “In my experience, ideas, talent and capital (money) come together mainly through... (pick up to 3)”.

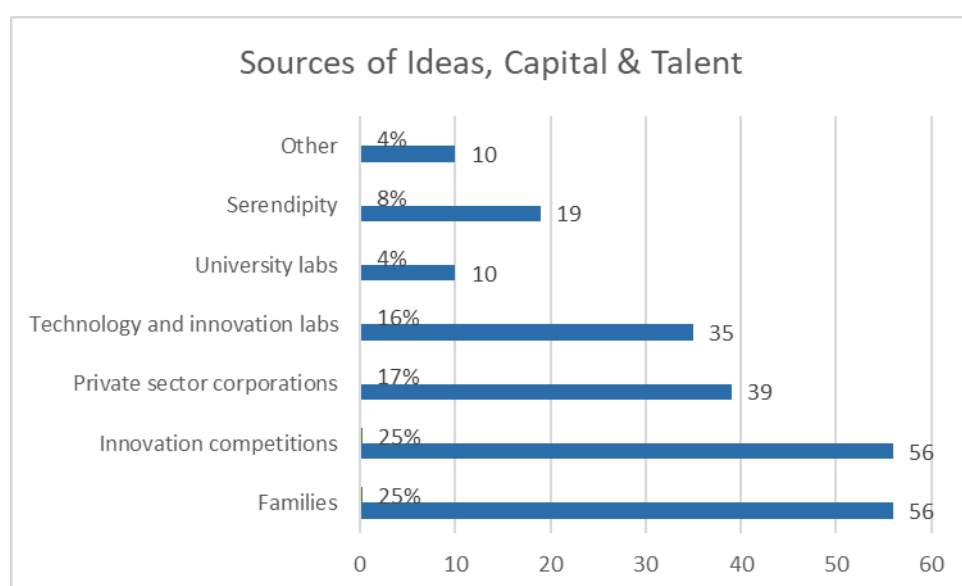


Figure 4.8: Sources of ideas, capital and talent

Source: Author, 2021.

Families, innovation competitions and hubs (government, independent and university-based) were cited as spaces from which the local ecosystem predominantly sourced ideas, capital and talent (See *Figure 4.8*). These were followed by private sector corporations and serendipity. This empirical finding is significant because it shows the importance of hubs as intermediary institutions not only brokering ideas but also as points of converging ideas, talent and money in African entrepreneurship. At the same time, this empirical finding highlights deeper issues of concern problematised in Chapter 1, namely that support to African entrepreneurs is fragmented and biased towards individuals from upper-middle-class families and with linkages internationally.

By implication, *families* that can afford to provide early-stage financial support to give impetus to new ideas are well off. By deduction also, *innovation competitions* are neither exclusively local nor international, and neither exclusively public nor private sector led. Instead, innovation competitions tend to be organised and funded by hybrid institutions in structured annualised offerings and they are therefore static and cyclic in design. However, while hubs also provide structured programmes, they have a history of providing intangible network fostering services that make them known as a symbol of enterprise support (Gryszkiewicz & Friederici, 2014) as discussed in Chapters 1 and 2.

It is significant that the findings of this research also highlight ‘serendipity’ as an important aspect in enabling new ventures combine ideas with the requisite talent and capital. It is significant because recent empirical studies have found that hubs play a critical role in fostering network embeddedness that orchestrates an entrepreneur’s *own* serendipity through group membership and facilitated networking processes (Busch & Barkema, 2020). This means that if serendipity plays such a critical role in fostering a successful mix of ideas, talent and capital, and hubs can also contribute in catalysing it, then both the roles of hub and serendipity should be understood in a much more elevated sense than mainstream entrepreneurship ecosystem literature studies currently credit it with having.

Beyond the questions gathering systems knowledge covered in 4.2.1 to 4.2.4 above, a further set of six triad questions was posed to respondents in order to deepen knowledge on the reality of the existing challenges and opportunities in African entrepreneurship.

4.2.5 *Experience of government by respondents*

Figures 4.9, 4.10 and 4.11 should be read as highlighting different aspects of the same triad diagram exploring the relationship between respondents and local governments. Respondents were invited to share their experiences of local government by responding to the statement: “In my experience as an entrepreneur, government is...”. Options were that government was either supportive, absent or punitive.

Figure 4.9 shows that 15% of the respondents' stories indicated the experience of government was that it was predominantly supportive. Figure 4.10 shows that 31% of the respondents' stories indicated that government was experienced as absent. Figure 4.11 shows that 21% of the respondent stories had experienced a government that is supportive, absent and punitive all at the same time. These empirical diagrams can be summed up to highlight respondent experiences where government had been largely either absent or punitive.

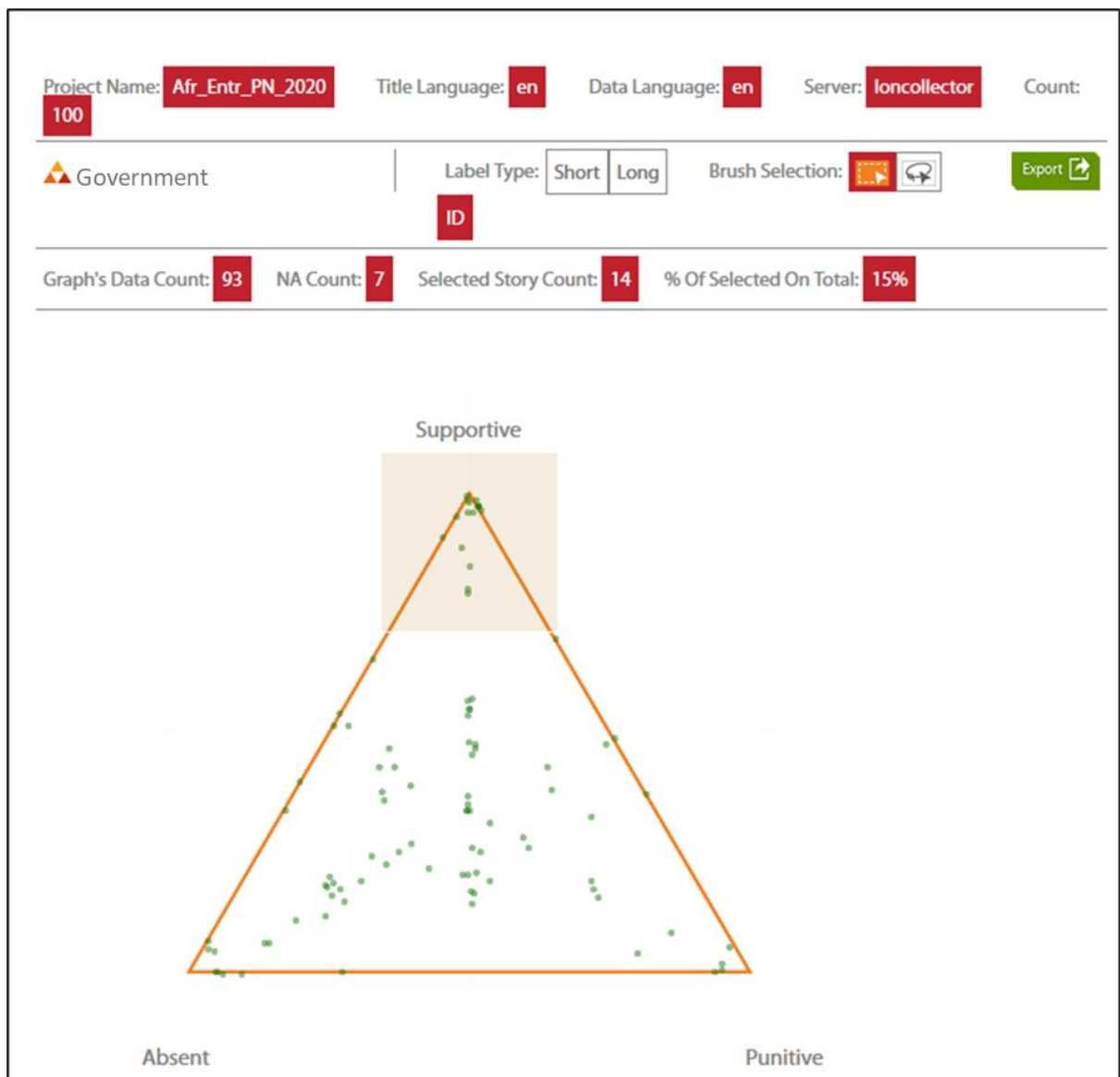


Figure 4.9: Government - Supportive

Source: Author, 2021.



Figure 4.10: Government – Absent

Source: Author, 2021



Figure 4.11: Government - Absent, punitive & supportive all at the same time

Source: Author, 2021

4.2.6 Barriers faced by local entrepreneurs

Figures 4.12, 4.13 and 4.14 show a concentration of respondent stories reflecting on how environmental barriers affect local entrepreneurs' efforts to start and grow ventures. The statement posited was: "In my experience, I believe the main barrier(s) entrepreneurs face is / are...". The three options provided were 'lack of technical business skills', 'lack of access to good coaches and mentors' and 'lack of access to finance'.

Figure 4.12 shows only 9% of the respondent stories reported lack of technical business skills as a barrier to local entrepreneurs. *Figure 4.13* shows that 23% of the respondent stories that experienced lack of access to finance as exclusively the main barrier to starting and growing ventures, while *Figure 4.14* shows that 27% of the respondents reported the main barriers experienced are mainly lack of good mentors and coaches as well as poor access to finance.

This empirical finding is significant in that it highlights that the biggest issue in growing entrepreneurship in Africa may not necessarily be lack of skills, but external environmental issues such as lack of mentorship, coaching and finance, among others. This means that more entrepreneurship education and training may be useful, but not catalytic in achieving the necessary momentum and maturity in local ecosystems. It is also significant because it means that while hubs should arguably continue to develop entrepreneurship skills, ecosystem building and other orchestration functions should be equally strengthened and grown.

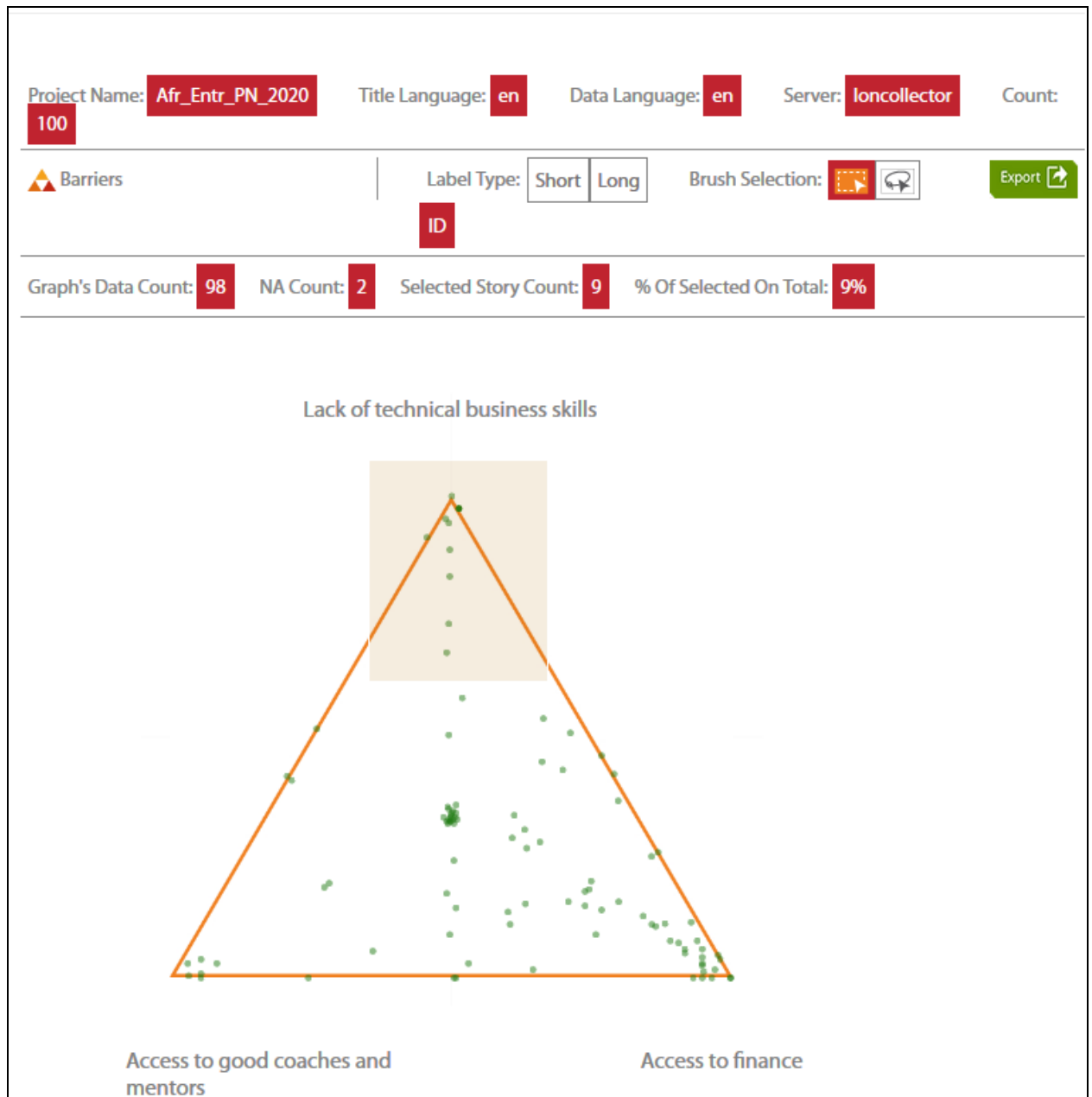


Figure 4.12: Barriers – Lack of technical business skills

Source: Author, 2021

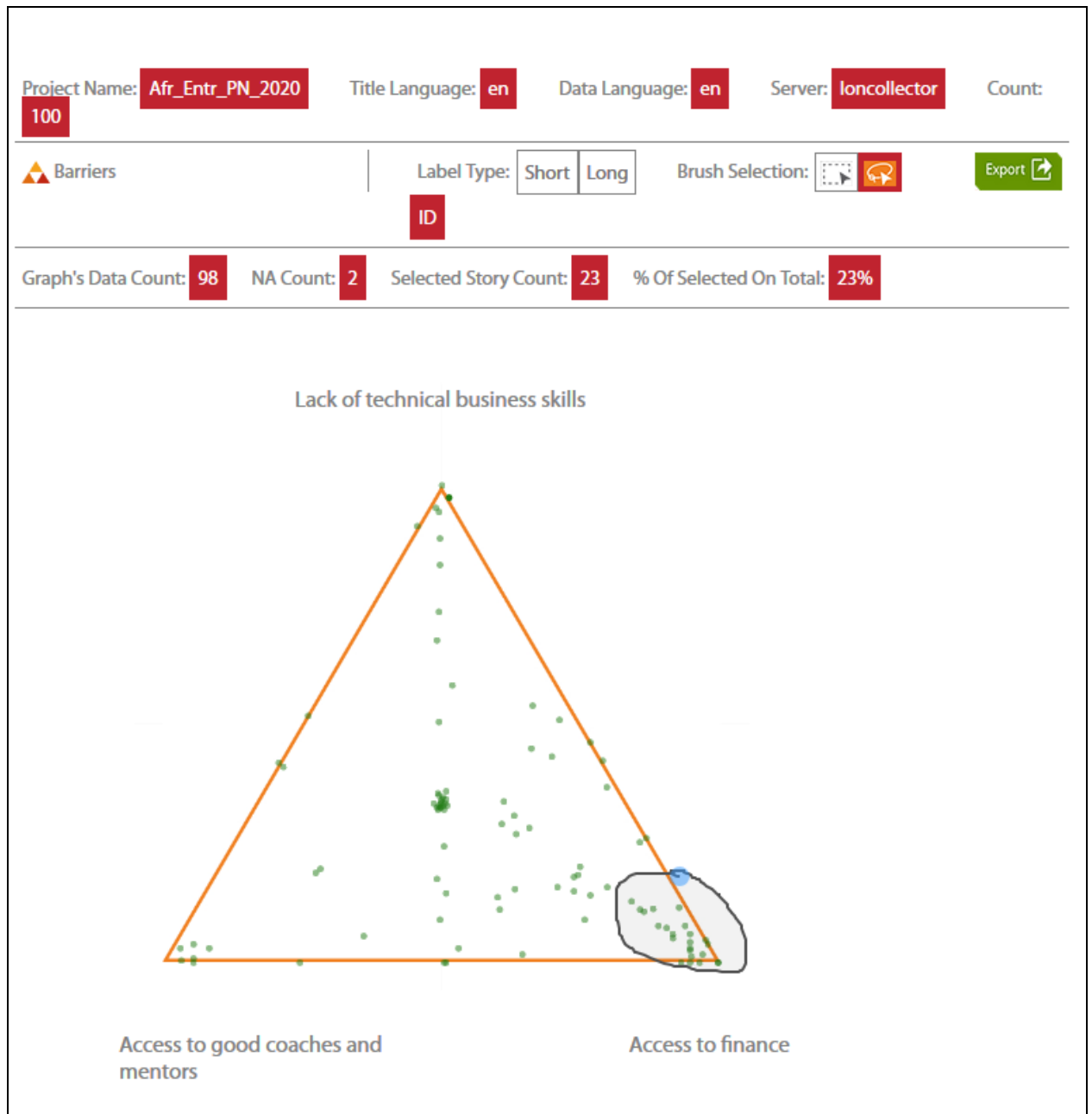


Figure 4.13: Barriers – Lack of access to finance

Source: Author, 2021

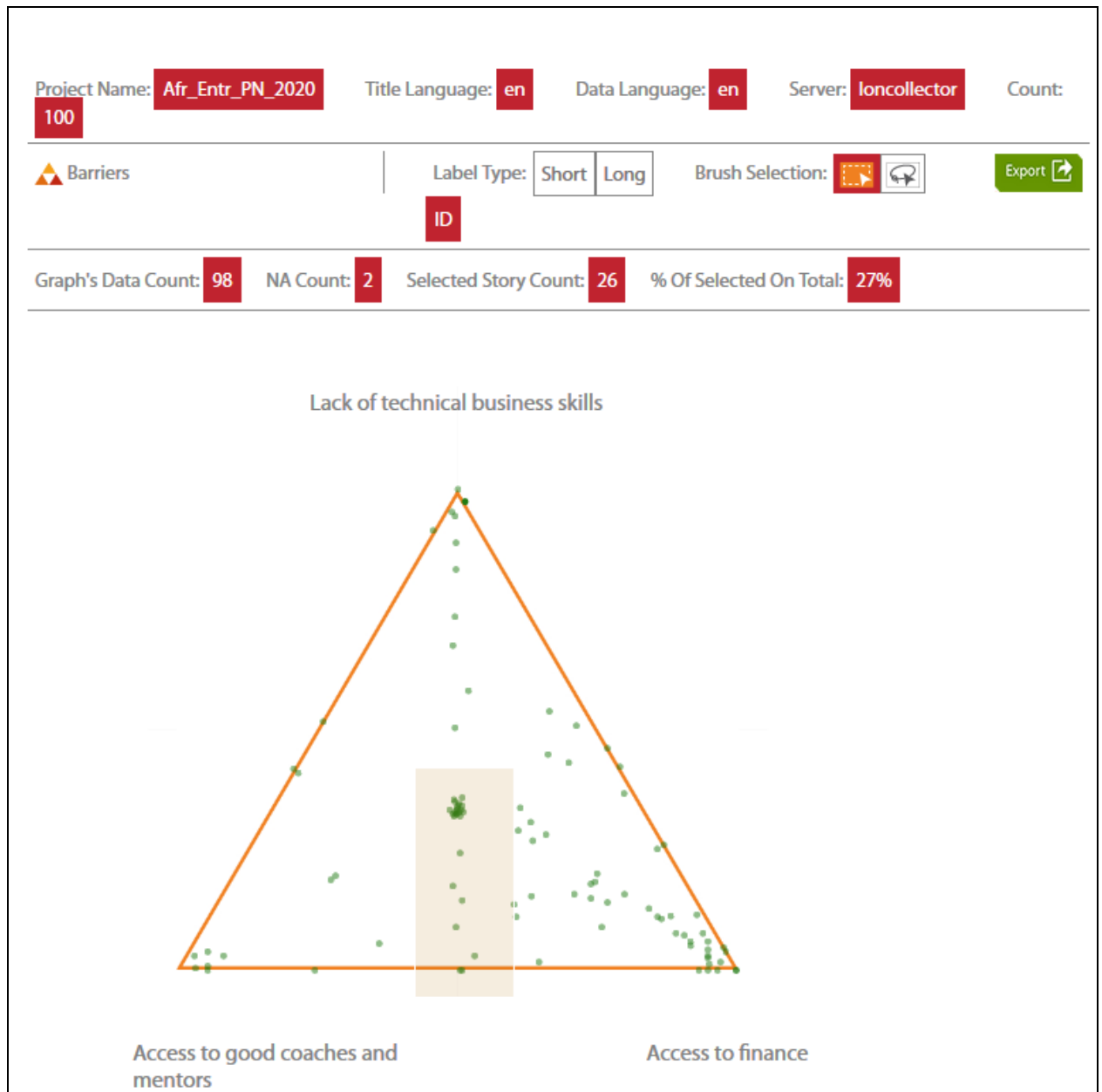


Figure 4.14: Barriers - Lack of access to good coaches, mentors and finance

Source: Author, 2021

In fact, focusing on mere training in technical business skills implicitly assumes a competitive ecosystem position that would only be convincing in an equitable Africa where opportunities are equal. Unfortunately, Africa cannot achieve the type of entrepreneurship the continent needs – i.e. a diversified and consistent pool that goes beyond achieving macro-economic growth but actually delivers on development goals – purely based on a competitive model that leaves access issues to chance and without some intentional social engineering to address barriers to entry.

Chapter 1 argued that intergenerational effects of race and gender dynamics on the continent constrain entrepreneurship. Beyond the issues of race, African entrepreneurship and gender parity have a long way to go before practitioners and policymakers can start being laissez-faire in their approaches to promoting entrepreneurship. The question of access to finance is a big issue in African entrepreneurship because it draws attention to the reality that most African youths come from poorer households and therefore are without assets.

Contextually, these non-training barriers confront policymakers and practitioners with a related but difficult dilemma that such discouraging structural issues create real disincentives for African youth to effectively embrace and explore entrepreneurship in an asset-less environment. This is because only very few (single digits in terms of percentage of population) own everything and therefore have the security needed for financing and can therefore compete more effectively. This empirical finding highlights the point that a competitive model built on leaving entrepreneurial development to neoliberal economics, or simply unplanned chance, fails to factor in not only income inequality, but more importantly asset inequality.

In such a low-income context, ecosystem interventions can aim to create the kind of institutional-financial systems or orchestrated environments that will make it possible for first-time African youth entrepreneurs to access finance and better compete with their well-off counterparts. This is an environmental challenge requiring ecosystem players and policymakers to explore creative and alternative substitutes for the “assets” normally required to provide financial security. This is worth investigating further as other empirical studies have shown that it is possible to explore alternative material and social asset-building approaches and how such accumulated assets help young people in low-income contexts envision more positive futures, become productive citizens, contribute to gender-income equity and overall wellbeing among African youths (Lough & Sherraden, 2012; Spiropoulos, 2019).

These sentiments were further confirmed by the respondents’ clear articulation of their dissatisfaction with current forms of entrepreneurship as the right economic strategy for African cities and countries if the status quo continued to preserve pathways that do not lead to *development* outcomes, i.e. change the face of the prime

innovators behind new businesses and transform societies, and not just produce innovations for the sake of private wealth formation or macro-economic growth. These empirical perspectives can be linked to the arguments put forwards in Chapter 2 indicating that pursuing macro-economic growth on its own is insufficient for *development*.

Yet, the attractiveness of training African youths for technical business skills is that it can in principle improve competencies to overcome the fundamental management flaws often reported in entrepreneurship studies. However, this needs to be coupled with deliberate efforts to unlock finance at scale on the continent. The mere provision of technical business skills would appear to privilege a classic micro-level ‘training paradigm’ that focuses on early identification of talented individuals and training them without devoting attention to meso-level and macro-level systemic issues, such as for example access to finance, among many other moderating factors discussed in this work and other studies.

4.2.7 *Local perspectives on entrepreneurship*

Beyond the external factors, a related factor to investigate was how respondents perceived the drivers for establishment of local businesses. To investigate, the study went on to explore wider cultural and mindset issues in terms of entrepreneurial career intentions and attitudes. Respondents were prompted to respond to the statement: “In my experience, people’s perspectives of entrepreneurship are mainly about...”. Respondents could choose a single option or a combination of options from ‘achieving sustainable wellbeing’, ‘survival and livelihood’ and ‘exploring an exciting career path’.



Figure 4.15: Local Perspectives: Achieving sustainable wellbeing

Source: Author, 2021

Figures 4.15 and 4.16 show different concentrations of respondent responses to the same statement. *Figure 4.15* shows that 27% of the respondent stories reported that locals perceive entrepreneurship as mainly being about achieving sustainable wellbeing, whereas *Figure 4.16* shows that 33% (the majority) of the respondent stories were concentrated on the perception that entrepreneurship is about survival and livelihood. Both figures indicate very little concentration of local experiences that see entrepreneurship as an exploration of an exciting career.



Figure 4.16: Local perspectives - Survival and livelihood

Source: Author, 2021

This empirical finding suggesting that local people did not see entrepreneurship as an exploration of an exciting career path was concerning, because the related human capital and entrepreneurship career theories cited in Chapter 2 postulated that situational factors can also impact on an entrepreneur's perception of his or her ability to exploit the available opportunities and therefore their intention to start a business (Abbas, 2013; Bacigalupo *et al.*, 2016).

This means nurturing a cultural environment in which African youths can explore entrepreneurship as a career choice is an important complementary support to add into the mix of wider promotion initiatives. According to the theory of planned behaviour postulated by Icek (1991), if the African region is to achieve productive entrepreneurship in the future, policymakers and practitioners would need to address environmental factors that improve youth perspectives on entrepreneurship as a viable career choice, and not just something to explore if one is unemployed. Recent studies have also found that devoting attention to environmental issues such as cultural drivers, diversity and perceived societal desirability can positively influence entrepreneurs' intention to grow ventures that aspire for goals beyond mere survival but toward innovation and development impact (Schwab, 2018; Vuorio *et al.*, 2018).

Bosma and Kelley (2019) conceptualise impact-driven entrepreneurship as a type of ambitious entrepreneurship with:

- high-growth expectations – meaning not merely survivalist or necessity-driven;
- innovative characteristics – meaning creation of a new product, service, experience, system, and/or building new needs, fetching the future of industry, among other attributes;
- international orientation – meaning new markets or expansion to global markets, among other tactics.

Encouraging desirability beyond survival is important because to contribute to business growth and add value to people and planet, new ventures also need to be both innovative and ambitious about the future. This is an important aspect of entrepreneurship to encourage among African entrepreneurs, especially if one considers that this empirical finding of people not on the whole considering entrepreneurship as a career choice is consistent with some studies suggesting that over 75% of what is deemed entrepreneurship across Africa are MSMEs employing between 10 to 50 employees, and mainly in business either out of necessity reasons or to exploit existing opportunities (African Development Bank (AfDB) *et al.*, 2017; Akinkugbe & Wohlmuth, 2016; Atiase *et al.*, 2017). While exploiting opportunities is a key competence in new venture creation, fostering career aspirations toward

innovation-driven entrepreneurship is important because it encourages going beyond the mindset of merely exploiting existing opportunities to generating new ones for the society and markets.

4.2.8 *Sources of financial support for local entrepreneurs*

Investigation also sought to generate systems knowledge about sources of financial support for successful entrepreneurs. Respondents were prompted to share their local experiences of sources of capital in responding to the statement: “In my experience, local entrepreneurs get financial support from...”. They could choose options demonstrating single or a combination of experiences between sources of financial support from local private sector, international development organisations or local government institutions.

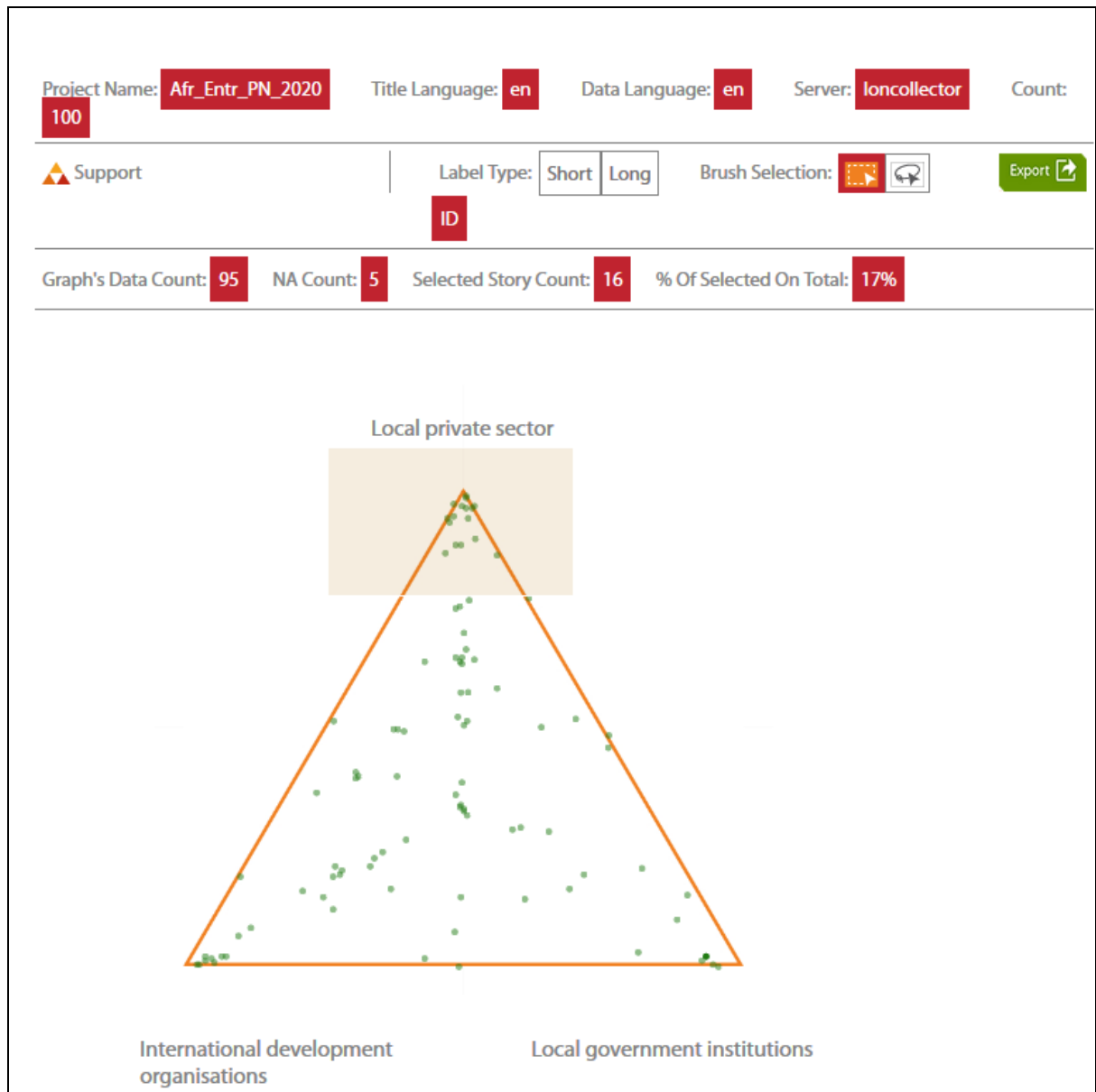


Figure 4.17: Financial Support - Local private sector

Source: Author, 2021

Figures 4.17 to 4.19 represent different aspects of the same findings. *Figure 4.17* shows that 17% of the respondent stories were concentrated on experiences where local entrepreneurs relied on the local private sector for financial support. *Figure 4.18* shows 19% respondent stories relating experiences where local entrepreneurs relied on international development organisations for financial support. *Figure 4.19* shows that 24% of the respondent stories reported on experiences where entrepreneurs sourced financial support from the private sector, local government and international development institutions.



Figure 4.18: Financial Support - International development organisations

Source: Author, 2021



Figure 4.19: Financial support - hybrid

Source: Author, 2021

What this empirical finding shows is that successful entrepreneurs in Africa are neither reliant on large local businesses nor local government because, as found in this study, they come mainly from affluent families or have international networks through corporate experience or education that allow them to appeal to international financiers.

4.2.9 *Geographic location of local entrepreneurs' education*

The study further sought to understand geographic locations of local entrepreneurs' educational background to properly construct appropriate demographic profile(s) for successful entrepreneurs in Africa. This is important knowledge to generate if practitioners and policymakers are to link or evaluate such a personal profile against desired development outcomes. Respondents were prompted to share their lived experiences on this by reflecting on the statement: "In my experience, local entrepreneurs tend to be...". They could choose single or a combination of experiences between 'locally educated', 'educated from Africa' or 'internationally educated.'



Figure 4.20: Geographic location(s) of local entrepreneurs' education – Locally educated

Source: Author, 2021

Figures 4.20 to 4.22 represent like other triads different concentrations of respondent experiences to the same factor of investigation. *Figure 4.20* shows that 30% of the respondent stories captured experiences where local entrepreneurs tend to be locally educated. *Figure 4.21* shows the majority (38%) of respondent stories that captured experiences where local entrepreneurs studied across all three geographic locations, while *Figure 4.22* shows 13% of respondent stories that reflected on experiences where local entrepreneurs studied internationally.



Figure 4.21: Geographic location(s) of local entrepreneurs' education – All three locations

Source: Author, 2021



Figure 4.22: Geographic location(s) of local entrepreneurs' education – Internationally educated

Source: Author, 2021

Overall, the main empirical finding from this factor of investigation is that local entrepreneurs tend to consume a mixture of education experiences between local country, continent and abroad. This gives them an international profile with global social and professional networks putting them at an advantage over those who studied exclusively within domestic shores.

This is also in line with growing emerging observations that suggest start-up co-founders who secure funding almost always have diaspora founders with international professional networks with past corporate experience or an international education, so that they are the main recipients of about 90% net foreign funding on the continent, especially in East Africa (Nzekwe, 2020). This is a significant finding if one considers that funders of African entrepreneurship have been reported to come mainly from the USA, Europe and Asia (GreenTec Capital Africa Foundation, 2020).

This paints a dark picture and exclusionary picture that to win in entrepreneurship one must partner with a foreign international talent, otherwise one may not get funding. It arguably creates an environment of ‘them’ versus ‘us’, which is covered in detail in the transformation (4.3) and target (4.4) knowledge sections.

4.2.10 Career background of local successful entrepreneurs

Lastly, to complete the system knowledge generation the respondents were asked to share their experiences on career backgrounds of successful local entrepreneurs. The prompting statement to elicit their responses was: “In my experience, successful entrepreneurs in my area...”. Respondents could choose one or a combination of options from ‘are first-time entrepreneurs’, ‘have past business experience’ or ‘are former government employees’. *Figures 4.23 to 4.25* below represent different visual aspects of the same empirical finding.



Figure 4.23: Success – Past business experience

Source: Author, 2021

Figure 4.23 shows that the majority (53%) of the respondent stories concentrated on local experiences of successful entrepreneurs having past business experience. *Figure 4.24* shows 16% of respondent accounts of local experiences were about successful first-time entrepreneurs who have had *some* past business experiences. Finally, *Figure 4.25* indicates a negligible number of respondent stories (8%) that shared experiences where successful entrepreneurs have had previous ties with local governments.

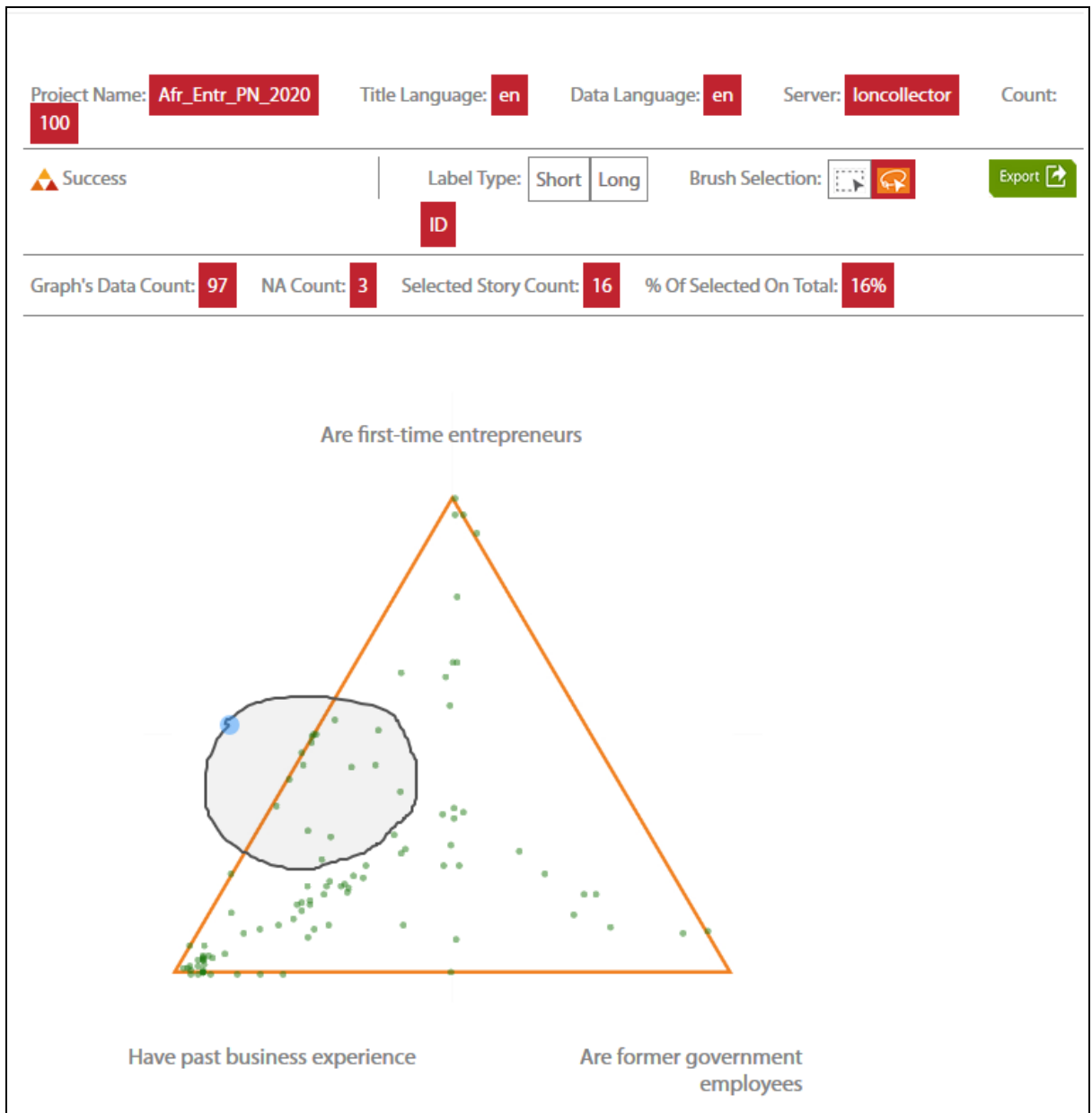


Figure 4.24: Success - First-time entrepreneurs with some past business experience

Source: Author, 2021



Figure 4.25: Success - Former government employees

Source: Author, 2021

This finding is in line with empirical findings of other studies showing the importance of past business experience as one of the differentiating entrepreneurial competencies with high predictability for a successful entrepreneurship career (Bacigalupo *et al.*, 2016; Farrington *et al.*, 2012; Lekoko, Rankhumise & Ras, 2012; Mitchelmore & Rowley, 2010; Obschonka & Silbereisen, 2012; Ploum *et al.*, 2018; Rahman, Azlan, Ahmad & Taghizadeh, 2015). These studies rank past business experience high because of demonstrable evidence and history of risk-taking ability and action orientation that arguably leads to business success if combined with other secondary innate and trainable competencies.

4.3 Transformation Knowledge Findings

4.3.1 Momentum – Government-led

Only 21% of the respondents perceived government as a lead steward in driving traction and momentum in African entrepreneurship, while a significant number (38%) suggested the private sector usually takes the lead in coordinating ecosystem activities and events in their contexts. The position of the median line suggests an overwhelming number of respondents have experienced private sector driving traction and momentum in their local ecosystem (See *Figures 4.26 and 4.27*).

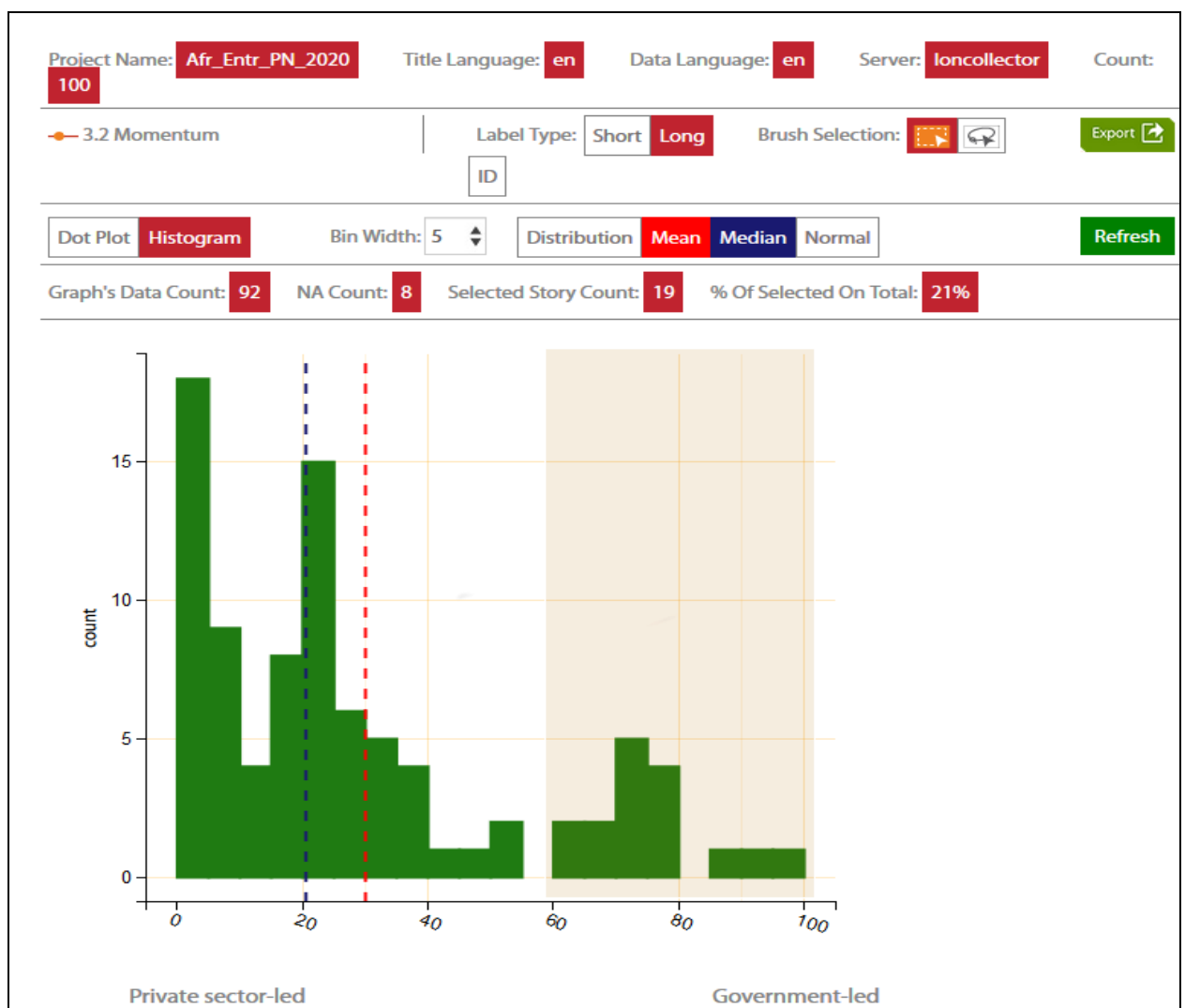


Figure 4.26: Traction and Momentum – Government-led

Source: Author, 2021

This empirical finding is not surprising as it validates a dominant and old classic paradigm that assumes the state must provide a mere facilitation role, with a private sector-led market deciding winners and losers. Unfortunately, as was theoretically argued in Chapter 2, this way of thinking and practice has led to African economies that are obsessed with economic growth and not necessarily development. Moreover, documented evidence has suggested that sustained entrepreneurship in thriving global ecosystems was in fact instigated by local governments, not the private sector (Mazzucato, 2013; Mazzucato & Penna, 2015). Against this background, more efforts are needed to acknowledge, inspire or partner with local governments, as the empirical findings indicate locals have largely experienced private sector-led efforts.

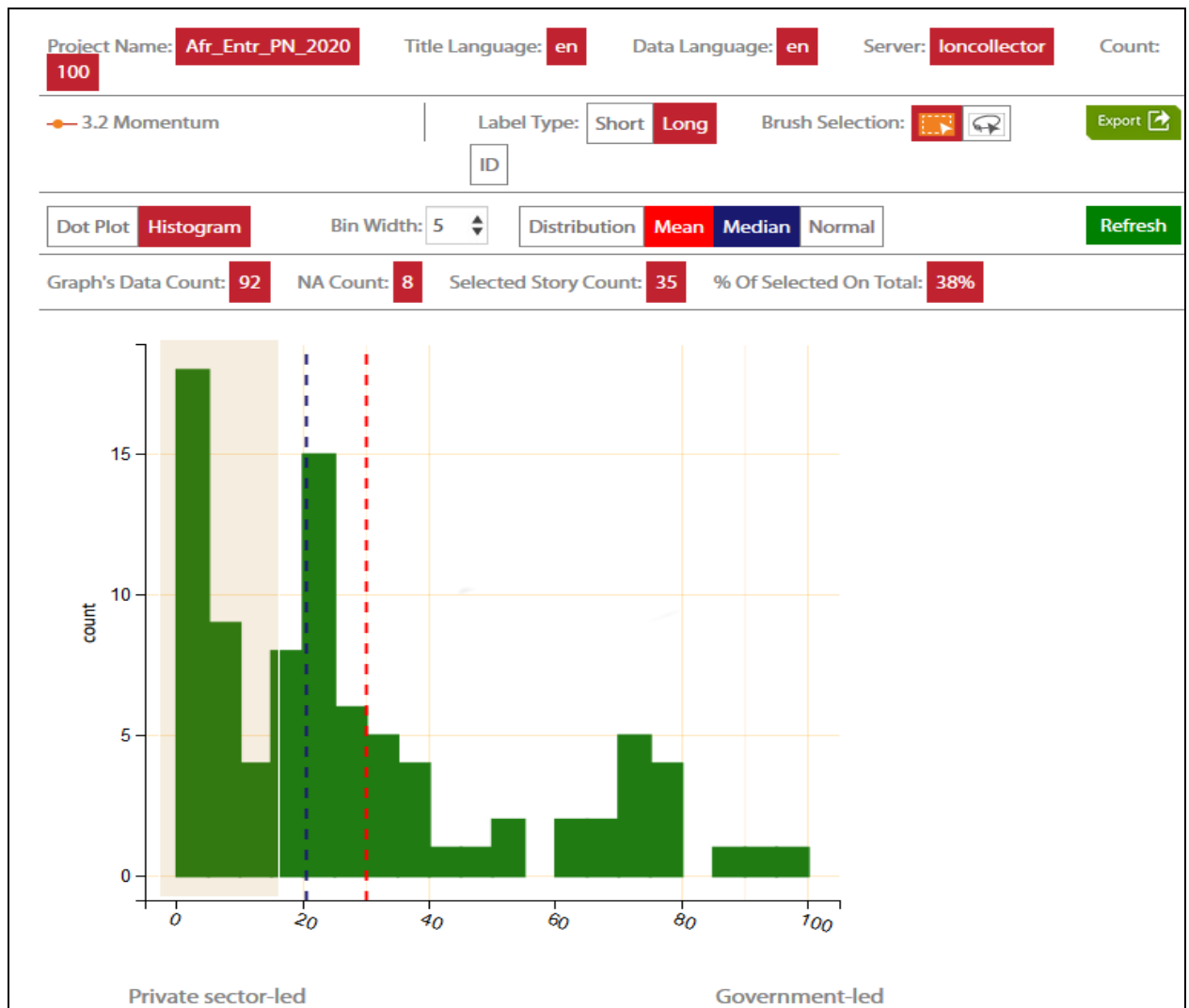


Figure 4.27: Traction and Momentum – Private sector-led

Source: Author, 2021

4.3.2 Focus of resources (Support)

Data suggest that support resources in African entrepreneurship ecosystems are largely dedicated to local entrepreneurs as opposed to supporting institutions. Only 14% of the respondents reported to have experienced ecosystem resources going to supporting institutions, while 26% experienced resources going exclusively to local entrepreneurs. The median indicated that on average local entrepreneurs are the focus of attention in growing entrepreneurship in the African region (See *Figures 4.28 and 4.29*).

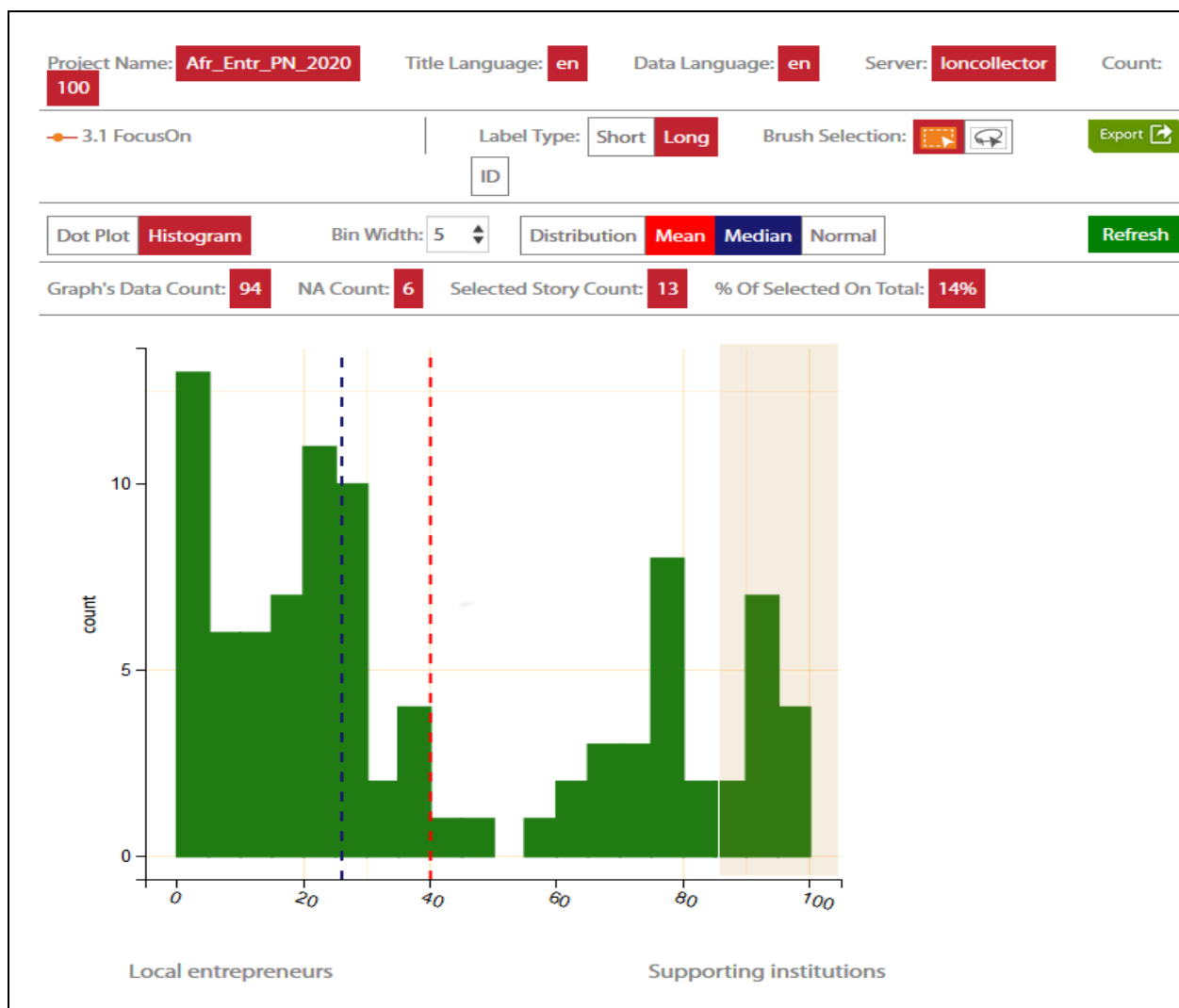


Figure 4.28: Resource Focus – On supporting institutions

Source: Author, 2021

This empirical finding suggested local ecosystems continue to employ individualistic approaches that assume selecting promising individuals, training them along with providing the appropriate incentives, will grow entrepreneurship. The researcher argued at length in Chapter 2 that while practitioners claim to follow ‘ecosystem approaches’, on the ground this lacks orchestration depth necessary to address structural issues, often experienced by local entrepreneurs as institutional barriers. The theoretical arguments presented combined with these empirical findings signal a need for a paradigm shift in implementation approaches and a call to philanthropies, policymakers and international development agencies to apportion some resources toward supporting institutions that are assumed to have the appropriate understanding, means and practices to support the very individuals to whom the resources largely go.

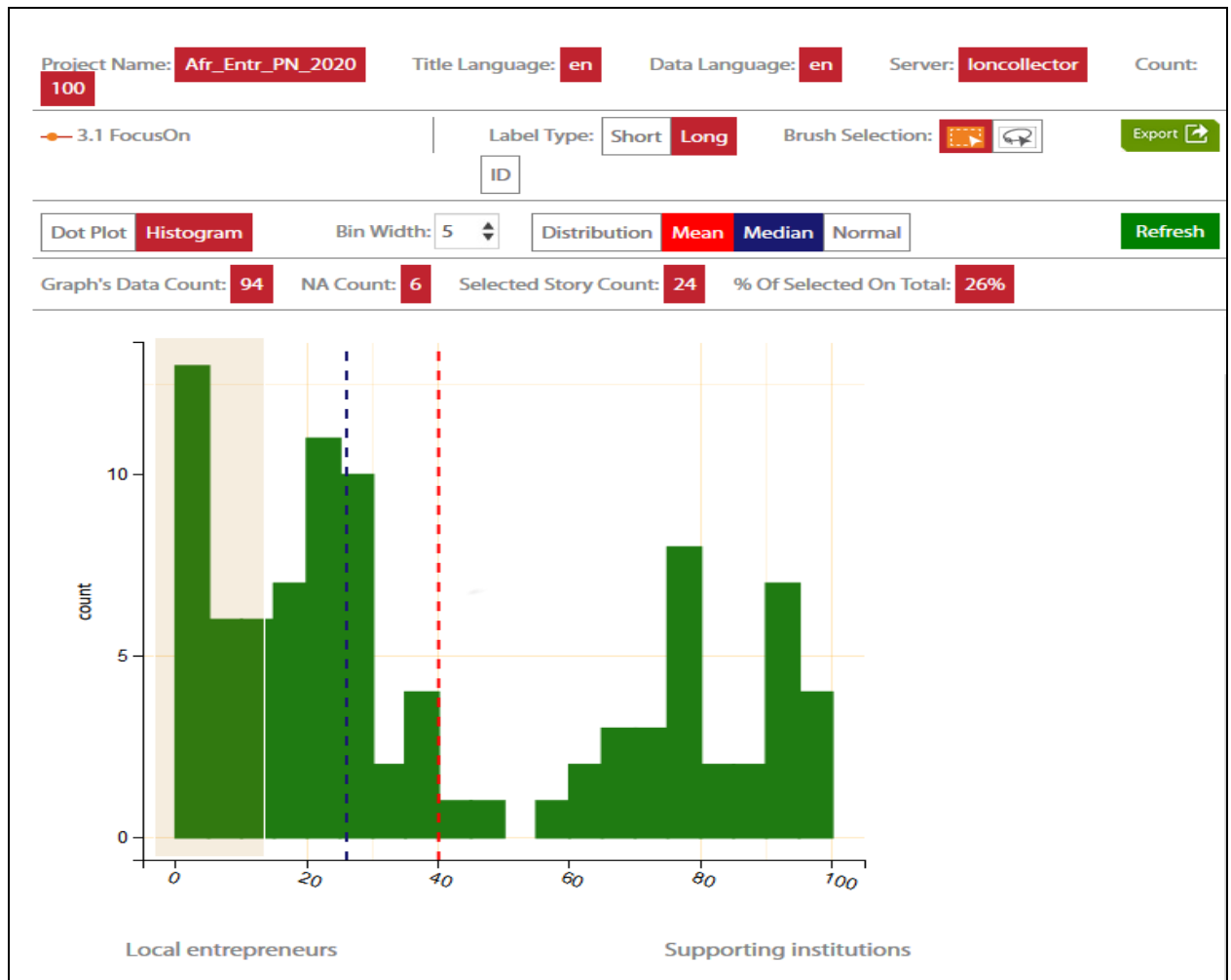


Figure 4.29: Resource Focus – On local entrepreneurs

Source: Author, 2021

4.3.3 Class origins

Empirical findings indicated that respondents perceive successful entrepreneurs in their local ecosystems as coming from upper-middle-class families as is illustrated in *Figures 4.30 and 4.31*. 23% of the respondents reported their experience of successful entrepreneurs as coming exclusively from well-off families, while a mere 14% could associate entrepreneurship and poor families. Aggregated with other respondents, the median line suggested respondents' lived experiences associate becoming a successful entrepreneur in Africa with an upper-middle-class family background.

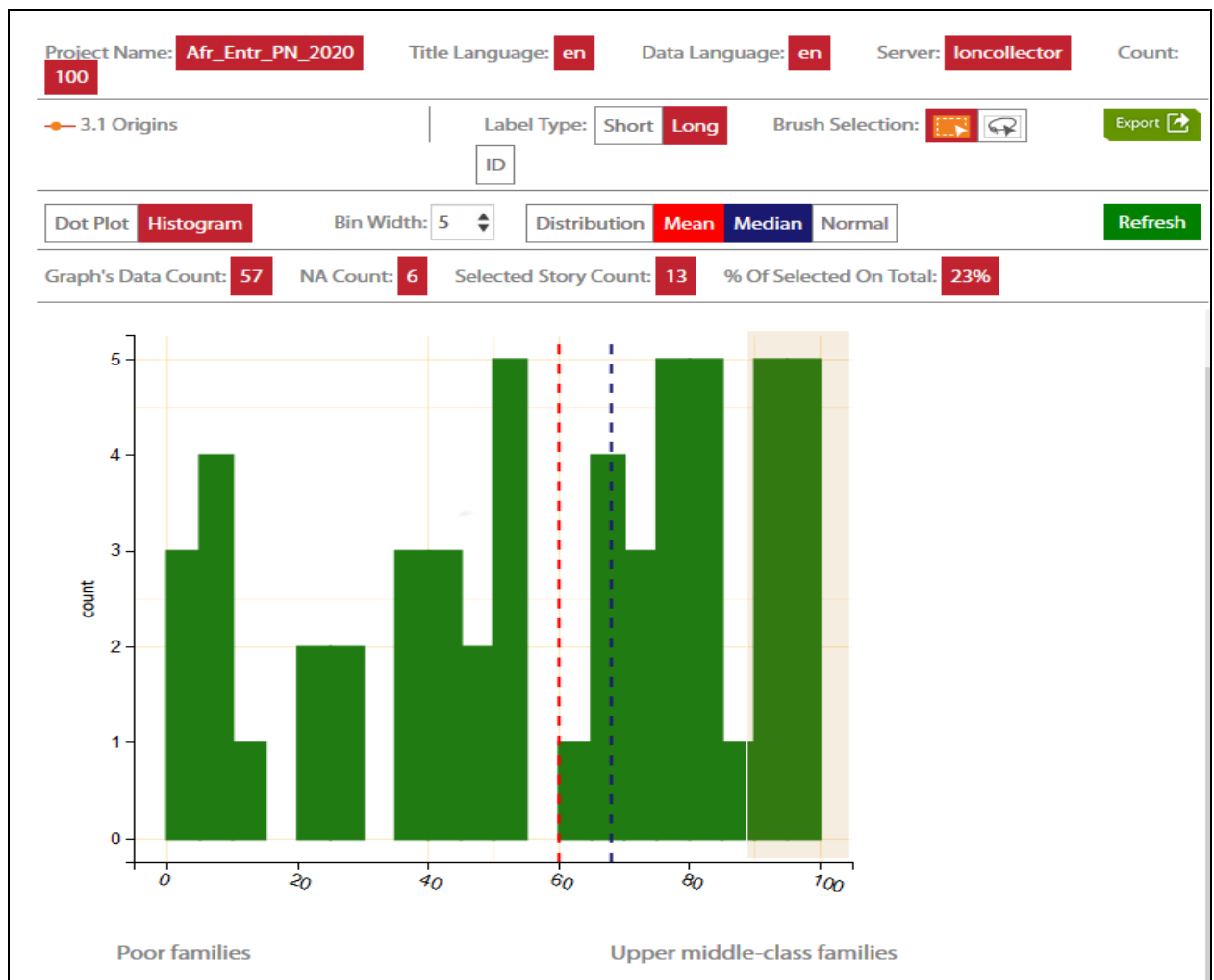


Figure 4.30: Class Origins – Upper middle-class families

Source: Author, 2021

This empirical finding is consistent with existing studies referenced in this study, highlighting the abounding complexity of structural issues such as limited capital accumulation and the way intergenerational family wealth establishes platforms for subsequent generations. In particular, this finding is concerning if one reflects on it through the lenses of the work of Akinkugbe and Wohlmuth (2016) and Valdez (2016) which suggests that African entrepreneurship literature notes few successful cases of new innovations and start-ups driven by elite and often White educated society members from upper middle-class family backgrounds, but with very little *development* actually resulting from entrepreneurship as we know it.

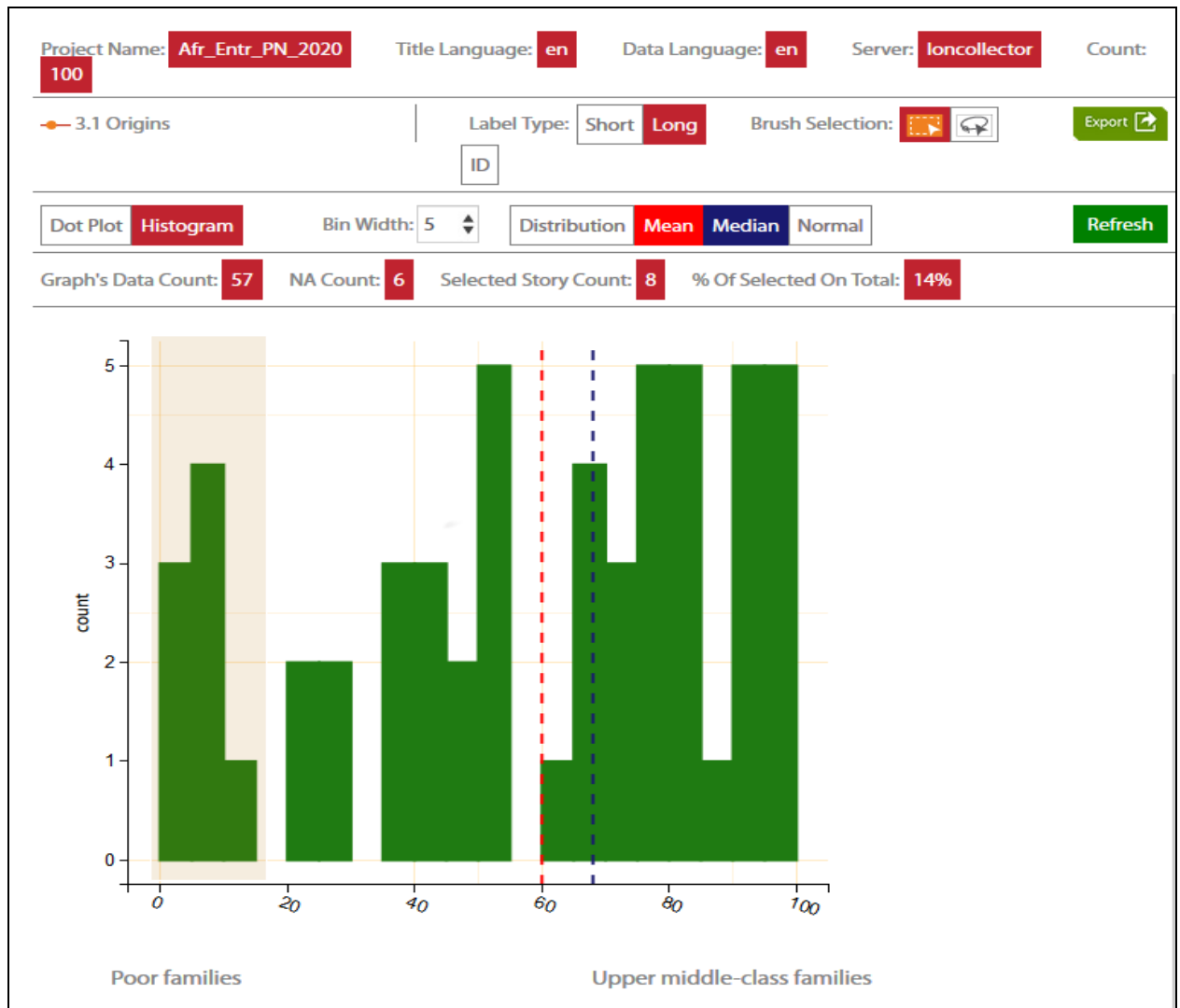


Figure 4.31: Class Origins – Poor families

Source: Author, 2021

4.4 Target Knowledge Findings

To elicit target knowledge, respondents were asked to respond to a futurist statement: ‘Now imagine its 2030, what do you think would have been the main changes in entrepreneurship. Please share a separate *ideal* scenario and a *worst-case* scenario...’. Responses to this statement were important to understand not only where transformation levers (factors) might be situated, but also to study how respondents imagined a desirable future. Given that respondents shared their ideal and worst-case scenario futures, the findings generated were much richer.

The researcher used thematic analysis (TA) to identify, analyse and report patterns (themes) within the ideal and worst-case qualitative data scenarios. TA is a widely used analytical method for minimally and systematically organising and interpreting qualitative datasets (Friese, Soratto & Pires, 2018). TA differs from content analysis (CA) in that the latter assumes that the texts (messages) are the predetermined phenomena to be studied, with codes developed upfront (a priori), whereas TA is “a way of seeing” and “making sense out of seemingly unrelated material” with codes emerging, a posteriori, in the process of “immersion” (Neuendorf, 2018: 212–213).

According to Vaismoradi, Jones, Turunen and Snelgrove (2016: 101) a *theme* is “an underlying meaning implicitly discovered at the interpretative level and elements of subjective understandings of participants, used as an implicit attribute, descriptor, element, concept or topic that organises a group of repeating ideas and enables researchers to answer the study question.” *Coding* as applied in this entrepreneurship study, is a process to reduce data into organised participant perspectives based on negative, positive or indifference comments about a phenomenon experience in a particular context (Vaismoradi *et al.*, 2016: 103).

To conduct TA, the researcher used a general framework of steps involving compiling, disassembling, reassembling, interpreting and concluding, as outlined by Castleberry and Nolen (2018). To compile the raw data (see Appendix D), the researcher jotted down key words in each respondent’s response and transferred them into a Pareto Chart (See *Figure 4.32*). The researcher then created an Excel table and organised the responses into a single column as a set up to disassemble them into text codes. To disassemble the data, a Microsoft Excel function was used, and it is known as CODE i.e. $f(x) = \text{CODE (Column Text)}$. This generated codes that one could reassemble into emerging themes as shown in *Appendix E*. To reassemble coded text, the researcher mapped and contextualised each code into an emerging category theme that signalled something important about the data in line with the research question.

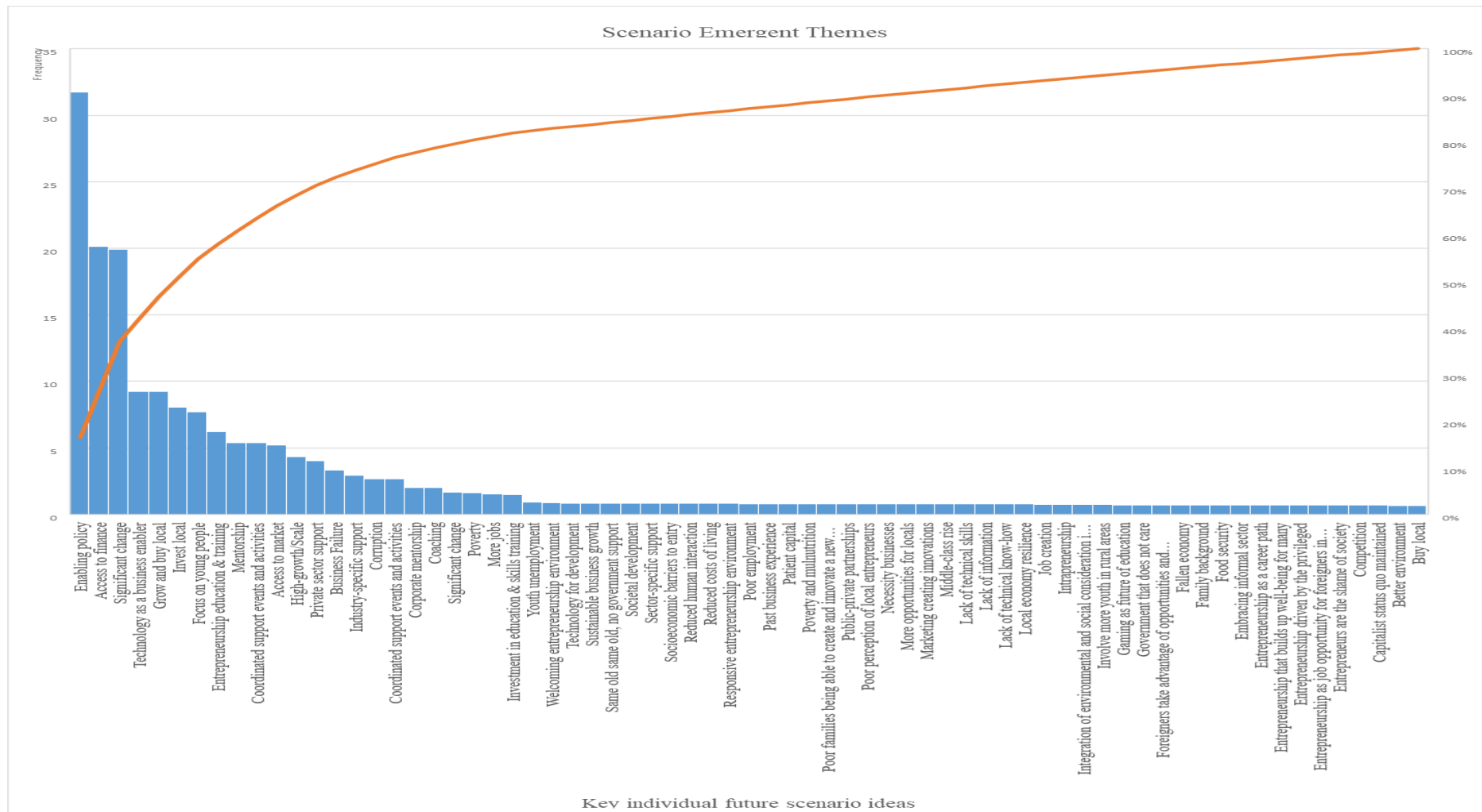


Figure 4.32: Uncategorised Individual Futuring Scenarios

Source: Author, 2021

After arriving at emerging category themes, the researcher interpreted what emerged as the essence of the data into useful findings about the phenomenon of entrepreneurship in Africa. These findings were eventually categorised into 8 themes, viz. access to finance and market, sense of control, enabling policy, dynamic ecology of support, formative context, enabling technology, scale, and sustainable development outcomes (see *Table 4.2*). These category themes attempted to capture the respondents' realities in terms of their outlook on entrepreneurship by the year 2030.

Some reflected positive outlooks suggesting that, at the very least, they did not see problems with the current status quo of entrepreneurship. However, a significant number of respondents revealed dissatisfaction with the lack of visible policy direction in African entrepreneurship, along with poor support for local entrepreneurs. In particular, the emergent findings highlighted that the environment under which local entrepreneurs operated was characterised as having poor access to finance, uncoordinated support, unfavourable policy (specifically high taxes, penalties and stringent regulation), and privileging of foreign entrepreneurs with strong corporate networks and access to financial capital. In turn, these issues create a negative formative context that undermines the scaling of new ventures driven by locals and therefore a stifling of development outcomes.

Table 4.2: Emerging category themes and descriptions

Emergent category themes	Count of Emerging Ideas	Description
Access to finance and market	39	Ability to access capital or markets.
Sense of control	62	People's power and relational agency to influence directionality of entrepreneurship outcomes.
Dynamic ecology of support	55	Coordinated ecosystem structures, events or activities that address barriers for individual entrepreneur.
Enabling policy	46	Government interventions and structure of incentives that make it possible for new ventures to compete and grow.
Formative context	32	Structural barriers to entry inhibiting local entrepreneurs to participate or grow businesses.
Scale	6	Sustained levels of annual revenue growth estimated between 10 to 20% for 3 to 5 years.
Sustainable development outcomes	14	Household and community-level human and environmental progress indicators.
Enabling Technology	13	Different mix of technologies that simplify and better augment product and service performance.
Total	267	

Source: Author, 2021

Finally, to conclude the TA, the researcher subjectively defined these themes to provide the reader with the researcher's own interpretations and subjective meaning. Unlike predictive or deductive studies, where analysis can be induced or even neatly calculated, the interpretive process followed in this study is in line with other empirical studies that view themes as latent underlying meanings of data inherently subjective in the researcher's constructivist analysis (Crowe, Inder & Porter, 2015).

4.5 Concluding remarks

In exploring possible development pathways for hubs, this study sought to create a signification framework that would first deconstruct the complex environment within which hubs operate. This generated systems knowledge. In addition, the investigation went further to identify areas of possible levers (transformation knowledge) that may signal strategic areas of intervening toward the ideal results (target knowledge) local respondents want. Aggregated, these three types of knowledge allowed for more grounded constructivist perspectives on African entrepreneurship that may be useful for hubs, because these perspectives were rooted in the practice of local practitioners, the community and entrepreneurs' lived experiences.

The data emerged to reveal several notable results about the context within which hubs operate. First, it was noticeable that the African innovation and entrepreneurship ecosystem is driven by local practitioners and entrepreneurs with a global experience acquired in other countries they practise in and in terms of their education.

Second, the findings suggest that hubs are a key institutional vehicle that facilitate the way that talent, ideas and capital come together, along with family and private sector corporations.

Third, the data confirmed a growing but concerning perception that successful local entrepreneurs are essentially from the African diaspora with an international education, past corporate experience or upper-middle-class family backgrounds.

Fourth, the findings highlighted an ongoing dominant perspective that the private sector continues to be experienced as providing the lead in coordinating ecosystem activities that drive entrepreneurship momentum and maturity on the continent.

Fifth, money, making a community difference and lifestyle were cited as the three main factors motivating African entrepreneurs to start businesses.

Sixth, and arguably consistent with individualist approaches problematised in the literature review chapter, the data indicated that respondents perceive the resources to foster entrepreneurship in their context as mainly focused on individual entrepreneurs as opposed to entrepreneur support organisations, such as hubs. This is to say, hubs are left without appropriate leadership, directionality and operational guidelines, which creates a risk of creating entrepreneurship pathways that locals may not want.

Seventh, a significant number of respondents suggested government is absent or punitive.

Eighth, access to finance and good mentors or coaches were cited as significant barriers for local entrepreneurs.

Ninth, the data suggested that if local entrepreneurs were lucky to secure finance, it would mainly be from a combination of local private sector and international development organisations.

Chapter 5 – Exploring Opportunities and Possibilities for Systems Change in African Entrepreneurship

5.1 Introduction

The chapter reflects on key empirical data in order to address the following subset of secondary research questions that were linked with the SenseMaker® method:

- What is the most appropriate typology of development for further reconstituting the relationship between entrepreneurship and development?
- How can different stakeholders in different countries and regional institutions help transition hubs into development institutions?

There is a specific focus on these two secondary questions because other sub-questions have already been addressed in detail, especially in Chapters 1, 2 and 3. Emerging insights addressing these two secondary questions will be combined with the results of the literature review covered in Chapter 2, where hub approaches and practices along with their relationship to development were discussed in detail. Aggregated, all corresponding insights addressing all the secondary questions outlined in Chapter 1 will help formulate an overall empirically-based response to the main question for this study: *How can hubs across Africa be reconfigured in ways that translate entrepreneurship into development?*

The presentation of the empirical findings in the preceding chapter was organised into systems knowledge, transformation knowledge and target knowledge. Systems and transformation knowledge provided empirical data that revealed ongoing realities of the environment (i.e. the system) within which hubs operate. While this was useful to give the reader a sense of what is going on, in this chapter we will dig deeper into the target knowledge data covered in section 4.4 and that was explored and presented using thematic analysis. The need for focusing on this aspect of data was also supported by various online focus groups held with relevant stakeholders throughout the study. These stakeholder engagements formed part of the collective reasoning and

sense-making complementary to the study. During the three²⁴ study webinars organised and designed to virtually ‘return’ the stories back to stakeholders, some participants pointed out that the usefulness of the study would mainly be in systematically unpacking the respondents’ perspectives of the future of entrepreneurship and how enterprise support organisations could be reimaged to better support local entrepreneurs.

While the target knowledge data analysed are normative in nature, this was by design and the researcher focused on target knowledge data because it would likely reveal a unique typology one could use to reimagine alternative development pathways in African entrepreneurship. At the same time, the futuristic orientation of these data was used to provide such possible pathways, which in this study are represented by “themes” as constructs for systems change. The emergent themes provided empirical insights that were useful in mapping out a set of reconfiguration possibilities that hubs could consider if they are to explore alternative pathways toward translating the promise of entrepreneurship into a *development* potential signalled by the respondents.

The exercise of mapping out reconfiguration possibilities for hubs is fundamentally a system change endeavour that, in this study, will be examined in the light of three considerations in line with ETTDR epistemological practices. These considerations are important for the reader to better contextualise the theoretical and policy implications that emanated from the target knowledge under discussion.

First, the ideas and views offered in this work should not be viewed as idealist propositions. To borrow Simone and Pieterse (2017: x)’s words, this work is a “call for things” inspired by a reflection of different thematic perspectives from the 100 inter- and intra-disciplinary empirical stories studied. The invitation is to critically engage with the tangential possibilities in African entrepreneurship that the respondents signal is wanted. This engagement needs to be expressed in a way that

²⁴ See first Webinar held on October 15, 2020 with the Centre for Complex Systems in Transition [here](#). See second Webinar held on October 30, 2020 with Africa Tech Group [here](#). See third Webinar held on November 26, 2020 with Cognitive Edge Research Network [here](#).

adequately addresses makeshift issues problematised in the dominant emerging structure²⁵ of the support system that, somewhat paradoxically, seem to be enabling *some* entrepreneurs as much as it constrains *others*, and enabling certain forms of entrepreneurship as much as it constrains others.

Secondly, it needs to be acknowledged that if hubs would take onboard empirical insights from this study, they would have to undergo multiple levels of learning to figure out where and how some proposed transformational changes resonate in their operations and impact on their vision for the hub. Once alignments are identified, various experiments would need to be designed to study practical implications on management approaches, practices and ways of being in a recursive learning fashion.

This consideration is inspired by Bateson's 'triple learning loop' theoretical framework which states that organisations learn differently, and no one form of learning is superior to another, but instead different forms and orders of learning should take place through ongoing reflexive and recursive practices (Tosey, Visser & Saunders, 2012). This means that hubs should not necessarily pursue epic paradigm shifts at the expense of straining management, staff, or resources. They can embrace different forms of learnings across operational, strategic and paradigm levels using gradual experimentation techniques with appropriate learning feedback loops.

Third and lastly, according to Jenal and Hanchar (2016), systemic change happens across three dimensional phases; transformation, scale and institutionalisation, as depicted in *Figure 5.1*. In their framework, transformational change refers to changes in individual beliefs, attitudes and behavioural norms as is observed and captured in target beneficiary's everyday narratives. For the purposes of this study, the target beneficiary is the local African entrepreneur and the laboratory institution driving change is a hub.

²⁵ The concept of an *emerging structure* was taken from the work on Jenal and Hanchar (2016), who argue that an effective way of assessing systems change is by studying how the current system constrains or enables individuals to engage with that system in ways that allow for wider societal participation. They argue that systems are unpredictable at an individual level, but that it is through observing the emergent structure of the system that one can properly observe how change is scaling. With African entrepreneurship, evidence from this study suggested, among other observations, that some demographic groups are navigating the 'system' of local support much better than others, who are constrained by the same system.

Scale explores whether change reaches critical mass in a dynamic that reflects changes in the emergent structure of the system beyond the project. This is to say the new emergent system in question starts to indirectly affect a much wider number of people in society. By implication, scaling in this study context relates to how changes in the innovation ecosystem structure of implicit and explicit incentives and barriers widely enable or constrain aspiring and practising local entrepreneurs.

Whereas, institutionalisation scans for embeddedness of change within institutions in the system; along with signs of future commitment to further spread and maintain the new changes. Institutionalisation would therefore be the phase where hubs and related ESOs have been incentivised to take on board new changes and begin the exercise of translating those changes into their strategies, approaches, implementation plans, operations and management practices.

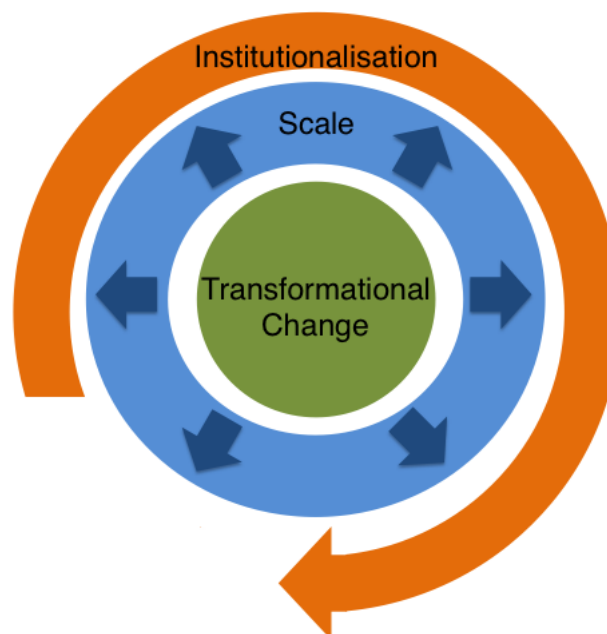


Figure 5.1: Systemic change framework

Source: Jenal & Hanchar (2016)

The rest of the analytical discussion in this chapter is organised using Jenal and Hanchar's (2016) systemic change framework. Using such a framework to organise the discussion is useful, because target knowledge empirical findings in Chapter 4 did not only capture desired futures of the respondents but also *conjured* up several

transformational changes synthesised into 8 resonant themes. These themes require one to at least outline practical and policy implications for adoption, scaling and institutionalisation within and around hubs.

Accordingly, section 5.2 discusses key transformational changes that respondents want to see adopted by support institutions such as hubs, by applying the resonant themes from the target knowledge results presentation. Section 5.3 discusses key implications for scaling such transformational changes within the three innovation ecosystems studied. Section 5.4 discusses the implications of preserving scaling efforts using hubs as institutional agencies of change. Section 5.5 summarises the analytical discussion.

5.2 Transformational changes

The researcher used non-linear causality thinking to crystallise and relate key transformational changes from the resonant thematic propositions captured in the target knowledge findings (see section 4.4). Non-linear causality thinking helps to explore “possibilities” for the future without being constrained to existing “degrees of freedom” that view factors of change as merely “random” (Juarrero, 1998: 235–237). This way, development practitioners could reimagine alternative futures by hypothesizing what might or ought to be. This non-linear causality thinking was adopted to explore how individual themes that emerged from the empirical study could be correlated into a “systemic whole” rather than a sum of its independent parts (Juarrero, 2002: 6).

As Juarrero (2009: 83) pointed out, dynamic complex systems like entrepreneurship in Africa are “neither completely rigid nor fully random” but “display a unique balance of integration”. In many ways, and as argued in detail in Chapter 2, entrepreneurship in Africa possesses similar properties and thus, it important to make explicit what researchers see as alternative possibilities of integration from empirical studies. This effort “interlinks levels of organization...with no preferred level of granularity” into both opportunities and possibilities for an ecological approach (Juarrero, 2010: 1).

In addition, dynamic complex systems are also not entirely dissipative or self-determinant as they require some levels of orchestration; “the agency that brings about the conditions that enable...emergence” (Juarrero, 2013: 5) and ecosystem innovation. It is through this acknowledgment that innovation hubs are explored as agents of change with the opportunity and possibility to inspire the agency needed to steer entrepreneurship toward *developmental* pathways in Africa.

Non-linear causality thinking was specifically used in this study to not only relate but also visually show the nested and wicked nature of creating and sustaining high-impact ventures as an ecological (cross-scale) conceptual framework for consideration. Cross-scale means coordinated and deliberate catalytic efforts to support high-growth ventures at micro, meso and macro levels to facilitate systems change (Curry & Hodgson, 2008; Sharpe *et al.*, 2014). This proposed conceptual framework is constructed using the non-linear causality visualisation guidelines (see Appendix G) proposed by Fisher, Mazzaro, Redding and Straw (2015) with ‘high-impact ventures’ as a *response* variable. As a qualitative visualisation tool for complex systems or wicked fields like entrepreneurship, non-linear causality diagrams have been used in past studies such as in Coleman, Liebovitch and Fisher (2019) and Liebovitch, Coleman and Fisher (2019).

To explain to the reader the rationalisation and inspiration behind choosing this technique as the basis to subjectively organise and construct a conceptual framework, it is important to refer to the normative nature of the data captured in the target knowledge section (4.4) and by extension the role of ‘conjecture’ in this abductive study. By design, sense-making studies are inherently abductive because their empirical outcomes are fundamentally about subjective hypothesis generation as opposed to objective hypothesis testing that characterise mainstream research based on inductive or deductive analytical techniques (Park, 2017).

Abduction is rooted in participatory action research in which the researcher subjectively and “actively gets involved in creating data and theories” from “individual perspectives to broad patterns”, in complex phenomena where “the course of action is unclear” and often articulated in a “rhetoric of advocacy and change” (Kaushik & Walsh, 2019: 2–4). This rhetoric of advocacy and change starts with

hypothesis generation when one embraces ideas that do not preserve the neatness of known theories, but make bold leaps out of what is normally experienced – what conjecture is about, according to Wentzel (2006).

As was discussed in the methodology chapter, this dynamic process of contextualised scientific conjecture aligns well, in part, with grounded pragmatism that can inspire advocacy (call to action) and innovative social change. According to Einstein’s model of scientific discovery, there can be no innovation of any form without conjecture as is depicted in *Figure 5.2*.

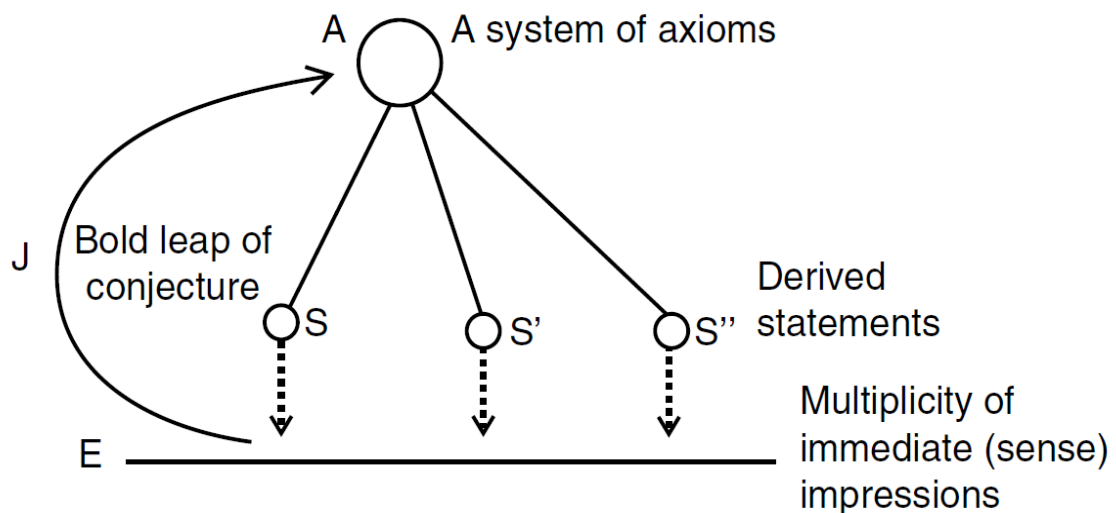


Figure 5.2: Einstein’s model of scientific discovery

Source: Wentzel (2006)

In Einstein’s model, innovators first make bold ideas (J) from mental constructs (conjecture) which reimagine a particular experience (E); then they translate this imagination (or “imagineering”) into a set of hypotheses (axioms) to innovate from (Wentzel, 2006). In other words, innovation (institutional, product, service or otherwise) starts with generating a hypothesis about how a lived individual experience can be improved; from that subsequent testing and experimentations are designed.

5.2.1 Prelude

As a prelude, the theoretical chapter argued that hubs have the potential to be good at supporting productive entrepreneurship, but only if they employ a wider ecological approach to orchestrating resources for local entrepreneurs. The discussion led to a

conclusion that hubs need to be ecological if they are going to have development impact. At the same time, the discussion raised a mutually reinforcing effect argument that transitioning conventional hubs towards adopting an ecological approach would be facilitated if they employed a development perspective to entrepreneurship.

In the next section of this chapter, the resonant thematic propositions as an ecological synthesis from the empirical study will be presented. Firstly, a background to the ecological approach will be provided, arguing that it is related to, but fundamentally different from, the conventional ecosystem approach.

Furthermore, the discussion disaggregates the three core ecological propositions (emerging themes) into primary elements that are argued to entail dynamic interactions making orchestration of enterprise support better. These primary thematic elements are argued to be the basis of important interactions that theoretically facilitate integration and optimisation of efforts as opposed to a mere mapping of ecosystem actors. The argument moves to discuss and illustrate the additional five thematic propositions that make up the secondary elements of ecological orchestration in enterprise support.

Last but not least, an argument is made that these ecological themes can address inaction and poor integration of efforts. This follows an observation that the main differentiator in the ecological approach is its ability to employ a systems approach to entrepreneurship, coupled with an agility that makes institutions employing this approach dynamic in nature. These attributes allow for ecological hubs to go beyond the training paradigm and passive conventional ways of doing that theoretically make the integration and optimisation of efforts so difficult to orchestrate.

Such dynamic orchestration of efforts is the genesis of the ecological approach to entrepreneurship, that was recently inspired by Mazzucato (2011, 2016) when she demystified dominant perspectives and critically argued that entrepreneurship in the United States (USA) was dynamically set up by the state and not necessarily the private sector, as had previously been misconstrued. Her work details how macro-level interventions by the US government and its organs such as public universities and military agencies did not only 'facilitate' as prescribed by the free enterprise

system founded on neoliberal theoretical traditions, but they also ‘directly’ intervened in new industry formation, which later incentivised private sector meso stakeholders like financial institutions and other business support services to drive innovation on the ground.

Mazzucato (2011) documents and debunks myths about how the growth of industries such as IT, biotech and nanotech are attributable to ‘individual’ shining hero entrepreneurs and star performing private sector organisations. Instead, she argues the opposite, namely that entrepreneurship success and the thriving Silicon Valley model is a consequence of direct state investments that helped de-risk follow-on investments from the private sector. At a time when libertarian politicians and private sector ideologies seemed to dictate political economy and industry formation, Mazzucato (2011: 20) argued that the debate “...is about admitting that in many cases, it has in fact been the state, not the private sector, that has had the vision for strategic change, daring to think — against all odds — about the ‘impossible’, creating a new technological opportunity, making the large necessary investments, and enabling a decentralised network of actors to enable the risky research, and to allow the development and commercialisation process to occur in a dynamic way.”

An additional useful but separate contribution to the ecological approach is the *rainforest* concept and analogy developed by Hwang and Horowitz (2012), associating successful entrepreneurship development with a “living biological system”. They argue that entrepreneurship is a product of “complex evolutionary interactions” requiring a “multi-disciplinary approach” that harnesses culture and networks beyond the conventional economic thinking.

The entrepreneurial state and rainforest concepts are a powerful foundation for an ecological approach that goes beyond the ecosystem approach pioneered by Daniel *et al.* (2018), Isenberg (2010) and Malecki (2018), among others. Furthermore, the importance of the ecological approach lies not simply at the conceptual level, but in the agency and optimisation it can foster in practice. In essence, its implications are fundamentally about rethinking institutional design and management practices to privilege more peer (meso) and policy advocacy (macro) orchestration beyond micro-level practices such as merely attending conferences or being conscious of the

‘ecosystem landscape’, but not influencing it to work productively, as many individual and institutional stakeholders in practice do.

While it is widely documented that the *ecosystem approach* has contributed immensely to new start-up formation, launching new ventures is a means to an end, not necessarily the end itself. In fact, heterodox scholars realise the nested nature of entrepreneurship implies that the formation of start-ups is but one of many progress milestones needed to sustain ventures and ultimately achieve productive entrepreneurship. The implications of an ecological approach are more far-reaching and useful in that they are fundamentally about (re)engineering entrepreneurship institutions to orchestrate *across scales*, going beyond mere problematisation and mapping of enabling factors of ecology.

Sadly, the ecosystem approach has had the unintended consequence of entrepreneurship institutions merely embracing the ecological awareness that there are meso and macro level players involved in creating and sustaining productive entrepreneurship, but at the same time preserving the individualistic, Marshallian management mindset that simultaneously treats those as exogenous variables that would somehow take care of themselves.

5.2.2 *Resonant thematic propositions affecting high-impact ventures*

Using the already established view that only productive entrepreneurship can facilitate the quantity and quality of jobs and social progress, i.e. development, one needs to unpack the primary and secondary thematic propositions or factors that make high-growth ventures possible. The findings of this study indicate that the three primary thematic factors that potentially influence and are influenced by high-impact ventures – as the only form of businesses theoretically linked with productive entrepreneurship – are i) scalable small but growing businesses (SGBs) with ii) access to both finance and markets, within an environment that is epitomised by a iii) dynamic ecology of support (See *Figure 5.3*).

The *scale* theme mainly represents respondent ideas supporting the view that support organisations like hubs must ensure that new local ventures achieve the necessary

growth to stand on their own. This view is in line with other recent studies such as that by Isenberg and Onyemah (2016) suggesting new SGBs must grow at a healthy rate of 10 to 20% per annum for three to five years consecutively to prove their viability and bankability. Although high growth alone has already been argued as inadequate for development, high-impact ventures must still grow sufficiently before fully reaching their potential for impact. *Access to finance or market's* theme collated respondent ideas around the ability of local entrepreneurs to successfully acquire finance or access to established or new markets without experiencing artificial barriers such as race, gender, age, spatial and intergenerational wealth discriminations, among others. The *dynamic ecology of support* theme elicited individualised entrepreneur support mechanisms that go beyond training or mechanistic approaches, but also address systemic artificial barriers inhibiting success.

According to the respondents, these primary factors in turn affect and are affected by enabling policy, sustainable development outcomes, sense of control, formative context and enabling technology (also See Figure 5.3). The *enabling policy* theme aggregated propositions that government interventions and structure of incentives must make it possible for new ventures to compete and grow. The *sustainable development* theme captured various desired non-linear expectations relating to household, community-level and environmental progress indicators that high-impact ventures need to be measured by.

In addition, the *sense of control theme* captured the respondents' underlying proposition that local proponents of African entrepreneurship need to also allow citizens and informal stakeholders' aspirations and relational agency to influence the directionality of entrepreneurship outcomes. The theme of a *formative context* captured ideas that focused on the barriers to entry respondents highlighted inhibit local entrepreneurs from participating in or growing businesses. Finally, the theme on *enabling technology* captured the importance of a different mix of technologies respondents highlighted local businesses need to simplify, and better augment product and service performance. These primary and secondary factors either positively or negatively affect or are affected by high-impact ventures in a dynamic fashion.

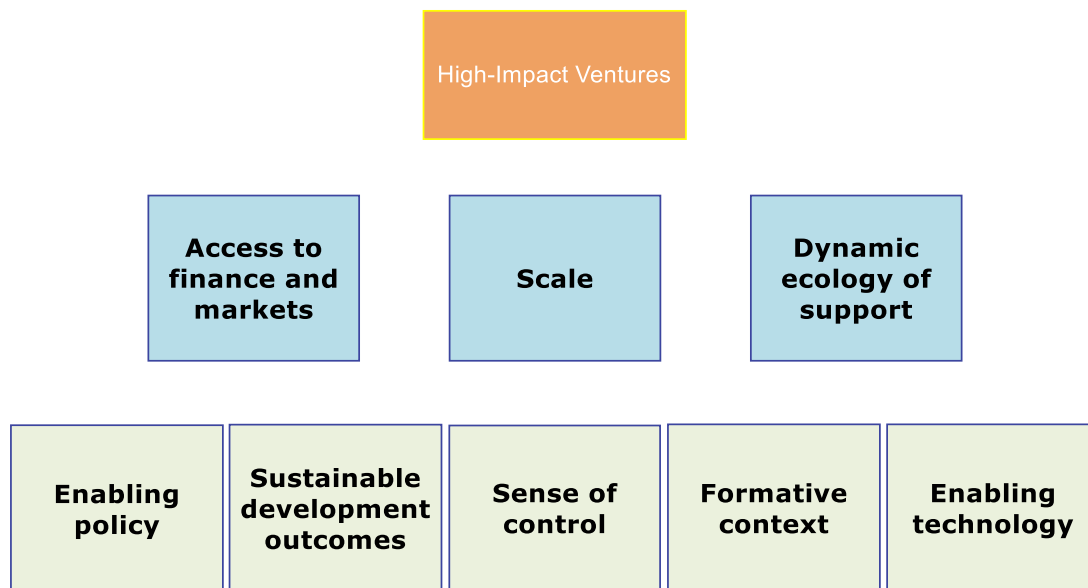


Figure 5.3: Primary (light blue) and secondary (light green) factors systemically affected by or affecting high-impact ventures

Source: Author, 2021

However, as argued earlier, creating high-impact ventures requires more than merely mapping ecosystem support, but also needs cross-scale institutional and policy interventions that enable the right dynamic factor combinations. Arguably, the incentives for ecosystem players to work across scales and be ecological are set up by an enabling regulatory environment (Sambuli & Whitt, 2017) or direct state intervention, as argued earlier. The impact of the above primary and secondary factors, therefore, cannot be understood in isolation, as will be shown in the construction of a non-linear causality linkages diagram below.

5.2.3 *Non-linear causality linkages*

To construct non-linear causality linkages between the primary and secondary thematic propositions (factors) required to create high impact ventures (See *Figure 5.4*), one first needed the building blocks to be explained and related (See *Figure 5.3*). The orange thematic factor represents a complex response variable that practitioners and policymakers are trying to change, in this case, high-impact ventures. Light blue means primary factors that affect or are affected by the response variable. Light green refers to secondary factors that affect or are affected by primary factors. Blue lines

mean the factors affect each other in the same direction, i.e. growing one factor also grows the other factor. Red dotted lines mean factors affect each other in the opposite direction, so that growing one factor reduces the effect of the other and vice versa. Finally, thickness of the line means the influence is stronger.

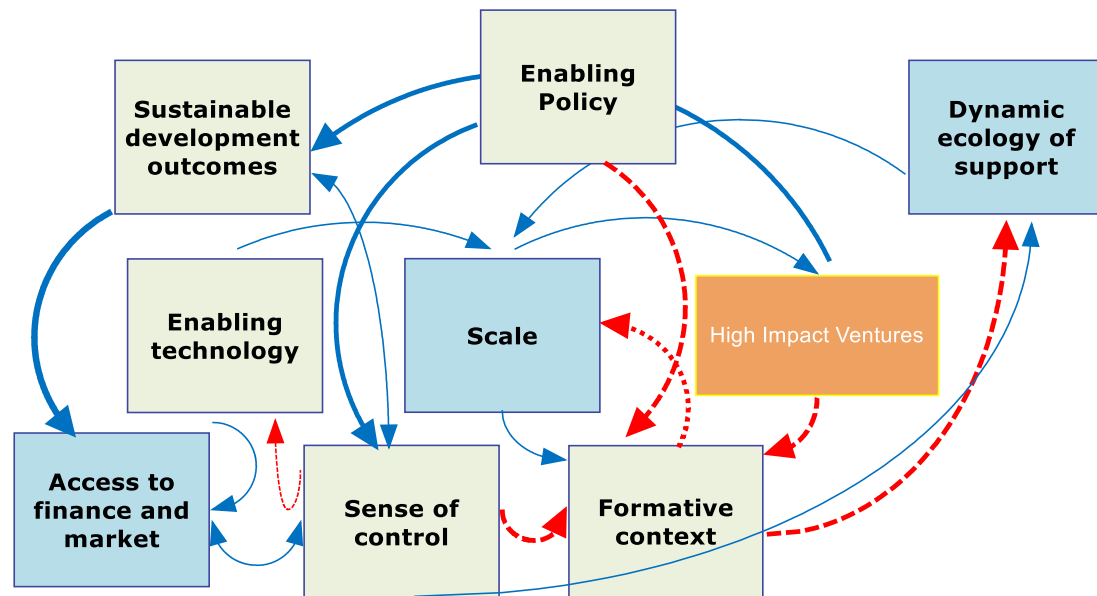


Figure 5.4: High-impact ventures non-linear causality linkages

Source: Author, 2021

5.2.4 Hypothesis generation

This non-linear causality diagram, therefore, sets up the following hypothesis:

To create high-impact ventures requires local entrepreneurs to focus on market opportunities with high prospects for scale. At the same time, scale is achievable through enabling technology and where an innovation ecosystem is characterised by a dynamic ecology of support that results in access to finance and markets needed as a conduit, especially during the early stages. While entrepreneurs can grow their new businesses to scale, that can be undermined by absence of enabling policy and degenerative formative context that disincentivises financiers to release capital. Consequently, that creates a systemic barrier, disincentivising ventures to explore long-term opportunities that enable innovative industry building and ultimately scale. Finally, this causal systemic loop also implies that successful high number of high-

impact ventures in principle improve individual and household incomes for co-founders and in the process create excess funding that can, in turn, be injected back into the local ecosystem to support upcoming ventures and sustainable development initiatives.

This hypothesis also highlights that conventional enterprise support is silent on policy and operates as if there exists an enabling policy environment even when that is sometimes not the case. For this reason, it is argued in the chapter that one of the key differentiating functions of ecological hubs is the policy advocacy needed to protect the entrepreneurship potential of the environment the hub operates in.

The hypothesised institutional and policy factor combinations illustrated in the non-linear causality diagram are healthy and effective only if they inspire an ecology of support in ways that create and sustain the productive entrepreneurship theoretically necessary for development. To achieve a healthy dynamism between the empirical thematic propositions, therefore, requires cross-scale interactions operating at all levels simultaneously, as shown in the non-linear causality diagram. In short, being ecological arguably leads to the creation and sustainability of high-impact ventures which in turn contributes to productive entrepreneurship that is theoretically linked with development.

Now that non-linear causality linkages of the emergent themes has been presented and hypothesised, the main take-away is that an ecological type of orchestration can help hubs address the kind of inaction that merely lists actors while not influencing them. Importantly, the constructed non-linear causality diagram puts forward a set of dynamic interactions that can help integrate, optimise and catalyse efforts. The next section provides a few arguments outlining how the hypothesised ecological framework can be scaled across the African entrepreneurship landscape in a bid to aid the creation and sustainability of high-impact ventures.

5.3 Scale

In thinking about the aspect of ‘scale’ or ‘scaling’ of the thematic propositions discussed above, it is important for the reader to understand various forms of scaling

and related heuristics that have practical and policy implications for African entrepreneurship actors. Needles to mention, this type of ‘Scaling’ denoted with a capital letter ‘S’ is different from the thematic proposition that emerged from the empirical findings and which was subjectively clustered or labelled as ‘scale’ earlier and denoted with a small letter ‘s’.

The latter version of scaling discussed so far captured respondents’ propositions and desires for local businesses to grow and operate beyond survivalist mode or aspirations to only acquire necessities. The Scale we are focusing on in this section is about mainstreaming the desired thematic (transformation) changes across applicable institutions and societal cultures, along with concomitant efforts to influence adoption at regime (policy) level as conceptualised by Jenal and Hanchar (2016).

5.3.1 *Innovation process for systemic change*

One key consideration in mainstreaming transformation ideas in complex environments that characterise both entrepreneurship and African cities is that innovators are likely to face degenerative conditions that may undermine desired transformation changes. These degenerative conditions make implementation problems less apparent but emergent and multiconnected, and thus requiring multicomponent behavioural changes on the part of those driving change (Raworth, 2017; Steffen *et al.*, 2015).

By extension, the innovation process for systemic change follows a non-linear set of steps that requires change agents to distinguish between pilots, prototypes and projects (Murray, Caulier-Grice & Mulgan, 2010). Pilots are niche or micro lab-like innovation tests that still have to undergo socio-technical and/or socio-political transitions (Murray *et al.*, 2010; Westley *et al.*, 2014). Prototypes are pilots that eventually go through iteration, trial and error in the social economy (Murray *et al.*, 2010; Slayton & Spinardi, 2016). Projects are social experiments that have successfully gone through recursive dynamic feedback loops at least either at niche AND regime or niche AND landscape level, and are resource ready for transitioning into full social change operations (Bloom & Chatterji, 2009; Murray *et al.*, 2010; Wahl, 2016).

This means that driving systems change is a non-linear journey involving prompting efforts to understand context, proposal development for setting up prototypes (experiments or micro-level social studies to test ideas), sustaining and learning from carefully designed social experiments, and finally mobilising resources for translating prototypes into social change projects (Gillespie, Menon & Kennedy, 2015; Murray *et al.*, 2010).

Another consideration is that Scaling requires actors to adopt and employ multiple pathways to impact. According to Moore and Riddell (2015), as is depicted in *Figure 5.5*, such pathways to impact involve Scaling out, deep and up. Scaling “out” often occurs when niche innovations do not necessarily nudge but merely replicate and nurse or preserve dominant, degenerative conditions, thus undermining desired transformative innovations needed for systems change (Moore & Riddell, 2015; Wahl, 2016; Westley *et al.*, 2014).

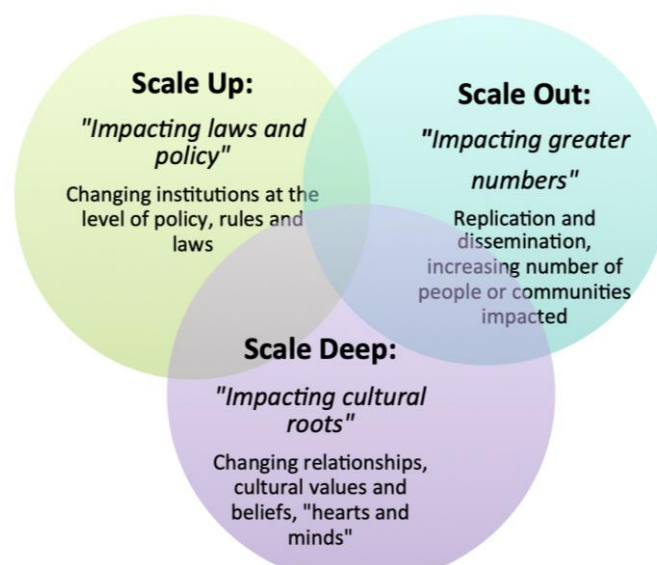


Figure 5.5: Scaling out, deep and up

Source: Moore & Riddell (2015)

Scaling “up” is about inspiring cross-scale social experiments that strategically nudge against or explicitly challenge “structural fetishism” (Moore & Riddell, 2015; Swilling, Pieterse & Hajer, 2018). Scaling “deep” refers to impacting on the cultural

roots that influence people's beliefs, values, empathy and mindsets in an environment (Moore & Riddell, 2015).

In other words, as opposed to the classic 'product-market orientated' or industrial horizontal. Scaling out, deep and up are about embedding knowledge and institutional governance processes that address cultural values and norms while at the same time lobbying policy (regime) issues in ways that undermine structural fetishism (Gillespie *et al.*, 2015; Lundvall, 2016). These governance processes ensure sustainability of the novelty idea until a necessary tipping point is reached, where the transformative innovation delivers on desired social change (Bloom & Chatterji, 2009; Gillespie *et al.*, 2015; Lundvall, 2016).

5.3.2 *Implications for ecological (re)design and practice*

As a reminder, the discussion in Chapter 2 highlighted that conventional hubs take a linear approach to entrepreneurship, failing to consider the reality that in some contexts entrepreneurship promotion takes place in non-deterministic environments characterised by poor institutions and a complexity that requires support institutions to adopt a system view on entrepreneurship through deliberate aggregation and optimisation of efforts.

As such, to address inaction and lack of integration, the ecological approach to entrepreneurship promotion systemically recognises that entrepreneurs operate in highly varied and specific spatial socio-economic contexts in which a mere training paradigm or awareness of barriers simply do not make a difference in the lives of entrepreneurs and the communities they are trying to serve.

Furthermore, by assembling resources from multi-national stakeholders, hubs employing ecological approaches to orchestration embrace open principles of innovation that through smart collaborations can contribute towards meeting public policy goals of development (Sambuli & Whitt, 2017). On the one hand, this means that their independent and hybrid nature make them effective at promoting entrepreneurship. On the other hand, it means in principle that ecological hubs must

have the requisite dynamism and agility to partner with policymakers and trans-local institutions to achieve development goals.

More importantly, the idea of ecology rests on acknowledging path dependencies on the past and future. Ecological hubs would need to pay attention to the ever-changing conditions and have the integrity to adapt their approaches and practices accordingly to successfully add value to entrepreneurs and achieve productive entrepreneurship levels as the systemic barriers change.

To successfully implement transitions among hubs, the ecological approach should not be confused with the ecosystem approach, as was addressed in section 5.2.1. The biggest difference indicated was that the ecosystem approach has helped hubs become aware or conscious of the other minimum systemic factors required to make entrepreneurship emerge. However, the observation was made that in practice conventional hubs tend to operate in silos without fully embracing ecological principles.

Outside the ecosystem approach – and perhaps also likely to cause confusion with the ecological approach – are mission-driven hubs that are ‘ecological’ in the sense of being pure ecology or have an ambition to become ‘greening’ industries. These hubs exist to assist entrepreneurs to produce green innovations and businesses in line with the bigger global sustainable development discourse. They are ecological by their exclusive focus on greening economies or at least on some value-chain aspects during product design but may not necessarily be working across scales. This means that as desirable as their efforts to become “greening” industries may be, those efforts can equally succumb to individualistic approaches that do not promote development if they do not work across scales.

Moreover, some hubs are likely to adopt the ecological approach proposed in the non-linear causality conceptual framework in piecemeal fashion rather than in full. Some conventional hubs, as discussed in the literature review chapter, are already demonstrating ecological elements, especially at the meso level. However, this study contends that a genuine commitment to the ecological approach entails working across all three scales of influence and recognising that unless the ecosystem has

enough traction at all scales, the entrepreneurial potential of that country is likely to be undermined. Practically, this may mean a rootedness in one scale along with attempts to nudge other scales accordingly. Depending on institutional resources and strategy, this may also mean incremental contributions across all scales.

It is hardly necessary to mention that a huge implication of the ecological approach is the capacitation of hub managers and ESOs alike to learn to navigate very different stakeholder environments at micro, meso and macro levels, each requiring in some cases completely different competencies to successfully exert that influence. In other words, the ecological approach may necessitate a redesign of hub management practices and operational models.

5.4 Institutionalisation

By way of recapping, it follows from the discussion above that some distinct functions or propositions theoretically make the ecological approach different and more effective compared to other approaches. The literature reviewed highlights hub-policy integration, meso-level engagements and a trans-local outlook as the main features of ecological institutions (See *Figure 5.6* below). Hub-policy integration refers to macro-level efforts to lobby for regulatory environments that are conducive to micro, small and medium enterprises (MSMEs) growing and succeeding in high-impact ventures. Meso-level engagements refer to efforts not only to map out market actors involved in the MSMEs value chain, but also aggregate and optimise their combined offerings. Finally, a trans-local outlook means the ability to inspire or mobilise resources beyond the local ecosystem, knowing that some individual entrepreneur-constraining resources such as a lack of finance and technical skills may only be available at international level.

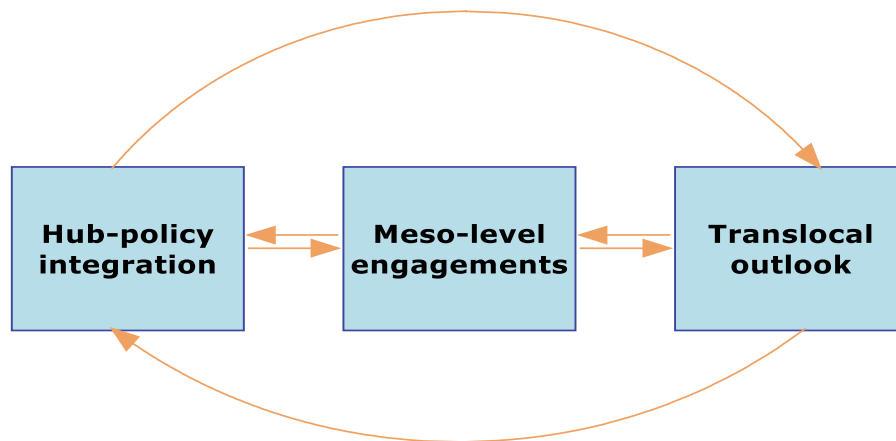


Figure 5.6: Features of an ecological institution

Source: Author, 2021

These features have been directly or indirectly isolated and emphasised elsewhere by Danes (2013), Obschonka and Silbereisen (2012) and Sambuli and Whitt (2017). Aggregated, the views of these scholars suggest that an ecosystem approach is synonymous with simple awareness of market (meso-level) actors and policy at macro-level but without any systemic influence, while the ecological approach is about catalysing that ‘ecosystem’ within hub intervention design and operational models in ways that privilege contribution of efforts rather than attribution. This means that scholars who favour the ecological approach are rooted in the idea that it takes a village to create a successful high-impact business.

Thus, the non-linear causality diagram was constructed in a way that illustrated these functions through dynamic negative or positive interactions beyond mere awareness, listing or mapping of actors as conventionally done by ecosystem practitioners. Instead, ecological institutions such as hubs championing new high-impact venture creation can focus on creating dynamic interactions that integrate and optimise efforts to support local entrepreneurs as constructed in the non-linear causality diagram (*Figure 5.4* above) and argued in detail in the theoretical chapter (Chapter 2).

The key assumption behind this approach is therefore that businesses produced and supported by hubs can be radical country demonstrations and champions (experimental pilots) for sector diversification and economic inclusivity that

entrepreneur support organisations (such as hubs) across Africa can look to emulate gradually. As a reminder to the reader, the inspiration behind the inquiry in this study was the need to reconfigure hubs for sector transformations and economic inclusivity – both arguably understated in the field and constraining some individual entrepreneur pathways in the current emerging structure of support, as problematised in Chapter 1. A useful set of practical design guidelines for achieving the kinds of economic transformations that inspired the next section, and adapted for what can be done and how, is taken from McMillan *et al.* (2017).

McMillan *et al.*, (2017) propose a four-phased guided approach to accelerating economic transformation for growth and economic development. These phases are very much aligned with TD phases with the main goal of using research to inspire action that can make a significant contribution to society. These phases involve diagnosing the causes of lack of transformation, unpacking the binding constraints leading to incentives for preserving the status quo, and exploring incremental solutions to intervene and create change. Given the diagnosis of what is going on (systems knowledge) and analysis of what can be changed (transformation knowledge), the next two sections conclude the discussion by exploring incremental solutions to intervene (what can be done) and how this can be done incrementally in order to inspire systems change.

5.4.1 *What can be done?*

Policy makers in Africa can help institutionalise an ecological approach in entrepreneurship by educating hub managers on appropriate policy by highlighting economy-wide, broad-based priority sectors and targeted interventions. The education of hubs by relevant authorities should include multiple convenings of the broader entrepreneurship circles in open and robust discussions about existing policy constraints or limitations. The output of such meetings should be a planning of public action to address the respective policy constraints with the intended result of promoting inclusive and transformed high-impact ventures.

Similar meetings can also be arranged by policymakers to include in-depth stakeholder engagement (including, financiers, trainers, angel investors, mentors and

entrepreneurs where appropriate) looking to create opportunities for new forms of self-interested action by powerful players that improve conditions for hub transformation. To illustrate the importance of inspiring new forms of self-interested action, one key issue worth exemplifying is the pervasively poor deployment of start-up funding to local African entrepreneurs, as also argued in the previous chapters and indicated in the empirical findings.

If existing approaches for funding African entrepreneurs are failing as originally intended, such creative meetings can, for example, explore alternative assets that investors can use as collateral instead of traditional assets. This is because it can be argued that assetless African entrepreneurs possess other cultural, social or community-based non-financial types of assets. These assets could be explored and piloted as radical alternative collateral schemes that facilitate better and innovative access to early-stage finance.

While there is growing evidence from a range of different disciplines (mostly outside mainstream economics) that there are successful micro-, medium- and large-scale entrepreneurial initiatives that seem to be rooted in specific ‘ways of doing things’ across a wide range of African contexts, many of these initiatives are too niche to have a systemic impact and, in some cases, suffer from rent-seeking behaviour that loots resources. One example of an innovative scheme in Africa was the Khula Enterprise Bank that was set up by the South African government to provide loan guarantees to deserving local entrepreneur. Sadly, this innovative institutional innovation lasted only a few years before it disappeared without publicly available knowledge products about what worked and what did not for other contexts to emulate.

To fuel the still nascent discussion of an ‘African mode of entrepreneurship’ that is far more ‘relational’ than what appears to be the case in other world regions, similar radical social experiments need to be studied, shared and adapted for Scale accordingly. The predominance of mainly ‘Western’ conceptions of entrepreneurship tends to obstruct such emergent alternatives showing different pathways to desired futures. This becomes seriously problematic when it comes to channelling investment funding into the entrepreneurship space. After all, investing is about risk and risk

analysis is not an exact science. If risk analysis is premised on assumptions about realities that are derived from non-African contexts, the unsurprising result will be a sense that investment in African entrepreneurship is high risk. This will drastically reduce the total quantum of funding available for expanding this vital sector of the economy.

5.4.2 *How can we start?*

One practical way of actualising the transition from conventional to ecological hubs is to start by identifying smart but small-scale hub interventions, while paying attention to both feasibility and institutional capacities for policy monitoring, learning and adaptation. This would include examples linking some hub interventions to national economic policies in line with economic transformation, i.e. a purposeful demonstrations of activities that facilitate interest in transformation and inclusivity.

Another practical policy intervention can be a designing of country guidelines governing hub operations and activities toward a development agenda. These hub guidelines can, for example, be designed and tested at country level with implementation lessons shared over time at continental platforms such as the African Union and Afrilabs, to name just two socio-institutional platforms.

To institutionalise these practical actions would arguably be very difficult to implement using conventional economic thinking. For some of these alternative transformative institutional innovations to have a chance to make a difference, or at best get to be piloted by hubs, more relational or *ubuntu*-like ways of being and doing need to be adopted by different actors ranging from policy to private equity firms. The example above of exploring the non-financial assets that African youths possess, would easily be received as radical and rejected by conventional economic thinkers. However, it provides a good example of relational, *ubuntu*-like institutional innovations that can go a long way in democratising access to funding and ultimately achievement of productive entrepreneurship if it were to be piloted, studied and Scaled.

5.5 Summary

This chapter has focused on Scaling and institutionalising the resonant thematic ideas from the empirical findings. It sought to sensitise the reader on the systemic issues of Scaling and institutionalising the ecological approach put forward as an arguably better way to convene and organise for developing African entrepreneurship.

In thinking about Scaling respondent resonant ideas, the non-linear causality diagram was used to visually hypothesise dynamic interactions in a bid to inspire new working modes befitting the African context. This was coupled with a simple triad of functions that stakeholders can look to adopt in reconfiguring institutional innovations within and among hubs.

As part of implementing the transition from conventional to ecological hubs, practical ideas were discussed of what can be done by relevant stakeholders. The researcher also suggested areas of starting along with new ways of being to make it possible to fetch the future of African entrepreneurship respondents reported they want.

Chapter 6 – Conclusion

6.1 Introduction

Much of the ambition and effort behind this study has been about an exploration of alternative paradigms and approaches that practitioners and policymakers can use to reimagine hubs as institutions that can facilitate pathways for development impact and social change. The discussion followed an argumentative thinking and writing style with the main argument being that hub practitioners can be on a better trajectory toward achieving development outcomes if they became ‘ecological’ in their ways of thinking, being and doing.

Using empirical insights that were organised into eight emerging themes, the argument moved to present a hypothetical systemic framework through the non-linear causality visual technique. This framework was created to facilitate a discussion about what can be practically done with specific examples of where practitioners and policymakers can incrementally start to Scale empirical ideas to help hubs optimise, catalyse or orchestrate a dynamic ecology of support in African entrepreneurship.

Using Jahn (2008)‘s research guidelines, the study followed a narrative-based action research approach in order to achieve three main research outcomes as represented in *Figure 6.1*. First, as was argued in the theoretical chapter, much of the entrepreneurship literature is based on individualistic theories of demand and supply where entrepreneurs are self-interested, utility-maximising individual units of analysis. This was problematised as not only reductionist but also conceptually limiting if practitioners and policymakers are to reimagine entrepreneurship through development lenses. As such, the study attempted to provide a redescription of entrepreneurship as a way of contributing to developmental entrepreneurship in the service of addressing African challenges.

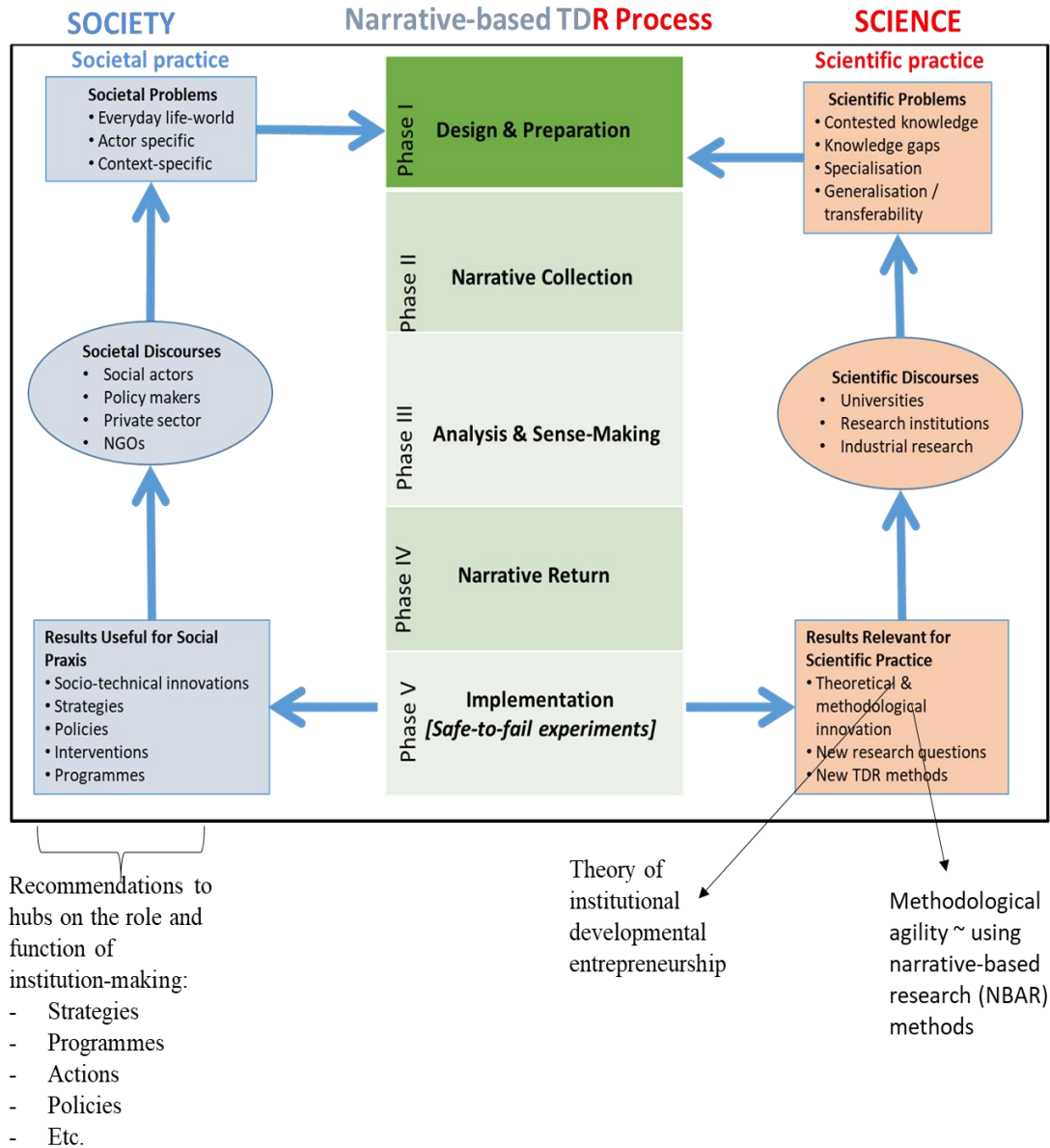


Figure 6.1: A summary of research outcomes

Source: Author, 2021 - Adapted from van Breda (2019)

Secondly, the study was designed and executed to embrace methodological agility to appropriately address issues and possibilities from the perspective and experiences of not only formal but also so-called informal stakeholders. This explains the intentionality of also drawing on the voices and experiences of those outside the innovation and entrepreneurship circles in Africa and who made up a significant 12% of the sample data. In part, this was largely because of the insights from the literature review that highlighted the complexity of entrepreneurship as a wicked practice, science and pathway for development. On the other hand, methodological agility was

also inspired by the informality of African youths that hubs position their work as a promise for.

Third, the preceding chapter (Chapter 5) provided a discussion about recommendations for Scaling the ecological approach into key actions, policies and experimental pilots. These recommendations did not position Scale in a reductionist fashion, but rather from a relational perspective. This is because, for example, while there is overwhelming evidence pointing to the lack of assets among African youths, it is also widely known that there are many relational assets that inspire a reimagination of new working modes in African entrepreneurship. The researcher provided an example of how a relational mode of being could be configured and piloted within the financing aspect of the entrepreneurship process that often creates state and institutional barriers for local entrepreneurs.

Below the researcher discusses these three research outcomes in detail as a way of concluding this study, with the hope of helping the reader to extrapolate key emerging insights. These emerging insights were organised into theoretical contribution, methodological reflections and implications for practice and future studies.

6.2 Theoretical contribution

It was argued in the main discussion that while evolutionary economic theory was an important contribution in crystallising the role of entrepreneurship in the formal economy, it reduced entrepreneurship into a micro-economic phenomenon by excessively focusing on the individual entrepreneur and understating the mediating factors of institutional arrangements and political economy. A macro-economic perspective befits African entrepreneurship better because it acknowledges the importance of institutional arrangements and political economy as enabling or constraining factors.

To illuminate a macro-economic and relational theoretical contribution made, the reader can refer to sections 2.4.1 – 2.4.3 where the researcher argues that development is generally seen through the three lenses of technological advancement, governance and outcomes. Among other research focuses or applications of development, these

three areas quickly crystallise different directionalities people may adopt, leading to different results in practice. In section 2.4.4, the researcher then makes the first theoretical argument that if development means different things to different scholars, then we need to clarify or debate what we mean by ‘entrepreneurship for development’ or the theoretical relationship entrepreneurship must have with such a contested concept of development. The rest of section 2.4.4 makes the first contribution that if we want entrepreneurship that contributes to development outcomes and not just technological advancement or economic growth, what is needed is to point practitioners to the direction of heterodox development scholars who view development within planetary boundaries among other alternative perspectives. The prevailing dominant narrative against viewing development this way is the vertical economic flows, assuming ever increasing and unsustainable economic growth rates while depleting planetary resources and not achieving social change.

In the end, the main contribution lies in surfacing the implicit assumptions that people make when they talk about developmental entrepreneurship or entrepreneurship for development. The delineated theoretical problem is that many tend to imply that entrepreneurship should help create growing ventures that would contribute to employment and tax revenues which help boost economic growth. In this perspective, entrepreneurship is reduced to a mere micro-economic facilitated process or conduit of growth or GDP. Whereas a relational macro-economic perspective i.e., entrepreneurship that facilitates genuine development means that entrepreneurship should work not only for economic growth but also in service of the environment and society; what the relevant cited scholars in chapter 2 for example view as *circular* economic flows as opposed to presumptions *vertical* economic perspectives of ever-increasing flows and growth.

The theoretical contribution was therefore less about just development but about *entrepreneurship for development* or simply the role and expectations of entrepreneurship in facilitating development. However, the researcher needed to first explore development theory in order to later use theoretical insights as a foil to link alternative development views with the type of entrepreneurship African respondents of this study articulated they want; entrepreneurship for genuine development and not

mere growth imperatives that benefit very few and select demographic groups of our society with intergenerational privilege of asset accumulation and access to finance.

Using all that theoretical foundation, the researcher offered as part of the theoretical contribution that if entrepreneurship is to achieve development outcomes, scholars need first to go beyond economic theory (mainly promoting growth or GDP) and expand their conceptual understanding through other relevant sciences such as geography and sustainability. Such an interdisciplinary perspective would be attractive to adopt because it would inspire a conceptual redescription of entrepreneurship with an explicit link to heterodox development outcomes.

Within this contribution and debate, the researcher then went on to offer what could be an appropriate conceptual redescription to seed a retheorisation of entrepreneurship which can potentially champion African development. Using heterodox development perspectives (a few mentioned above), the researcher offered that entrepreneurship (denoted with normal letter 'e') be redescribed as a large-scale, politically inspired and acontextual grand development discourse, with *entrepreneurship* (denoted with italic letter 'e') be conceptually positioned as a complex relational discourse aimed at achieving social change within planetary boundaries. By implication, entrepreneurship (or entrepreneurship for growth) was then argued to be associated with the orthodox pursuit of growth-led development, while *entrepreneurship* (or *entrepreneurship* for development) was associated with the heterodox pursuit of sustainable wellbeing and social change.

Using this detailed deconstruction of entrepreneurship versus economic growth (see section 2.5.1) and entrepreneurship versus development (see section 2.5.2), the researcher used sections 2.5.3 to 2.5.5 to apply these emerging insights into existing hub approaches, with the main argument being that entrepreneurship for growth leads to reductionist and solo institutional hub approaches as it means practitioners have biases for the type of businesses that can yield most growth quickly sometimes at the expense of inclusion or environment, among other calamities. If practitioners adopted a more interdisciplinary perspective to entrepreneurship beyond the neoclassical economist worldview, they could be in a better position to embrace more inclusive implementation approaches in their development interventions.

Furthermore, this theoretical contribution was used in the subsequent discussion to identify theoretical limitations of foundational theory holding entrepreneurship as the basis for 'solo' institutional approaches that continue to characterise hub practices and approaches in Africa. If the foundational theories behind entrepreneurship were in and of themselves individualistic, it was not inconceivable that practitioners employing the same would also be individualistic in their outlook and practice, as heterodox scholars have convincingly debated.

Instead, what the study offered was an ecological approach to efforts to promote entrepreneurship. This was contrasted with individual approaches that have been arguably concealed under the broad umbrella of the infamous but fragmented ecosystem approach. The ecological approach, on the other hand, was argued as theoretically more appropriate because it recognises the importance of creating a dynamic ecology of support among hubs so that entrepreneurs can focus on their already difficult venture issues. Thus, in theory, the most relevant hubs would be the ones that are good at creating and maintaining this ever-changing ecology of support. Using the emerging themes from the empirical findings, this new way of optimising, catalysing or orchestrating entrepreneurship promotion efforts was later in the study dynamically constructed and presented as an ecological framework future studies can test in various African settings.

The theoretical outcomes of the literature review were useful not only for shifting the conceptual boundaries of entrepreneurship, but also for inspiring agility and plurality within the type of methodology and methods needed for the study design and the testing of some of the theoretical arguments. The next section reflects on some key methodological experiences that other studies could adopt or adapt in future investigations of entrepreneurship.

6.3 Methodological contribution

In reflecting on the methodology and methods employed in this study, a quadruple of research experiences or encounters happened; namely immersion, Covid-19, SenseMaker® and abduction. These experiences shaped not only the transdisciplinary methodology, but also the set of mixed methods employed during the investigation.

Immersion involved developing my own experience between 2016 and 2018 when different hubs in Ghana, Kenya and Rwanda were visited, along with the observations made across other African innovation ecosystems such as those in Tanzania, Ethiopia and Algeria. During these visits, the researcher developed a deep inspiration and commitment to understand African entrepreneurs' cultural experiences and narrate them within the broader literature on the social sciences and entrepreneurship. This empowered the researcher to write not only as a researcher, but also as an African entrepreneurship stakeholder, which explains in some instances a writing style and analysis embracing autoethnography.

Secondly, while embarking on the study, Covid-19 emerged at the start of 2020 at a time to visit Ghana, Rwanda and Kenya for stakeholder interviews and focus group discussions, which were to form part of the broader data-collection process. However, with travel restrictions, Covid-19 inspired an exploring of alternative data-collection methods and technologies that would still achieve the research objectives. One of these technological and methodological alternatives was SenseMaker®, that the researcher was introduced to at a Stellenbosch University Transdisciplinary Methodology Summer Course two years earlier. The Summer Course was co-facilitated by Ms Zhen Goh from the technology owner, Cognitive Edge, and Dr van Breda of Stellenbosch University's Centre for Complex Systems in Transition.

Thirdly, whereas the researcher had expected to conduct a limited number of 'expert' interviews and focus groups before the pandemic, through technology and agility the study ended up collecting 100 stories across Ghana, Kenya and Rwanda, which would never have been possible without a creative online data-collection tool such as SenseMaker®'s Collector™ (see raw data on associated individual stories on Appendix F). In the process it was identified that SenseMaker® was in fact a process and method at the same time. This is because it challenged the researcher to embrace and follow an abductive logic to data collection and inferencing. The value of this abductive logic lies in its iterative or looping nature during the co-designing of the survey instrument. By challenging the researcher to co-create and test the questions with relevant stakeholders before starting data collection, SenseMaker® enabled a transdisciplinary approach to this empirical study. This means that the study was co-produced *with* both formal and informal African stakeholders, and not just *for* them.

Moreover, and as a fourth experience, the abduction process of discovery followed in the study during the empirical analysis phase was not an antithesis of inductive or deductive reasoning. Where applicable, the latter were employed as either complementary analytical or argumentative reasoning logics. In fact, the value of following an abductive logic lies in the ability to move between inductive, deductive and abductive reasoning logics, as explained in the methodology section. For example, some of the reported observations by respondents such as that successful local entrepreneurs in the African continent are essentially members of the African diaspora with an international education, past corporate experiences or upper-middle-class family backgrounds were interpreted using inductive reasoning to evidence or support the generalisation that local, under-resourced and aspiring indigenous entrepreneurs without an international education or extensive corporate experience would find it very difficult to succeed without deliberate catalytic support to help them overcome unique barriers. At the same time, the literature review employed deductive reasoning to argue that if the theoretical foundations or frameworks behind entrepreneurship are individualistic and therefore reductionist, it was not inconceivable that hubs employing the same would also be individualistic about the nature of support they provide to local entrepreneurs who may need alternative support approaches.

Therefore, a key methodological contribution offered in the study was not only the healthy or agile use of different reasoning logics, but also methods needed to make sense of generated data at various stages of the investigation. As discussed, to collect data SenseMaker® was used because it was an appropriate data-collection method to generate systems, transformation and target knowledge about African entrepreneurship in the study sites. Yet the type of data collected necessitated a hybrid of quantitative and qualitative synthesis and extraction methods. For example, thematic analysis was used as a method of synthesis to extrapolate repeating underlying themes from respondents' lived experiences. This statistical procedure was useful as it helped separate 'signal' from the 'noise' in the empirical dataset, which resulted in eight emerging themes. These eight emerging themes captured the essence of propositions among respondents. In addition, the researcher needed to execute a third and final data visualisation procedure using non-linear causality thinking to

relate the eight themes in order to hypothesise, visualise and offer an ecological framework which hubs can try and test in their varied African contexts.

This healthy oscillation between different reasoning logics and statistical methods allowed the researcher to confidently sift through useful empirical insights, which would not have been possible without embracing methodological agility. For example, by using a constructivist and abductive logic during the thematic analysis stage, while simultaneously employing an interpretivist approach to describe emerging themes, the study embraced pluralist approaches to knowledge generation. In the end, such methodological agility significantly contributed to generating useful empirical insights to help recommend or reflect on some key implications for practice and future studies that are covered in the next section.

In summary, the empirical design followed in this study demonstrates one of the rare research efforts to deliberately include *informal stakeholders* in the data collection processes as conventional studies tend to privilege so-called “formal stakeholders” who generally hold similar perspectives or experiences. 23% (See *Figure 4.1*) of the participants in this study for example were not necessarily involved in African entrepreneurship development but held key experiences and perspectives as stakeholders indirectly affected by the outcomes of entrepreneurship. Another 12% (also in depicted in *Figure 4.1*), classified themselves as *community citizens* who are concerned and wanted to voice out their experiences or perceptions of African entrepreneurship. This offers future researchers looking to achieve epistemic justice (balanced knowledge perspectives) in social science a practical example to potentially adapt from.

Related to this contribution is that these stakeholders were not merely used to extract knowledge from, with the researcher somehow developing investigation questions without their knowledge or involvement. Another key methodological value offered in this study was the inclusion of stakeholders in the research instrument design process. This was done in this study by involving both formal and informal interdisciplinary stakeholders in the design of the research questions so that the study could later benefit from useful and actionable emerging empirical insights. This is an

important value for development scholars looking to co-design relevant studies that can make a difference to entrepreneurship practitioners.

Further, relational studies in entrepreneurship are scarce, and the ones that are published tend to be conceptual. This study has provided an original example of an empirical entrepreneurship study employing a macro-economic relational approach both in the theoretical framework and research design. This was achieved by involving stakeholders working across scales of local societies, private sector and regime (government) levels to harvest grounded relational insights beyond reductionist, neoclassical micro-economic perspectives. This careful design can offer value to heterodox scholars looking to link research with social change.

Finally, whereas conventional research studies in entrepreneurship tend to be about testing a predetermined hypothesis and using deductive or inductive logic to engage with participants, the methodology and methods employed in this work enable a collaborative approach to generating the hypothesis with the research participants. This study therefore also provides an original account of how methodological agility can help social scientist help practitioners generate new knowledge about their lived experiences, perceptions and innovative future pathways through collective sensemaking.

6.4 Recommendations: Implications for practice and future studies

As a way of distilling the study findings into practical implications for practice and future studies, the reader is reminded that the purpose of making sense of the empirical findings was to explore alternative development pathways for hubs. To effectively do that, it was important to first deconstruct the complex environment within which hubs operate. This generated what the study dubbed as ‘systems knowledge’.

In addition, the investigation went further to garner areas of possible levers (transformation knowledge) that may signal strategic areas of intervening for the ideal results (target knowledge) local respondents reported they wanted to achieve. Put together, the tapestry of these three generated knowledge forms allowed for more

grounded constructivist institutional perspectives on African entrepreneurship used to derive recommendations from what sometimes appeared as contradictory, confusing or blurred empirical findings.

For example, one of the key empirical findings suggested that hubs that earlier were defined as hybrid or convening spaces operating at the intersection of private and public sectors, are potentially a key institutional vehicle that assembles resources such as talent, ideas and capital. At the same time, the study highlighted an ongoing dominant perspective that the private sector continues to be experienced as the lead force in coordinating ecosystem activities that drive entrepreneurship momentum and maturity in the continent. These findings contrasted with a significant number of respondents who suggested that government was absent or punitive, which could be interpreted to mean that the government's efforts are either experienced in a negative light or invisible at the level of local entrepreneurs, and perhaps by extension that the private sector is experienced in a positive light.

Yet, as a significant number of respondents reported, if successful local entrepreneurs on the African continent are essentially minority foreigners and members of the African diaspora with international education, past corporate experiences or upper-middle-class family backgrounds, one can deduce that private sector and international development institutional efforts have a bias towards mainly benefiting the same demographic groups.

While it may be argued that local private sector and international enterprise support organisations are prudent in their highly selective and exclusionary minority support schemes, the findings of this study point to a non-inclusive directionality of development. If one couples this with the earlier argument that these private or international development support organisations may be using ineffectual individualistic approaches because of their old-fashioned theoretical or decision-making frameworks, the much-hyped development promise of entrepreneurship on the African continent may not be realised.

The pervasive nature of these individualistic approaches employed by local and international enterprise support organisations was evidenced by emerging data in this

study which indicated that respondents perceive resources to foster entrepreneurship in their context as mainly focused on *individual entrepreneurs* as opposed to entrepreneur support organisations (i.e., *institutions*), such as hubs.

This *homo economicus* approach elevating individual entrepreneurs as opposed to support institutions arguably follows a ‘self-selecting’ logic of developed nations where education and other demographic factors can be left to chance because, for example, everyone has access to good education and opportunities at a minimum. More worrisome is that such an approach does not only leave hubs without appropriate leadership, directionality and operational guidelines, but also with financial sustainability issues, which places them at a risk of creating entrepreneurship pathways not in the service of local stakeholders and indigenous entrepreneurs.

Therefore, chief among other takeaways from this study is that, while entrepreneurship ecosystem support in the three study sites was reported as effectively fragmented and exclusionary at the level of individual entrepreneurs, an even more urgent matter is that the very hybrid institutions (innovation hubs) set up to supplement state and private sector forces are at risk of not being effective nor sustainable without appropriate institution-building or institutional innovations to harness and intensify their hybrid mediating efforts.

Examples of such institutional innovations could be developing contextual institutional arrangements for and between competing entrepreneurs on the ground, because too much or excessive competition – especially from large corporations – was reported as destructive (creating losers and artificial barriers to entry), while too little or no competition is also undesirable (creating a static environment or a disincentive for innovating) from the perspective of African states looking to spur economic growth and inspire local firms to compete at international trade level. They may also include innovative ways of sharing working or winning practices in different African ecosystems. Such shared knowledge infrastructure could be used to knit together new coherent policies at African Union or continental level.

These examples are grounded on two empirical observations that emerged from this study and implied by the insights discussed earlier about the relationship between

institutional innovations and hubs within the operational context of existing dominant state and market forces. The first empirical observation was that there may be a relationship of direct proportionality between institutional innovation and relative ‘freedom’ of hubs in relation to state and market forces. In other words, hubs are likely to be more innovative the more ‘independent’ they are from state and market forces that respondents experienced as either absent or exclusionary, respectively.

On the other hand, there may be a relationship of indirect proportionality between institutional innovations and relative ‘independence’ of hubs from dominant state and market forces. This is to say, the opposite of the first observation, that hubs are likely to be forced to come up with institutional innovations the ‘closer’ they are to state and market forces. While these observations or hunches were not addressed, tested or even the focus of this investigation, they nevertheless emerged from the study findings and could present fruitful areas for future studies.

Additionally, to realise these ideas it may be important to distinguish between two different kinds of hubs, namely those working closely with entrepreneurs on the ground and those that work with or co-ordinate other hubs, i.e. those we can call “hubs of hubs”. While the former type of hub was the focus of this study and explained in detail in the first and second chapter, the latter can exist to mediate the dominant existing and fragmented state and market forces which manifest and influence local entrepreneurs differently in different African settings.

By implication, another key practice recommendation from this study is therefore the establishment of a hub of hubs within each innovation ecosystem. These could be conceptualised and funded by both the private sector and the state as new forms of private-public partnerships or coalitions to help with institution-making for and between individual entrepreneurs. These institution-making initiatives could be better organised through hubs of hubs, as conventional hubs slowly transition to the ecological approach overtime. One of their mandates could also be to capacitate conventional hubs to operate across different scales, which would help expedite the Scaling of the ecological approach proposed in this study.

Therefore, hubs of hubs could become meso-level institutions to also help with the coordination and assembling of ecosystem data in different African countries. For example, they could document lessons from successful or innovative ecosystem arrangements for and between local entrepreneurs, which could become the basis for future studies. Such future studies could help share these lessons so that other country entrepreneurship ecosystems could adapt and adopt them from time to time.

Hubs of hubs could also then incrementally draw on various country data to help set up future studies that could seek to influence African modes of working that work successfully across different countries and need policy support at continental level. This would help address the lack of visible or coherent entrepreneurship policies on the African continent. At the same time, institution-building activities can also be Scaled from the ground up with informal guiding principles and practices used by indigenous local entrepreneurs. Those could later be promoted by hubs of hubs and institutionalised by conventional hubs into new emerging working or established practices toward enhancing the ecological approach.

In the final section below, the researcher synthesises the entire research endeavour to paint a picture of where the investigation started and ended. The researcher reflects on the study by narrating how each chapter develops the intellectual project to empower the reader to follow the logic and main arguments put forward. The synthesis ends by isolating the practical suggestions or implementation ideas that could be piloted to test some of the emerging empirical insights against contextual realities of African entrepreneurship.

6.5 Synthesis

In Chapter 1 this research inquiry started with a problem statement that problematised innovation hubs as extractive institutional agencies that unintentionally promote rent-seeking behaviour in African entrepreneurship. The argument made was that by orientating their services to the benefit of rent-seeking partners such the early stage financiers simply looking for bankable short-term wins in developing entrepreneurs (GreenTec Capital Africa Foundation, 2020; Viarnaud, Boisnier, Worms & Nyati,

2020), innovations hubs are invariably institutions working to extract talent at the expense of genuine, patient or long-term entrepreneur development support.

To support this claim, four subsequent arguments were made that hubs i) have an obsession with technology innovations and digital entrepreneurship at the risk of not growing other sectors or forms of entrepreneurship, ii) lack practice guidelines leading to poor support services, iii) follow insular institutional support approaches which contribute to inequities, and iv) are geographically concentrated across big but selected shining star cities within what is now known as the “innovation quadruple”, namely Kenya, Nigeria, Egypt and South Africa. The latter argument, for example, means that although the international funding community facilitates deals across the continent, about 80% of the overall funding goes to start-ups in the ‘innovation quadruple’. Aggregated, these issues point to an exclusionary innovation ecosystem in African entrepreneurship (WeeTracker, 2018a).

This positioned entrepreneurship as a wicked problem, in which well-meaning interventions tend to have unpredictable or unforeseeable unintended consequences with both historic and futurist path dependencies (Feld & Hathaway, 2020). If as the cited studies pointed out in Chapter 1, entrepreneurs who end up winning and launching successful high-impact start-ups are mainly of similar demographic backgrounds and not representative of the median local residents (Akinkugbe & Wohlmuth, 2016), then African entrepreneurship has yet to translate the promise of its developmental effects into reality, particularly the reality of African youths and women.

To deepen the reader’s knowledge of African entrepreneurship literature, the first part of Chapter 2 sought to conduct theoretical and literature reviews to construct a conceptual framework with a developmental worldview befitting aspiring and practising African entrepreneurs. The newly constructed conceptual framework used human agency, defined as a sense of control in determining the directionality of entrepreneurship outcomes, as a relational lens through which to situate entrepreneurship against the state and market forces that young African entrepreneurs must navigate daily in their bid to assemble the resources needed for new venture formation (refer to section 2.4.2).

To substantiate the importance of a relational lens in African entrepreneurship, a support argument was made that blindly following either market, state or both forces without fully immersing oneself in local narratives or discourses risks achieving the economic growth imperative, but without necessarily achieving development outcomes. This is because to achieve just and equitable engagements in complex social phenomena such as entrepreneurship, some scholars like Bauwens, Kostakis and Pazaitis (2019), Hobbes (1970), Lukács (1972) and Slater and Tonkiss (2013), to cite just four, have long argued that human agency is a critical driver and equilibrating factor between society's sense of control and 'reified' socio-institutional state and market forces, which are traditionally the main drivers of innovation and entrepreneurship.

Following this line of thinking means that entrepreneurship for development is possible but likely improbable without human agency. This means that if entrepreneurship is to truly be a force for social change, and facilitate that change within planetary boundaries, market forces would need not only to work with state forces but also apply human agency as a significant factor nudging innovations and new industries in a *just* direction.

The second part of Chapter 2 applied this human agency-inspired or relational conceptual framework against existing entrepreneurship approaches to argue why and how mainstream thinking and practices are no longer fit for the current realities facing African development. Combining the two parts, a new dynamic or relational institutional (ecological) approach was offered in line with developmental evaluation of institutional performance literature reviewed. These two foundational chapters and the resultant conceptual approach meant that the study needed to be set up around heterodox methodological approaches if it were to successfully integrate some aspects of human agency in the design.

Accordingly, the corresponding transdisciplinary methodology and sense-making methods used in Chapter 3 were designed not only to bring to the surface the current reality of relevant stakeholders' human agency in relation to state and market forces, but also to explore the desired set of directionalities to aid enterprise support organisations toward developmental outcomes. The inter- and intra-disciplinary

respondent perspectives were elicited in a way that revealed contextual realities, experiences and aspirations that innovation hubs would need to consider in helping local entrepreneurs overcome barriers and win in African entrepreneurship.

Chapter 4 crystallised sensibilities and insights from the 100 respondent stories that produced eight emergent category themes used to synthesise the lived experiences captured in the sample data from Ghana, Kenya and Rwanda. These themes represented resonant perspectives rooted in individual stakeholder stories and experiences of African entrepreneurship in their local context.

Chapter 5 isolated and used these emerging themes to headline key insights about what local stakeholders suggested is needed to transition enterprise support efforts toward the development pathways they want. The first analytical exercise conducted related these themes together in order to construct a hypothetical ecological framework that future studies could use, for example, to collect relevant data and test their appropriateness through suitable techniques such as systems dynamics modelling, among others. The second analytical exercise conducted used a systems change framework by Jenal and Hanchar (2016) to map out a development pathway for what innovation hubs would need to consider and do in order to transition their management approaches towards development. This framework helped situate empirical results through the phased practicalities of Scaling and institutionalising empirical insights within and across innovation hubs.

Against the systems change practicalities and sensibilities outlined for consideration in Chapter 5, Chapter 6 discussed how empirical data helped the research endeavour address the main research question in terms of what needs to be done to reconfigure and transition innovation hubs toward becoming development institutions. Beyond isolating key findings, the concluding remarks also provided key considerations for implementation practitioners and future studies. These considerations emphasised the need for formalising the tracking of institutional performance data generated by innovation hubs to design experimental modes of enterprise support or institutional innovation responses that better help local entrepreneurs progress their high-impact ventures.

Through hubs of hubs, for example, this could practically mean mobilising policy makers in Africa to help institutionalise an ecological approach in entrepreneurship by educating hub managers on appropriate policy highlighting economy-wide, broad-based priority sectors and targeted interventions. The knowledge sharing and education of hub management by relevant authorities can include multiple convenings of the broader entrepreneurship circle in open and robust discussions about existing policy constraints and possibilities. The output of such meetings could be designing *new* public action to address the respective policy constraints with the intention of promoting inclusive and transformed high-impact ventures.

Another practical way of actualising the transition from conventional to ecological hubs could start off by identifying *existing* but small-scale hub interventions, while paying attention to both feasibility and institutional capacities for policy monitoring, learning and adaptation. This could include examples linking some hub interventions to national economic policies in line with economic transformation, i.e. deliberate demonstration activities to facilitate interest in transformation and inclusivity.

To illuminate the idea of smart but small-scale hub interventions, the researcher offered one detailed potential experimental project that could provide a lot of data for - and insight into policy monitoring, learning and adoption – a reimagination of assets used as collateral to access finance. This would involve exploring alternative assets that investors can use as collateral instead of traditional assets in order to advance African entrepreneurs without assets but possessing other cultural, social or community-based non-financial types of assets. These assets could be explored and piloted as radical alternative collateral schemes that facilitate better and innovative access to early-stage finance.

Similar innovative ecological initiatives could illustrate the importance of inspiring innovative forms of self-interested action to possibly address the pervasive ecosystem barriers facing local African entrepreneurs such as those described in this study and highlighted by empirical findings.

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Appendices

Appendix A: Definition of Terms and Concepts

Abductive reasoning – a discovery process of hypothesising creative ways or following hunches to explain a phenomenon or infer emerging insight from available data.

Conventional approach – individual-based efforts to growing entrepreneurship rooted in reductionist ideas that simply identify promising individuals, creating incentives and replicating past success to grow entrepreneurship in a region.

Development – large-scale politically inspired and contextualised projects largely aimed at achieving economic growth.

Development – relational and socially complex but contextualised large-scale projects that facilitate household or individual progress toward better livelihoods and prosperity.

Discourse – macro-level universal expectations from assembled *discourses*; ordered and presented as an integrated frame.

Discourse – typical narratives and imagery painted by meso-level practitioners to make sense of patterns in a complex social phenomenon.

Dissonance – contradictory experiences and processes that directly or indirectly influence local entrepreneurs and actors to make decisions or engage with existing livelihood opportunities.

Dyads – research instrument allowing participants to choose between two opposing options – polarities – with which to signify the meaning of their shared experiences and perceptions.

Entrepreneurship (or Entrepreneurship for growth) – orthodox pursuit of growth-led Development.

Entrepreneurship (or Entrepreneurship for development) – heterodox pursuit of sustainable wellbeing and social change.

Ecological approach – Aggregation, optimisation and orchestration of multiple and cross-scale institutional efforts to grow entrepreneurship in a region.

Ecosystem approach – location-specific practices that recognise the importance of environmental factors and employ a systems view to growing entrepreneurship, but do so without facilitating cross-scale interactions and efforts.

Fetching the future – deliberate learning efforts from emerging patterns or experimental projects about how things could potentially evolve or nudge system change.

Inter-function – meso or regime-level (policy) hub activities dedicated to working with a peer group of support organisations with the aim of addressing ecosystem barriers facing local entrepreneurs.

Intra-function – micro-level hub activities dedicated to supporting local entrepreneurs, such as training, workshops, speaker events, tours and other simulation activities.

Macro – state or policy-level linkages helping to protect or enable entrepreneurial potential in a region.

Maturity – intensity and depth of results from momentum activities.

Meso – peer-to-peer institutions or approaches working locally and abroad to achieve similar entrepreneurship goals.

Micro – solo and insular social experiments or entrepreneurship efforts aimed at supporting individual entrepreneurs.

Momentum – sustained traction of coordinated efforts.

Multiple choice questions (MCQs) – research questions with a predetermined list of response choices aimed at gaining finer grain demographic, contextual data and other relevant information of the respondents.

Prompting questions – open-ended questions for eliciting experiences and perceptions from respondents.

Resonant – emerging voices or insights signalling how stakeholders feel, perceive or experience a particular issue.

Signifier – an area or issue of investigation, sometimes called a ‘modulator’.

Triads – research instrument giving respondents a framework of three options with which to signify the meaning of their shared experiences and perceptions.

Wicked – phenomena characterised by interventions that tend to have unpredictable or unforeseeable unintended consequences with both historic and futurist path dependencies.

Appendix B: Signification Framework



Welcome!

This is a research project supported by the Centre for Complex Systems in Transition (CST) and School of Public Leadership at Stellenbosch University (South Africa) aimed at better understanding of peoples' experiences with entrepreneurship in different parts / contexts on the African continent. We are hoping that this better understanding of your lived realities will contribute to the good momentum currently made with entrepreneurship on the continent whilst also, at the same time, addressing the many developmental challenges facing our continent today.

The process is simple: we will ask you to share an experience in response to a situation, then ask short follow-up questions about that experience. We apologize in advance if the questions do not fully address what you have or are experiencing as we navigate these new challenges. We hope that this tool can serve as a way to capture your voice. The session will require approximately 15 minutes of your time.

We are committed to preserving your privacy. Below you will find language where we ask for your consent to participate in this study.

Participation in this questionnaire is entirely up to you. You do not need nor have to participate.

Please click "yes" if you choose to participate in this study by completing this questionnaire.

Yes

Please pick an image and share an experience of yours, or that of someone you know, in the last few months, that explains / depicts how you feel about your current situation. This can be a positive or negative experience – something that makes you feel either optimistic or pessimistic about entrepreneurship-in your context.

Suggest a #hashtag or title for your response

First, a few questions about you

I am a...

- an entrepreneur
- business coach
- training facilitator
- university educator
- financier
- hub manager
- Community Citizen
- Other

If other, please state:

I am a...

- Female
- Male
- Non-binary
- prefer not to say

I am...

- below 20years old
- 21 to 30 years old
- 31 to 40 years old
- 41 to 50 years old
- 51 to 60 years old
- 61 to 70 years old
- more than 70 years old
- Prefer not to say

My country of origin or birth is...

- Ghana
- Kenya
- Rwanda
- Other

If other, please state:

The country where I mainly practice entrepreneurship is...

- Ghana
- Kenya
- Rwanda
- Other

If other please state:

The sector experience, my story is based on is...

- manufacturing
- ICT
- transport
- retail
- services
- public
- Other

If other, please state:

My time in this sector is...

- Less than a year
- 1-3 years
- 3-5 years
- 5-10years
- 11- 20years
- 21-30 years
- more than 30 years
- prefer not to say

In my experience, people's attitude toward entrepreneurship has been?

(pick one)

- Strongly positive
- Positive
- neutral
- negative
- strongly negative

In my experience, entrepreneurs in my context are motivated by...

(pick up to three)

- money
- reputation
- lifestyle
- self-expression
- making a community difference
- making an environmental difference
- Other

If other, please state:

In my experience, the best way to describe entrepreneurship in my country is...

- poor
- struggling but getting there
- growing stronger each year
- on a great momentum
- mature
- thriving
- dark & gloomy
- not sure where it is going

In my experience, ideas, talent and capital (money) come together mainly through...

(pick up to three)

- families
- innovation competitions
- private sector corporations
- technology and innovation hubs
- university laboratories
- serendipity
- Other

If other, please state:

DYADS

In my experience, stakeholder engagements to create entrepreneurship momentum (sustained traction) and maturity (intensity & depth) are...

Private sector-led-----*government-led*

In my experience, consistently growing entrepreneurship in my region has been focused on...

Local entrepreneurs-----*supporting institutions*

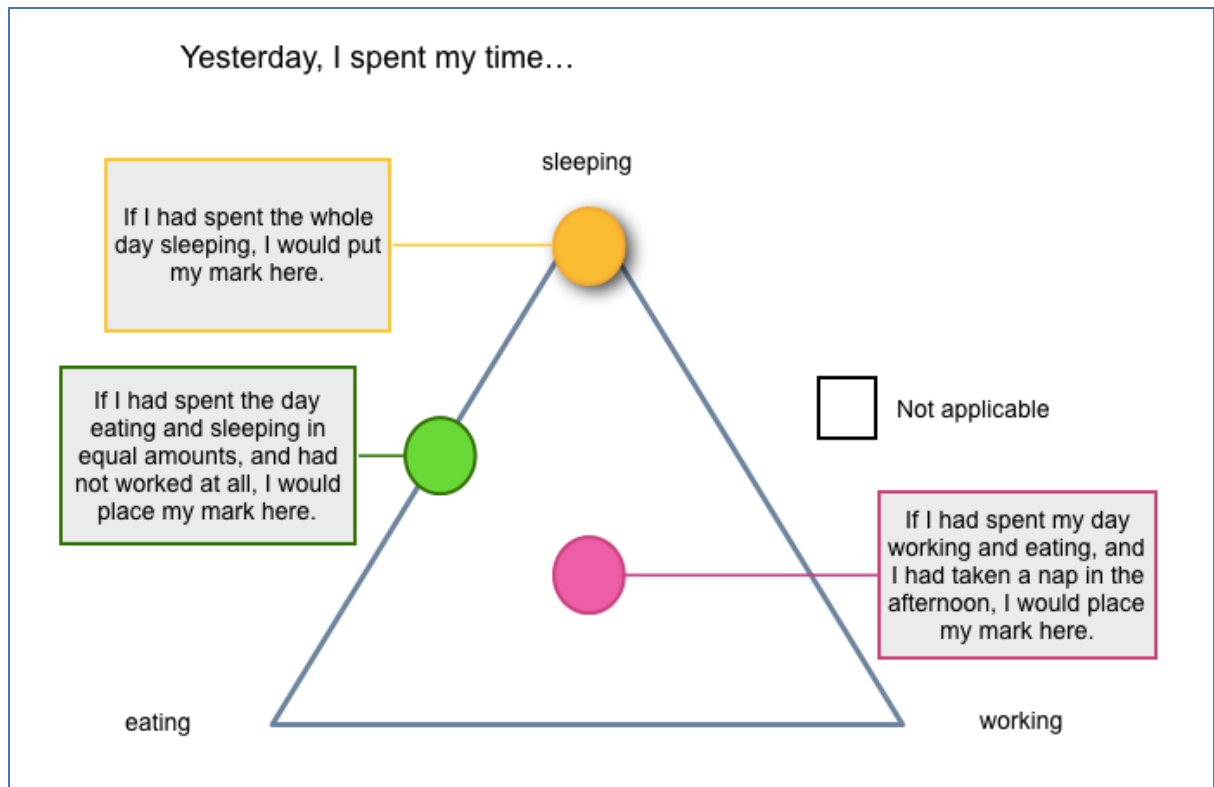
In my experience, entrepreneurs often come from...

Poor families-----*upper middle-class families*

TRIADS

In the next section, we ask a few questions about your story and purposefully ask you to categorize it between three areas. You will be asked to indicate where you feel your story best fits; whether it associates more with one area, or a mix of two or all three of the choices presented. You can indicate your answer by dragging and dropping the blue ball somewhere in the triangle.

Below is an example of that exercise using a case of how you spent a day, and some examples demonstrating where you would place the ball.



In my experience, I believe the main barrier(s) entrepreneurs face is / are...

- lack of technical business skills
- access to finance
- access to good coaches and mentors

In my story, I experience government as...

- absent
- punitive
- supportive

In my experience, people's perspectives of entrepreneurship are mainly about...

- achieving sustainable wellbeing
- survival and livelihood
- exploring an exciting career path

In my experience, local entrepreneurs get financial support from...

- local private sector
- international development organisations
- local government institutions

In my experience, successful entrepreneurs in my country

- have past business experience
- are first-time entrepreneurs
- are former government employees

In my experience, entrepreneurs in my context tend to be

- locally educated
- internationally educated
- educated from Africa

OPEN-ENDED

Thinking about the experience you shared.

How common is your story?

- Everyone would say the same
- A lot of people would say the same
- Some people would say the same
- Hardly anyone would say the same
- No-one would say the same
- Not sure

Who needs to hear what you have shared with us?

- No one, just me
- Other family members
- Fellow entrepreneurs
- people in my neighbourhood/community
- Politicians/decision makers
- The media
- Other

If other, please state:

Now imagine its 2030, what do you think would have been the main changes in entrepreneurship.

Please share a separate ideal scenario and a worst-case scenario

Ideal Scenario:

Worst Scenario:

Thank you for your participation. We are hoping to use your experience to better understand lived realities of those involved in creating momentum and maturity in entrepreneurship in your region. Your experience is important to us. Thank you for your participation. We are hoping to use your experience to better understand your situation and of those involved in creating the conditions or environment for entrepreneurship in your region.

At this point, you may choose if you want to share your anonymous story with others. If you do not give consent, your experience will only be used by the researcher to better understand the impact of these events on entrepreneurship and NOT shared with anyone (nor used in reports or conferences, etc.).

- I am willing to share my story

- I don't want others to read or hear my story

Appendix C: Signification Framework and Secondary Question Alignment

Secondary study question(s)	Related Signification Framework Investigation question(s)	Type of knowledge
<p>What is the most appropriate typology of development for further reconstituting the relationship between entrepreneurship and development?</p>	<p>MCQs</p> <p>I am a...</p> <ul style="list-style-type: none"> - an entrepreneur - business coach - training facilitator - university educator - financier - hub manager - Community Citizen - Other <p style="text-align: right;">If other, please state: <input style="width: 150px; height: 20px;" type="text"/></p> <p>I am a...</p> <ul style="list-style-type: none"> - Female - Male - Non-binary - prefer not to say <p>I am...</p> <ul style="list-style-type: none"> - below 20years old - 21 to 30 years old - 31 to 40 years old - 41 to 50 years old - 51 to 60 years old - 61 to 70 years old - more than 70 years old - Prefer not to say <p>My country of origin or birth is...</p> <ul style="list-style-type: none"> - Ghana - Kenya - Rwanda - Other <p style="text-align: right;">If other, please state: <input style="width: 150px; height: 20px;" type="text"/></p> <p>The country where I mainly practice entrepreneurship is...</p> <ul style="list-style-type: none"> - Ghana - Kenya - Rwanda 	<p>Systems Knowledge</p>

	<ul style="list-style-type: none">- Other <p>If other, please state: <input type="text"/></p> <p>The sector experience, my story is based on is...</p> <ul style="list-style-type: none">- manufacturing- ICT- transport- retail- services- public- Other <p>If other, please state: <input type="text"/></p> <p>My time in this sector is...</p> <ul style="list-style-type: none">- Less than a year- 1-3 years- 3-5 years- 5-10years- 11- 20years- 21-30 years- more than 30 years- prefer not to say <p>In my experience, people's attitude toward entrepreneurship has been?</p> <p>(pick one)</p> <ul style="list-style-type: none">- Strongly positive- Positive- neutral- negative- strongly negative <p>In my experience, entrepreneurs in my context are motivated by...</p> <p>(pick up to three)</p> <ul style="list-style-type: none">- money- reputation- lifestyle- self-expression- making a community difference- making an environmental difference- Other <p>If other, please state: <input type="text"/></p>	
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In my experience, the best way to describe entrepreneurship in my country is...

- poor
- struggling but getting there
- growing stronger each year
- on a great momentum
- mature
- thriving
- dark & gloomy
- not sure where it is going

In my experience, ideas, talent and capital (money) come together mainly through...

(pick up to three)

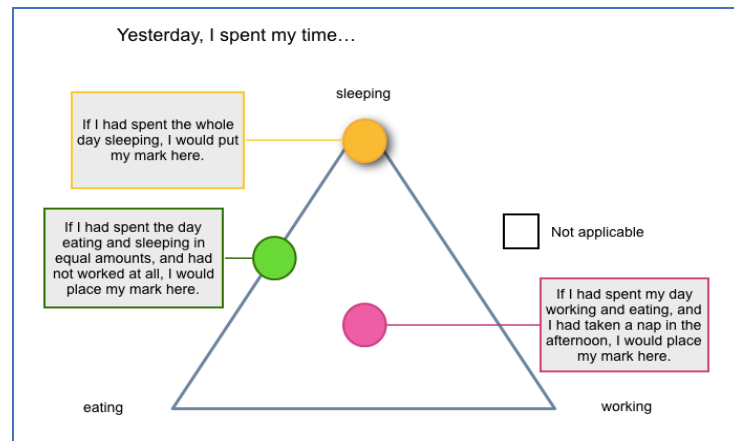
- families
- innovation competitions
- private sector corporations
- technology and innovation hubs
- university laboratories
- serendipity
- Other

If other, please state:

TRIADS

In the next section, we ask a few questions about your story and purposefully ask you to categorize it between three areas. You will be asked to indicate where you feel your story best fits; whether it associates more with one area, or a mix of two or all three of the choices presented. You can indicate your answer by dragging and dropping the blue ball somewhere in the triangle.

Below is an example of that exercise using a case of how you spent a day, and some examples demonstrating where you would place the ball.



	<p>In my experience, I believe the main barrier(s) entrepreneurs face is / are...</p> <ul style="list-style-type: none"> - lack of technical business skills - access to finance - access to good coaches and mentors <p>In my story, I experience government as...</p> <ul style="list-style-type: none"> - absent - punitive - supportive <p>In my experience, people's perspectives of entrepreneurship are mainly about...</p> <ul style="list-style-type: none"> - achieving sustainable wellbeing - survival and livelihood - exploring an exciting career path <p>In my experience, local entrepreneurs get financial support from...</p> <ul style="list-style-type: none"> - local private sector - international development organisations - local government institutions <p>In my experience, successful entrepreneurs in my country</p> <ul style="list-style-type: none"> - have past business experience - are first-time entrepreneurs - are former government employees <p>In my experience, entrepreneurs in my context tend to be</p> <ul style="list-style-type: none"> - locally educated - internationally educated - educated from Africa <p>OPEN-ENDED</p> <p>Thinking about the experience you shared.</p> <p>How common is your story?</p> <ul style="list-style-type: none"> - Everyone would say the same - A lot of people would say the same - Some people would say the same - Hardly anyone would say the same - No-one would say the same - Not sure <p>Who needs to hear what you have shared with us?</p>	
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	<ul style="list-style-type: none"> - No one, just me - Other family members - Fellow entrepreneurs - people in my neighbourhood/community - Politicians/decision makers - The media - Other <p>If other, please state: <input style="width: 100px; height: 20px;" type="text"/></p>	
<p>How can different stakeholders in different countries help transition hubs into development institutions?</p>	<p>DYADS</p> <p>In my experience, stakeholder engagements to create entrepreneurship momentum (sustained traction) and maturity (intensity & depth) are...</p> <p><i>Private sector-led-----government-led</i></p> <p>In my experience, consistently growing entrepreneurship in my region has been focused on...</p> <p><i>Local entrepreneurs-----supporting institutions</i></p> <p>In my experience, entrepreneurs often come from...</p> <p><i>Poor families-----upper middle-class families</i></p>	<p>Transformation knowledge</p>
<p>What is the most appropriate typology of development for further reconstituting the relationship between entrepreneurship and development?</p> <p>How can different stakeholders in different countries help transition hubs into development institutions?</p>	<p>OPEN-ENDED</p> <p>Now imagine its 2030, what do you think would have been the main changes in entrepreneurship. Please share a separate ideal scenario and a worst-case scenario...</p> <p>Ideal Scenario:</p> <div style="border: 1px solid black; height: 30px; width: 100%;"></div> <p>Worst Scenario:</p> <div style="border: 1px solid black; height: 30px; width: 100%;"></div>	<p>Target Knowledge</p>

Source: Author, 2021

Appendix D: Ideal versus Worst-Case Scenario Raw Data

Ideal scenario	Worst-case scenario
Every thing must be of businesses use	Luck of chance to access data or information which can help anyone who what to create his own enterprise
Vast technological improvements	No significant change
The government should put so much effort in supporting local entrepreneurs so that they can feel able and confident.	If people keep the idea in their mind that to be successful as an entrepreneur you need to have a past in business, they will get nowhere
I believe 2030 due to the Covid 19 pandemic many people will venture into businnes since many jobs (employment) has proven to be unsustainable in terms of job security as many people have lost jobs due to the economic breakdown. On the other hand, business owners despite facing challanges are still in business.	Worst case scenerio is when businesses increase itll mean higher competition on products and also, the government taxation system doesn't favor the less fortunate and beginners which makes it difficult as a business starter to prosper
A Kenya and an Africa where ideas are funded in equal measure with secured collateral and legally charged securities.	A Kenya and an Africa where ideas fail due to requirements for secured collateral and legally charged securities.
I have networked with the right people in Rwanda, other developers and myself have worked on a common idea andwe are closely working with government officials who guide us.It's not about the money, it's about finding technological solutions to common problems at an affordbale cost.	My entrepreneur life was not as successful as I would have thought (success is subjective).It's been a fun ride anyway.
A big part of trending entrepreneurs would be more in a digital business, and there might be a big international movement of entrepreneurship.	The worst scenario is that the development of technology the world is facing has huge challenge. Small entrepreneurs needs more technical and at the same time financial support to adapt to the modern way to accelerate their sales, and the solution cannot be provided by government without any external support for developing countries.
Businesses that have embraced technological advancement will thrive.	I dont know
Ideally, the Government continued to create an ecosystem favourable to entrepreneurship including incentives, policies, etc. Relationship with other EA countries have greatly improved, creating markets and oppotunities for Rwandan entrepreneurs. As a	The pandemic hits the country with increasing number of cases; businesses are collapsing as a result of a reduced customer purchasing power, high rates of unemployment, closure of borders, etc. After the pandemic, the country faces challenges to regain

result, the private sector is growing exponentially, creating jobs and prosperity for Rwanda.	entrepreneurship momentum, companies are struggling to get finances that would enable them to get back on track, etc.
In 2030 entrepreneurship will change in physical and other way people they usual use especially in daily life. Moreover it would based on technology at the high level.	It's high technology and the best way people would use like different innovation in entrepreneurship
They grow bigger and better	Get discouraged by economy changes
More support for entrepreneurs from the private sector in terms of opportunities and mentorship.	Government politicizing gains made by the entrepreneurship echo-systems.
Increased number of populace in the sector due to support from government and private sector. Ideal working conditions that sustains the business and enables decent living.	Collapse of the sector due to government bottlenecks
Zoom meetings will increase and travelling for physical meetings will decline	Hospital income will miserably decrease and the lack of personal touch will be clearly visible in the hospitality industry
Leadership that fosters an environment where local businesses are valued more than international ones. Goods produced are of very good quality and plenty of youth have jobs and infrastructure is good	People can't make ends meet. Others opt to leave the country and try elsewhere. Desperation is high. Crime is a norm.
Things would have improved, due to technology and infrastructure developments	Things remain the way they are
Low rate of people who are not working.	Having higher rate of unchanged situation where people are still struggling and homeless and without permanent jobs.
Reduced human interaction.	Almost all opportunities will have been explored
Entrepreneurs are more supported by the government and more recognized by the society. I would envision a future where we would source almost all our materials from within our own reach which can only be done if we support upcoming entrepreneurs by educating them, giving them financial boost and even creating policies where their ideas are protected will create a self-sufficient society.	Worst case scenario is we continue on the path we are in i.e. continue outsourcing even the most basic items and forget our very own. It will be a different version of business neo-colonialism.
in 2030, there is an ecosystem that supports early stage ideas and invest in young people. Right now, most entrepreneurs don't have a support system(mentors, coaches) to help them navigate the start-	No change has been made.

<p>up hustle. In addition, there are no investors who are willing to play the long term game.</p>	
<p>A government that creates a good environment for entrepreneurs with low taxes and more infrastructure.</p>	<p>Corruption and government theft having choked out entrepreneurs and worsening the business environment completely</p>
<p>Local entrepreneurs being at the helm of economic growth and expansion by contributing about 80% of the GDP in most African countries.</p>	<p>Governments not being supportive of the struggles of entrepreneurs hence leading to a decline of the overall contribution of the sector the the overall socio-economic growth of African countries.</p>
<p>Remain the same if the GOK doesn't support entrepreneurship in terms of policies made in Kenya especially to do with taxation of both imported and locally sourced goods</p>	<p>Many entrepreneurs will quit several times</p>
<p>Government has put in place policies to make it easier to start and maintain business. Reduced tax and better access to information</p>	<p>Things stay the same</p>
<p>More government support in form of access to loans and good infrastructure</p>	<p>More punitive taxes A receding economy Inaccessible loans</p>
<p>IF THE GOVERNMENT INVEST MORE WITH YOUNG ENTREPRENEUR AND PROVIDE MORE MENTORING</p>	<p>IF GOVERNMENT KEEP SUPPORTING THOSE WHO ARE ALREADY ABLE TO WORK (MIDDLE CLASS) ONLY AND THEY KEEP FORGETTING THE STARTS UP COMPANIES AND INNOVATORS</p>
<p>During this period there will be many entrepreneurs growth in the nation because of the current situation especially with the decline of white collar jobs..</p>	<p>The growth rate of entrepreneurs slow increase due to many technical challenges including capital, government services like licensing etc..</p>
<p>Entrepreneurship support centres that really exists to unlock entrepreneurial innovation and accelerate and sustain their success. Government funding/investment schemes that enable and not throttle small enterprise. Entrepreneurial programmes implemented from primary school level to reposition the mindset of growing children regarding what success means Regulations and administrative burdens like multiple registration requirements for company incorporation, tax, employment and other compliance are a thing of the pastThe economy grows because SMEs are</p>	<p>Government programmes are an all assuming and powerful behemoth that throttles entrepreneurship at every turn - from regulatory burdens, compliance mountains, worse payment terms and delays in paying SMEs for work already delivered to government and big businesses</p>

liberated and supported to ignite local economic development and thus create real, sustainable and meaningful jobs Big business take a more considered approach to ESD so that it is far more about compliance but unlocking the sector's potential	
Financing for business was easily accessibleLocal investors were more supportive of local businessesMore opportunities to grow new businessesMore avenues for entrepreneurs to interact and network	Financing is still a challengeLocal investors believe less in local entrepreneursLess opportunities to grow businessEntrepreneurs working in silos Government makes no effort to encourage entrepreneur businesses
i can not predict without data or other research done but i think in 2030,it will be a highly competitive market	i can not predict without data or other research done but i think in 2030 the area of working(business location),it will be expensive.
There is alot of blend in entrepreneurship and the internet/IT	There are many great business ideas but lack of motivation /coaching/fintiak or government support
Being self employed	Getting enough income
People's mindsets	Lack of capital
The entrepreneurship technology skills will change massively. The changes would be business platforms will change for the betterment of human health.	Money value seems to go down across all nation leading to fall economy.
-More access to funding.-Business friendly interest on loans.-Less of government exorbitant taxes and licenses.	-Very high government taxes.-Lack of support from government.-Influx of foreign traders in our markets
Government supporting first time entrepreneurs to increase employment rate	Inflated taxes imposed on small businesses
No change as corruption keeps taking place and business opportunities are not fairly dispersed	Poverty And malnutrition
the ideal scenario to me by 2030 is that, at least 50 percent of the african population is successful entrepreneurs and that the entrepreneurial, creativity and innovation education is given to at least 70 percent of the african youth.	I think the worst case scenario would be inadequate or insufficient entrepreneurial, creativity and innovation education to the african youth.
Govt will have responded to the need for mentorships and business coaches and financial leveraging by supporting PPPs in building assembly lines for manufacturing revolutionary robotics to support agriculture, transportation, power and utilities, and other state governed primary and secondary industries.	Govt will have ignored the people, continued looting the land and resources then not invested in education and industrialisation. Environment and communities will have devolved into further desperation.

<p>Helping entrepreneurs to grow by educating and giving them funds to be able to operate and make difference in the community and other people's lives. By creating more jobs and better environment</p>	<p>Big business taking advantage of small business. Entrepreneurs not getting full support they needed</p>
<p>let me tell you this: in our daily life, the mentalities and thinking of persons about entrepreneurship is becoming positively advanced due to the involvement of different institutions and government. so, what have been the main changes in entrepreneurship is how the society is considering the one who has the commitment for becoming young entrepreneurs. Also, the mindset of the society that often think that the entrepreneurs are borned from the families with inherited entrepreneur their are totally wrong, because anyone else with the desire and dreams to make environmental different can work towards his/her dreams effectively and efficiently.</p>	<p>the entrepreneurship field is still facing with different barriers such barriers include the those that can considered as internal factors (based of the entrepreneurs) and other as external. the internal factors include limited capital, lack of technical skills, lack of professional business creation guiders and mentors, ... for external factors, is a situation where there is no involvement of government and environmental barriers.</p>
<p>Government supported entrepreneurship and capacity building towards sustainable business growth.</p>	<p>Lack of entrepreneurial support from stakeholders and decisionmakers</p>
<p>Is that more people who have skills and ideas will be more successful compared to those who don't have it</p>	<p>Those without skills n also don't have a good education are likely to have a difficult life compared to those with the skills.</p>
<p>Limited creation employment opportunities due to varsatility of individuals</p>	<p>Can't think of any at the moment</p>
<p>Everyone will venture into entrepreneurship..</p>	<p>The market will be flooded.</p>
<p>Entrepreneurs in Africa get all the support and education required from both government and private sector. Funding in Africa becomes risk averse and more VC's and angel investors within Africa rise up and more international VC's come to Africa and we realise the creation of at least 5 unicorns born and bred in Africa. Red tape is removed by governments and it is easier to do business within and between various African countries.</p>	<p>Red tape within governments increases. Funders remain risk averse. Founders get annoyed and migrate to outside of Africa to start their entrepreneurial journeys.</p>
<p>Equal representation on financiers. Both government, local investors and international investors. Non dominating the space hence swaying</p>	<p>Entrepreneurs not motivated enough to create innovations that are market creating and not pivoting to new markets because of lack of Financiers, Policy and</p>

policy to best fit them.	a space to freely thrive in their space.
Entrepreneurship are better locally trained and financed Entrepreneurship are at the center of societal development and local economy resilience	Entrepreneurship is the driver of inequality and the shame of society
Funding will be more accessible. Government supporting entrepreneurs.	Lack of funding and no support from the government.
An ideal scenario will be that in 2030, it will be easier for young Rwandese/Africans to have access to coaching/mentorship and finances. In addition to that, the ecosystem will grow into a sustainable framework that nurtures younger generations who have an entrepreneurial spirit.	The worst case scenario is that the failing rate of entrepreneurs will continue to grow over the years and will kill any wish to follow an entrepreneurial path.
Private sector will grow Investment in startups will grow	Local investors will not see potential in startup investing.
Our society will have changed the archaic thought that entrepreneurship is risky and getting a job is much safer than creating your own asset as an entrepreneur. Also I hope the government will have set up laws that help in motivating small business and project being started by locals more so the youth eg by giving them grace period to start off and be independent before charging them taxes as a young business.	People will not have out grown the thought that leaving from paycheck to paycheck is much safer than creating your asset. And the government will have not eased the requirements more so charges young business face while starting.
Entrepreneurship will have a great deal support and access to finance	Hardships of entrepreneurs in accessing funds
-Well structured financial systems-Advanced technology-Innovative products and services-Large market share for local products-More learning programmes about entrepreneurship	-High taxes-High interest rates on credits-money driven entrepreneurs-Unserved population due to overpopulation
Ideal - entrepreneurship becomes part of the curriculum in Ghana, Kenya, and Rwanda. From an early age, people are taught and shown the virtues of entrepreneurship. Also, there's a robust ecosystem that supports these young entrepreneurs.	Worst case - Business as usual. Nothing changes. Slow progress towards valuing the work of entrepreneurs.
Government support and locally driven	Government tariffs and internationally driven
should we have atleast 80% of solutions ideas and implentation for each sector in ecosystem.	should we have satisfying 80% of demands and good operations
Local investors saw a added value and benefit in entrepreneurship and fund entrepreneurs/startup Government provide the appropriated frame to	The positive spirit and dynamic is broken through the lack of appropriated measures at government and private sectors level to support entrepreneurs

<p>support entrepreneurs (appropriated infrastructure, supportive legislation, facilitating access to credit, support Pan African and international exposure)</p>	
<p>All businesses will have integrated environmental and social considerations in their day-to-day operations</p>	<p>Capitalistic status quo maintained</p>
<p>Education and skill development</p>	<p>With Brilliant ideas, plans, passion, skills and education without any funding to implement these.</p>
<p>Most businesses will be all about virtual reality. For example, in this day and era, prototyping and designing is quite expensive, through VR it will become cheaper and faster. Together with many other beneficial factors that will be brought about by VR.</p>	<p>N/A</p>
<p>Production agriculture will have increased significantly, contributing to widespread increase in food security in Africa. That we will have access to technologically advanced methods of production that are affordable. These technological advancements will not just be confined to IT, but also to marketing, science, and engineering including post harvest food preservation. That we will be able to process our produce, and add value instead of simply selling raw materials. That we will have access to capital and mentors. That governments and policy makers create conducive ecosystems for entrepreneurs. That our markets will expand not just nationally but further into the region and continent.</p>	<p>That production agriculture will be dominated by large multinational organization, squeezing out local initiatives. That technological advancement is inaccessible and un-affordable. Available capital goes mainly to foreign owned enterprises. That governments and policy makers fail to unblock barriers facing entrepreneurs.</p>
<p>Established businesses identify challenges and work with startups to solve them</p>	<p>Foreign donor agencies continue corrupt the market for talent by supporting worthless programs and debilitating entrepreneurs</p>
<p>Entrepreneur would be much in a much better position and things would be easy for them hence making the economy better</p>	<p>Our economy would have failed completely and no entrepreneur would be successful</p>
<p>Streamline access to finances</p>	<p>Corruption and wastage of resources</p>
<p>More people venture into entrepreneurship.</p>	<p>The government fails to support entrepreneurs and exploits them through over taxation.</p>
<p>Most people would lean towards entrepreneurship</p>	<p>Entrepreneurship would be run by citizens from other</p>

	countries instead of out own entrepreneurs who are instead locating to more developed countries to innovate their ideas there
Entrepreneurship and Technology will have merged and made entrepreneurship easier	Finance wand lack of skills will still be a reason why entrepreneurs fails
better access to finance and skills training	stagnant or declining access to finance and skills training
Policy changes support startups and more individuals believe that anyone can be an entrepreneur	Nothing changes and individuals are overwhelmed by the process to register and operate a business
Entrepreneurs have access to patient capital and mentors to guide them through the entrepreneurial process	Thing remain the same or get worse and poverty ravages the society
Government increased support to local entrepreneurs	Lack of market for locally produced products due to increased imports
Public-private partnerships has become policy as social entrepreneurship	Private sector took over
On my side, I'm certainly that 2030 ,I will changes many things in entrepreneurship live to turn most of my brothers and sisters, classmates and neighbors to be entrepreneur than to be anyone else.	What I consider as worst-case scenario is referred to the young Africans that to be educated doesn't mean that there are not institution or company waiting for you, just think like that you learn as the one who Will create it. The reference is: today I'm agribusiness entrepreneur even though I'm graduate in ict again in IPRC's
thank you, i think in 2030 it will be amazing because i got much experiences than now and the world it will very good and bad somehow because of technology	thank you, i think in 2030 it will be amazing because i got much experiences than now and the world it will very good and bad somehow because of technology and my business it will be sustainable at all but in order to achieve that dreams it will be worst because of some problems i faced with
That every key decision making body has a seasoned entrepreneur within their management; that the polytechnics inform markets and the vice versa; that the informal sector is heavily involved in the decision making process and their value addition is worked on significantly.	That beautiful projects are summararily dismissed as 'jua-kali' - informal business; that entrepreneurs give up on their dreams and resort to other things.
Good transport network.	fallen economy,high inflation can kill the currency
Entrepreneurs operate in an environment that is welcoming even if you do not come from wealth, have connections, for exanple. In 2030 the	Entrepreneurship continues to be driven by the privileged.

<p>environment is able to recognise and is responsive to an entrepreneurship that builds up well-being for many.</p>	
<p>People would have embraced entrepreneurship instead of sticking to the norms of what career paths are usually undertaken. There will be government funding to young entrepreneurs and more opportunities for them to showcase their products</p>	<p>People would have abandoned entrepreneurship due to lack of government support meaning level of unemployment among the youth and middle aged will be at an all time high</p>
<p>My ideal scenario would be that entrepreneurship is supported and encouraged in the same way as being employed, and there is access to resources and capital for entrepreneurs. this will give more youth an opportunity to work for themselves, and more importantly reduce the harsh mentality that working for someone is the only way to be successful. I think this scenario would lift Kenya out of poverty, and increase cash flow in the economy, plus engage more youth in rural areas. If this were to happen it would create the grounds for I believe will be the best version of our country.</p>	<p>It keeps going as it has been. Entrepreneurship is viewed as job opportunity for foreigners in agritech/ fintech, resources and investments remain in Nairobi, and there's ever mounting pressure to be employed.</p>
<p>Better policies from local governments and incentives to support startups. More collaboration and partnership with the private sector to drive entrepreneurship.</p>	<p>Due to a lack of strong and effective government support especially with regards to accessing funding, opportunities and innovations coming out Africa do not have local ownership; startups do not grow and create expected jobs.</p>
<p>There are government loans and grants accessible to people who venture into business. And proper mentors for mental support</p>	<p>It's the same</p>
<p>Technology and rapid urbanisation in Africa will drive a massive wave of entrepreneurship across Africa. Rising affluence of Africa's middle class will make available capital to start and sustain entrepreneurship. An increasingly connected Africa will widen markets for entrepreneurs. Governments will understand and better support entrepreneurs.</p>	<p>Governments will still not get it and not put in place the framework and environment to sustain entrepreneurship on the continent. Inward-looking countries will still restrict access to their markets.</p>
<p>Lack of capital</p>	<p>Lack of the technical know how.</p>
<p>If there would be the best support to the entrepreneurship that is the ideal scenario, if young people will be still struggling with ideas but no</p>	<p>If there would be the best support to the entrepreneurship that is the ideal scenario, if young people will be still struggling with ideas but no support</p>

support to make them real.	to make them real.
Entrepreneurship policies are being implemented and it is easier to start and grow a business in Ghana; getting the necessary funding and support.	We are still struggling with getting policy-makers to the table and entrepreneurship is a backup plan for graduates.
The government support the local small scale and large scale entrepreneurs. And people embrace that we do not need an 8 to 5 job to make a living.	The situation remains the same as it is now in 2020
Entrepreneurship would be on a whole new scale and applied differently from what we observe today. Gaming would be on the tip of education while technological innovations would be more selling than any other entrepreneurship venture.	Focus on social media would be high. Aspects of interactions, consumer relations, metrics and analysis of consumer behavior through personal contact would be ignored affecting great aspects on effectiveness and performance.
The main change will be on access to finance. I believe lots of people will understand the benefits of investing in young entrepreneur.	if the governments does not care
N/a	N/a
A platform will be created for aspiring entrepreneurs to pitch ideas, get advice and funds	Entrepreneurs will still struggle ..due to lack of mentorship and support
i will be able to prove that people from poor family will be able to create and innovate a new business!	i will not be able to prove what i say before!
In West Africa, each country would have developed an entrepreneurial ecosystem supportive of innovation and industry. ECOWAS is functional and takes advantage of these strong ecosystems to take leadership on the continent in Agribusiness, Light Manufacturing, Healthtech.	Foreigners take advantage of above opportunities and indigenous entrepreneurs lose ground.
Clothing and clothes manufacturing industry will be strong	Technological advancement would distract the entertainment industry hence clothing perspective
Barriers to entry will be non-existent	There would be more socioeconomic barriers to become an entrepreneur
The government putting up measures to fully support and protect start ups and entrepreneurs... By coming up with stringent but ideal copyright laws	Same old same old... No government support
A lot of people receive funding and can start anything new that will scale.	Very few people will receive funding. It may be difficult to start anything new that will scale.
One of the biggest challenges is access to markets (not capital or training), and by 2030 I think the ideal scenario would be a pan-African trade agreement, with open trade borders, ability to ship	Worst case scenario is just about the opposite: trade tariffs continue to increase as countries become protectionist -- a potential fall out from Covid in which countries are creating in-house manufacturing to deal

<p>and do logistics across the continent, and standard import/export requirements to developed markets. Entrepreneurs would know what it takes to get their products out to the right clients, and htat there is a true product-market fit with facilitated access to make sure that regardless of location customers can find products and entrepreneurs can find customers.</p>	<p>with constrained borders -- leading to entrepreneurs only being able to service their niche market. This would advance some countries through entrepreneurship, but would also leave innovation in silos and would mean that many consumer won't have access to affordable, life-changing products and services. Small business would struggle to gain traction in small markets.</p>
<p>Safe spaces to innovate & fail to allow more co-creation and innovation. More private sector led innovation where public and government can feel confident in stepping back.</p>	<p>Entrepreneurs feel like there isn't enough opportunity because the most profitable spaces are foreign/gov't led or that there is no need to provide high quality goods and services because there are no standards leading to the market growing with mediocre offerings.</p>
<p>Economic growth and development More jobs and opportunities Government support Technological innovation Global presence more specialized educational systems Reduced cost of living</p>	<p>Stagnation and government greed</p>

Appendix E: Ideal versus Worst-Case Scenario Emergent Themes

Key Repeated Text or Ideas	Code	Emerging theme
Access to finance	65	Access to finance and market
Access to finance	65	Access to finance and market
Access to market	65	Access to finance and market
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Access to market	65	Access to finance and market
Access to market	65	Access to finance and market

		market
Access to market	65	Access to finance and market
Business Failure	66	Formative context
Business Failure	66	Formative context
Business Failure	66	Formative context
Buy local	66	Sense of control
Business Failure	66	Formative context
Better environment	66	Sense of control
Business Failure	66	Formative context
Competition	67	Dynamic ecology of support
Coordinated support events and activities	67	Dynamic ecology of support
Coordinated support events and activities	67	Dynamic ecology of support
Coordinated support events and activities	67	Dynamic ecology of support
Corporate mentorship	67	Dynamic ecology of support
Coaching	67	Dynamic ecology of support
Corporate mentorship	67	Dynamic ecology of support
Coordinated support events and activities	67	Dynamic ecology of support
Coordinated support events and activities	67	Dynamic ecology of support
Corruption	67	Sense of control
Coordinated support events and activities	67	Dynamic ecology of support
Corruption	67	Sense of control
Coordinated support events and activities	67	Dynamic ecology of support
Coordinated support events and activities	67	Dynamic ecology of support
Coaching	67	Dynamic ecology of support
Corruption	67	Sense of control

Capitalist status quo maintained	67	Sense of control
Coordinated support events and activities	67	Dynamic ecology of support
Coordinated support events and activities	67	Dynamic ecology of support
Coordinated support events and activities	67	Dynamic ecology of support
Corruption	67	Sense of control
Coordinated support events and activities	67	Dynamic ecology of support
Corporate mentorship	67	Dynamic ecology of support
Coaching	67	Dynamic ecology of support
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
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Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Entrepreneurship education & training	69	Dynamic ecology of support
Enabling policy	69	Enabling policy
Entrepreneurship education & training	69	Dynamic ecology of support
Enabling policy	69	Enabling policy
Entrepreneurship education & training	69	Dynamic ecology of support
Entrepreneurship education & training	69	Dynamic ecology of support

Enabling policy	69	Enabling policy
Entrepreneurship education & training	69	Dynamic ecology of support
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Entrepreneurship education & training	69	Dynamic ecology of support
Enabling policy	69	Enabling policy
Embracing informal sector	69	Dynamic ecology of support
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
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Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Entrepreneurship education & training	69	Dynamic ecology of support
Enabling policy	69	Enabling policy
Entrepreneurship education & training	69	Dynamic ecology of support
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Entrepreneurship as a career path	69	Sense of control
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Entrepreneurship education & training	69	Dynamic ecology of support
Enabling policy	69	Enabling policy

Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Enabling policy	69	Enabling policy
Entrepreneurship that builds up well-being for many	69	Sense of control
Entrepreneurship driven by the privileged	69	Sense of control
Entrepreneurs are the shame of society	69	Sense of control
Entrepreneurship as job opportunity for foreigners in agritech and fintech	69	Sense of control
Focus on young people	70	Sense of control
Food security	70	Sense of control
Focus on young people	70	Sense of control
Focus on young people	70	Sense of control
Focus on young people	70	Sense of control
Focus on young people	70	Sense of control
Focus on young people	70	Sense of control
Focus on young people	70	Sense of control
Focus on young people	70	Sense of control
Family background	70	Sense of control
Fallen economy	70	Sense of control
Focus on young people	70	Sense of control
Focus on young people	70	Sense of control
Focus on young people	70	Sense of control
Focus on young people	70	Sense of control
Foreigners take advantage of opportunities and indigenous entrepreneurs lose ground	70	Sense of control
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Gaming as future of education	71	Enabling technology
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Grow and buy local	71	Sense of control
Government that does not care	71	Sense of control

High-growth/Scale	72	Scale
High-growth/Scale	72	Scale
High-growth/Scale	72	Scale
High-growth/Scale	72	Scale
High-growth/Scale	72	Scale
High-growth/Scale	72	Scale
Industry-specific support	73	Dynamic ecology of support
Investment in education & skills training	73	Dynamic ecology of support
Industry-specific support	73	Dynamic ecology of support
Invest local	73	Sense of control
Integration of environmental and social consideration in businesses	73	Sense of control
Investment in education & skills training	73	Dynamic ecology of support
Intrapreneurship	73	Dynamic ecology of support
Industry-specific support	73	Dynamic ecology of support
Invest local	73	Sense of control
Invest local	73	Sense of control
Industry-specific support	73	Dynamic ecology of support
Invest local	73	Sense of control
Invest local	73	Sense of control
Invest local	73	Sense of control
Invest local	73	Sense of control
Invest local	73	Sense of control
Invest local	73	Sense of control
Invest local	73	Sense of control
Involve more youth in rural areas	73	Sense of control
Invest local	73	Sense of control
Job creation	74	Sustainable development outcomes
Lack of information	76	Dynamic ecology of support
Lack of technical know-how	76	Dynamic ecology of support

Local economy resilience	76	Sustainable development outcomes
Lack of technical skills	76	Dynamic ecology of support
More opportunities for locals	77	Sense of control
Mentorship	77	Dynamic ecology of support
Mentorship	77	Dynamic ecology of support
Mentorship	77	Dynamic ecology of support
Middle-class rise	77	Sustainable development outcomes
Mentorship	77	Dynamic ecology of support
Marketing creating innovations	77	Sustainable development outcomes
Mentorship	77	Dynamic ecology of support
Mentorship	77	Dynamic ecology of support
More jobs	77	Sustainable development outcomes
More jobs	77	Sustainable development outcomes
Mentorship	77	Dynamic ecology of support
Necessity businesses	78	Dynamic ecology of support
Past business experience	80	Dynamic ecology of support
Private sector support	80	Dynamic ecology of support
Patient capital	80	Sense of control
Private sector support	80	Dynamic ecology of support
Poverty and malnutrition	80	Sustainable development outcomes
Poor employment	80	Sustainable

		development outcomes
Public-private partnerships	80	Sense of control
Private sector support	80	Dynamic ecology of support
Poor families being able to create and innovate a new business	80	Sense of control
Private sector support	80	Dynamic ecology of support
Poor perception of local entrepreneurs	80	Sense of control
Poverty	80	Sustainable development outcomes
Poverty	80	Sustainable development outcomes
Private sector support	80	Dynamic ecology of support
Reduced human interaction	82	Dynamic ecology of support
Responsive entrepreneurship environment	82	Sense of control
Reduced costs of living	82	Sustainable development outcomes
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Sector-specific support	83	Dynamic ecology of support
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Socioeconomic barriers to entry	83	Sense of control
Significant change	83	Formative context
Significant change	83	Formative context
Sustainable business growth	83	Sustainable development outcomes
Significant change	83	Formative context

Significant change	83	Formative context
Same old same old, no government support	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Significant change	83	Formative context
Societal development	83	Sustainable development outcomes
Significant change	83	Formative context
Significant change	83	Formative context
Technology as a business enabler	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Technology for development	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Technology as a business enabler	84	Enabling technology
Welcoming entrepreneurship environment	87	Sense of control
Youth unemployment	89	Sustainable development outcomes

Appendix F: Raw Data on Associated Individual Stories

Individual stories of Triad 4.2.5: Government - Supportive

	# StayHome opportunity to job
1.	Today I am happy compared to the way I lived before, actually I am a university student and I didn't get enough time to think about what I can do or what I have to know so that it can be of important or profit to me that is why I am glad because the holidays given to schools caused by covid 19 I got enough time to go deep in my studies (software designing) and I saw that I can make job by my own after getting a request from student from other university asking me to make him a software project and we discuss the matter of how he can pay me. So I found it profitable and I took it as opportunity to create my own job so now I made a company which helps students to get designing aid and other services related to IT field online.
2.	# Business in Rwanda
	Something that makes me feel optimistic about entrepreneurship is the way people are ready to support local businesses, in my experience i've been selling different things for the past 2months and i was impressed on how my friends and family were excited and ready to support my business .
3.	# NATURE RESUSCITATE
	I have a experience in poverty where I don't want to see other people in poverty it is my aim to deliver and implement jobs in order to reduce the number of unemployment rate.
4.	# WE WILL PICK UP STRONG THAN EVER
	SPEAK ON BEHALF OF MYSELF TO BE HONEST I FEEL LIKE THINGS ARE GOING TO BE DIFFICULT FOR SOME PEOPLE LIKE US WHO WAS SUPPOSED TO RELY ON HEAVY INVESTMENT THAT WHERE ABOUT TO FLOW ON THIS AFRICA CONTINENT. THIS PANDEMIC HAS JUST SPOILED OR PAUSED THIS OPPORTUNITIES ITS GOING TO BE HARD FOR OUR PROJECTS LIKE MINE BUT I HAVE HOPE AS SOON LIFE COMES BACK TO NORMAL THINGS WILL BE OK BUT SOME OF US WE ARE GOING TO WAIST TIME TRACK ON OUR PROJECT WE HAD BEFORE THIS COVID19 CRISIS. WE HAD GOOD UNDERSTANDING BETWEEN EACH OTHER BEFORE COVID19 I MEANT YOUTH OF AFRICA WERE READY TO WORK TOGETHER
5.	# Family
	Family is the backbone of entrepreneurship since this is where i get ideas from and also the support to start and be able to run a business.
6.	# AfricaYouthTechLeaders

	I discuss and often interact with young tech entrepreneurs in Rwanda. I gained much optimism through the latest years (post 2010) witnessing how these young people are able to quickly adapt, own and shape new technological developments in their local contexts. The four digital entrepreneurs involved in my recent activity in Rwanda lead their start-up company in various fields such as AI, blockchain or IoT and learn form the multiple communities they belong to, beyond their country. Their solutions are often replicable and yield important potential for scalability in the Eastern Africa region, but also beyond on the continent.
7.	# theFuture'sYours
	In Rwanda, we have a Fabrication Laboratory called FabLab that supports hardware innovators. There are some good projects coming from them and it's making me optimistic about entrepreneurship in Rwanda
8.	# Opportunity
	Recently my friend has attended drone workshop and want to join airforce military academy and he passed well all Technical tests and fail because of teeth not good and became like is last opportunity missed but after he thought how could make hardware business now is okay.
9.	# Collaborativeinnovation
	I'm optimistic about collaborative innovation
10.	# To young people who are waiting for being hired
	I'm Faustin TUYUBAHE, I'm graduate from Iprc(RP)in ict with upper class division but I'm now agribusiness entrepreneur because after being a graduate I miss anyone to hire me and turn mi mind to be a self employed buy turning local available opportunities .
11.	# The journey
	Risk taking is good but can be worse
12.	# MyMaskMySafety
	Emergency of COVID-19 pandemic promoted the local manufacturing of masks especially for lower income consumption. This improves the tailoring entrepreneurial subsector.
13.	# EvolveOrDie
	In this photo, I am reminded of working together in a team to get creative about how to solve our problems! I like the iterative process of human centered design and what I see in this photo is a diversity of people -- gender, religion -- that are bringing new perspectives to solve a challenge. In my company, we have also faced the challenge of needing to redesign our offering as Covid has made it unsafe to meet people in person and we have had to change both our product and processes in Rwanda. So far, we're finding success, and I look

	forward to when we can all be as close as in this photo again!
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Individual stories of Triad 4.2.5: Government - Absent

1.	# Team work
	I believe in team work and that if several minds come together there is a higher probability of achieving a set goal. In my field as a consultant and an entrepreneur, i believe in team work in that we are able to expound on our ideas and feilds of expertise by coming together.
2.	# Entrepreneurnothing
	Hello,as a developer, I have learned that networking is as important as technical skills for all types of entrepreneurs.A great idea by itself won't do, you need to know how to present it and how to introduce yourself to potential investors.
3.	# Research entrepreneur
	Innovating through my work.
4.	# Innovation
	A team recently came up with an idea of coming up with an e-commerce system that connects sellers and buyers, especially in the agriculture sector. However it was too costly to implement considering the capital and storage required, not forgetting the advert costs.
5.	# LocalBusinessesMatter
	Teamwork. In an entrepreneurship business, having the right partner who balances and strengthens your weaknesses and vice versa has proved to be a game changer.
6.	# Tableideas
	I miss sharing a table and discusing on business ideas
7.	# Working together
	Working together as a team to find better ideas and solutions.
8.	# TheAfricaWeWant
	Africans winning robotics competitions is not new. But how do we turn prototype to assembly lines? The need for public private partnerships to solve socioeconomic issues in Africa is rising. I am optimistic of the private response to the market need but I am pessimistic of the public sectors response in Africa.
9.	# BuildKenyaforKenyabyKenyans
	A friend of mine decided to start a small online thrift store. People were reluctant to buy as buying clothing online can be a hustle.. She invested in capital and the business didn't pick. There was no support.
10.	# Familybusinesssupport
	Family: Family is everything to me. Through the good and bad times they have always been my source of strength. They love me for me and are not afraid to guide me in the right direction even when things are not looking up and more effort is required.

11.	# Breaking the curve
	I have learnt from my current team of forex trading and in logistics of agricultural products. That entrepreneurship is all about creating a common goal with your team and partners and working smart and having good strategies towards reaching your goal and targets
12.	# Crafting
	Currently ideating and business strategizing
13.	# Buildingyoungentrepreneurs
	I think the image shows someone who is trying to pitch an idea to investors. Ever since I entered into the entrepreneurship space I have been able to pitch my idea to various investors with the purpose of trying to get funding that will help me in growing my business. Before pitching, one does a lot of practise to ensure that he/she understands the business in and out so as to be able to answer any questions asked well or to ensure that he/she has a very captivating pitch. After the pitch, when the investors try to enquire more about the business, here is where you realise that there are a lot of things that are missing in either the business plan or there's a lot of things that have to be factored in. Speaking from an upcoming entrepreneurs point of view. For me, I think this is a positive thing as it acts as an eye opener, and on the other side, a good pitch, can lead to great opportunities.
14.	# Supportvijana
	A friend of mine once decided to start a small tech firm. The idea was great but had no funding. He spent all his savings trying to build the business but it was not enough and could not secure additional funding. He ended up closing the business and seeking formal employment
15.	# Manufacture the world
	Manufacturing industry is where i feel has one of the least entrepreneurs
16.	# ShapeReality
	I wanna make so much money to influence and shape my current reality.
17.	# Quarantine
	I am optimistic about my current situation. I'm very lucky to be in a position where lockdown has exposed me to opportunities in wine, mostly because the shift to online has cut the cost of hosting events and there's been a surge in demand for wine content. I do not think I would have the opportunities I do now if the world wasn't in a situation that demanded us to change how we interact and connect with each other.
18.	# Passive mindsets from judges
	I had an opportunity in high school to participate in an annual science project competition. I had worked so hard since the beginning of the year and with the Overall hype from my peers and support from my family i was encouraged to go for it!! However, the space as from that and many other environments are so limiting to the full potentials of what people have to offer. I was seen skills on artificial intelligence,

	agricultural entrepreneurship so advance for “highschool” level but judges and teachers with not as an expansive mind as we had expected. I also had an opportunity to engage in an entrepreneurial project from Allan and Gray in strathmore last year and i can say it just went way beyond what i had expected! Support is very critical for an entrepreneur with a large and captivating innovation.
19.	# Epicfail
	Entrepreneurship has been difficult....I tried out something in cooperation with others...it didn't go so well
20.	# Family
	Family is more important than friends. Family is everything one needs.

Individual stories for Triad 4.2.5: Government – Absent, Punitive & Supportive all at the same time.

1.	# Product design
	It's an experience from school, which was about product designing. It was a great experience since I now understand that all products have to be designed according to clients need, not the designer wish.
2.	# Humanadapt2020
	This image represents family. In the context of the COVID-19 pandemic, families had to adjust to a new normal. Businesses that provided solutions during/after the lockdown have thrived, especially in the form of digital solutions that provided various services to families (online ordering, online payment systems, etc.). This made me feel optimistic about people's ability to quickly adapt to life challenges despite their personal circumstances.
3.	# Realitiesofglobalchange
	The Realities of Global Change
4.	# Wilted dreams
	I feel that most inventors and their inventions go down the drain due to bad leadership in the country. Funds meant to fund these folks create jobs for hundred others is squandered.
5.	# Africafortheyouth
	I like that the picture is inclusive of women in the group of young people working together as a team to create innovative solutions that include everyone. I feel alone mostly when working on my business and I don't have people around me with the necessary skilset to help me.
6.	# Covidbars
	In the last few months, work has been difficult. As one in the bar sector, the government directives to shut down all bars completely is a huge blow. It's up to us to look for other sources of income or stay hungry.

7.	# My hobbies
	I like experment
8.	# Farming and family times
	Spending my time at home with family and especially a newborn. Also more into farming Helps keep me motivated
9.	# Teamworkworks
	My experience in the last few months, is that i realised that teamwork/partnership is better when it comes to entrepreneurship, before i wanted to do things all alone and it was very hard and nearly impossible because it was too much to handle for one individual to go all the way from the ideas to developing it, implement it and make it work.i needed a lot of skills and knowledge that i did not have, which made me today to put up a partnership(team) and outsource when it is needed so that i can make the idea or dream come to reality.
10.	# Entrepresseure
	Well, all I can say about my current situation is that I have been pushed to think creatively to come up with my own start up...I can indeed affirm that it has made me feel positively about entrepreneurship.
11.	# HCD
	This picture makes me realise that we cannot take for granted the simple meaning of convening to support a startup or run a project that involves human interaction and field research.
12.	# Annual planning meeting
	Planning sessions for the year.
13.	# Training workshop
	A group work at a training workshop. Training empower thevproplr. Working in teams
14.	# NewWayOfThinking
	COVID-19 has indeed fetched the future. It has made me realize that although the world is changing rapidly, a few constants remain. One among them - people will always need food hence urban agriculture is highly important especially with regional lock-downs. In response, we are now intensifying our production of herbs and green vegetables. Beyond that, we must dream new dreams. Have a new way of thinking, planning and doing things. We must ask - what does the future look like and how can we better prepare now for the future?
15.	# YoungFarmer
	A friend started a business and challenged me to start the one thing av been procrastinating on which is farming. So i finally started poultry farming and the experience was good and I can't wait to continue in the business and diversify to other forms of agriculture like vegetable farming

16.	# StelCovid Action
	We initiated a Covid response unit called StelCovid Action in Stellenbosch. We educate the public on the virus, we hand out soap and do door to door screening with the Dept. of Health. I chose this photo since it represents the positive effects of assisting people through knowledge and sanitary products.
17.	# Struggling
	it is something difficult to start business without any capital but it is possible for the first time it was difficult but now it's little difficult but my experience is positive because i don't think about negative that's who am i
18.	# NewPhase
	The current situation has allowed and enabled my team and I to think deeply and strategize about the future of our business.
19.	# EntrepreneurshipIsAnIdentity
	I got on the drawing board for a couple of new ventures in areas I have not tried my hands in before. I was able to get others to join me on this new journey and I realized that entrepreneurship has become a new identity and all entrepreneurs are now from the same village.
20.	# Mothersareentrepreneurs
	Mother's are entrepreneurs and they do not know about it. They call it caring/Providing for their children.
21.	# African mother life
	this picture show me how the African mother face with many problem of giving a birth of unwanted children! i realise that i can create a platform that will help them to upgrade them self.
22.	# Transformation
	This was the experience during our Mandela Washington Fellowship. I learned a lot and was transformed
23.	# PIVOT
	The photo selected depicts how with the current pandemic, as an entrepreneur and fellow team member we have had to rethink how we work collectively to withstand the challenges while anticipating the future.

Individual stories for Triad 4.2.6: Barriers – Lack of technical business skills

1.	# StayHome opportunity to job
	Today I am happy compared to the way I lived before, actually I am a university student and I didn't get enough time to think about what I can do or what I have to know so that it can be of important or profit to me that is why I am glad because the holidays given to schools caused by covid 19 I got enough time to go deep in my studies (software designing) and I saw that I can make job by my own

	after getting a request from student from other university asking me to make him a software project and we discuss the matter of how he can pay me. So I found it profitable and I took it as opportunity to create my own job so now I made a company which helps students to get designing aid and other services related to IT field online.
2.	# NATURE RESUSCITATE
	I have a experience in poverty where I don't want to see other people in poverty it is my aim to deliver and implement jobs in order to reduce the number of unemployment rate.
3.	# TogetherWithWomenEntrepreneurs
	The picture paints a mixed feeling of most women entrepreneurs within the African context but most specifically Refugee women entrepreneurs who our organization work with. Since the advent of COVID-19, a number of refugee women have been adversely hit by the pandemic which has caused severe disruptions in supply chains, business environment and a trickle down effect on livelihoods. It is evident that, compared to their male counterparts, women entrepreneurs are structurally limited with regard to navigating the supply chain scene. As such, women are at the receiving end since most of them rely on such businesses as a source of revenue and livelihood to fend for their many dependents.
4.	# Collaborativeinnovation
	I'm optimistic about collaborative innovation
5.	# To young people who are waiting for being hired
	I'm Faustin TUYUBAHE, I'm graduate from Iprc(RP)in ict with upper class division but I'm now agribusiness entrepreneur because after being a graduate I miss anyone to hire me and turn mi mind to be a self employed buy turning local available opportunities .
6.	# Epicfail
	Entrepreneurship has been difficult....I tried out something in cooperation with others...it didn't go so well

Individual stories for Triad 4.2.6: Barriers - Access to finance

1.	# Business in Rwanda
	Something that makes me feel optimistic about entrepreneurship is the way people are ready to support local businesses, in my experience i've been selling different things for the past 2months and i was impressed on how my friends and family were excited and ready to support my business .
2.	# Team work

	I believe in team work and that if several minds come together there is a higher probability of achieving a set goal. In my field as a consultant and an entrepreneur, i believe in team work in that we are able to expound on our ideas and feilds of expertise by coming together.
3.	# Recalibrate
	This season has been a balance of both positive gains and a few setbacks. We have come to appreciate the role technology plays in enhancing the success of businesses and enhancing communication.
4.	# Realitiesofglobalchange
	The Realities of Global Change
5.	# Innovation
	A team recently came up with an idea of coming up with an e-commerce system that connects sellers and buyers, especially in the agriculture sector. However it was too costly to implement considering the capital and storage required, not forgetting the advert costs.
6.	# Africafortheyouth
	I like that the picture is inclusive of women in the group of young people working together as a team to create innovative solutions that include everyone.I feel alone mostly when working on my business and I don't have people around me with the necessary skilset to help me.
7.	# Covidbars
	In the last few months, work has been difficult. As one in the bar sector, the government directives to shut down all bars completely is a huge blow. It's up to us to look for other sources of income or stay hungry.
8.	# Multipleincomesources
	People have come together to brainstorm other possible sources of income especially after covid hit
9.	# Familyfirst
	A family contributed cash and helped someone I know start a business
10.	# WE WILL PICK UP STRONG THAN EVER
	I SPEAK ON BEHALF OF MYSELF TO BE HONEST I FEEL LIKE THINGS ARE GOING TO BE DIFFICULT FOR SOME PEOPLE LIKE US WHO WAS SUPPOSED TO RELY ON HEAVY INVESTMENT THAT WERE ABOUT TO FLOW ON THIS AFRICA CONTINENT. THIS PANDEMIC HAS JUST SPOILED OR PAUSED THIS OPPORTUNITIES ITS GOING TO BE HARD FOR OUR PROJECTS LIKE MINE BUT I HAVE HOPE AS SOON LIFE COMES BACK TO NORMAL THINGS WILL BE OK BUT SOME OF US WE ARE GOING TO WAIST TIME TRACK ON OUR PROJECT WE HAD

	BEFORE THIS COVID19 CRISIS. WE HAD GOOD UNDERSTANDING BETWEEN EACH OTHER BEFORE COVID19 I MEANT YOUTH OF AFRICA WERE READY TO WORK TOGETHER
11.	# Thetechpreneur
	positive experience in the ideas brought to life
12.	# My hobbies
	I like experment
13.	# Farming and family times
	Spending my time at home with family and especially a newborn. Also more into farming Helps keep me motivated
14.	# BusinessInToughTimes
	The opening of the economy by the president though with some restrictions still makes me optimistic about my entrepreneurship skills.
15.	# Newbeginnings
	Im excited to start my own business
16.	# Working together
	Working together as a team to find better ideas and solutions.
17.	# Together we can grow
	Entrepreneurship is about helping each other by sharing ideas, and being innovative. Planning and engaging with other people has helped a lot of entrepreneurs to grow and sustain their business.I have been in a group of entrepreneurs who helped me to know how to manage my business, how to solve problems, and also how to move my business to the next level. It's very helpful when we all brainstorm and agree on certain things that will all helps us. But the bad part is that there will be some who will discouraged you but the most important thing is to focus on the goal. Entrepreneurship is about learning from each other, supporting, motivating and engaging with each other.
18.	# Entrepessure
	Well, all I can say about my current situation is that I have been pushed to think creatively to come up with my own start up...I can indeed affirm that it has made me feel positively about entrepreneurship.
19.	# BuildKenyaforKenyabyKenyans
	A friend of mine decided to start a small online thrift store. People were reluctant to buy as buying clothing online can be a hustle.. She invested in capital and the business didn't pick. There was no support.
20.	# Familybusinesssupport
	Family: Family is everything to me. Through the good and bad times they

	have always been my source of strength. They love me for me and are not afraid to guide me in the right direction even when things are not looking up and more effort is required.
21.	# Life changer
	I once wanted to do something, build something of my own maybe or rather make a meaning to my life. I still do actually, but I discovered a way to do that is through entrepreneurship. Not just for me but for everyone
22.	# Family
	Having a happy, loving and united family is one of the best feelings in everyone's lifetime. Growing in these kinds of families boosts one's confidence, self-esteem and intelligence, this is because your ideas, dreams and ambitions are taken into consideration. This can generate new ideas and promote innovation due to family support. This is a key factor to the development of entrepreneurship. It is a privilege to have this model as a family nowadays due to many divorces and children are not able to realize their dreams.
23.	# TheBlackScientist
	I am part of a student-led organisation interested in furthering research in medicine. Over the past few months, we have been meeting virtually to brainstorm ideas and develop literature review papers on various medical topics for publishing during this time.
24.	# Supportvijana
	A friend of mine once decided to start a small tech firm. The idea was great but had no funding. He spent all his savings trying to build the business but it was not enough and could not secure additional funding. He ended up closing the business and seeking formal employment
25.	# Positive entrepreneurship
	Entrepreneurship is inclusive. Unlike in some jobs that choose to give more opportunities to a particular gender, entrepreneurship covers both genders.
26.	#Teamwork
	This reminds me of student group work promoted in an entrepreneurship education program I am researching.
27.	# YoungFarmer
	A friend started a business and challenged me to start the one thing I've been procrastinating on, which is farming. So I finally started poultry farming and the experience was good and I can't wait to continue in the business and diversify to other forms of agriculture like vegetable farming
28.	# ShapeReality

	I wanna make so much money to influence and shape my current reality.
29.	# The journey
	Risk taking is good but can be worse
30.	# Family
	Family is more important than friends. Family is everything one needs.

Individual stories for Triad 4.2.6: Barriers - Lack of Access to both mentors and finance

1.	# Product design
	It's an experience from school, which was about product designing. It was a great experience since I now understand that all products have to be designed according to clients need, not the designer wish.
2.	# Humanadapt2020
	This image represents family. In the context of the COVID-19 pandemic, families had to adjust to a new normal. Businesses that provided solutions during/after the lockdown have thrived, especially in the form of digital solutions that provided various services to families (online ordering, online payment systems, etc). This made me feel optimistic about people's ability to quickly adapt to life challenges despite their personal circumstances.
3.	# Wilted dreams
	I feel that most inventors and their inventions go down the drain due to bad leadership in the country. Funds meant to fund these folks create jobs for hundred others is squandered.
4.	# Nairobionlineacademy
	I've tried to disrupt the education sector and it's the first time an enterprise has worked for me.
5.	# Sticky Dreams
	Spent thee last few months in quarantine writing down ideas on businesses and programming algorithms on sticky notes all around my house. They range from startups ideas to ankara batman designs. I scribble them when on calls with my friends, with workmates , with business partners. Pre corona The image on this picture was a weekly sight, me and my partner sitted at a table scribbling down different ideas and plans.
6.	# VirtualRealityFlyingInTheDark
	While we have been gripped with lockdowns in the various African countries, I have seen how entrepreneurs have continued to hustle in order to stave off disaster, with some innovatively pivoting their business models and/or products and services in order to be responsive the the

	shifting market conditions. At the same time I have been astounded by how many ecosystem builders have been looking to go about their business as if it's business as usual. Not agile, flexible or even ready to digitize when the lockdowns demanded that of them. I have been left with a deep sense of ambivalence about their usefulness and value to entrepreneurs to whom they owe their very existence.
7.	# How to choose a best business idea
	This is the experience of someone, this picture remember me the experience of one of my family member who attended the training on business and challenged by how to choose the good business idea and the trainers tell them to name more business ideas and they will get the best characteristics of choosing the good idea after that he writes many ideas in different post-its. Finally he gets how to choose the good idea from brainstorming ideas.
8.	# Teamwork works
	My experience in the last few months, is that I realised that teamwork/partnership is better when it comes to entrepreneurship, before I wanted to do things all alone and it was very hard and nearly impossible because it was too much to handle for one individual to go all the way from the ideas to developing it, implement it and make it work. I needed a lot of skills and knowledge that I did not have, which made me today to put up a partnership (team) and outsource when it is needed so that I can make the idea or dream come to reality.
9.	# HCD
	This picture makes me realise that we cannot take for granted the simple meaning of convening to support a startup or run a project that involves human interaction and field research.
10.	# theFutureIsYours
	In Rwanda, we have a Fabrication Laboratory called FabLab that supports hardware innovators. There are some good projects coming from them and it's making me optimistic about entrepreneurship in Rwanda.
11.	# Innovation without bias
	I loved the image of mixed gender builders. It highlighted opportunity to innovate without bias.
12.	# Youth Innovation Entrepreneurship
	This picture expresses the dynamic within the digitalisation labs that I am supervising at the Pan African University Institute for Water and Energy Sciences with very enthusiastic students from different African countries looking on how digital technologies can leapfrog the development of the continent. I am very enthusiastic because I see a similar dynamic in many

	African countries and universities
13.	# NewWayOfThinking
	COVID-19 has indeed fetched the future. It has made me realize that although the world is changing rapidly, a few constants remain. One among them - people will always need food hence urban agriculture is highly important especially with regional lock-downs. In response, we are now intensifying our production of herbs and green vegetables. Beyond that, we must dream new dreams. Have a new way of thinking, planning and doing things. We must ask - what does the future look like and how can we better prepare now for the future?
14.	# Representation in Ecosystems
	Entrepreneurs and members of the community who have an interest in entrepreneurship are coming together to discuss what they need and how to create a better ecosystem. I selected this photo because it is mostly men at the table; representation is being addressed across Africa because support organisations and business owners are not from local communities or women. Profits are not reinvested in communities and decisions that affect entire communities are being made by men. The discussions about representation include recommendations for change and accountability measures from the community which could be a positive change with proper implementation. The path to entrepreneurship becomes easier with more people sharing their journey, owners being permanent members of the community, and donors communicating with local support organizations to address local issues while accomplishing their mission.
15.	# StelCovid Action
	We initiated a Covid response unit called StelCovid Action in Stellenbosch. We educate the public on the virus, we hand out soap and do door to door screening with the Dept. of Health. I chose this photo since it represents the positive effects of assisting people through knowledge and sanitary products.
16.	# Struggling
	it is something difficult to start business without any capital but it is possible for the first time it was difficult but now it's little difficult but my experience is positive because i don't think about negative that's who am i
17.	# Womenintech
	A young woman named X that participated in an entrepreneurship training program that I ran has been able to access capital and scale tech-enabled business to a significant degree, seeing an exponential growth in

	revenue and creating jobs.
18.	# EntrepreneurshipIsAnIdentity
	I got on the drawing board for a couple of new ventures in areas I have not tried my hands in before. I was able to get others to join me on this new journey and I realized that entrepreneurship has become a new identity and all entrepreneurs are now from the same village.
19.	# Mothersareentrepreneurs
	Mother's are entrepreneurs and they do not know about it. They call it caring/Providing for their children.
20.	# African Women Perspectives
	Only men sitting around the table, this image translates the situation in the financial sector, support systems for women entrepreneurs in SSA. As an accelerator program manager, we need to customize contents and materials to the realities of young women in African culture, not from a western cultural perspective. Culture impacts your legal, social and societal rights. Young married women with children were not able to participate fully to our program because of their mother and spouse obligations.
21.	# MyMaskMySafety
	Emergency of COVID-19 pandemic promoted the local manufacturing of masks especially for lower income consumption. This improves the tailoring entrepreneurial subsector.
22.	# InnovationIsKey
	Innovation in technology is slowly becoming the heart of the entrepreneurship. I was very impressed with how a company in Kenya is using technology to improve traffic flow.
23.	# Transformation
	This was the experience during our Mandela Washington Fellowship. I learned a lot and was transformed
24.	# PIVOT
	The photo selected depicts how with the current pandemic, as an entrepreneur and fellow team member we have had to rethink how we work collectively to withstand the challenges while anticipating the future.
25.	# Lovewins
	Love lives in different ways, forms and experiences. It goes deeper than what we

Individual stories for Triad 4.2.7: Achieving sustainable wellbeing

1.	# StayHome opportunity to job
	Today I am happy compared to the way I lived before, actually I am a university student and I didn't get enough time to think about what I can do or what I have to know so that it can be of important or profit to me that is why I am glad because the holidays given to schools caused by covid 19 I got enough time to go deep in my studies (software designing) and I saw that I can make job by my own after getting a request from student from other university asking me to make him a software project and we discuss the matter of how he can pay me. So I found it profitable and I took it as opportunity to create my own job so now I made a company which helps students to get designing aid and other services related to IT field online.
2.	# Business in Rwanda
	Something that makes me feel optimistic about entrepreneurship is the way people are ready to support local businesses, in my experience i've been selling different things for the past 2months and i was impressed on how my friends and family were excited and ready to support my business .
3.	# Product design
	It's an experience from school, which was about product designing. It was a great experience since I now understand that all products have to be designed according to clients need, not the designer wish.
4.	#realitiesofglobalchange
	The Realities of Global Change
5.	# NATURE RESUSCITATE
	I have a experience in poverty where I don't want to see other people in poverty it is my aim to deliver and implement jobs in order to reduce the number of unemployment rate.
6.	#nairobionlineacademy
	I've tried to disrupt the education sector and it's the first time an enterprise has worked for me.
7.	# WE WILL PICK UP STRONG THAN EVER
	I SPEAK ON BEHALF OF MYSELF TO BE HONEST I FEEL LIKE THINGS ARE GOING TO BE DIFFICULT FOR SOME PEOPLE LIKE US WHO WAS SUPPOSED TO RELY ON HEAVY INVESTMENT THAT WHERE ABOUT TO FLOW ON THIS AFRICA CONTINENT. THIS PANDEMIC HAS JUST SPOILED OR PAUSED THIS OPPORTUNITIES ITS GOING TO BE HARD FOR OUR PROJECTS LIKE MINE BUT I HAVE HOPE AS SOON LIFE COMES BACK TO NORMAL THINGS WILL BE OK BUT SOME OF US WE

	ARE GOING TO WAIST TIME TRACK ON OUR PROJECT WE HAD BEFORE THIS COVID19 CRISIS. WE HAD GOOD UNDERSTANDING BETWEEN EACH OTHER BEFORE COVID19 I MEANT YOUTH OF AFRICA WERE READY TO WORK TOGETHER
8.	# My hobbies
	I like experment
9.	# BusinessInToughTimes
	The opening of the economy by the president though with some restrictions still makes me optimistic about my entrepreneurship skills.
10.	#kazikwavijana
	Many young people are determined to complete their studies and secure employment but the frustrations within the employment field are many. The government promises jobs to many unemployed youths but nothing is ever done to help improve the situation.
11.	#BuildKenyaforKenyaByKenyans
	A friend of mine decided to start a small online thrift store. People were reluctant to buy as buying clothing online can be a hustle.. She invested in capital and the business didn't pick. There was no support.
12.	#AfricaYouthTechLeaders
	I discuss and often interact with young tech entrepreneurs in Rwanda. I gained much optimism through the latest years (post 2010) witnessing how these young people are able to quickly adapt, own and shape new technological developments in their local contexts. The four digital entrepreneurs involved in my recent activity in Rwanda lead their start-up company in various fields such as AI, blockchain or IoT and learn form the multiple communities they belong to, beyond their country. Their solutions are often replicable and yield important potential for scalability in the Eastern Africa region, but also beyond on the continent.
13.	#Familybusinesssupport
	Family: Family is everything to me. Through the good and bad times they have always been my source of strength. They love me for me and are not afraid to guide me in the right direction even when things are not looking up and more effort is required.
14.	#opportunity
	recently my friend has attended drone workshop and want to join airforce military academy and he passed well all Technical tests and fail because of teeth not good and became like is last opportunity missed but after he thought how could make hardware business now is okay.
15.	#collaborativeinnovation
	I'm optimistic about collaborative innovation

16.	#businessidea
	My experience in coming up with a business of my own was hectic as it led me to sitting through many nights brainstorming and it has not fully picked up yet a whole year after
17.	#TheBlackScientist
	I am part of a student-led organisation interested in furthering research in medicine. Over the past few months, we have been meeting virtually to brainstorm ideas and developed literature review papers on various medical topics for publishing during this time.
18.	#supportvijana
	A friend of mine once decided to start a small tech firm. The idea was great but had no funding. He spent all his savings trying to build the business but it was not enough and could not secure additional funding. He ended up closing the business and seeking formal employment
19.	# Positive entrepreneurship
	Entrepreneurship is inclusive. Unlike in some jobs that choose to give more opportunities to a particular gender, entrepreneurship covers both genders.
20.	#manufacture the world
	Manufacturing industry is where i feel has one of the least entrepreneurs
21.	# To young people who are waiting for being hired
	I'm Faustin TUYUBAHE, I'm graduate from Iprc(RP)in ict with upper class division but I'm now agribusiness entrepreneur because after being a graduate I miss anyone to hire me and turn mi mind to be a self employed buy turning local available opportunities .
22.	http://healtheducat.rw
	There is a need to learn and learn, virtual reality is so helpful and need to be strengthened to the point that we can learn with no interruptions, like here in Rwanda and many more countries... schools have closed, there is practically no need to learn and keep going we need it ..
23.	#mothersareentrepreneurs
	Mother's are entrepreneurs and they do not know about it. They call it caring/Providering for their children.
24.	# Passive mindsets from judges
	I had an opportunity in high school to participate in an annual science project competition. I had worked so had since the beginning of the year and with the Overall hype from my peers and support from my family i was encouraged to go for it!! However, the space as from that and many other environments are so limiting to the full potentials of what people have to offer. I was seen skills on artificial intelligence, agricultural entrepreneurship so advance for "highschool"

	level but judges and teachers with not as an expansive mind as we had expected. I also had an opportunity to engage in an entrepreneurial project from Allan and Gray in strathmore last year and i can say it just went way beyond what i had expected! Support is very critical for an entrepreneur with a large and captivating innovation.
25.	#epicfail
	Entrepreneurship has been difficult....I tried out something in cooperation with others...it didn't go so well
26.	#family
	Family is more important than friends. Family is everything one needs.

Individual stories for Triad 4.2.7: Survival and livelihood

1.	#team work
	I believe in team work and that if several minds come together there is a higher probability of achieving a set goal. In my field as a consultant and an entrepreneur, i believe in team work in that we are able to expound on our ideas and feilds of expertise by coming together.
2.	# Crossing A River Full of Crocodiles
	I feel optimistic despite the dangers faced on this entrepreneurial journey as I cross the first of many rivers in my quest to do well by doing good.
3.	# Research entrepreneur
	Innovating through my work.
4.	#entrepreneurshipitches
	I find entrepreneurship a path taken by many who cant find a breakthrough in their initial path. While many take this as an alternative, some have however ventured I this out of passion. My interaction with women as a community facilitator had seen both interests interplay and the mindset is what brings out the difference. More women have confirmed self reliance and satisfaction through entrepreneurship amid challanges. This has given me hope that if the missing link in the jargon can be fixed the more African women can be more resilient, independent and have a reason for a sustainable future.
5.	# Wilted dreams
	I feel that most inventors and their inventions go down the drain due to bad leadership in the country. Funds meant to fund these folks create jobs for hundred others is squandered.
6.	#Innovation
	A team recently came up with an idea of coming up with an e-commerce system that connects sellers and buyers, especially in the agriculture sector. However it was too costly to implement considering the capital and storage required, not

	forgetting the advert costs.
7.	#LocalBusinessesMatter
	Teamwork. In an entrepreneurship business, having the right partner who balances and strengthens your weaknesses and vice versa has proved to be a game changer
8.	#africafortheyouth
	I like that the picture is inclusive of women in the group of young people working together as a team to create innovative solutions that include everyone. I feel alone mostly when working on my business and I don't have people around me with the necessary skillset to help me.
9.	#covidbars
	In the last few months, work has been difficult. As one in the bar sector, the government directives to shut down all bars completely is a huge blow. It's up to us to look for other sources of income or stay hungry.
10.	#TogetherWithWomenEntrepreneurs
	The picture paints a mixed feeling of most women entrepreneurs within the African context but most specifically Refugee women entrepreneurs who our organization work with. Since the advent of COVID-19, a number of refugee women have been adversely hit by the pandemic which has caused severe disruptions in supply chains, business environment and a trickle down effect on livelihoods. It is evident that, compared to their male counterparts, women entrepreneurs are structurally limited with regard to navigating the supply chain scene. As such, women are at the receiving end since most of them rely on such businesses as a source of revenue and livelihood to fend for their many dependents.
11.	#multipleincomesources
	People have come together to brainstorm other possible sources of income especially after covid hit
12.	#Familyfirst
	A family contributed cash and helped someone I know start a business
13.	#VirtualRealityFlyingInTheDark
	While we have been gripped with lockdowns in the various African countries, I have seen how entrepreneurs have continued to hustle in order to stave off disaster, with some innovatively pivoting their business models and/or products and services in order to be responsive to the shifting market conditions. At the same time I have been astounded by how many ecosystem builders have been looking to go about their business as if it's business as usual. Not agile, flexible or even ready to digitize when the lockdowns demanded that of them. I have been left with a deep sense of ambivalence about their usefulness and value to entrepreneurs to whom they owe their very existence.
14.	#thetechpreneur

	positive experience in the ideas brought to life
15.	#tableideas
	I miss sharing a table and discussing on business ideas
16.	# Farming and family times
	Spending my time at home with family and especially a newborn. Also more into farming Helps keep me motivated
17.	#hustler
	Entrepreneurship is a beautiful journey. Having gone in and out and went back to employment cause i felt i needed more stability . it is a fulfilling thing though also demanding at the samtime. I learnt you need to accept both the good and the bad coming from it.
18.	#newbeginnings
	Im excited to start my own business
19.	# Together we can grow
	Entrepreneurship is about helping each other by sharing ideas, and being innovative. Planning and engaging with other people has helped a lot of entrepreneurs to grow and sustain their business.I have been in a group of entrepreneurs who helped me to know how to manage my business, how to solve problems, and also how to move my business to the next level. It's very helpful when we all brainstorm and agree on certain things that will all helps us. But the bad part is that there will be some who will discouraged you but the most important thing is to focus on the goal. Entrepreneurship is about learning from each other, supporting, motivating and engaging with each other.
20.	#life changer
	I once wanted to do something,build something of my own mybe or rather make a meaning to my life. I still do actually, but I discovered a way to do that is through entrepreneurship. Not just for me but for everyone
21.	#Crafting
	Currently ideating and business strategizing
22.	# Training workshop
	A group work at a training workshop. Training empower thevproplr. Working in teams
23.	#buildingyoungentrepreneurs
	I think the image shows someone who is trying to pitch an idea to investors.Ever since I entered into the entrepreneurship space I have been able to pitch my idea to various investors with the purpose of trying to get funding that will help me in growing my business. Before pitching,one does a lot of practise to ensure that he/she understands the business in and out so as to be able to answer any questions asked well or to ensure that he/she has a very captivating pitch.After the pitch,

	when the investors try to enquire more about the business,here is where you realise that there are a lot of things that are missing in either the business plan or there's a lot of things that have to be factored in. Speaking from an upcoming entrepreneurs point of view. For me,I think this is a positive thing as it acts as an eye opener, and on the other side,a good pitch,can lead to great opportunities.
24.	#NewWayOfThinking
	COVID-19 has indeed fetched the future. It has made me realize that although the world is changing rapidly, a few constants remain. One among them - people will always need food hence urban agriculture is highly important especially with regional lock-downs. In response, we are now intensifying our production of herbs and green vegetables. Beyond that, we must dream new dreams. Have a new way of thinking, planning and doing things. We must ask - what does the future look like and how can we better prepare now for the future?
25.	#teamwork
	This reminds me of student group work promoted in an entrepreneurship education program I am researching.
26.	#struggling
	it is something difficult to start business without any capital but it is possible for the first time it was difficult but now it's little difficult but my experience is positive because i don't think about negative that's who am i
27.	#quaranwine
	I am optimistic about my current situation. I'm very lucky to be in a position where lockdown has exposed me to opportunities in wine, mostly because the shift to online has cut the cost of hosting events and there's been a surge in demand for wine content. I do not think I would have the opportunities I do now if the world wasn't in a situation that demanded us to change how we interact and connect with each other.
28.	#womenintech
	A young woman named X that participated in an entrepreneurship training program that I ran has been able to access capital and scale tech-enabled business to a significant degree, seeing an exponential growth in revenue and creating jobs.
29.	#African mother life
	this picture show me how the African mother face with many problem of giving a birth of unwanted children! i realise that i can create a platform that will help them to upgrade them self.
30.	#African Women Perspectives
	Only men sitting around the table, this image translates the situation in the financial sector, support systems for women entrepreneurs in SSA. As an accelerator program manager, we need to customize contents and materials to the realities of

	young women in African culture, not from a western cultural perspective. Culture impacts your legal, social and societal rights. Young married women with children were not able to participate fully to our program because of their mother and spouse obligations.
31.	# Transformation
	This was the experience during our Mandela Washington Fellowship. I learned a lot and was transformed
32.	#EvolveOrDie
	In this photo, I am reminded of working together in a team to get creative about how to solve our problems! I like the iterative process of human centered design and what I see in this photo is a diversity of people -- gender, religion -- that are bringing new perspectives to solve a challenge. In my company, we have also faced the challenge of needing to redesign our offering as Covid has made it unsafe to meet people in person and we have had to change both our product and processes in Rwanda. So far, we're finding success, and I look forward to when we can all be as close as in this photo again!

Individual stories for Triad 4.2.8: (Financial) Support – Local private sector

1.	# Business in Rwanda
	Something that makes me feel optimistic about entrepreneurship is the way people are ready to support local businesses, in my experience i've been selling different things for the past 2months and i was impressed on how my friends and family were excited and ready to support my business
2.	# Team work
	I believe in team work and that if several minds come together there is a higher probability of achieving a set goal. In my field as a consultant and an entrepreneur, i believe in team work in that we are able to expound on our ideas and feilds of expertise by coming together
3.	# Multipleincomesources
	People have come together to brainstorm other possible sources of income especially after covid hit
4.	# Tableideas
	I miss sharing a table and discusing on business ideas
5.	# Newbeginnings
	Im excited to start my own business
6.	# Working together
	Working together as a team to find better ideas and solutions.
7.	# BuildKenyaforKenyabyKenyans

	A friend of mine decided to start a small online thrift store. People were reluctant to buy as buying clothing online can be a hustle.. She invested in capital and the business didn't pick. There was no support.
8.	# Life changer
	I once wanted to do something,build something of my own mybe or rather make a meaning to my life. I still do actually, but I discovered a way to do that is through entrepreneurship. Not just for me but for everyone
9.	# Training workshop
	A group work at a training workshop. Training empower thevproplr. Working in teams
10.	# Buildingyoungentrepreneurs
	I think the image shows someone who is trying to pitch an idea to investors.Ever since I entered into the entrepreneurship space I have been able to pitch my idea to various investors with the purpose of trying to get funding that will help me in growing my business. Before pitching,one does a lot of practise to ensure that he/she understands the business in and out so as to be able to answer any questions asked well or to ensure that he/she has a very captivating pitch.After the pitch, when the investors try to enquire more about the business,here is where you realise that there are a lot of things that are missing in either the business plan or there's a lot of things that have to be factored in. Speaking from an upcoming enterepreneurs point of view. For me,I think this is a positive thing as it acts as an eye opener, and on the other side,a good pitch,can lead to great opportunities.
11.	# Supportvijana
	A friend of mine once decided to start a small tech firm. The idea was great but had no funding. He spent all his savings trying to build the business but it was not enough and could not secure additional funding. He ended up closing the business and seeking formal employment
12.	# ShapeReality
	I wanna make so much money to influence and shape my current reality.
13.	# The journey
	Risk taking is good but can be worse
14.	# Mothersareentrepreneurs
	Mother's are entrepreneurs and they do not know about it. They call it caring/Providering for their children.
15.	# Epicfail
	Entrepreneurship has been difficult....I tried out something in cooperation with others...it didn't go so well

Individual stories for Triad.4.2.8: (Financial) Support – International development organisations

1.	# Recalibrate
	This season has been a balance of both positive gains and a few setbacks. We have come to appreciate the role technology plays in enhancing the success of businesses and enhancing communication.
2.	# Research entrepreneur
	Innovating through my work.
3.	# TogetherWithWomenEntrepreneurs
	The picture paints a mixed feeling of most women entrepreneurs within the African context but most specifically Refugee women entrepreneurs who our organization work with. Since the advent of COVID-19, a number of refugee women have been adversely hit by the pandemic which has caused severe disruptions in supply chains, business environment and a trickle down effect on livelihoods. It is evident that, compared to their male counterparts, women entrepreneurs are structurally limited with regard to navigating the supply chain scene. As such, women are at the receiving end since most of them rely on such businesses as a source of revenue and livelihood to fend for their many dependents.
4.	# WE WILL PICK UP STRONG THAN EVER
	I SPEAK ON BEHALF OF MYSELF TO BE HONEST I FEEL LIKE THINGS ARE GOING TO BE DIFFICULT FOR SOME PEOPLE LIKE US WHO WAS SUPPOSED TO RELY ON HEAVY INVESTMENT THAT WERE ABOUT TO FLOW ON THIS AFRICA CONTINENT. THIS PANDEMIC HAS JUST SPOILED OR PAUSED THIS OPPORTUNITIES ITS GOING TO BE HARD FOR OUR PROJECTS LIKE MINE BUT I HAVE HOPE AS SOON LIFE COMES BACK TO NORMAL THINGS WILL BE OK BUT SOME OF US WE ARE GOING TO WAIST TIME TRACK ON OUR PROJECT WE HAD BEFORE THIS COVID19 CRISIS. WE HAD GOOD UNDERSTANDING BETWEEN EACH OTHER BEFORE COVID19 I MEANT YOUTH OF AFRICA WERE READY TO WORK TOGETHER
5.	# Hustler
	Entrepreneurship is a beautiful journey. Having gone in and out and went back to employment cause i felt i needed more stability . it is a fulfilling thing though also demanding at the samtime. I learnt you need to accept both the good and the bad coming from it.
6.	# Entrepresseure
	Well, all I can say about my current situation is that I have been pushed to

	think creatively to come up with my own start up...I can indeed affirm that it has made me feel positively about entrepreneurship.
7.	# Familybusinesssupport
	Family: Family is everything to me. Through the good and bad times they have always been my source of strength. They love me for me and are not afraid to guide me in the right direction even when things are not looking up and more effort is required.
8.	# Crafting
	Currently ideating and business strategizing
9.	# Collaborativeinnovation
	I'm optimistic about collaborative innovation
10.	# TheBlackScientist
	I am part of a student-led organisation interested in furthering research in medicine. Over the past few months, we have been meeting virtually to brainstorm ideas and developed literature review papers on various medical topics for publishing during this time.
11.	# Positive entrepreneurship
	Entrepreneurship is inclusive. Unlike in some jobs that choose to give more opportunities to a particular gender, entrepreneurship covers both genders.
12.	# Teamwork
	This reminds me of student group work promoted in an entrepreneurship education program I am researching.
13.	# Struggling
	it is something difficult to start business without any capital but it is possible for the first time it was difficult but now it's little difficult but my experience is positive because i don't think about negative that's who am i
14.	# Shauku
	I saw these guys building various machinery. They way they explained to me how these machinery worked with so much passion made me wish to find something that could light up my eyes like that. Something that can make me both money and give a sense of fulfillment
15.	# Passive mindsets from judges
	I had an opportunity in high school to participate in an annual science project competition. I had worked so hard since the beginning of the year and with the Overall hype from my peers and support from my family i was encouraged to go for it!! However, the space as from that and many other environments are so limiting to the full potentials of what people have to offer. I was seen skills on artificial intelligence, agricultural entrepreneurship so advance for "highschool" level but judges and teachers

	with not as an expansive mind as we had expected. I also had an opportunity to engage in an entrepreneurial project from Allan and Gray in strathmore last year and i can say it just went way beyond what i had expected! Support is very critical for an entrepreneur with a large and captivating innovation.
16.	# African Women Perspectives
	Only men sitting around the table, this image translates the situation in the financial sector, support systems for women entrepreneurs in SSA. As an accelerator program manager, we need to customize contents and materials to the realities of young women in African culture, not from a western cultural perspective. Culture impacts your legal, social and societal rights. Young married women with children were not able to participate fully to our program because of their mother and spouse obligations.
17.	# PIVOT
	The photo selected depicts how with the current pandemic, as an entrepreneur and fellow team member we have had to rethink how we work collectively to withstand the challenges while anticipating the future.

Individual stories for Triad.4.2.8: (Financial) Support - Hybrid

1.	# Change
	I've seen friends of mine change their way of thinking in terms of entrepreneurship and shifted it in terms of their ability to incorporate the changes associated with COVID 19. It's not always about coming up with something brand new rather coming up with new things to improve services that already exist
2.	# Entrepreneurshipitches
	I find entrepreneurship a path taken by many who cant find a breakthrough in their initial path. While many take this as an alternative, some have however ventured I this out of passion. My interaction with women as a community facilitator had seen both interests interplay and the mindset is what brings out the difference. More women have confirmed self reliance and satisfaction through entrepreneurship amid challanges. This has given me hope that if the missing link in the jargon can be fixed the more African women can be more resilient, independent and have a reason for a sustainable future.
3.	# Realitiesofglobalchange
	The Realities of Global Change
4.	# Innovation
	A team recently came up with an idea of coming up with an e-

	commerce system that connects sellers and buyers, especially in the agriculture sector. However it was too costly to implement considering the capital and storage required, not forgetting the advert costs.
5.	# NATURE RESUSCITATE
	I have a experience in poverty where I don't want to see other people in poverty it is my aim to deliver and implement jobs in order to reduce the number of unemployment rate.
6.	# Nairobionlineacademy
	I've tried to disrupt the education sector and it's the first time an enterprise has worked for me.
7.	# LocalBusinessesMatter
	Teamwork. In an entrepreneurship business, having the right partner who balances and strengthens your weaknesses and vice versa has proved to be a game changer
8.	# Sticky Dreams
	Spent thee last few months in quarantine writing down ideas on businesses and programming algorithms on sticky notes all around my house. They range from startups ideas to ankara batman designs. I scribble them when on calls with my friends, with workmates , with business partners. Pre corona The image on this picture was a weekly sight, me and my partner sitted at a table scribbling down different ideas and plans . Crossing of previous ones, adding new ones. The image makes me feel happy and hopeful and enthusiasm. I see the possibilities lying there on the sticky notes
9.	# Common Mwananchi story
	I have been to a virtual game booth in a mall and the feeling was exciting..I think its a very noble idea and well though out.
10.	# Thetechpreneur
	positive experience in the ideas brought to life
11.	# How to choose a best business idea
	This is the experience of someone,this pic remember me the experience of one of my family member who attended the training on business and challenged by how to choice the good business idea and the trainers tell them to names more business idea and they will get the best characteristics of choosing the good idea after that he write may idea in different post-it. Finally he get how to choose the good idea from brainstorming idea.
12.	# Farming and family times
	Spending my time at home with family and especially a newborn. Also

	more into farming Helps keep me motivated
13.	# BusinessInToughTimes
	The opening of the economy by the president though with some restrictions still makes me optimistic about my entrepreneurship skills.
14.	# AfricaYouthTechLeaders
	I discuss and often interact with young tech entrepreneurs in Rwanda. I gained much optimism through the latest years (post 2010) witnessing how these young people are able to quickly adapt, own and shape new technological developments in their local contexts. The four digital entrepreneurs involved in my recent activity in Rwanda lead their start-up company in various fields such as AI, blockchain or IoT and learn from the multiple communities they belong to, beyond their country. Their solutions are often replicable and yield important potential for scalability in the Eastern Africa region, but also beyond on the continent.
15.	# Breaking the curve
	I have learnt from my current team of forex trading and in logistics of agricultural products. That entrepreneurship is all about creating a common goal with your team and partners and working smart and having good strategies towards reaching your goal and targets
16.	# Family
	Having a happy, loving and united family is one the best feeling in everyone's lifetime. Growing in these kind of family boosts one's confidence, self-esteem and intelligence, this is because your ideas, dreams and ambitions are taken into consideration. This can generate new ideas and promote innovation due the family support. This is a key factor to development of entrepreneurship. It is a privilege to have this model as family nowadays due to many divorces and children are not able to realize their dreams.
17.	# Annual planning meeting
	Planning sessions for the year.
18.	# Manufacture the world
	Manufacturing industry is where i feel has one of the least entrepreneurs
19.	# Edutech
	Our organization's goal is to introduce high school students to the field of computer science through teaching them how to code. This requires students to have access to technology such as computers and sometimes internet. The pandemic has shown that many students do not have

	devices with adequate capability for them to effectively learn from home.
20.	# StelCovid Action
	We initiated a Covid response unit called StelCovid Action in Stellenbosch. We educate the public on the virus, we hand out soap and do door to door screening with the Dept. of Health. I chose this photo since it represents the positive effects of assisting people through knowledge and sanitary products.
21.	# NewPhase
	The current situation has allowed and enabled my team and I to think deeply and strategize about the future of our business.
22.	# Family
	Family is more important than friends. Family is everything one needs.

Individual stories for Triad.4.2.9: Locally Educated

1.	# StayHome opportunity to job
	Today I am happy compared to the way I lived before, actually I am a university student and I didn't get enough time to think about what I can do or what I have to know so that it can be of important or profit to me that is why I am glad because the holidays given to schools caused by covid 19 I got enough time to go deep in my studies (software designing) and I saw that I can make job by my own after getting a request from student from other university asking me to make him a software project and we discuss the matter of how he can pay me. So I found it profitable and I took it as opportunity to create my own job so now I made a company which helps students to get designing aid and other services related to IT field online.
2.	# Team work
	I believe in team work and that if several minds come together there is a higher probability of achieving a set goal. In my field as a consultant and an entrepreneur, i believe in team work in that we are able to expound on our ideas and feilds of expertise by coming together.
3.	# TogetherWithWomenEntrepreneurs
	The picture paints a mixed feeling of most women entrepreneurs within the African context but most specifically Refugee women entrepreneurs who our organization work with. Since the advent of COVID-19, a number of refugee women have been adversely hit by the pandemic which has caused severe disruptions in supply chains, business environment and a trickle down effect on livelihoods. It is evident that, compared to their male counterparts, women entrepreneurs are structurally limited with regard to navigating the supply chain scene. As such, women are at the receiving end since most of them rely on such

	businesses as a source of revenue and livelihood to fend for their many dependents.
4.	# Multipleincomesources
	People have come together to brainstorm other possible sources of income especially after covid hit
5.	# How to choose a best business idea
	This is the experience of someone, this pic remember me the experience of one of my family member who attended the training on business and challenged by how to choose the good business idea and the trainers tell them to name more business ideas and they will get the best characteristics of choosing the good idea after that he wrote many ideas in different post-its. Finally he got how to choose the good idea from brainstorming ideas
6.	# Tableideas
	I miss sharing a table and discussing on business ideas
7.	# Newbeginnings
	I'm excited to start my own business
8.	# Working together
	Working together as a team to find better ideas and solutions.
9.	# Kazikwavijana
	Many young people are determined to complete their studies and secure employment but the frustrations within the employment field are many. The government promises jobs to many unemployed youths but nothing is ever done to help improve the situation.
10.	# Family
	Family is the backbone of entrepreneurship since this is where I get ideas from and also the support to start and be able to run a business.
11.	# Entrepresseure
	Well, all I can say about my current situation is that I have been pushed to think creatively to come up with my own start-up...I can indeed affirm that it has made me feel positively about entrepreneurship
12.	# BuildKenyaforKenyaByKenyans
	A friend of mine decided to start a small online thrift store. People were reluctant to buy as buying clothing online can be a hustle. She invested in capital and the business didn't pick. There was no support.
13.	#EntrepreneurshipMyPassion
	This picture reminds me of myself and my partner working on our start-up. We were researching and debating our competitors and why we are better than them. It further reminds me of another memory of myself and two of my friends sitting and brainstorming new business ideas to launch. I am optimistic

	about entrepreneurship and the change it can bring to the continent and the sustainable problem solving that comes with it.
14.	# Familybusinesssupport
	Family: Family is everything to me. Through the good and bad times they have always been my source of strength. They love me for me and are not afraid to guide me in the right direction even when things are not looking up and more effort is required.
15.	# Breaking the curve
	I have learnt from my current team of forex trading and in logistics of agricultural products. That entrepreneurship is all about creating a common goal with your team and partners and working smart and having good strategies towards reaching your goal and targets
16.	# Life changer
	I once wanted to do something, build something of my own maybe or rather make a meaning to my life. I still do actually, but I discovered a way to do that is through entrepreneurship. Not just for me but for everyone
17.	# Buildingyoungentrepreneurs
	I think the image shows someone who is trying to pitch an idea to investors. Ever since I entered into the entrepreneurship space I have been able to pitch my idea to various investors with the purpose of trying to get funding that will help me in growing my business. Before pitching, one does a lot of practise to ensure that he/she understands the business in and out so as to be able to answer any questions asked well or to ensure that he/she has a very captivating pitch. After the pitch, when the investors try to enquire more about the business, here is where you realise that there are a lot of things that are missing in either the business plan or there's a lot of things that have to be factored in. Speaking from an upcoming entrepreneurs point of view. For me, I think this is a positive thing as it acts as an eye opener, and on the other side, a good pitch, can lead to great opportunities.
18.	# Collaborativeinnovation
	I'm optimistic about collaborative innovation
19.	# Positive entrepreneurship
	Entrepreneurship is inclusive. Unlike in some jobs that choose to give more opportunities to a particular gender, entrepreneurship covers both genders.
20.	# Teamwork
	This reminds me of student group work promoted in an entrepreneurship education program I am researching.
21.	# YoungFarmer
	A friend started a business and challenged me to start the one thing av been

	procrastinating on which is farming. So i finally started poultry farming and the experience was good and I can't wait to continue in the business and diversify to other forms of agriculture like vegetable farming
22.	# ShapeReality
	I wanna make so much money to influence and shape my current reality.
23.	# Mothersareentrepreneurs
	Mother's are entrepreneurs and they do not know about it. They call it caring/Providing for their children.
24.	# Epicfail
	Entrepreneurship has been difficult....I tried out something in cooperation with others...it didn't go so well
25.	# Transformation
	This was the experience during our Mandela Washington Fellowship. I learned a lot and was transformed
26.	# EvolveOrDie
	In this photo, I am reminded of working together in a team to get creative about how to solve our problems! I like the iterative process of human centered design and what I see in this photo is a diversity of people -- gender, religion -- that are bringing new perspectives to solve a challenge. In my company, we have also faced the challenge of needing to redesign our offering as Covid has made it unsafe to meet people in person and we have had to change both our product and processes in Rwanda. So far, we're finding success, and I look forward to when we can all be as close as in this photo again!

Individual stories for Triad 4.2.9: Education – All three locations

1.	# Change
	I've seen friends of mine change their way of thinking in terms of entrepreneurship and shifted it in terms of their ability to incorporate the changes associated with COVID 19. It's not always about coming up with something brand new rather coming up with new things to improve services that already exist
2.	# Business in Rwanda
	Something that makes me feel optimistic about entrepreneurship is the way people are ready to support local businesses, in my experience i've been selling different things for the past 2months and i was impressed on how my friends and family were excited and ready to support my business .
3.	# Crossing A River Full of Crocodiles
	I feel optimistic despite the dangers faced on this entrepreneurial journey as I cross the first of many rivers in my quest to do well by doing good.

4.	# Entrepreneurnothing
	Hello,as a developer, I have learned that networking is as important as technical skills for all types of entrepreneurs. A great idea by itself won't do, you need to know how to present it and how to introduce yourself to potential investors.
5.	# Product design
	It's an experience from school, which was about product designing. It was a great experience since I now understand that all products have to be designed according to clients need, not the designer wish.
6.	# Humanadapt2020
	This image represents family. In the context of the COVID-19 pandemic, families had to adjust to a new normal. Businesses that provided solutions during/after the lockdown have thrived, especially in the form of digital solutions that provided various services to families (online ordering, online payment systems, etc). This made me feel optimistic about people's ability to quickly adapt to life challenges despite their personal circumstances.
7.	# Entrepreneurshipitches
	I find entrepreneurship a path taken by many who cant find a breakthrough in their initial path. While many take this as an alternative, some have however ventured I this out of passion. My interaction with women as a community facilitator had seen both interests interplay and the mindset is what brings out the difference. More women have confirmed self reliance and satisfaction through entrepreneurship amid challanges. This has given me hope that if the missing link in the jargon can be fixed the more African women can be more resilient, independent and have a reason for a sustainable future.
8.	# Realitiesofglobalchange
	The Realities of Global Change
9.	# Wilted dreams
	I feel that most inventors and their inventions go down the drain due to bad leadership in the country. Funds meant to fund these folks create jobs for hundred others is squandered.
10.	# Innovation
	A team recently came up with an idea of coming up with an e-commerce system that connects sellers and buyers, especially in the agriculture sector. However it was too costly to implement considering the capital and storage required, not forgetting the advert costs.
11.	# Nairobionlineacademy
	I've tried to disrupt the education sector and it's the first time an enterprise has worked for me.

12.	# LocalBusinessesMatter
	Teamwork. In an entrepreneurship business, having the right partner who balances and strengthens your weaknesses and vice versa has proved to be a game changer
13.	# Covidbars
	In the last few months, work has been difficult. As one in the bar sector, the government directives to shut down all bars completely is a huge blow. It's up to us to look for other sources of income or stay hungry.
14.	# Sticky Dreams
	Spent the last few months in quarantine writing down ideas on businesses and programming algorithms on sticky notes all around my house. They range from startups ideas to Ankara Batman designs. I scribble them when on calls with my friends, with workmates, with business partners. Pre-COVID-19 the image on this picture was a weekly sight, me and my partner sitting at a table scribbling down different ideas and plans. Crossing out previous ones, adding new ones. The image makes me feel happy and hopeful and enthusiastic. I see the possibilities lying there on the sticky notes
15.	# Common Mwananchi story
	I have been to a virtual game booth in a mall and the feeling was exciting..I think it's a very noble idea and well thought out.
16.	# VirtualRealityFlyingInTheDark
	While we have been gripped with lockdowns in the various African countries, I have seen how entrepreneurs have continued to hustle in order to stave off disaster, with some innovatively pivoting their business models and/or products and services in order to be responsive to the shifting market conditions. At the same time I have been astounded by how many ecosystem builders have been looking to go about their business as if it's business as usual. Not agile, flexible or even ready to digitize when the lockdowns demanded that of them. I have been left with a deep sense of ambivalence about their usefulness and value to entrepreneurs to whom they owe their very existence.
17.	# My hobbies
	I like experimenting
18.	# Farming and family times
	Spending my time at home with family and especially a newborn. Also more into farming. Helps keep me motivated
19.	# BusinessInToughTimes
	The opening of the economy by the president though with some restrictions still makes me optimistic about my entrepreneurship skills.

20.	# Hustler
	Entrepreneurship is a beautiful journey. Having gone in and out and went back to employment cause i felt i needed more stability . it is a fulfilling thing though also demanding at the samtime. I learnt you need to accept both the good and the bad coming from it.
21.	# Teamworkworks
	My experience in the last few months, is that i realised that teamwork/partnership is better when it comes to entrepreneurship, before i wanted to do things all alone and it was very hard and nearly impossible because it was too much to handle for one individual to go all the way from the ideas to developing it, implement it and make it work.i needed a lot of skills and knowledge that i did not have, which made me today to put up a partnership(team) and outsource when it is needed so that i can make the idea or dream come to reality.
22.	# TheAfricaWeWant
	Africans winning robotics competitions is not new. But how do we turn prototype to assembly lines? The need for public private partnerships to solve socioeconomic issues in Africa is rising. I am optimistic of the private response to the market need but I am pessimistic of the public sectors response in Africa.
23.	# AfricaYouthTechLeaders
	I discuss and often interact with young tech entrepreneurs in Rwanda. I gained much optimism through the latest years (post 2010) witnessing how these young people are able to quickly adapt, own and shape new technological developments in their local contexts. The four digital entrepreneurs involved in my recent activity in Rwanda lead their start-up company in various fields such as AI, blockchain or IoT and learn form the multiple communities they belong to, beyond their country. Their solutions are often replicable and yield important potential for scalability in the Eastern Africa region, but also beyond on the continent.
24.	# Entrepreneurship in Africa
	teaching and learning with hands on material is great.
25.	# Family
	Having a happy, loving and united family is one the best feeling in everyone's lifetime. Growing in these kind of family boosts one's confidence, self-esteem and intelligence, this is because your ideas, dreams and ambitions are taken into consideration. This can generate new ideas and promote innovation due the family support. This is a key factor to development of entrepreneurship.It is a privilege to have this model as family nowadays due to many divorces and children are not able to realize their dreams.

26.	# Opportunity
	recently my friend has attended drone workshop and want to join airforce military academy and he passed well all Technical tests and fail because of teeth not good and became like is last opportunity missed but after he thought how could make hardware business now is okay.
27.	# Crafting
	Currently ideating and business strategizing
28.	# Training workshop
	A group work at a training workshop. Training empower thevproplr. Working in teams
29.	# TheBlackScientist
	I am part of a student-led organisation interested in furthering research in medicine. Over the past few months, we have been meeting virtually to brainstorm ideas and developed literature review papers on various medical topics for publishing during this time.
30.	# Edutech
	Our organization's goal is to introduce high school students to the field of computer science through teaching them how to code. This requires students to have access to technology such as computers and sometimes internet. The pandemic has shown that many students do not have devices with adequate capability for them to effectively learn from home.
31.	# YoungFarmer
	A friend started a business and challenged me to start the one thing av been procrastinating on which is farming. So i finally started poultry farming and the experience was good and I can't wait to continue in the business and diversify to other forms of agriculture like vegetable farming
32.	# StelCovid Action
	We initiated a Covid response unit called StelCovid Action in Stellenbosch. We educate the public on the virus, we hand out soap and do door to door screening with the Dept. of Health. I chose this photo since it represents the positive effects of assisting people through knowledge and sanitary products.
33.	# NewPhase
	The current situation has allowed and enabled my team and I to think deeply and strategize about the future of our business.
34.	# EntrepreneurshipIsAnIdentity
	I got on the drawing board for a couple of new ventures in areas I have not tried my hands in before. I was able to get others to join me on this new journey and I realized that entrepreneurship has become a new identity and all entrepreneurs are now from the same village.

35.	# African Women Perspectives
	Only men sitting around the table, this image translates the situation in the financial sector, support systems for women entrepreneurs in SSA. As an accelerator program manager, we need to customize contents and materials to the realities of young women in African culture, not from a western cultural perspective. Culture impacts your legal, social and societal rights. Young married women with children were not able to participate fully to our program because of their mother and spouse obligations.
36.	# InnovationIsKey
	Innovation in technology is slowly becoming the heart of the entrepreneurship. I was very impressed with how a company in Kenya is using technology to improve traffic flow.
37.	# Family
	Family is more important than friends. Family is everything one needs.
38.	# Transformation
	This was the experience during our Mandela Washington Fellowship. I learned a lot and was transformed
39.	# EvolveOrDie
	In this photo, I am reminded of working together in a team to get creative about how to solve our problems! I like the iterative process of human centered design and what I see in this photo is a diversity of people -- gender, religion -- that are bringing new perspectives to solve a challenge. In my company, we have also faced the challenge of needing to redesign our offering as Covid has made it unsafe to meet people in person and we have had to change both our product and processes in Rwanda. So far, we're finding success, and I look forward to when we can all be as close as in this photo again!

Individual stories for Triad 4.2.9: Education – Internationally educated

1.	# Recalibrate
	This season has been a balance of both positive gains and a few setbacks. We have come to appreciate the role technology plays in enhancing the success of businesses and enhancing communication.
2.	# Research entrepreneur
	Innovating through my work.
3.	# WE WILL PICK UP STRONG THAN EVER
	I SPEAK ON BEHALF OF MYSELF TO BE HONEST I FEEL LIKE THINGS ARE GOING TO BE DIFFICULT FOR SOME PEOPLE LIKE US WHO WAS SUPPOSED TO RELY ON HEAVY

	INVESTMENT THAT WHERE ABOUT TO FLOW ON THIS AFRICA CONTINENT. THIS PANDEMIC HAS JUST SPOILED OR PAUSED THIS OPPORTUNITIES ITS GOING TO BE HARD FOR OUR PROJECTS LIKE MINE BUT I HAVE HOPE AS SOON LIFE COMES BACK TO NORMAL THINGS WILL BE OK BUT SOME OF US WE ARE GOING TO WAIST TIME TRACK ON OUR PROJECT WE HAD BEFORE THIS COVID19 CRISIS. WE HAD GOOD UNDERSTANDING BETWEEN EACH OTHER BEFORE COVID19 I MEANT YOUTH OF AFRICA WERE READY TO WORK TOGETHER
4.	# Thetechpreneur
	positive experience in the ideas brought to life
5.	# Innovationwithoutbias
	I loved the image of mixed gender builders. It highlighted opportunity to innovate without bias.
6.	# Annual planning meeting
	Planning sessions for the year.
7.	# Supportvijana
	A friend of mine once decided to start a small tech firm. The idea was great but had no funding. He spent all his savings trying to build the business but it was not enough and could not secure additional funding. He ended up closing the business and seeking formal employment
8.	# Struggling
	it is something difficult to start business without any capital but it is possible for the first time it was difficult but now it's little difficult but my experience is positive because i don't think about negative that's who am i
9.	# The journey
	Risk taking is good but can be worse
10.	# EntityCentered
	Optimistic because there's a rush of activity around advancing entrepreneurship (especially against the backdrop of the pandemic, entrepreneurs continue to be considered by banks, governments, foundations), pessimistic because this work to support entrepreneurship seems organisation centered, and support for individual citizens (whether they are themselves entrepreneurs or not) is secondary.
11.	# Womenintech

	A young woman named X that participated in an entrepreneurship training program that I ran has been able to access capital and scale tech-enabled business to a significant degree, seeing an exponential growth in revenue and creating jobs.
12.	# Passive mindsets from judges
	I had an opportunity in high school to participate in an annual science project competition. I had worked so hard since the beginning of the year and with the Overall hype from my peers and support from my family i was encouraged to go for it!! However, the space as from that and many other environments are so limiting to the full potentials of what people have to offer. I was seen skills on artificial intelligence, agricultural entrepreneurship so advance for “highschool” level but judges and teachers with not as an expansive mind as we had expected. I also had an opportunity to engage in an entrepreneurial project from Allan and Gray in strathmore last year and i can say it just went way beyond what i had expected! Support is very critical for an entrepreneur with a large and captivating innovation.
13.	# African mother life
	this picture show me how the African mother face with many problem of giving a birth of unwanted children! i realise that i can create a platform that will help them to upgrade them self.

Individual stories for Triad 4.2.10: Success – Past business experience

1.	# StayHome opportunity to job
	Today I am happy compared to the way I lived before, actually I am a university student and I didn't get enough time to think about what I can do or what I have to know so that it can be of important or profit to me that is why I am glad because the holidays given to schools caused by covid 19 I got enough time to go deep in my studies (software designing) and I saw that I can make job by my own after getting a request from student from other university asking me to make him a software project and we discuss the matter of how he can pay me. So I found it profitable and I took it as opportunity to create my own job so now I made a company which helps students to get designing aid and other services related to IT field online.
2.	# Business in Rwanda
	Something that makes me feel optimistic about entrepreneurship is the way people are ready to support local businesses, in my experience i've been selling different things for the past 2months and i was impressed on how my friends and family were excited and ready to support my business .
3.	# Team work

	I believe in team work and that if several minds come together there is a higher probability of achieving a set goal. In my field as a consultant and an entrepreneur, i believe in team work in that we are able to expound on our ideas and feilds of expertise by coming together.
4.	# Crossing A River Full of Crocodiles
	I feel optimistic despite the dangers faced on this entrepreneurial journey as I cross the first of many rivers in my quest to do well by doing good.
5.	# Entrepreneurnothing
	Hello,as a developer, I have learned that networking is as important as technical skills for all types of entrepreneurs.A great idea by itself won't do, you need to know how to present it and how to introduce yourself to potential investors.
6.	# Recalibrate
	This season has been a balance of both positive gains and a few setbacks. We have come to appreciate the role technology plays in enhancing the success of businesses and enhancing communication.
7.	# Wilted dreams
	I feel that most inventors and their inventions go down the drain due to bad leadership in the country. Funds meant to fund these folks create jobs for hundred others is squandered.
8.	# Innovation
	A team recently came up with an idea of coming up with an e-commerce system that connects sellers and buyers, especially in the agriculture sector. However it was too costly to implement considering the capital and storage required, not forgetting the advert costs.
9.	# TogetherWithWomenEntrepreneurs
	The picture paints a mixed feeling of most women entrepreneurs within the African context but most specifically Refugee women entrepreneurs who our organization work with. Since the advent of COVID-19, a number of refugee women have been adversely hit by the pandemic which has caused severe disruptions in supply chains, business environment and a trickle down effect on livelihoods. It is evident that, compared to their male counterparts, women entrepreneurs are structurally limited with regard to navigating the supply chain scene. As such, women are at the receiving end since most of them rely on such businesses as a source of revenue and livelihood to fend for their many dependents.
10.	# WE WILL PICK UP STRONG THAN EVER
	I SPEAK ON BEHALF OF MYSELF TO BE HONEST I FEEL LIKE THINGS ARE GOING TO BE DIFFICULT FOR SOME PEOPLE LIKE US

	WHO WAS SUPPOSED TO RELY ON HEAVY INVESTMENT THAT WHERE ABOUT TO FLOW ON THIS AFRICA CONTINENT. THIS PANDEMIC HAS JUST SPOILED OR PAUSED THIS OPPORTUNITIES ITS GOING TO BE HARD FOR OUR PROJECTS LIKE MINE BUT I HAVE HOPE AS SOON LIFE COMES BACK TO NORMAL THINGS WILL BE OK BUT SOME OF US WE ARE GOING TO WAIST TIME TRACK ON OUR PROJECT WE HAD BEFORE THIS COVID19 CRISIS. WE HAD GOOD UNDERSTANDING BETWEEN EACH OTHER BEFORE COVID19 I MEANT YOUTH OF AFRICA WERE READY TO WORK TOGETHER
11.	# Common Mwananchi story
	I have been to a virtual game booth in a mall and the feeling was exciting..I think its a very noble idea and well though out.
12.	# Thetechpreneur
	positive experience in the ideas brought to life
13.	# Newbeginnings
	Im excited to start my own business
14.	# Together we can grow
	Entrepreneurship is about helping each other by sharing ideas, and being innovative. Planning and engaging with other people has helped a lot of entrepreneurs to grow and sustain their business.I have been in a group of entrepreneurs who helped me to know how to manage my business, how to solve problems, and also how to move my business to the next level. It's very helpful when we all brainstorm and agree on certain things that will all helps us. But the bad part is that there will be some who will discouraged you but the most important thing is to focus on the goal. Entrepreneurship is about learning from each other, supporting, motivating and engaging with each other.
15.	# Kazikwavijana
	Many young people are determined to complete their studies and secure employment but the frustrations within the employment field are many.The government promises jobs to many unemployed youths but nothing is ever done to help improve the situation.
16.	# Family
	Family is the backbone of entrepreneurship since this is where i get ideas from and also the support to start and be able to run a business.
17.	# Entrepresseure
	Well, all I can say about my current situation is that I have been pushed to think creatively to come up with my own start up...I can indeed affirm that it

	has made me feel positively about entrepreneurship.
18.	# BuildKenyaforKenyaByKenyans
	A friend of mine decided to start a small online thrift store. People were reluctant to buy as buying clothing online can be a hustle. She invested in capital and the business didn't pick. There was no support.
19.	# HCD
	This picture makes me realise that we cannot take for granted the simple meaning of convening to support a startup or run a project that involves human interaction and field research.
20.	# Familybusinesssupport
	Family: Family is everything to me. Through the good and bad times they have always been my source of strength. They love me for me and are not afraid to guide me in the right direction even when things are not looking up and more effort is required.
21.	# TheFutureIsYours
	In Rwanda, we have a Fabrication Laboratory called FabLab that supports hardware innovators. There are some good projects coming from them and it's making me optimistic about entrepreneurship in Rwanda
22.	# Breaking the curve
	I have learnt from my current team of forex trading and in logistics of agricultural products. That entrepreneurship is all about creating a common goal with your team and partners and working smart and having good strategies towards reaching your goal and targets
23.	# Family
	Having a happy, loving and united family is one the best feeling in everyone's lifetime. Growing in these kind of family boosts one's confidence, self-esteem and intelligence, this is because your ideas, dreams and ambitions are taken into consideration. This can generate new ideas and promote innovation due the family support. This is a key factor to development of entrepreneurship. It is a privilege to have this model as family nowadays due to many divorces and children are not able to realize their dreams.
24.	# Annual planning meeting
	Planning sessions for the year.
25.	# Opportunity
	recently my friend has attended drone workshop and want to join airforce military academy and he passed well all Technical tests and fail because of teeth not good and became like is last opportunity missed but after he thought how could make hardware business now is okay.

26.	# Crafting
	Currently ideating and business strategizing
27.	# Training workshop
	A group work at a training workshop. Training empower theproplr. Working in teams
28.	# Buildingyoungentrepreneurs
	I think the image shows someone who is trying to pitch an idea to investors.Ever since I entered into the entrepreneurship space I have been able to pitch my idea to various investors with the purpose of trying to get funding that will help me in growing my business. Before pitching,one does a lot of practise to ensure that he/she understands the business in and out so as to be able to answer any questions asked well or to ensure that he/she has a very captivating pitch.After the pitch, when the investors try to enquire more about the business,here is where you realise that there are a lot of things that are missing in either the business plan or there's a lot of things that have to be factored in. Speaking from an upcoming enterepreneurs point of view. For me,I think this is a positive thing as it acts as an eye opener, and on the other side,a good pitch,can lead to great opportunities.
29.	# Collaborativeinnovation
	I'm optimistic about collaborative innovation
30.	# Businessidea
	My experience in coming up with a business of my own was hectic as it led me to sitting through many nights brainstorming and it has not fully picked up yet a whole year after
31.	# YoungFarmer
	A friend started a business and challenged me to start the one thing av been procrastinating on which is farming. So i finally started poultry farming and the experience was good and I can't wait to continue in the business and diversify to other forms of agriculture like vegetable farming
32.	# Supportvijana
	A friend of mine once decided to start a small tech firm. The idea was great but had no funding. He spent all his savings trying to build the business but it was not enough and could not secure additional funding. He ended up closing the business and seeking formal employment
33.	# Struggling
	it is something difficult to start business without any capital but it is possible for the first time it was difficult but now it's little difficult but my experience is positive because i don't think about negative that's who am i
34.	# ShapeReality

	I wanna make so much money to influence and shape my current reality.
35.	# The journey
	Risk taking is good but can be worse
36.	# EntityCentered
	Optimistic because there's a rush of activity around advancing entrepreneurship (especially against the backdrop of the pandemic, entrepreneurs continue to be considered by banks, governments, foundations), pessimistic because this work to support entrepreneurship seems organisation centered, and support for individual citizens (whether they are themselves entrepreneurs or not) is secondary.
37.	# Quaranwine
	am optimistic about my current situation. I'm very lucky to be in a position where lockdown has exposed me to opportunities in wine, mostly because the shift to online has cut the cost of hosting events and there's been a surge in demand for wine content. I do not think I would have the opportunities I do now if the world wasn't in a situation that demanded us to change how we interact and connect with each other.
38.	# Womenintech
	A young woman named X that participated in an entrepreneurship training program that I ran has been able to access capital and scale tech-enabled business to a significant degree, seeing an exponential growth in revenue and creating jobs.
39.	# NewPhase
	The current situation has allowed and enabled my team and I to think deeply and strategize about the future of our business.
40.	http://healtheducat.rw
	There is a need to learn and learn, virtual reality is so helpful and need to be strengthened to the point that we can learn with no interruptions, like here in Rwanda and many more countries... schools have closed, there is practically no need to learn and keep going we need it ..
41.	# Mothersareentrepreneurs
	Mother's are entrepreneurs and they do not know about it. They call it caring/Providing for their children.
42.	# Passive mindsets from judges
	I had an opportunity in high school to participate in an annual science project competition. I had worked so hard since the beginning of the year and with the Overall hype from my peers and support from my family i was encouraged to go for it!! However, the space as from that and many other environments are so limiting to the full potentials of what people have to

	offer. I was seen skills on artificial intelligence, agricultural entrepreneurship so advance for “highschool” level but judges and teachers with not as an expansive mind as we had expected. I also had an opportunity to engage in an entrepreneurial project from Allan and Gray in strathmore last year and i can say it just went way beyond what i had expected! Support is very critical for an entrepreneur with a large and captivating innovation.
43.	# Learnfromother
	learn from other
44.	# Epicfail
	Entrepreneurship has been difficult....I tried out something in cooperation with others...it didn't go so well
45.	# African Women Perspectives
	Only men sitting around the table, this image translates the situation in the financial sector, support systems for women entrepreneurs in SSA. As an accelerator program manager, we need to customize contents and materials to the realities of young women in African culture, not from a western cultural perspective. Culture impacts your legal, social and societal rights. Young married women with children were not able to participate fully to our program because of their mother and spouse obligations.
46.	# MyMaskMySafety
	Emergency of COVID-19 pandemic promoted the local manufacturing of masks especially for lower income consumption. This improves the tailoring entrepreneurial subsector.
47.	# Family
	Family is more important than friends. Family is everything one needs.
48.	# Transformation
	This was the experience during our Mandela Washington Fellowship. I learned a lot and was transformed
49.	# EvolveOrDie
	In this photo, I am reminded of working together in a team to get creative about how to solve our problems! I like the iterative process of human centered design and what I see in this photo is a diversity of people -- gender, religion -- that are bringing new perspectives to solve a challenge. In my company, we have also faced the challenge of needing to redesign our offering as Covid has made it unsafe to meet people in person and we have had to change both our product and processes in Rwanda. So far, we're finding success, and I look forward to when we can all be as close as in this photo again!
50.	# Lovewins

	Love lives in different ways, forms and experiences. It goes deeper than what we envision or assume. It is raw.
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Individual stories for Triad 4.10: Success –First-time entrepreneurs with some past business experience

1.	# Farming and family times
	Spending my time at home with family and especially a newborn. Also more into farming Helps keep me motivated
2.	# Hustler
	Entrepreneurship is a beautiful journey. Having gone in and out and went back to employment cause i felt i needed more stability . it is a fulfilling thing though also demanding at the samtime. I learnt you need to accept both the good and the bad coming from it.
3.	# Teamworkworks
	My experience in the last few months, is that i realised that teamwork/partnership is better when it comes to entrepreneurship, before i wanted to do things all alone and it was very hard and nearly impossible because it was too much to handle for one individual to go all the way from the ideas to developing it, implement it and make it work.i needed a lot of skills and knowledge that i did not have, which made me today to put up a partnership(team) and outsource when it is needed so that i can make the idea or dream come to reality.
4.	# EntrepreneurshipMyPassion
	This picture reminds me of myself and my partner working on our start up. We were researching and debating our competitors and why we are better than them. It further reminds me of a another memory of myself and two of my friends sitting and brainstorming new business ideas to launch. I am optimistic about entrepreneurship and the change it can bring to the continent and the sustainable problem solving that comes with it.
5.	# AfricaYouthTechLeaders
	I discuss and often interact with young tech entrepreneurs in Rwanda. I gained much optimism through the latest years (post 2010) witnessing how these young people are able to quickly adapt, own and shape new technological developments in their local contexts. The four digital entrepreneurs involved in my recent activity in Rwanda lead their start-up company in various fields such as AI, blockchain or IoT and learn from the multiple communities they belong to, beyond their country. Their solutions are often replicable and yield important potential for scalability

	in the Eastern Africa region, but also beyond on the continent.
6.	# Entrepreneurship in Africa
	teaching and learning with hands on material is great.
7.	# NewWayOfThinking
	COVID-19 has indeed fetched the future. It has made me realize that although the world is changing rapidly, a few constants remain. One among them - people will always need food hence urban agriculture is highly important especially with regional lock-downs. In response, we are now intensifying our production of herbs and green vegetables. Beyond that, we must dream new dreams. Have a new way of thinking, planning and doing things. We must ask - what does the future look like and how can we better prepare now for the future?
8.	# TheBlackScientist
	I am part of a student-led organisation interested in furthering research in medicine. Over the past few months, we have been meeting virtually to brainstorm ideas and developed literature review papers on various medical topics for publishing during this time.
9.	# Teamwork
	This reminds me of student group work promoted in an entrepreneurship education program I am researching.
10.	# Representation in Ecosystems
	Entrepreneurs and members of the community who have an interest in entrepreneurship are coming together to discuss what they need and how to create a better ecosystem. I selected this photo because it is mostly men at the table; representation is being addressed across Africa because support organisations and business owners are not from local communities or women. Profits are not reinvested in communities and decisions that affect entire communities are being made by men. The discussions about representation include recommendations for change and accountability measures from the community which could be a positive change with proper implementation. The path to entrepreneurship becomes easier with more people sharing their journey, owners being permanent members of the community, and donors communicating with local support organizations to address local issues while accomplishing their mission.
11.	# StelCovid Action
	We initiated a Covid response unit called StelCovid Action in Stellenbosch. We educate the public on the virus, we hand out soap and do door to door screening with the Dept. of Health. I chose this photo since it represents the positive effects of assisting people through

	knowledge and sanitary products.
12.	# To young people who are waiting for being hired
	I'm Faustin TUYUBAHE, I'm graduate from Iprc(RP)in ict with upper class division but I'm now agribusiness entrepreneur because after being a graduate I miss anyone to hire me and turn mi mind to be a self employed buy turning local available opportunities .
13.	# NewPhase
	The current situation has allowed and enabled my team and I to think deeply and strategize about the future of our business.
14.	# EntrepreneurshipIsAnIdentity
	I got on the drawing board for a couple of new ventures in areas I have not tried my hands in before. I was able to get others to join me on this new journey and I realized that entrepreneurship has become a new identity and all entrepreneurs are now from the same village.
15.	# Lovewins
	Love lives in different ways, forms and experiences. It goes deeper than what we envision or assume. It is raw.

Individual stories for Triad 4.2.10: Success – Former government employees.

1.	# NATURE RESUSCITATE
	I have a experience in poverty where I don't want to see other people in poverty it is my aim to deliver and implement jobs in order to reduce the number of unemployment rate.
2.	# LocalBusinessesMatter
	Teamwork. In an entrepreneurship business, having the right partner who balances and strengthens your weaknesses and vice versa has proved to be a game changer
3.	# Covidbars
	In the last few months, work has been difficult. As one in the bar sector, the government directives to shut down all bars completely is a huge blow. It's up to us to look for other sources of income or stay hungry.
4.	# Multipleincomesources
	People have come together to brainstorm other possible sources of income especially after covid hit
5.	# Familyfirst
	A family contributed cash and helped someone I know start a business
6.	# Working together
	Working together as a team to find better ideas and solutions.
7.	# African mother life

	<p>this picture show me how the African mother face with many problem of giving a birth of unwanted children! i realise that i can create a platform that will help them to upgrade them self.</p>
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Individual stories for Dyad 4.3.1: Momentum – Government-led

1.	# StayHome opportunity to job
	<p>Today I am happy compared to the way I lived before, actually I am a university student and I didn't get enough time to think about what I can do or what I have to know so that it can be of important or profit to me that is why I am glad because the holidays given to schools caused by covid 19 I got enough time to go deep in my studies (software designing) and I saw that I can make job by my own after getting a request from student from other university asking me to make him a software project and we discuss the matter of how he can pay me. So I found it profitable and I took it as opportunity to create my own job so now I made a company which helps students to get designing aid and other services related to IT field online.</p>
2.	# Product design
	<p>It's an experience from school, which was about product designing. It was a great experience since I now understand that all products have to be designed according to clients need, not the designer wish.</p>
3.	# Humanadapt2020
	<p>This image represents family. In the context of the COVID-19 pandemic, families had to adjust to a new normal. Businesses that provided solutions during/after the lockdown have thrived, especially in the form of digital solutions that provided various services to families (online ordering, online payment systems, etc). This made me feel optimistic about people's ability to quickly adapt to life challenges despite their personal circumstances.</p>
4.	# Africafortheyouth
	<p>I like that the picture is inclusive of women in the group of young people working together as a team to create innovative solutions that include everyone. I feel alone mostly when working on my business and I don't have people around me with the necessary skilset to help me.</p>
5.	# WE WILL PICK UP STRONG THAN EVER
	<p>I SPEAK ON BEHALF OF MYSELF TO BE HONEST I FEEL</p>

	LIKE THINGS ARE GOING TO BE DIFFICULT FOR SOME PEOPLE LIKE US WHO WAS SUPPOSED TO RELY ON HEAVY INVESTMENT THAT WERE ABOUT TO FLOW ON THIS AFRICA CONTINENT. THIS PANDEMIC HAS JUST SPOILED OR PAUSED THIS OPPORTUNITIES ITS GOING TO BE HARD FOR OUR PROJECTS LIKE MINE BUT I HAVE HOPE AS SOON LIFE COMES BACK TO NORMAL THINGS WILL BE OK BUT SOME OF US WE ARE GOING TO WAIST TIME TRACK ON OUR PROJECT WE HAD BEFORE THIS COVID19 CRISIS. WE HAD GOOD UNDERSTANDING BETWEEN EACH OTHER BEFORE COVID19 I MEANT YOUTH OF AFRICA WERE READY TO WORK TOGETHER
6.	# Hustler
	Entrepreneurship is a beautiful journey. Having gone in and out and went back to employment cause i felt i needed more stability . it is a fulfilling thing though also demanding at the samtime. I learnt you need to accept both the good and the bad coming from it.
7.	# Family
	Family is the backbone of entrepreneurship since this is where i get ideas from and also the support to start and be able to run a business.
8.	# AfricaYouthTechLeaders
	I discuss and often interact with young tech entrepreneurs in Rwanda. I gained much optimism through the latest years (post 2010) witnessing how these young people are able to quickly adapt, own and shape new technological developments in their local contexts. The four digital entrepreneurs involved in my recent activity in Rwanda lead their start-up company in various fields such as AI, blockchain or IoT and learn form the multiple communities they belong to, beyond their country. Their solutions are often replicable and yield important potential for scalability in the Eastern Africa region, but also beyond on the continent.
9.	# TheFutureIsYours
	In Rwanda, we have a Fabrication Laboratory called FabLab that supports hardware innovators. There are some good projects coming from them and it's making me optimistic about entrepreneurship in Rwanda
10.	# Opportunity
	recently my friend has attended drone workshop and want to join airforce military academy and he passed well all Technical tests and

	fail because of teeth not good and became like is last opportunity missed but after he thought how could make hardware business now is okay
11.	# YouthInnovationEntrepreneurship
	This picture express the dynamic within the digitalisation labs that i am supervising at the Pan African University Insitute for Water and Energy Sciences with very enthusiast students from different African countries looking on how digital technologies can leapfrog the development of the continent. I am very enthusiastic because i see a similar dynamic in many African countries and universities
12.	# Collaborativeinnovation
	I'm optimistic about collaborative innovation
13.	# Positive entrepreneurship
	Entrepreneurship is inclusive. Unlike in some jobs that choose to give more opportunities to a particular gender, entrepreneurship covers both genders.
14.	# Teamwork
	This reminds me of student group work promoted in an entrepreneurship education program I am researching.
15.	# Edutech
	Our organization's goal is to introduce high school students to the field of computer science through teaching them how to code. This requires students to have access to technology such as computers and sometimes internet. The pandemic has shown that many students do not have devices with adequate capability for them to effectively learn from home.
16.	# InnovationIsKey
	Innovation in technology is slowly becoming the heart of the entrepreneurship. I was very impressed with how a company in Kenya is using technology to improve traffic flow.
17.	# EvolveOrDie
	In this photo, I am reminded of working together in a team to get creative about how to solve our problems! I like the iterative process of human centered design and what I see in this photo is a diversity of people -- gender, religion -- that are bringing new perspectives to solve a challenge. In my company, we have also faced the challenge of needing to redesign our offering as Covid has made it unsafe to meet people in person and we have had to change both our product and processes in Rwanda. So far, we're finding

	success, and I look forward to when we can all be as close as in this photo again!
18.	# PIVOT
	The photo selected depicts how with the current pandemic, as an entrepreneur and fellow team member we have had to rethink how we work collectively to withstand the challenges while anticipating the future.

Individual stories for Dvad.4.3.1: Momentum – Private sector-led

1.	# Crossing A River Full of Crocodiles
	I feel optimistic despite the dangers faced on this entrepreneurial journey as I cross the first of many rivers in my quest to do well by doing good.
2.	# Recalibrate
	This season has been a balance of both positive gains and a few setbacks. We have come to appreciate the role technology plays in enhancing the success of businesses and enhancing communication.
3.	# NATURE RESUSCITATE
	I have a experience in poverty where I don't want to see other people in poverty it is my aim to deliver and implement jobs in order to reduce the number of unemployment rate.
4.	# Nairobionlineacademy
	I've tried to disrupt the education sector and it's the first time an enterprise has worked for me.
5.	# Covidbars
	In the last few months, work has been difficult. As one in the bar sector, the government directives to shut down all bars completely is a huge blow. It's up to us to look for other sources of income or stay hungry.
6.	# Sticky Dreams
	Spent thee last few months in quarantine writing down ideas on businesses and programming algorithms on sticky notes all around my house. They range from startups ideas to ankara batman designs. I scribble them when on calls with my friends, with workmates, with business partners. Pre corona The image on this picture was a weekly sight, me and my partner sitted at a table scribbling down different ideas and plans. Crossing of previous ones, adding new ones. The image makes me feel happy and hopeful and enthusiasm. I see the possibilities lying there on the sticky notes
7.	# My hobbies
	I like experment

8.	# BusinessInToughTimes
	The opening of the economy by the president though with some restrictions still makes me optimistic about my entrepreneurship skills.
9.	# Newbeginnings
	Im excited to start my own business
10.	# TheAfricaWeWant
	Africans winning robotics competitions is not new. But how do we turn prototype to assembly lines? The need for public private partnerships to solve socioeconomic issues in Africa is rising. I am optimistic of the private response to the market need but I am pessimistic of the public sectors response in Africa.
11.	# Together we can grow
	Entrepreneurship is about helping each other by sharing ideas, and being innovative. Planning and engaging with other people has helped a lot of entrepreneurs to grow and sustain their business.I have been in a group of entrepreneurs who helped me to know how to manage my business, how to solve problems, and also how to move my business to the next level. It's very helpful when we all brainstorm and agree on certain things that will all helps us. But the bad part is that there will be some who will discouraged you but the most important thing is to focus on the goal. Entrepreneurship is about learning from each other, supporting, motivating and engaging with each other.
12.	# BuildKenyaforKenyabyKenyans
	A friend of mine decided to start a small online thrift store. People were reluctant to buy as buying clothing online can be a hustle. She invested in capital and the business didn't pick. There was no support.
13.	# Familybusinesssupport
	Family: Family is everything to me. Through the good and bad times they have always been my source of strength. They love me for me and are not afraid to guide me in the right direction even when things are not looking up and more effort is required.
14.	# Breaking the curve
	I have learnt from my current team of forex trading and in logistics of agricultural products.That entrepreneurship is all about creating a common goal with your team and partners and working smart and having good strategies towards reaching your goal and targets
15.	# Innovationwithoutbias
	I loved the image of mixed gender builders. It highlighted opportunity to innovate without bias.

16.	# Buildingyoungentrepreneurs
	I think the image shows someone who is trying to pitch an idea to investors. Ever since I entered into the entrepreneurship space I have been able to pitch my idea to various investors with the purpose of trying to get funding that will help me in growing my business. Before pitching, one does a lot of practise to ensure that he/she understands the business in and out so as to be able to answer any questions asked well or to ensure that he/she has a very captivating pitch. After the pitch, when the investors try to enquire more about the business, here is where you realise that there are a lot of things that are missing in either the business plan or there's a lot of things that have to be factored in. Speaking from an upcoming entrepreneurs point of view. For me, I think this is a positive thing as it acts as an eye opener, and on the other side, a good pitch, can lead to great opportunities.
17.	# Supportvijana
	A friend of mine once decided to start a small tech firm. The idea was great but had no funding. He spent all his savings trying to build the business but it was not enough and could not secure additional funding. He ended up closing the business and seeking formal employment
18.	# Manufacture the world
	Manufacturing industry is where i feel has one of the least entrepreneurs
19.	# Representation in Ecosystems
	Entrepreneurs and members of the community who have an interest in entrepreneurship are coming together to discuss what they need and how to create a better ecosystem. I selected this photo because it is mostly men at the table; representation is being addressed across Africa because support organisations and business owners are not from local communities or women. Profits are not reinvested in communities and decisions that affect entire communities are being made by men. The discussions about representation include recommendations for change and accountability measures from the community which could be a positive change with proper implementation. The path to entrepreneurship becomes easier with more people sharing their journey, owners being permanent members of the community, and donors communicating with local support organizations to address local issues while accomplishing their mission.
20.	# YoungFarmer
	A friend started a business and challenged me to start the one thing I've been procrastinating on which is farming. So I finally started poultry farming and the experience was good and I can't wait to continue in the

	business and diversify to other forms of agriculture like vegetable farming
21.	# ShapeReality
	I wanna make so much money to influence and shape my current reality.
22.	# Quarantine
	I am optimistic about my current situation. I'm very lucky to be in a position where lockdown has exposed me to opportunities in wine, mostly because the shift to online has cut the cost of hosting events and there's been a surge in demand for wine content. I do not think I would have the opportunities I do now if the world wasn't in a situation that demanded us to change how we interact and connect with each other.
23.	# NewPhase
	The current situation has allowed and enabled my team and I to think deeply and strategize about the future of our business.
24.	http://healtheducat.rw
	There is a need to learn and learn, virtual reality is so helpful and need to be strengthened to the point that we can learn with no interruptions, like here in Rwanda and many more countries... schools have closed, there is practically no need to learn and keep going we need it ..
25.	# Mothersareentrepreneurs
	Mother's are entrepreneurs and they do not know about it. They call it caring/Providing for their children.
26.	# Passive mindsets from judges
	I had an opportunity in high school to participate in an annual science project competition. I had worked so hard since the beginning of the year and with the Overall hype from my peers and support from my family i was encouraged to go for it!! However, the space as from that and many other environments are so limiting to the full potentials of what people have to offer. I was seen skills on artificial intelligence, agricultural entrepreneurship so advance for "highschool" level but judges and teachers with not as an expansive mind as we had expected. I also had an opportunity to engage in an entrepreneurial project from Allan and Gray in strathmore last year and i can say it just went way beyond what i had expected! Support is very critical for an entrepreneur with a large and captivating innovation.
27.	# Learnfromother
	learn from other
28.	# Epicfail
	Entrepreneurship has been difficult....I tried out something in cooperation with others...it didn't go so well

29.	# MyMaskMySafety
	Emergency of COVID-19 pandemic promoted the local manufacturing of masks especially for lower income consumption. This improves the tailoring entrepreneurial subsector.
30.	# Lovewins
	Love lives in different ways, forms and experiences. It goes deeper than what we envision or assume. It is raw.

Individual stories for Dvad.4.3.2: Support Resource Focus On supporting institutions

1.	# StayHome opportunity to job
	Today I am happy compared to the way I lived before, actually I am a university student and I didn't get enough time to think about what I can do or what I have to know so that it can be of important or profit to me that is why I am glad because the holidays given to schools caused by covid 19 I got enough time to go deep in my studies (software designing) and I saw that I can make job by my own after getting a request from student from other university asking me to make him a software project and we discuss the matter of how he can pay me. So I found it profitable and I took it as opportunity to create my own job so now I made a company which helps students to get designing aid and other services related to IT field online.
2.	# Recalibrate
	This season has been a balance of both positive gains and a few setbacks. We have come to appreciate the role technology plays in enhancing the success of businesses and enhancing communication.
3.	# Wilted dreams
	I feel that most inventors and their inventions go down the drain due to bad leadership in the country. Funds meant to fund these folks create jobs for hundred others is squandered.
4.	# Africafortheyouth
	I like that the picture is inclusive of women in the group of young people working together as a team to create innovative solutions that include everyone. I feel alone mostly when working on my business and I don't have people around me with the necessary skilset to help me.
5.	# Sticky Dreams
	Spent thee last few months in quarantine writing down ideas on businesses and programming algorithms on sticky notes all around my house. They range from startups ideas to ankara batman designs. I scribble them when on calls with my friends, with workmates , with

	business partners. Pre corona The image on this picture was a weekly sight, me and my partner sitted at a table scribbling down different ideas and plans . Crossing of previous ones, adding new ones. The image makes me feel happy and hopeful and enthusiasm. I see the possibilities lying there on the sticky notes
6.	# Working together
	Working together as a team to find better ideas and solutions.
7.	# Entrepessure
	Well, all I can say about my current situation is that I have been pushed to think creatively to come up with my own start up...I can indeed affirm that it has made me feel positively about entrepreneurship.
8.	# Buildingyoungentrepreneurs
	I think the image shows someone who is trying to pitch an idea to investors.Ever since I entered into the entrepreneurship space I have been able to pitch my idea to various investors with the purpose of trying to get funding that will help me in growing my business. Before pitching,one does a lot of practise to ensure that he/she understands the business in and out so as to be able to answer any questions asked well or to ensure that he/she has a very captivating pitch.After the pitch, when the investors try to enquire more about the business,here is where you realise that there are a lot of things that are missing in either the business plan or there's a lot of things that have to be factored in. Speaking from an upcoming enterepreneurs point of view. For me,I think this is a positive thing as it acts as an eye opener, and on the other side,a good pitch,can lead to great opportunities.
9.	http://healtheducat.rw
	There is a need to learn and learn, virtual reality is so helpful and need to be strengthened to the point that we can learn with no interruptions, like here in Rwanda and many more countries... schools have closed, there is practically no need to learn and keep going we need it ..
10.	# Passive mindsets from judges
	I had an opportunity in high school to participate in an annual science project competition. I had worked so had since the beginning of the year and with the Overall hype from my peers and support from my family i was encouraged to go for it!! However, the space as from that and many other environments are so limiting to the full potentials of what people have to offer. I was seen skills on artificial intelligence, agricultural entrepreneurship so advance for "highschool" level but judges and teachers with not as an expansive mind as we had expected. I also had an opportunity to engage in an entrepreneurial project from Allan and Gray

	in strathmore last year and i can say it just went way beyond what i had expected! Support is very critical for an entrepreneur with a large and captivating innovation.
11.	# Lovewins
	Love lives in different ways, forms and experiences. It goes deeper than what we envision or assume. It is raw.

Individual stories for Dvad.4.3.2: Support Resource Focus On Individual local entrepreneurs

1.	# NATURE RESUSCITATE
	I have a experience in poverty where I don't want to see other people in poverty it is my aim to deliver and implement jobs in order to reduce the number of unemployment rate.
2.	# Multipleincomesources
	People have come together to brainstorm other possible sources of income especially after covid hit
3.	# WE WILL PICK UP STRONG THAN EVER
	I SPEAK ON BEHALF OF MYSELF TO BE HONEST I FEEL LIKE THINGS ARE GOING TO BE DIFFICULT FOR SOME PEOPLE LIKE US WHO WAS SUPPOSED TO RELY ON HEAVY INVESTMENT THAT WERE ABOUT TO FLOW ON THIS AFRICA CONTINENT. THIS PANDEMIC HAS JUST SPOILED OR PAUSED THIS OPPORTUNITIES ITS GOING TO BE HARD FOR OUR PROJECTS LIKE MINE BUT I HAVE HOPE AS SOON LIFE COMES BACK TO NORMAL THINGS WILL BE OK BUT SOME OF US WE ARE GOING TO WAIST TIME TRACK ON OUR PROJECT WE HAD BEFORE THIS COVID19 CRISIS. WE HAD GOOD UNDERSTANDING BETWEEN EACH OTHER BEFORE COVID19 I MEANT YOUTH OF AFRICA WERE READY TO WORK TOGETHER
4.	# My hobies
	I like experment
5.	# BusinessInToughTimes
	The opening of the economy by the president though with some restrictions still makes me optimistic about my entrepreneurship skills.
6.	# Newbeginnings
	Im excited to start my own business
7.	# TheAfricaWeWant

	Africans winning robotics competitions is not new. But how do we turn prototype to assembly lines? The need for public private partnerships to solve socioeconomic issues in Africa is rising. I am optimistic of the private response to the market need but I am pessimistic of the public sectors response in Africa.
8.	# Together we can grow
	Entrepreneurship is about helping each other by sharing ideas, and being innovative. Planning and engaging with other people has helped a lot of entrepreneurs to grow and sustain their business. I have been in a group of entrepreneurs who helped me to know how to manage my business, how to solve problems, and also how to move my business to the next level. It's very helpful when we all brainstorm and agree on certain things that will all help us. But the bad part is that there will be some who will discourage you but the most important thing is to focus on the goal. Entrepreneurship is about learning from each other, supporting, motivating and engaging with each other.
9.	# Family
	Family is the backbone of entrepreneurship since this is where I get ideas from and also the support to start and be able to run a business.
10.	# BuildKenyaforKenyaByKenyans
	A friend of mine decided to start a small online thrift store. People were reluctant to buy as buying clothing online can be a hassle.. She invested in capital and the business didn't pick. There was no support.
11.	# Familybusinesssupport
	Family: Family is everything to me. Through the good and bad times they have always been my source of strength. They love me for me and are not afraid to guide me in the right direction even when things are not looking up and more effort is required.
12.	# TheFutureIsYours
	In Rwanda, we have a Fabrication Laboratory called FabLab that supports hardware innovators. There are some good projects coming from them and it's making me optimistic about entrepreneurship in Rwanda
13.	# Breaking the curve
	I have learnt from my current team of forex trading and in logistics of agricultural products. That entrepreneurship is all about creating a common goal with your team and partners and working

	smart and having good strategies towards reaching your goal and targets
14.	# Innovationwithoutbias
	I loved the image of mixed gender builders. It highlighted opportunity to innovate without bias.
15.	# Businessidea
	My experience in coming up with a business of my own was hectic as it led me to sitting through many nights brainstorming and it has not fully picked up yet a whole year after
16.	# Supportvijana
	A friend of mine once decided to start a small tech firm. The idea was great but had no funding. He spent all his savings trying to build the business but it was not enough and could not secure additional funding. He ended up closing the business and seeking formal employment
17.	# Manufacture the world
	Manufacturing industry is where i feel has one of the least entrepreneurs
18.	# YoungFarmer
	A friend started a business and challenged me to start the one thing av been procrastinating on which is farming. So i finally started poultry farming and the experience was good and I can't wait to continue in the business and diversify to other forms of agriculture like vegetable farming
19.	# To young people who are waiting for being hired
	I'm Faustin TUYUBAHE, I'm graduate from Iprc(RP)in ict with upper class division but I'm now agribusiness entrepreneur because after being a graduate I miss anyone to hire me and turn mi mind to be a self employed buy turning local available opportunities .
20.	# The journey
	Risk taking is good but can be worse
21.	# Learnfromother
	learn from other
22.	# Epicfail
	Entrepreneurship has been difficult...I tried out something in cooperation with others...it didn't go so well
23.	# MyMaskMySafety
	Emergency of COVID-19 pandemic promoted the local

	manufacturing of masks especially for lower income consumption. This improves the tailoring entrepreneurial subsector.
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Individual stories for Dvad.4.3.3: Class Origins: Upper-middle class families

1.	# Business in Rwanda
	Something that makes me feel optimistic about entrepreneurship is the way people are ready to support local businesses, in my experience i've been selling different things for the past 2months and i was impressed on how my friends and family were excited and ready to support my business .
2.	# Team work
	I believe in team work and that if several minds come together there is a higher probability of achieving a set goal. In my field as a consultant and an entrepreneur, i believe in team work in that we are able to expound on our ideas and feilds of expertise by coming together.
3.	# Realitiesofglobalchange
	The Realities of Global Change
4.	# Wilted dreams
	I feel that most inventors and their inventions go down the drain due to bad leadership in the country. Funds meant to fund these folks create jobs for hundred others is squandered.
5.	# LocalBusinessesMatter
	Teamwork. In an entrepreneurship business, having the right partner who balances and strengthens your weaknesses and vice versa has proved to be a game changer
6.	# Thetechpreneur
	positive experience in the ideas brought to life
7.	# My hobbies
	I like experment
8.	# Farming and family times
	Spending my time at home with family and especially a newborn. Also more into farming Helps keep me motivated
9.	# BusinessInToughTimes
	The opening of the economy by the president though with some restrictions still makes me optimistic about my entrepreneurship skills.
10.	# Kazikwavijana

	Many young people are determined to complete their studies and secure employment but the frustrations within the employment field are many. The government promises jobs to many unemployed youths but nothing is ever done to help improve the situation.
11.	# Entrepresseure
	Well, all I can say about my current situation is that I have been pushed to think creatively to come up with my own start up...I can indeed affirm that it has made me feel positively about entrepreneurship.
12.	# BuildKenyaforKenyaByKenyans
	A friend of mine decided to start a small online thrift store. People were reluctant to buy as buying clothing online can be a hustle.. She invested in capital and the business didn't pick. There was no support.
13.	# Life changer
	I once wanted to do something, build something of my own maybe or rather make a meaning to my life. I still do actually, but I discovered a way to do that is through entrepreneurship. Not just for me but for everyone
14.	# Annual planning meeting
	Planning sessions for the year.
15.	# Crafting
	Currently ideating and business strategizing
16.	# Training workshop
	A group work at a training workshop. Training empower the propl. Working in teams
17.	# Buildingyoungentrepreneurs
	I think the image shows someone who is trying to pitch an idea to investors. Ever since I entered into the entrepreneurship space I have been able to pitch my idea to various investors with the purpose of trying to get funding that will help me in growing my business. Before pitching, one does a lot of practise to ensure that he/she understands the business in and out so as to be able to answer any questions asked well or to ensure that he/she has a very captivating pitch. After the pitch, when the investors try to enquire more about the business, here is where you realise that there are a lot of things that are missing in either the business plan or there's a lot of things that have to be factored in. Speaking from an upcoming entrepreneurs point of view. For me, I think this is a positive thing as it acts as an eye opener, and on the other side, a good pitch, can lead to great opportunities.
18.	# Collaborativeinnovation
	I'm optimistic about collaborative innovation

19.	# Supportvijana
	A friend of mine once decided to start a small tech firm. The idea was great but had no funding. He spent all his savings trying to build the business but it was not enough and could not secure additional funding. He ended up closing the business and seeking formal employment
20.	# The journey
	Risk taking is good but can be worse
21.	# EntityCentered
	Optimistic because there's a rush of activity around advancing entrepreneurship (especially against the backdrop of the pandemic, entrepreneurs continue to be considered by banks, governments, foundations), pessimistic because this work to support entrepreneurship seems organisation centered, and support for individual citizens (whether they are themselves entrepreneurs or not) is secondary.
22.	# Shauku
	I saw these guys building various machinery. The way they explained to me how these machinery worked with so much passion made me wish to find something that could light up my eyes like that. Something that can make me both money and give a sense of fulfillment
23.	# Breakingnorms
	I know of a friend of mine who wants to venture into YouTube. All he needs is a camera and his parents to help him acquire one. But they won't do it because they do not see how one could make a living off of it. Go to school become a doctor then buy yourself a camera. Our African parents beliefs can at times become a hindrance to entrepreneurship.
24.	http://healtheducat.rw
	There is a need to learn and learn, virtual reality is so helpful and need to be strengthened to the point that we can learn with no interruptions, like here in Rwanda and many more countries... schools have closed, there is practically no need to learn and keep going we need it ..
25.	# Passive mindsets from judges
	I had an opportunity in high school to participate in an annual science project competition. I had worked so hard since the beginning of the year and with the Overall hype from my peers and support from my family i was encouraged to go for it!! However, the space as from that and many other environments are so limiting to the full potentials of what people have to offer. I was seen skills on artificial intelligence, agricultural entrepreneurship so advance for "highschool" level but judges and teachers with not as an expansive mind as we had expected. I also had an opportunity to engage in an entrepreneurial project from Allan and Gray in

	strathmore last year and i can say it just went way beyond what i had expected! Support is very critical for an entrepreneur with a large and captivating innovation.
26.	# Epicfail
	Entrepreneurship has been difficult....I tried out something in cooperation with others...it didn't go so well
27.	# PIVOT
	The photo selected depicts how with the current pandemic, as an entrepreneur and fellow team member we have had to rethink how we work collectively to withstand the challenges while anticipating the future.
28.	# Business in Rwanda
	Something that makes me feel optimistic about entrepreneurship is the way people are ready to support local businesses, in my experience i've been selling different things for the past 2months and i was impressed on how my friends and family were excited and ready to support my business .
29.	# Team work
	I believe in team work and that if several minds come together there is a higher probability of achieving a set goal. In my field as a consultant and an entrepreneur, i believe in team work in that we are able to expound on our ideas and feilds of expertise by coming together.
30.	# Realitiesofglobalchange
	The Realities of Global Change
31.	# Wilted dreams
	I feel that most inventors and their inventions go down the drain due to bad leadership in the country. Funds meant to fund these folks create jobs for hundred others is squandered.
32.	# LocalBusinessesMatter
	Teamwork. In an entrepreneurship business, having the right partner who balances and strengthens your weaknesses and vice versa has proved to be a game changer
33.	# Thetechpreneur
	positive experience in the ideas brought to life
34.	# My hobbies
	I like experment
35.	# Farming and family times
	Spending my time at home with family and especially a newborn. Also more into farming Helps keep me motivated
36.	# BusinessInToughTimes
	The opening of the economy by the president though with some restrictions

	still makes me optimistic about my entrepreneurship skills.
37.	# Kazikwavijana
	Many young people are determined to complete their studies and secure employment but the frustrations within the employment field are many. The government promises jobs to many unemployed youths but nothing is ever done to help improve the situation.
38.	# Entressure
	Well, all I can say about my current situation is that I have been pushed to think creatively to come up with my own start up...I can indeed affirm that it has made me feel positively about entrepreneurship.
39.	# BuildKenyaforKenya
	A friend of mine decided to start a small online thrift store. People were reluctant to buy as buying clothing online can be a hustle.. She invested in capital and the business didn't pick. There was no support.
40.	# Life changer
	I once wanted to do something, build something of my own maybe or rather make a meaning to my life. I still do actually, but I discovered a way to do that is through entrepreneurship. Not just for me but for everyone
41.	# Annual planning meeting
	Planning sessions for the year.
42.	# Crafting
	Currently ideating and business strategizing
43.	# Training workshop
	A group work at a training workshop. Training empower the people. Working in teams
44.	# Buildingyoungentrepreneurs
	I think the image shows someone who is trying to pitch an idea to investors. Ever since I entered into the entrepreneurship space I have been able to pitch my idea to various investors with the purpose of trying to get funding that will help me in growing my business. Before pitching, one does a lot of practise to ensure that he/she understands the business in and out so as to be able to answer any questions asked well or to ensure that he/she has a very captivating pitch. After the pitch, when the investors try to enquire more about the business, here is where you realise that there are a lot of things that are missing in either the business plan or there's a lot of things that have to be factored in. Speaking from an upcoming entrepreneurs point of view. For me, I think this is a positive thing as it acts as an eye opener, and on the other side, a good pitch, can lead to great opportunities.

45.	# Collaborativeinnovation
	I'm optimistic about collaborative innovation
46.	# Supportvijana
	A friend of mine once decided to start a small tech firm. The idea was great but had no funding. He spent all his savings trying to build the business but it was not enough and could not secure additional funding. He ended up closing the business and seeking formal employment
47.	# The journey
	Risk taking is good but can be worse
48.	# EntityCentered
	Optimistic because there's a rush of activity around advancing entrepreneurship (especially against the backdrop of the pandemic, entrepreneurs continue to be considered by banks, governments, foundations), pessimistic because this work to support entrepreneurship seems organisation centered, and support for individual citizens (whether they are themselves entrepreneurs or not) is secondary.
49.	# Shauku
	I saw these guys building various machinery. The way they explained to me how these machinery worked with so much passion made me wish to find something that could light up my eyes like that. Something that can make me both money and give a sense of fulfillment
50.	# Breakingnorms
	I know of a friend of mine who wants to venture into YouTube. All he needs is a camera and his parents to help him acquire one. But they won't do it because they do not see how one could make a living off of it. Go to school become a doctor then buy yourself a camera. Our African parents beliefs can at times become a hindrance to entrepreneurship.
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Individual stories for Dvad.4.3.3: Class Origins: Poor families

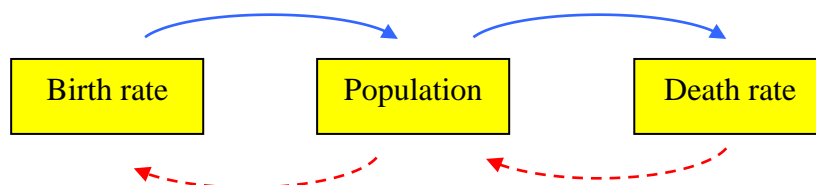
1.	# Recalibrate
	This season has been a balance of both positive gains and a few setbacks. We have come to appreciate the role technology plays in enhancing the success of businesses and enhancing communication.
2.	# NATURE RESUSCITATE
	I have a experience in poverty where I don't want to see other people in poverty it is my aim to deliver and implement jobs in order to reduce the number of unemployment rate.
3.	# Hustler
	Entrepreneurship is a beautiful journey. Having gone in and out and went back to employment cause i felt i needed more stability . it is a fulfilling thing though also demanding at the samtime. I learnt you need to accept both the good and the bad coming from it.
4.	# Newbeginnings
	Im excited to start my own business
5.	# Working together
	Working together as a team to find better ideas and solutions.
6.	# Breaking the curve
	I have learnt from my current team of forex trading and in logistics of agricultural products.That entrepreneurship is all about creating a common goal with your team and partners and working smart and having good

	strategies towards reaching your goal and targets
7.	# Businessidea
	My experience in coming up with a business of my own was hectic as it led me to sitting through many nights brainstorming and it has not fully picked up yet a whole year after
8.	# Lovewins
	Love lives in different ways, forms and experiences. It goes deeper than what we envision or assume. It is raw.

Appendix G: Constructing a non-linear causality diagram²⁶

A non-linear causality diagram (NLD) is a qualitative method for visualizing how different variables in a system are interrelated and how they influence each other to create system dynamics. This approach is used to build a simplified model of the factors and dynamics that influence a phenomenon of interest. By selecting a key phenomenon or response variable and visualizing the factors that drive or inhibit that phenomenon as well as the influences those factors exert on each other, it is possible to learn about how the system responds to change.

The NLD consists of a set of nodes that represent the variables in the system and connecting lines that describe the relationships between the variables and direction of each relationship. A positive causal link between two nodes indicates a positive relationship, such that when one variable increases (or decreases), the other variable also increases (or decreases). In other words, the variables change together in the **same** direction. However, a negative causal link means the two nodes change in **opposite** directions. For example, if the node from which the link starts increases, the other node decreases, and vice versa.



<http://people.revoledu.com/kardi/tutorial/SystemDynamic/>

Steps for creating a Non-Linear Causality Diagram

Step 1: Define model theme

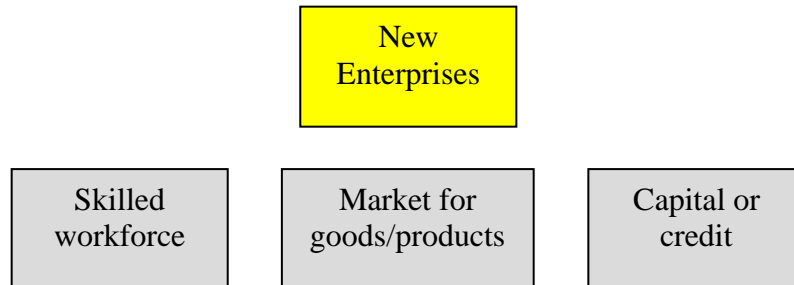
Ex: Job creation in a development value chain

Step 2: Identify the response variables (in this case high-impact ventures).

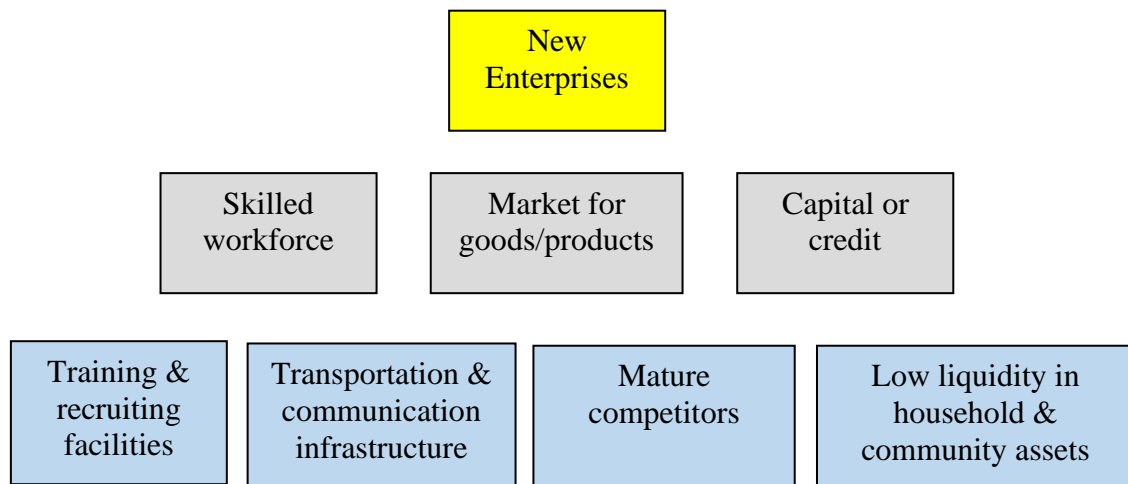


²⁶ This guide was put together and given to the researcher by Professor Joshua Fisher as a product from his work in Coleman *et al.* (2019), Fisher *et al.* (2015) and Liebovitch *et al.* (2019).

Step 3: For each variable, isolate 2-3 primary factors that most directly influence (and are influenced by) the response variable and add these to the map. This will represent the core system map, a critical step in the mapping process that should not be rushed. The remainder of the mapping exercise will build off of this core map.



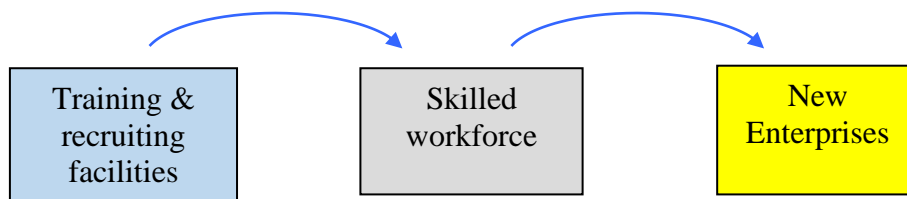
Step 4: Brainstorm all relevant secondary factors that seem to be significantly related to the primary factors identified in Step 2. (do not begin mapping at this step)



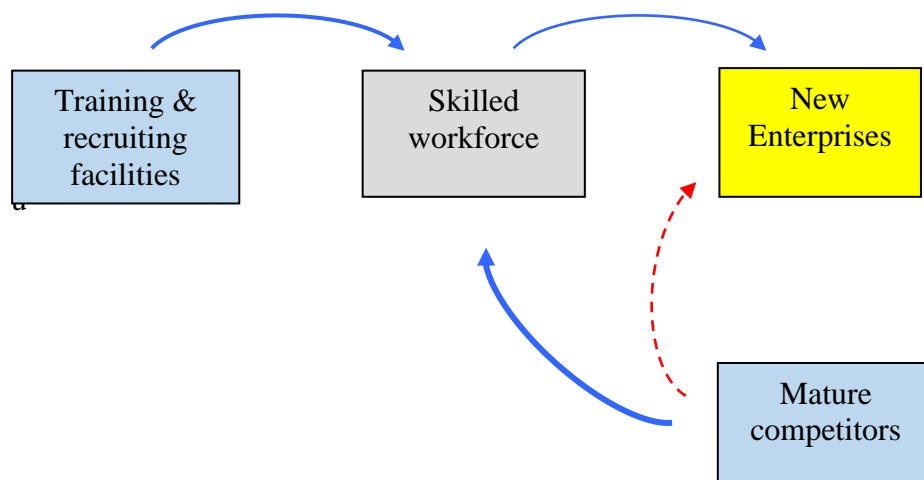
Step 5: Once the group feels that they have developed a sufficiently comprehensive list of factors, begin to prioritize them in terms of their overall relevance to the map, as well as their direct and indirect relationships to the primary factors. This is also a good time to clarify any factors that are not clear to the group and to modify the terms used to describe the factor to be sure that it is variable (i.e. can move up and down). The group should try to limit this list of factors to 20 or less.

Model Construction:

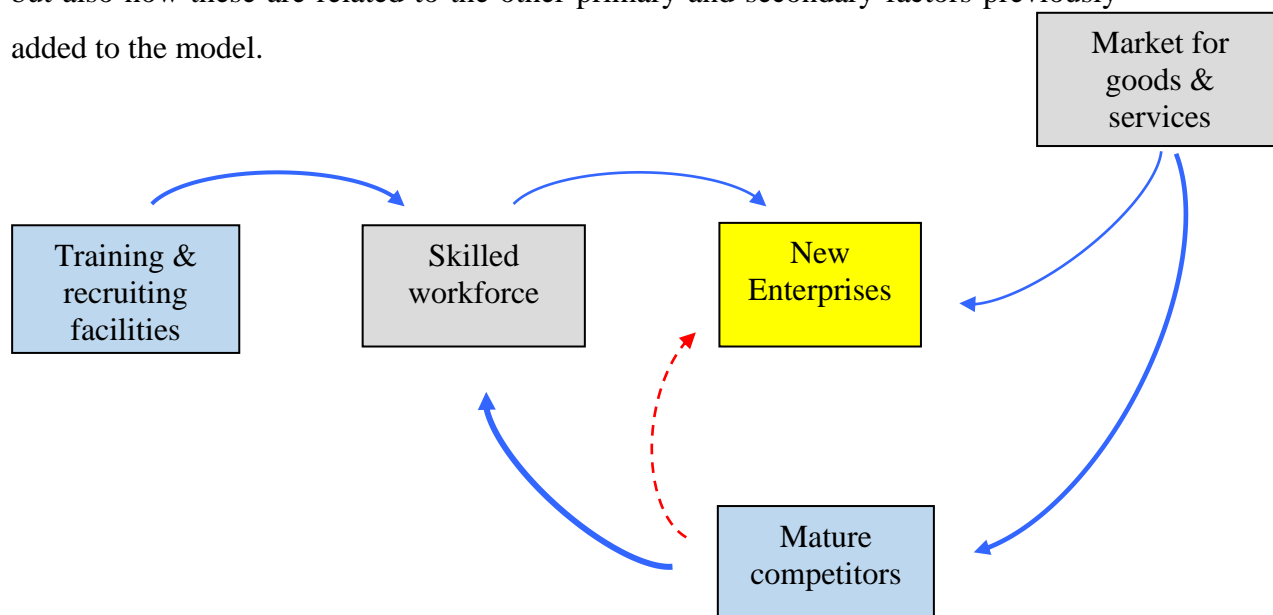
Step 6: Begin to add the factors to the map, starting by building off of only one of the primary factors to start with. As these secondary factors are added to the map, the group should also be drawing directional lines indicating the relationships between the factors.



Step 7: Further modify the relationship lines between factors as being either ‘same’ (the factors change up or down together; denoted with a solid line) or ‘opposite’ (a change in the value of one factor changes the other factor in the opposite direction; denoted with a dashed line). The thickness of the line should indicate the strength of the influence.

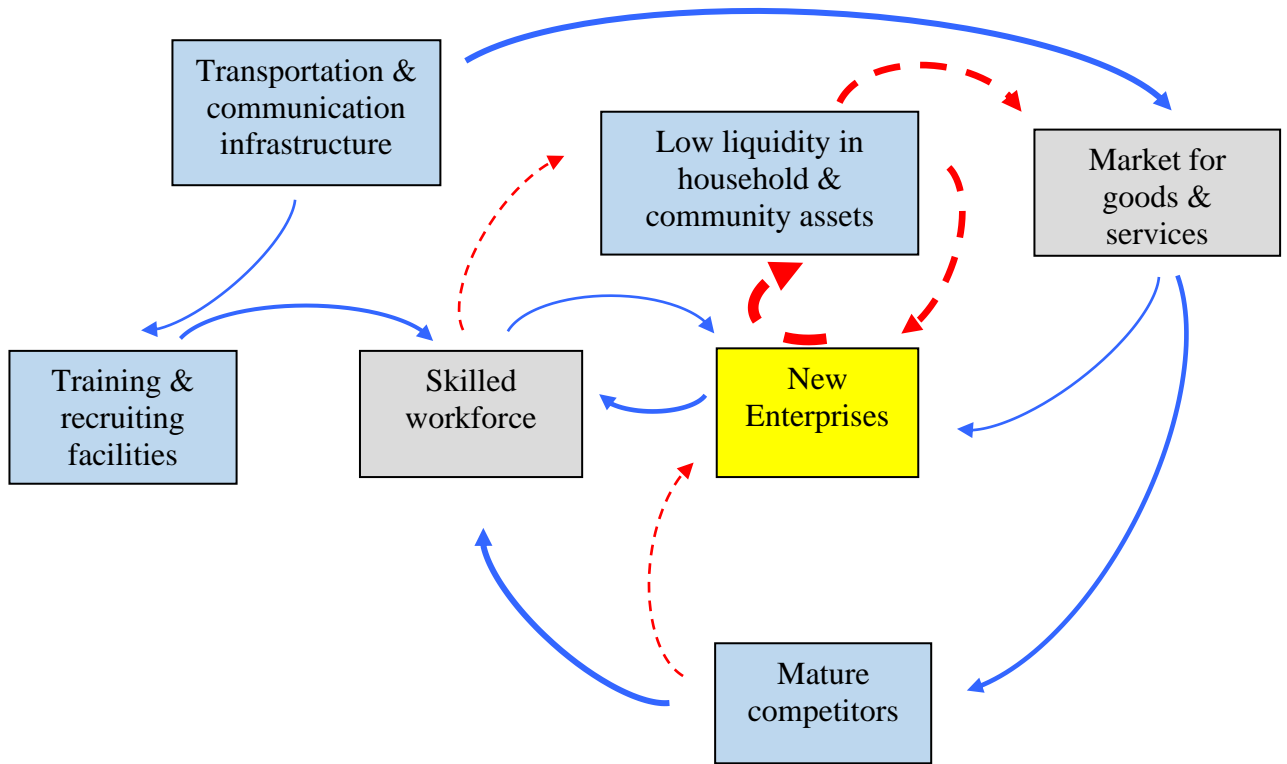


Step 8: Repeat Steps 5 & 6 for the remaining 1-2 factors, being sure to indicate not only the relationships to the primary factor and between each of these added factors but also how these are related to the other primary and secondary factors previously added to the model.

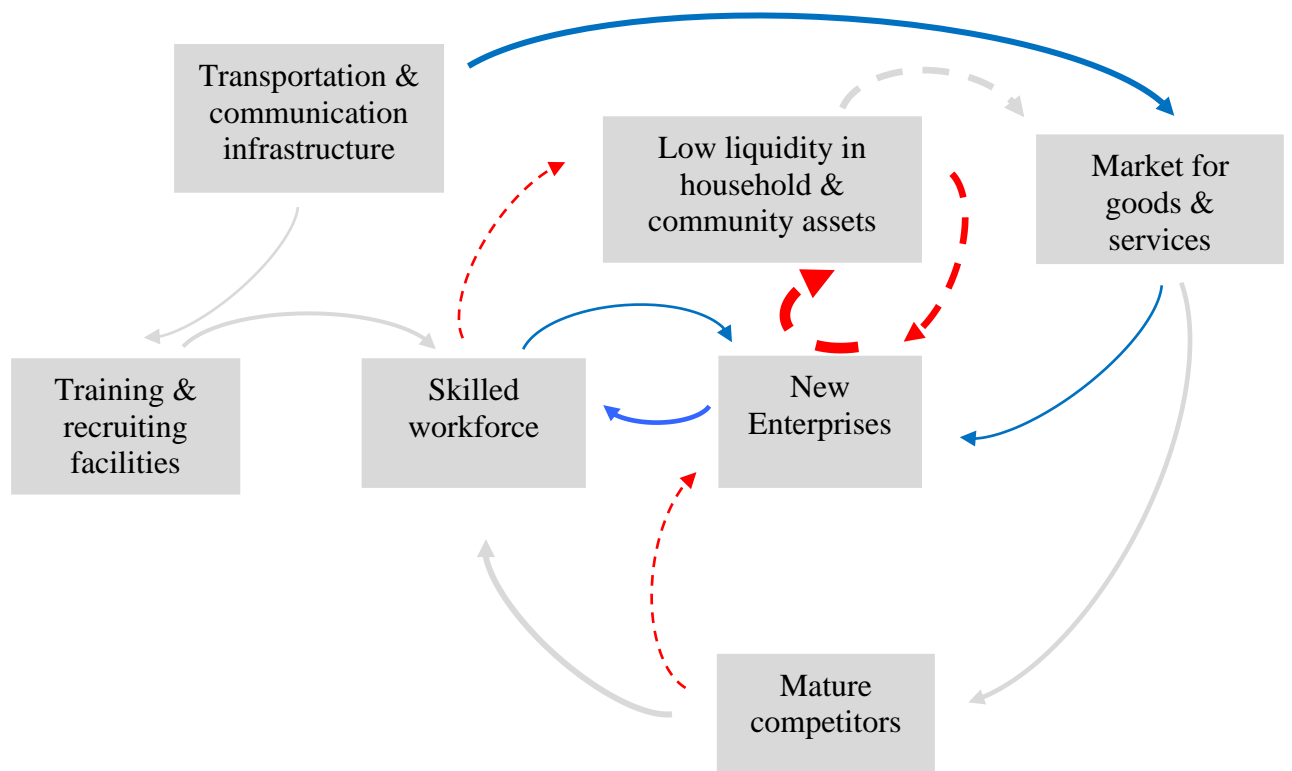


Refining the Model:

Step 9: As a group, review the draft visualization to identify mistakes, points of confusion, or inconsistencies. Revise as needed.



Step 10: Examine the visualization and discuss the learning that emerges. Describe the learning in the form of a change hypothesis



Example:

In the model above, the presence of a skilled workforce and a market for goods and services contribute to the creation of new enterprises. New enterprises then reverse the low liquidity in household and community assets. However, the lack of liquid assets inhibits enterprise creation because there is no start-up capital and the presence of competitors creates a disincentive because the existing market is already captured. Finally, transportation and communication infrastructure improvement have a strong influence on market creation which incentivizes new enterprises. Those new enterprises increase a skilled workforce, which in turn reverses low household and community asset liquidity.

H1: If we can improve transportation and communication infrastructure, we will be able to strengthen markets for goods and services. This, in turn, spurs new enterprises which over time could reverse the trend of low household asset liquidity.