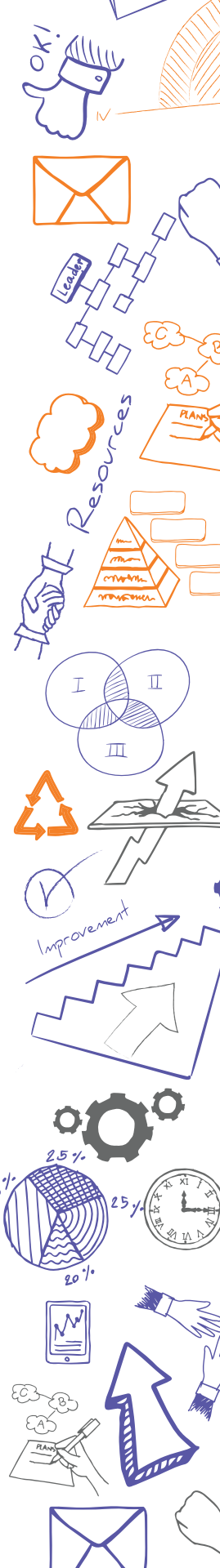
THE GAME CHANGERS

Impact Enterprises in East Africa



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Founded in 2002, the Aavishkaar and Intellecap Group have directed US $ 600 Million of capital to entrepreneurs working on such challenging problems sustainably through equity funds, venture debt vehicle, microfinance lending or investment banking intermediation. Intellecap provides a broad range of Consulting, Research and Investment Banking Services, to Multilateral Agencies, Development Finance Institutions, Social Enterprises, Corporations, Investors, Policy Makers and Donors. Select clients include the Rockefeller Foundation, Gates Foundation, GIZ, DFID, Hindustan Unilever, International Finance Corporation, Asian Development Bank and Michael and Susan Dell Foundation.

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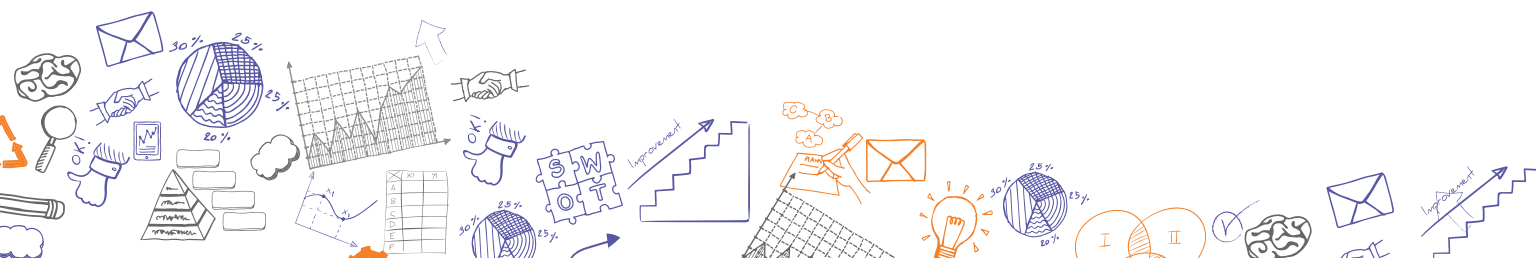
TABLE OF CONTENTS



EXECUTIVE SUMMARY

East Africa's compelling growth story and entrepreneurial culture has attracted global attention – from providers of impact capital, private sector corporations, and other entrepreneurs from the Global South. The region is home to several recent innovations and success stories at the intersection of technology and financial inclusion, which have the capacity to transform economies. Likewise, innovations at the intersection of technology and healthcare have the potential to dramatically improve key metrics across development goals and save lives that are otherwise lost to treatable and preventable diseases. Entrepreneurs are also innovating with business models in other sectors to reach the customer, increase productivity, and enable them to climb towards a better quality of life.

East Africa is expected to be the fastest growing region in the African continent in 2016.[1] The region has demonstrated promising avenues for investors and a surge in Foreign Direct Investment (FDI) over the last decade. Although economic and political reforms have stabilized and streamlined the growth process to a significant extent, a large segment of the population still remains underserved. Given the geographical, infrastructural, and socio-economic barriers in East Africa, mainstream business models are unable to address demand in remote, rural, low income, and underserved markets. This has resulted in the growth of a unique class of enterprises that strive to create social impact while maintaining focus on financial sustainability. These impact enterprises and their innovative business models have motivated entrepreneurs across the Global South.

What is an impact enterprise?

Impact enterprises are businesses that aim to generate profits and create a positive social impact.

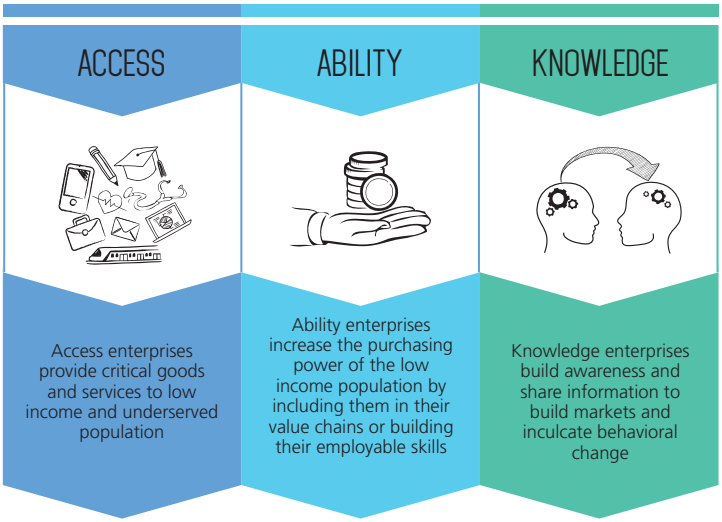
These enterprises directly improve the lives and livelihoods of the low income population by increasing access to critical products and services; or by improving the productivity, output quality, or market linkages for low income producers. They create awareness and disseminate information in underserved markets.

Impact enterprises seek to reach underserved customers - they provide ***access*** to critical products and services; employable skills and market linkages to increase ***ability*** to earn livelihoods; and ***knowledge*** services to build awareness about safer or optimal solutions as well as initiate behavior change. This study examines how impact enterprises in five countries: Ethiopia, Kenya, Rwanda, Tanzania and Uganda respond to market challenges and stimulate inclusive growth in the region. It draws insights from literature review, secondary research of 398

1 African Economic Outlook. African Development Back. OECD Development Center. UNDP. 2015

enterprises, a detailed survey of 125 enterprises, and primary interviews with 15 keys stakeholders from the impact enterprise ecosystem in the region. Enterprises are analyzed across the three levers: Access, Ability, and Knowledge.

FIGURE 1: DEFINITIONS OF THE LEVERS



Key Highlights Of The Study

FOR INVESTORS

Investors looking for a pipeline of seed stage, small ticket investments will find options aplenty; scaled and successful models are, however, difficult to find in East Africa. Kenya has more profitable impact enterprises, while there are fewer such enterprises in other countries in East Africa, requiring longer investment horizons. Kenya's strategic geographical advantage, favorable economic reforms, and mature enterprise ecosystem has led to the rapid growth of impact businesses in the region. The country also has a good mix of expat entrepreneurs, who are usually more opportunity-driven and bring technical and business knowledge, and domestic entrepreneurs, who have a strong understanding of local needs and context. Business collaborations between local and expat entrepreneurs in Kenya have opened up opportunities across sectors and enhanced human capital and skills. Given the vibrant ecosystem, more than 50% of the enterprises in East Africa are headquartered in Kenya. Compared to other countries, Kenyan enterprises are well distributed across sectors, and investors are able to identify and build a pipeline for investments.

Other countries in the region are seeing fledgling growth in impact enterprises. As per Intellecap's database, Uganda has the second largest number of enterprises after Kenya, with a few enterprises that are more than a decade old. It is also the most preferred expansion destination for impact enterprises from other East African countries. The Ugandan Government's proactive efforts have resulted in a considerable improvement

FIGURE 2: EASE OF DOING BUSINESS

	Ethiopia	Kenya	Rwanda	Tanzania	Uganda
2015 Rank	148	129	55	140	135
	+2	+21	-7	+1	+13
2016 Rank	146	108	62	139	122

Doing Business 2015 and Doing Business 2016, World Bank Group

in its ease of doing business rank. Similarly, recent regulatory and economic reforms in Rwanda, Tanzania and Ethiopia are also likely to foster impact entrepreneurship.

Across East Africa, most sustainable and scalable models are Ability agribusinesses. These enterprises take a value-chain approach to provide skills, aggregate produce, and sell in urban and export markets. There are many sustainable Access models in clean energy, but most are backed by grants. Of the different clusters of business models that are observed in the region, the highest proportion of profitable enterprises are seen among Ability agribusinesses. This is primarily because they provide support across all segments of the value chain and market the produce to customers from the middle and higher income brackets. Through interventions across segments, these enterprises are able to ensure quality as well as efficient and continuous supply to markets. Ability agribusinesses have, therefore, attracted considerable investor interest. Besides the agriculture sector, a number of scalable and sustainable models are observed in clean energy. These Access enterprises provide clean energy solutions to low income populations, and are constrained on pricing and payments. Some of the most interesting innovations in payments are seen in this sector. Most of the enterprises in this sector are backed by grants.

> *"Technology plays a very important role in providing access to market information and payment solutions for consumers. It has also helped small businesses access markets by reducing the cost of communication and marketing.*
>
> ***Mary Mwangi,***
> ***Aspen Network of Development Entrepreneurs (ANDE)***

While ICT has had a disruptive impact as an enabler, it has not yet seen scale as an output or product. Penetration of ICT has triggered innovative models in Kenya, while it is yet to gain traction in other countries. Mobile money has provided a significant boost to the Kenyan economy in recent years, and has revolutionized how people pay for products and services. Given the high mobile phone penetration and suitable 3G infrastructure, many impact enterprises have designed their business models around m-pesa and other similar platforms. East Africa currently has around 24 mobile money service providers and m-pesa is leading the space with over 21 million registered customers.[2] Although the use of mobile money is prevalent in Kenya, it is yet to take off in other countries. For example, m-pesa is not as popular in Rwanda although it has the required infrastructure. Similarly, Ethiopia has indigenous mobile money platforms such as BelCash and M-BIRR, but unlike m-pesa, these need to be backed by bank accounts[3] or microfinance institutions (MFIs).[4] This greatly limits the usability of such platforms especially for low income communities. Moreover, government regulations and competition between banks and telecom companies also act as barriers to the use and further development of mobile money. As most people in East Africa use feature phones, innovations in mobile money and digital finance need to be SMS-based with an easy-to-use interface.

Many impact enterprises have ICT components for solution delivery and efficiency improvement. Models with ICT as a solution have attracted investor interest, but are yet to see scale. Models that are enabled or supported by ICT have scaled and increased the reach and efficiency of impact enterprises across sectors.

3 Belcash Mobile Banking. VC4Africa

4 FINNFUND write-up on M-BIRR Ethiopia. http://www.finnfund.fi/ajankohtaista/uutiset15/en_GB/MBirr_Ethiopia/

The impact enterprise space in East Africa has a huge appetite for blended capital and crowding in funds from different sources. Innovative financial instruments offering patient capital and small ticket sizes are critical for the growth of impact entrepreneurship in the region. Around 60% of the enterprises in East Africa are younger than five years, and given the market challenges in the region, they take a long time to break even. Among the surveyed enterprises, 48% have achieved break even, while 28% are profitable. The average impact enterprise is considerably small; 67% of the surveyed impact enterprises earned less than US$100,000 in the last fiscal year.

> *"Many traditional grant funders are now experimenting with designating funds to make equity investments in for-profit companies whose models are aligned with their impact goals, not just to find innovative ways of making impact but also to move towards making their own models as funding organizations more sustainable and regenerative.*
>
> ***Lia Mayka,***
> ***Village Capital***

Given the size and youth of impact enterprises in East Africa, there is a mismatch between the investment criteria and ticket sizes of impact investors and the market requirement. The average ticket size of investments in impact enterprises is often lower than US$1mn.[5] This highlights the need for innovative financing mechanisms tailored for impact businesses. Uncollateralized lending and small ticket sizes can help investors include impact enterprises in their portfolio. Instruments that incorporate multi-year plans in which predetermined amounts of capital are disbursed periodically based on milestones achieved by the enterprise would also bridge the funding gap. Other innovations for impact enterprises in need of patient capital include result-based financing and other forms of blended finance.

FOR ENTERPRISES

Capacity and willingness to pay among low income customers is one of the biggest hurdles that Access enterprises face. They should innovate with payment and distribution strategies to improve affordability and availability of their offerings. Around 65% of the impact enterprises in the region increase availability and provide critical products and services in the region. Most of these Access enterprises are in the clean energy and agriculture sectors. Given the low purchasing power of their target customers and infrastructural limitations to reach them, Access enterprises need to design and develop innovative solutions with respect to pricing, payments, and distribution.

A small number of enterprises have pioneered such innovations. The pay-as-you-go model has helped increase the uptake of energy products while the pay-per-use model has helped motivate target customers to shift away from suboptimal solutions. Some impact enterprises are able to provide products at lower prices by aggregating customers. A few enterprises also provide financing options to potential customers, hence increasing their capacity to pay for products and services. Similarly, enterprises adopt distribution strategies that leverage microfinance institutions, village level entrepreneurs (VLEs), and online selling to increase their reach. Enterprises have also

5 *Venture Finance in Africa Report. Venture Capital for Africa. 2015*

designed strategies that enable them to scale rapidly. These include the use of templatized offerings and tech-based solutions that can be replicated with ease across geographies.

Impact of skill building efforts is nullified if the skills are not taken to market. Ability enterprises should consider building a component of market linkage along with capacity building and skilling for sustainability. Around 31% of impact enterprises work with the low income population to increase their productivity and capacity to earn higher incomes. Since more than 70% of East Africa's population is engaged in agriculture, most Ability enterprises operate in this sector. These enterprises provide support that ranges from extension services and capacity building to providing quality inputs, processing facilities, and market linkages. However, with productivity gains, the labor requirement in agriculture is likely to decrease and hence, employment alternatives need to be found. In order to support the growth of other employment generating sectors such as construction, hospitality, and information and communications technology (ICT) in the region, Ability enterprises should provide training, develop skills, and build human capital. Currently, there is very limited representation from impact enterprises in these segments. Ability models that are built around market linkages have been profitable, and have seen scale, as well as investor interest.

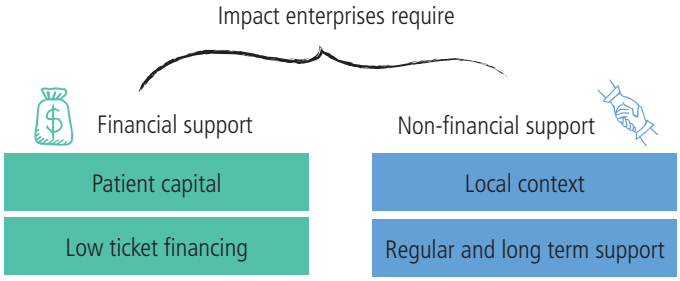
Awareness building is critical, but Knowledge enterprises need to build innovative revenue streams. A few enterprises are experimenting with advertisements and data brokering to design financially viable business models. In almost all sectors in East Africa, low income and underserved consumers have to make do with suboptimal solutions which greatly affect their quality of life. For example, the energy sector is characterized by dependence on biomass, the healthcare sector still sees prevalence of traditional medicine, the agriculture sector is characterized by subsistence farming practices, and the financial services sector is still restricted to informal institutions in some areas. Uptake remains poor even if the purchasing power of the low income population is improved and critical products and services are made available to them. Creating awareness and encouraging positive behavior change among potential consumers is very important for building markets for impact businesses in East Africa.

> *"There are plenty of cookstoves and solar lamps out there, but investment in behavior change is required to cause actual impact. Behavior change is now an integral part of business models to improve uptake of products.*
>
> ***Nicolas Chevrollier,***
> ***BoP Innovation Center***

Although this space was traditionally dominated by donors and non-profit organizations, there are a few impact enterprises (4% of enterprises in our survey) that have experimented with interesting revenue models. Some of them are building steady revenue streams through advertising while others are mining data that is useful for other enterprises. Knowledge enterprises can also partner with other impact enterprises, as well as larger corporates in order to design efficient go-to-market strategies tailored for underserved markets.

FOR NON-FINANCIAL SUPPORT PROVIDERS

FIGURE 3: SUPPORT REQUIRED BY IMPACT ENTREPRENEURS



Incubation support reaches a small base of entrepreneurs, who share that they need stronger context and more regular support. Incubators can leverage ICT to reach a larger pool of entrepreneurs and provide them with basic support, while continuing to provide high-touch mentoring. In the early stages, enterprises seek on-going hand-holding and incubation support. Growth stage enterprises need acceleration (technical and business advisory) support when exploring scale and expansion. Although incubators provide non-financial support to a number of younger enterprises, many more still rely on mentoring from professional networks and other entrepreneurs. According to survey responses, incubator support is observed for enterprises that are younger than five years; and enterprises in Kenya are key beneficiaries of such support. Most of the enterprises planning to scale to new territories, new customer groups, and new product categories mainly received support and guidance from professional networks and other entrepreneurs. This gap in provision of technical assistance and advisory services should be bridged to strengthen the support ecosystem for impact enterprises. Also, incubators are only able to support a limited cohort of entrepreneurs at a point in time. In order to cater to the growing number of entrepreneurs, incubators can leverage virtual models to deliver templatized support in addition to high-touch, in-person mentoring.

GOING FORWARD

Representation of impact enterprises across sectors is weak. Barring agriculture, value chains in most sectors with impact enterprise presence are shallow. There are some critical white spaces, highlighting significant opportunity for profitable and innovative models. Each sector has seen growth in certain types of business models. The agriculture sector is leading in terms of profitable and impactful business models providing agriculture inputs, extension services, market linkages, and processing facilities. In clean energy, most models provide solar products and clean cookstoves. Some investors and incubators share that this has led to market saturation, and suggest greater participation in micro-grids and biogas models that supply electricity for small businesses and households, and thus, build stable revenue streams.

Most healthcare models have emerged since 2010. Healthcare offers opportunities across several segments, although currently, a majority of the models currently provide affordable basic healthcare services in rural areas where there is a huge supply gap. There is a significant opportunity in developing the cluster and providing customers with services from prevention and diagnosis to treatment and cure. Under-represented segments include preventive and diagnostic healthcare products and services, last mile medicine distribution, and emergency transportation services. In addition, micro-insurance is relatively unexplored in the region and the high private health expenditure can encourage low income customers to purchase insurance.

Among the less represented sectors, most education models provide education content through ICT-based models, but are unable to serve low income consumers who lack access to ICT. There are few models that provide affordable education and vocational training. Most of these models cater to the consumer and business needs, and there is a market for more such models in East Africa.

In the water & sanitation space, most enterprises provide safe drinking water and waste management services. There is a need for innovations to increase the viability of models providing sanitation facilities in urban areas and clean water in rural areas, as they struggle to build revenue streams despite established need. Lastly, digital finance has taken off in Kenya, but it is yet to catch up in other East African countries. Given that governments across East Africa are undertaking initiatives to improve ICT infrastructure, enterprises can tap opportunities in mobile money.

> *"Since a lot of innovations in e-distribution models are based on m-pesa's mobile banking platform, these models may not be easily replicated in other countries unless mobile wallet platforms are adopted and widely utilized.*
>
> ***I-DEV International***

Transfer of knowledge and resources through South-South collaboration can foster entrepreneurship in East Africa and stimulate further innovation. Such collaborations can also help transfer inclusive business models that have worked in regions such as South Asia into Africa in order to provide solutions to chronic challenges. For example, for-profit microfinance models have flourished in India, while Kenya has become the hub for innovations in mobile money. Collaboration can allow both countries to innovate and design ways in which mobile money can be used to increase microfinance penetration and lower default rates. Similar knowledge transfer is possible in agriculture extension services for better productivity, off-grid solutions for clean energy and healthcare solutions. In addition to transfer of knowledge and ideas, collaborations can help existing enterprises replicate their models in new markets enabling them to expand their customer base.

For the most part, entrepreneurial activity in East Africa is restricted to Kenya. Concerted efforts to build a strong entrepreneurial ecosystem will eventually support a larger number of innovation focused enterprises across the region. Over the last decade, the entrepreneurial ecosystem in Kenya has strengthened and encouraged a number of young enterprises. More entrepreneurs in Kenya look upon entrepreneurship as a prospective career option, beyond just subsistence. As a result, Kenya is the birthplace of some of the most inspiring innovations and entrepreneurs are not only developing high-growth models, but also helping create employment. In other East African countries, entrepreneurship is still mostly seen as a means of gaining employment. Although, individual governments are undertaking initiatives to strengthen infrastructure and ease legal frameworks, it is equally important for strong private sector players capable of seeding entrepreneurship to step in and expand their line of work beyond Kenya. Organizations that have the capacity to provide end-to-end support to entrepreneurs through all stages: idea, business plan, revenue, profit, and scale are required to give a boost to the entrepreneurial capabilities in other countries.[6]

6 Catalysts for Change: Creating an Eco-system for Young Entrepreneurs in East Africa. Intellecap. 2015

SETTING THE CONTEXT

The African Economic Outlook estimates that East Africa will be the fastest growing region in the continent in 2016. The region is expected to grow at a promising 6.7% in 2016, while on an average, Africa is expected to grow at 5%.[7] Five countries in the region: Ethiopia, Kenya, Tanzania, Rwanda and Uganda are collectively home to more than 237 million people, almost 10% of Sub-Saharan Africa's population.[8] Over the last five years, these countries have demonstrated stable growth rates and increase in per capita income attributed to factors such as political stability, urbanization, and enabling macroeconomic policies. Africa was ranked the world's second most attractive investment destination in 2013 attracting traditional, angel, and impact investors. More than US$9.3mn has been disbursed by Development Finance Institutions (DFIs) and other impact investors in East Africa, further fostering economic growth.[9]

> *"The BoP now features on both sides of the value chain, as producers and consumers.*
>
> ***Nicolas Chevrollier,***
> ***BoP Innovation Center***

Although the economic growth figures for the region are impressive, it has not translated into inclusive economic development. The benefits of the African growth story are not evenly distributed, and the region is severely affected by rising inequality of income and economic opportunities. The average human development index (HDI) score of the region is less than 0.5, signifying that the region fares poorly in terms of health, education, and purchasing power. Africa is considered the 'youngest' continent in the world with more than 200 million people aged between 15 and 24 years. East African youth, however, find it difficult to get suitable employment.[10] More than 70% of the region's population is engaged in the agriculture sector, which is characterized by disguised unemployment.[11] Less than 33% of grade three students in the region have basic numeracy and language skills.[12] There are approximately 0.6 hospital beds, fewer than 0.2 physicians, and only 0.8 nurses and midwives per 1,000 people. Consequently, more than 60% of the deaths in East Africa occur due to preventable and treatable diseases.[13] Similarly, only 20% of the region's population can avail of grid electricity, resulting in high dependence on harmful sources of energy such as biomass and kerosene.[14] Limited availability of electricity also dilutes the impact of development efforts in other sectors.

7. African Economic Outlook. African Development Bank. OECD Development Center. UNDP.2015.
8. Official Estimates by the National Statistics Departments of each country.
9. Landscape for Impact investing in East Africa. Global impact Investing Network. 2015.
10.State of Education in Africa Report. The Africa America Institute. 2015.
11. From multiple country reports. Causes of Unemployment in Kenya. Kenyaplex. 2012.
12. Are Our Children Learning. Literacy and Numeracy Across East Africa. Uwezu. 2013.
13. World Development Indicators. World Bank Data. http://data.worldbank.org/indicator/SH.DTH.COMM.ZS
14. Access to Electricity. World Development Indicators. World Bank Data. http://data.worldbank.org/indicator/EG.ELC.ACCS.ZS

These development challenges significantly impact the lives of the low income population. While governments across the region have made considerable progress over the last few years, other stakeholders including the private sector need to contribute with complementary efforts to accelerate progress. When channeling investments, private sector players seek destinations and sectors that offer ease of setting up and running business operations. The presence of geographical, infrastructural, and socio-economic barriers give rise to a variety of market challenges. These market challenges have had two key implications in East Africa: they have constrained mainstream businesses from entering risky markets and market segments, and triggered the emergence of a special class of entrepreneurs who seek to maximize social impact while simultaneously pursuing profit.

Market Challenges: Key Triggers To Impact Entrepreneurship

In developing countries, markets have a tendency to fail or to operate at suboptimal levels due to six key challenges. Each of these challenges or gaps reduces the efficiency of how markets operate and increases the risk of enterprises that operate in East Africa.

FIGURE 4: KEY MARKET CHALLENGES IN EAST AFRICA

Market challenges in East Africa are primarily related to barriers to productivity, quality, reach/ availability, viability, motivation, and scale. These interlink to erode the business case for enterprises. Productivity, as a measure of output created per unit of input used, is a key determinant of an economy's performance. In East Africa, and especially in the less developed regions, resources tend to be underutilized.[15] The agriculture sector is characterized by disguised unemployment, while the absence of other marketable skills increases pressure on the sector. Similarly, limited availability of electricity impacts industrial productivity. For those at the base of the pyramid, low productivity results in a vicious circle of poverty which is difficult to escape without external intervention.

Limited purchasing power of the low income population makes it difficult for producers and service providers to viably supply quality products to them. The affordability issue constrains many market players from targeting the low income population. In East Africa, more than 70% of the population lives on less

15. From multiple country reports. Unemployment and Underemployment Challenges in Kenya: Policy Gaps, Gapes & Gulfs.

than US$3.10 per day, resulting in their exclusion from markets.[16] They, therefore, make do with suboptimal solutions or alternatives for basic needs.

In addition to customers' limited capacity to pay, enterprises are also constrained due to infrastructure, uneven geographical distribution, and socio-economic constraints. For instance, enterprises seeking to provide lighting, electricity or basic healthcare need to invest significantly in building delivery and distribution channels. Customers' inability to pay coupled with the presence of substitutes that are cheaper or free further erodes the business case for enterprises to sustainably enter these markets. Enterprises that have attempted to re-engineer low cost solutions with limited features or inexpensive material have faced challenges due to the gap between the aspirations of consumers and their perceptions of these product offerings. Further, given the low density of population in rural areas, it is not always possible for enterprises to target or reach rural customers, especially if they are dependent on traditional channels for distribution.

Finally, first mover enterprises often have to build markets, create demand for their offerings, and educate customers. For instance, enterprises selling clean cookstoves have to educate customers about the side effects and health hazards of biomass use. Similarly, an enterprise which aims to improve sanitation facilities among the low income population will also need to educate the customers about the connection between health and hygiene. Despite their efforts, they often find that customers continue to opt for the lower cost alternative.

These market challenges prevent enterprises from scaling which eventually impacts their growth potential and hence, their capacity to raise capital from investors. Most mainstream enterprises, therefore, avoid targeting low income customers, seeking instead to serve customer groups that are easier to reach and demonstrate capacity and willingness to pay.

Impact enterprises most often emerge in areas where government or mainstream business solutions are unable to provide products and services to the low income population. Low incomes, poor awareness, and the absence of basic products and services cumulatively prevent those at the base of the pyramid from improving their quality of life. On the other hand, market challenges of viability, reach, and customer motivation make it difficult for mainstream enterprises to intervene. The challenges are even more evident in rural areas where the majority of population resides. In the last few years, many successful impact enterprises have debunked the myth that profit and impact cannot go hand in hand. They have demonstrated that they not only contribute to addressing development challenges, but also offer suitable returns to investors.

Today, DFIs, impact investors, policymakers, and local governments are increasingly recognizing the importance of impact entrepreneurship in driving solutions to some of East Africa's biggest challenges.[17] These stakeholders have together created an impact enterprise ecosystem which has been an important cornerstone steering the development process in the region.

FIGURE 5: MAINSTREAM VS. IMPACT SMEs

Market Challenges	Mainstream SMEs	Impact SMEs
Motivation		✓
Viability		✓
Productivity	✓	✓
Quality	✓	✓
Reach/Availability		✓
Scale	✓	✓

16. Poverty Headcount Ratio. World Development Indicators. World Bank Data. http://data.worldbank.org/indicator/SI.POV.2DAY
17. Catalysts for Change: Creating an Eco-system for Young Entrepreneurs in East Africa. Intellecap. 2015.

The increase in both, financial and non-financial support has also fostered impact entrepreneurship in the region. East Africa has seen a proliferation of entrepreneurship and innovative business models in nearly all critical sectors. Disruptive business models like m-pesa, M-Kopa, and Bridge International Academies have demonstrated how enterprises can scale impact. An Intellecap East Africa survey in 2014 found that 79% of the jobs created for youth in the age group of 18 to 34 were created by youth entrepreneurs in the region. In terms of entrepreneurial density, in Uganda, entrepreneurs form more than 28.1% of the population, the highest in the world. East Africa has also seen significant interest of investors and more than 155 impact investors operate in the region. In addition, significant official development assistance and grants flow into critical sectors in the region and act as incentives for impact entrepreneurs. Private equity investors focus on the food and beverage, agribusiness, retail, healthcare, and financial services sectors.[18] Donors and grant making institutions channel much of their support to the water & sanitation and energy sectors.[19]

FIGURE 6: DRIVERS OF IMPACT ENTREPRENEURSHIP

Source: Intellecap Analysis

Besides investor support, there has also been an increase in the number of organizations providing business advisory support to entrepreneurs. Many of them focus on idea stage entrepreneurs and provide much needed pre-incubation support. The region has also seen a growing number of competitions for aspiring and new entrepreneurs such as the African innovation Prize,[20] Ashoka Change Maker's Youth Venture Program,[21] and the Future Forward Challenge.[22] Initiatives such as the Sankalp Forum[23] facilitate dialogue and discourse around impact entrepreneurship, and connect entrepreneurs with potential investors, further strengthening the ecosystem for impact enterprises.

Impact Entrepreneurs and their Business Models in East Africa

Impact enterprise models are built around three levers or types of business responses to development challenges: Access, Ability, and Knowledge.

Access enterprises engage with the low income population as consumers and provide them with products and services. An enterprise which sells solar home systems in off-grid locations is an example of an Access model. Ability enterprises engage with the low income population as producers or partners, and provide them with skills

18. Catalysts for Change: Creating an Eco-system for Young Entrepreneurs in East Africa. Intellecap. 2015.
19. The Landscape for Impact investing in East Africa. Global impact Investing Network. 2015.
20. Africa Innovation Foundation. http://innovationprizeforafrica.org/
21. Ashoka Innovators for the Public. https://www.ashoka.org/youth-venture
22. Ashoka Changemakers. https://www.changemakers.com/futureforward
23. Intellecap Advisory Services. http://www.sankalpforum.com/

and market linkages to gain livelihoods and earn incomes. An enterprise that provides skills training in hospitality or ICT is an example of an Ability model. Knowledge enterprises disseminate information or knowledge to increase awareness and bring about behavior change among the low income and underserved populations. An enterprise that shares information on maternal health and provides information on the required vaccinations is a Knowledge model.

FIGURE 7: ENGAGEMENT OF IMPACT ENTREPRENEURS WITH BOP ACROSS THE THREE LEVERS

	BoP Involvement	Value to BOP	Models	Target Market
ACCESS	As consumers of critical products and services	Improved access to critical products and services that are high quality and affordable	Clean cooking solutions, financial services, agriculture inputs, and mobile clinics	Rural and urban BOP
ABILITY	As partners in enterprise value chain and/ or skill development	Through skills improvement, increased productivity and output	Vocational education and training, agro-processing and capacity building of farmers	Rural, urban and export market (middle and upper income)
KNOWLEDGE	As consumers of information	Improved awareness and behavior change towards better quality of life	Information linked to maternal health and good farming practices	Rural and urban BOP

Business Model Analysis

Impact enterprises in East Africa, across the three levers, demonstrate a wide range of characteristics and business models. Some of them target rural markets, while others serve urban markets. They adopt different distribution models to address challenges in reach and availability – ranging from directly selling in these markets to franchise and online models. Some of them leverage ICT (internet and mobile telephony) to scale and reach a wider audience. Enterprises have also found ways to templatize their services in order to achieve scale rapidly. Some enterprises use mobile phones and internet to encourage behavior change. They have received financial and non-financial support from a variety of sources, and seek to expand within their existing markets and to other countries. Successful impact enterprises in the region have not only made the best use of the existing resources and their environment, but also provide solutions to some of the key development challenges while ensuring financial sustainability.

In order to understand the different elements of impact enterprise models in East Africa, this report adopts a business model canvas tailored for impact businesses. The canvas acts as the basis for analysis and evaluation of trends in the database and survey responses of East Africa's impact entrepreneurs.

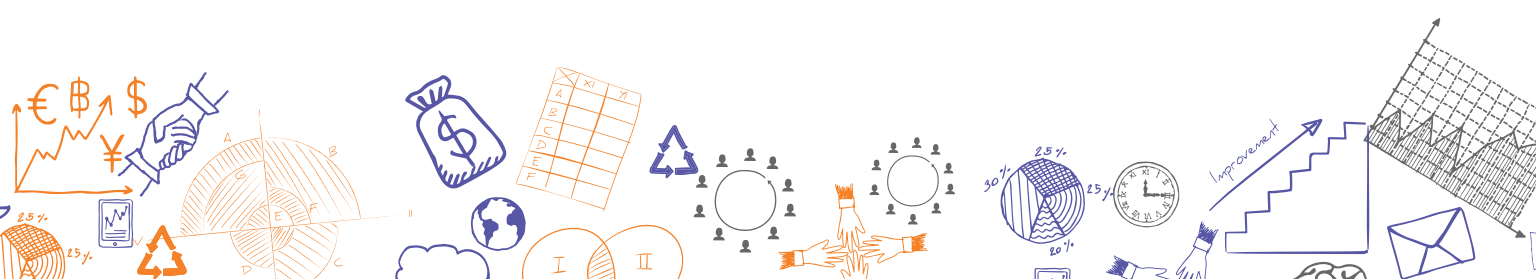
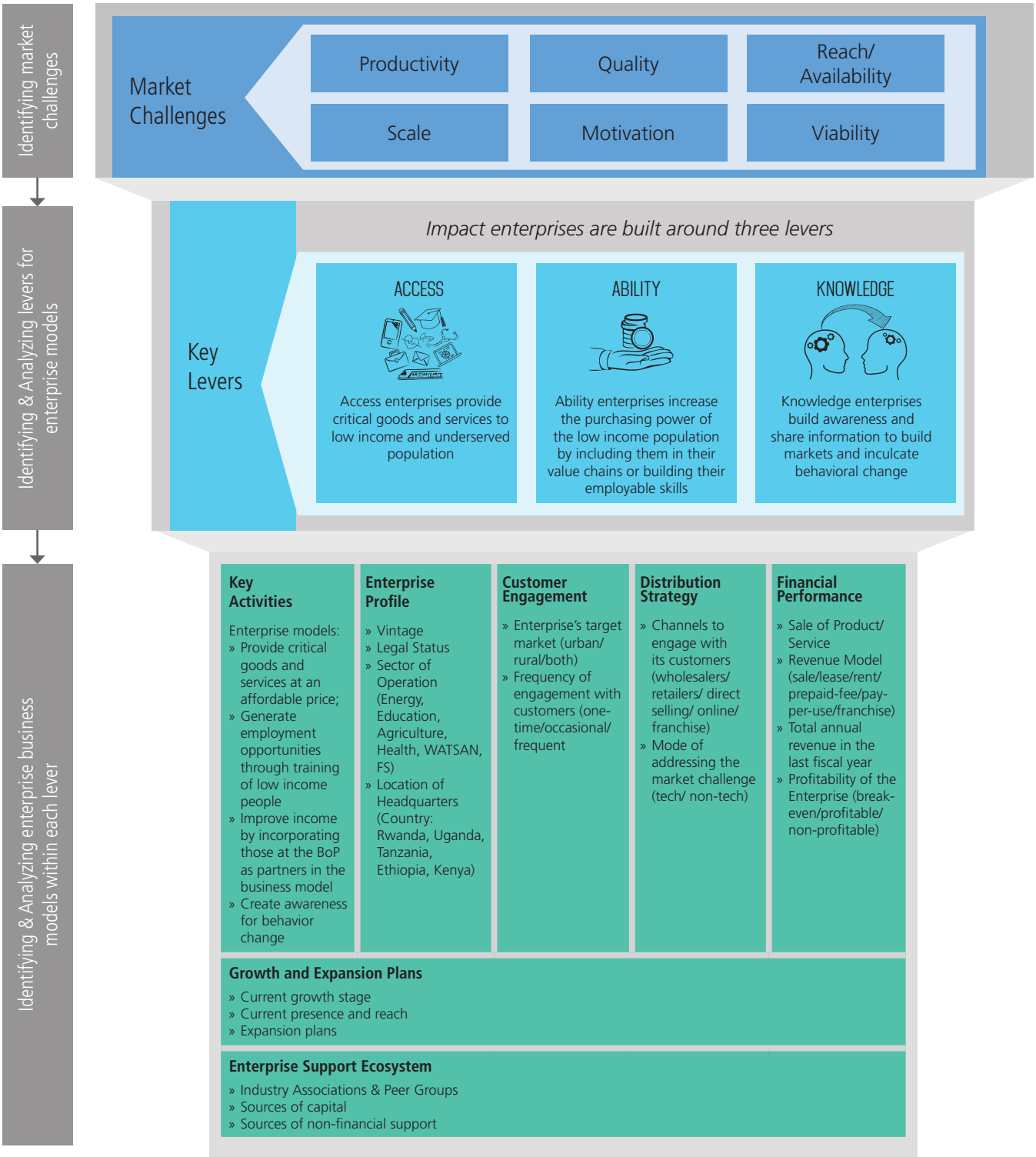


FIGURE 8: RESEARCH FRAMEWORK FOR EXAMINING IMPACT ENTERPRISES ACROSS EAST AFRICA



THE IMPACT ENTERPRISE LANDSCAPE IN EAST AFRICA

>50% of the impact enterprises in East Africa are located in Kenya

78% of the impact enterprises are headquartered in urban areas

>75% of the impact enterprises cater to both rural and urban customers

65% of the enterprises provide critical products and services to low income and underserved population

108 enterprises of the total 125 respondents plan to expand their presence beyond their home country in next one year

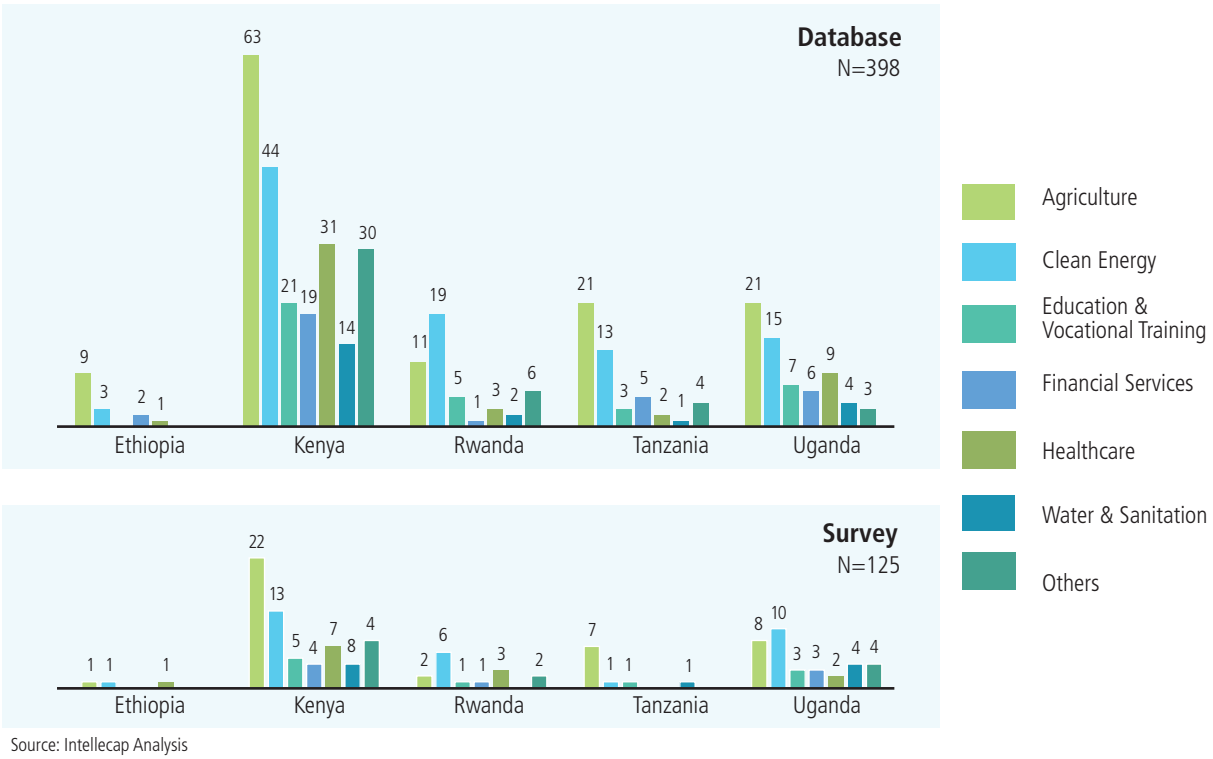
Based on Intellecap's internal database of 398 enterprises and an online survey with responses from 125 enterprises

This study examined enterprise models across five countries - Ethiopia, Kenya, Rwanda, Tanzania and Uganda. The enterprises were selected across critical needs sectors such as agriculture, clean energy, financial services, education, healthcare, and water & sanitation. Secondary research of Intellecap's internal database of 398 business models and an online survey with responses from 125 enterprises inform this report.

There are both, traditional and innovative impact enterprises in East Africa. Some models we examined have innovative product designs, distribution models, and pricing and payment solutions to overcome the socio-economic and infrastructure barriers that hinder inclusive growth in the region. Others build on the region's reliance on agriculture, and attempt to address challenges in order to allow the sector achieve unfettered growth. This section presents an overview of the landscape of impact enterprises in East Africa across sectors and geographic distribution, vintage and stages of development, pricing and distribution strategies, financial and non-financial support, and profitability of the business models.

Impact enterprises are concentrated in Kenya, with most enterprises providing products such as solar home systems, clean cookstoves and agriculture inputs, and services such as market linkages for low income producers. Within East Africa, there is a concentration of entrepreneurship in Kenya, with more than 50% of the enterprises in Intellecap's database and survey operating there. Uganda, a growing impact enterprise destination, follows with 27% of the enterprises in our database. The impact enterprise space is nascent in Rwanda, Tanzania and Ethiopia.

FIGURE 9: IMPACT ENTERPRISES ACROSS SECTORS AND COUNTRIES

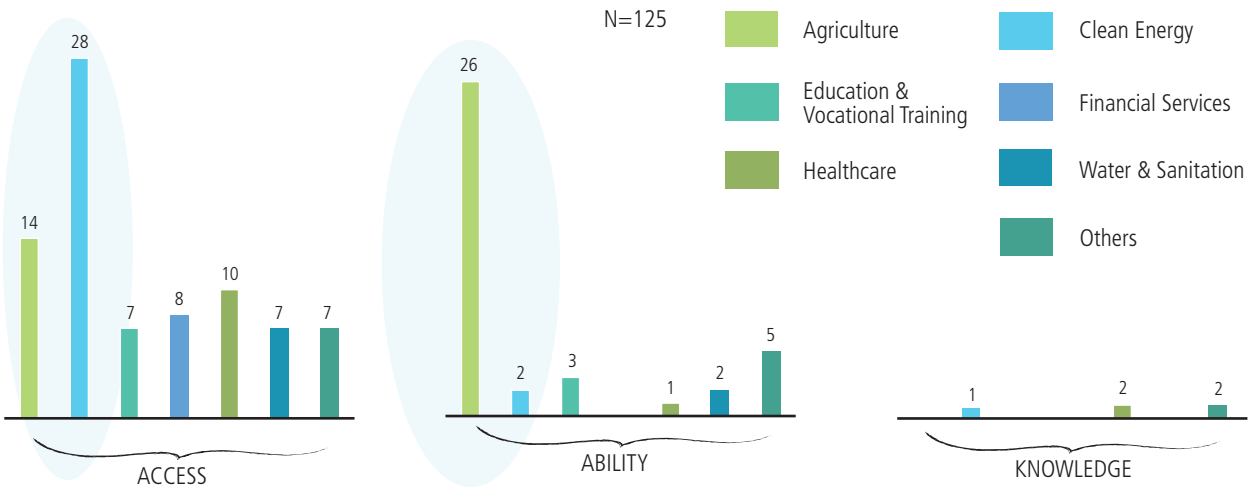


Source: Intellecap Analysis

Across the five countries though, a large number of enterprises focus on clean energy (solar/ biomass products and clean cookstoves). A significant number of enterprises provide agriculture inputs and create market linkage for farmers. The number of education, healthcare and waste management models is limited, while enterprises offering digital financial services are mostly found in Kenya given the high uptake of digital money and deep penetration of telecom infrastructure in the country.

Access enterprises account for a majority of all the impact businesses. Around 78% of these enterprises are headquartered in urban areas, and more than 75% cater to both rural and urban customers. A majority of the impact enterprises in the region, across all three levers, are located in Kenya. Most of the Access enterprises provide clean energy products and agriculture inputs. Most of the Ability enterprises provide agriculture-based skills and training and help low income customers improve their income levels through market linkage.

FIGURE 10: IMPACT ENTERPRISES ACROSS LEVERS AND SECTORS

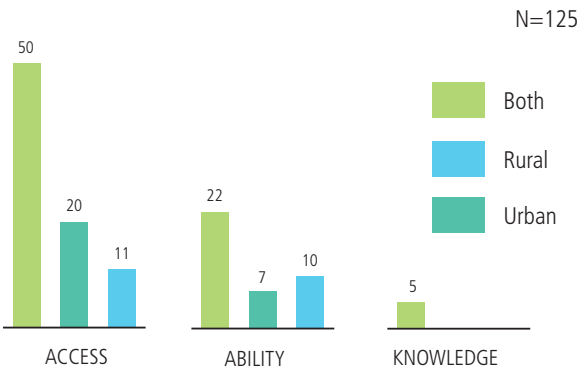


Source: Intellecap Analysis

Given the higher density of population, and better access to markets and infrastructure in urban areas, most of the enterprises across the three levers are headquartered in urban areas.

Entrepreneurship in East Africa is young; most enterprises operate in one market with a single product/service, or are increasing their customer base by adding more products/services in the same market. Around 60% of the enterprises in East Africa have been established in the last five years. Primary interviews indicate that the strong entrepreneurial

FIGURE 11: IMPACT ENTERPRISES ACROSS LEVERS AND TARGET MARKET

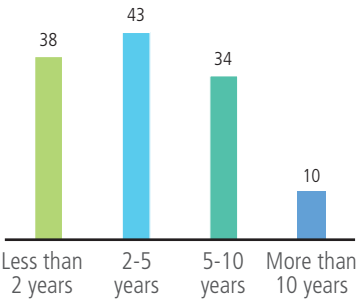


Source: Intellecap Analysis

ecosystem in the region has contributed to this growth. Kenya has the largest number of early and growth stage enterprises. Reasons for this surge in entrepreneurship in Kenya include ease of doing business (Kenya has an ease of doing business rank of 108 compared to 146 of Ethiopia[24]), availability of human capital and increased flow of investments in the region to support businesses. There are about 136 impact capital vehicles managed by close to 95 impact investors in Kenya.[25] Most of the early stage companies operate in the clean energy sector

FIGURE 12: IMPACT ENTERPRISES BY VINTAGE

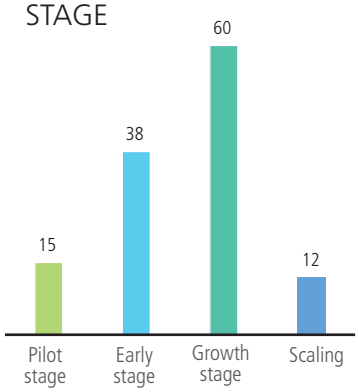
N=125



Source: Intellecap Analysis

FIGURE 13: IMPACT ENTERPRISES BY GROWTH STAGE

N=125



Pilot stage: *Testing the market with product/service*

Early stage: *Fully rolled out product/service in one market*

Growth stage*: Growing in existing marketwith new customers and/or products and services*

Scaling: *In new markets and territories*

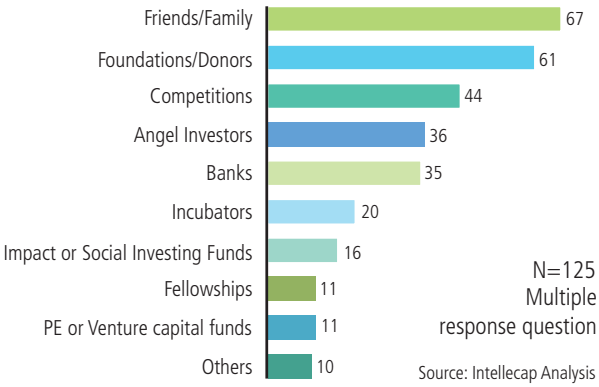
Source: Intellecap Analysis

given the high demand for electricity in the low income communities. Most of the growth stage enterprises are agribusinesses providing agricultural inputs, market linkages to farmers, and food processing and distribution.

Since most enterprises are in the early stage, they rely on personal funds, and friends and family for seed funding. Across the region, the demand for financial and non-financial support for younger enterprises outstrips supply. A large number of enterprises received support from donors and foundations. Competitions promoting impact entrepreneurship are a popular source of idea/pilot stage financial support in the region. Angel investors have also directed capital towards impact enterprises. However, given that more than 50% of the enterprises are less than five years old with revenue less than US$100,000; demand for small ticket investments outstrips supply.

Most entrepreneurs received non-financial assistance from peer-learning through professional networks, other entrepreneurs and board members. Formal incubator support, which is reasonably well developed in East Africa, is still unable to support the growing number of enterprises. Among the survey respondents, only 50% received non-financial

FIGURE 14: SOURCES OF FINANCIAL SUPPORT



Source: Intellecap Analysis

24. Doing Business Economy Rankings. World Bank. http://www.doingbusiness.org/rankings
25. The Landscape for Impact investing in East Africa. Global impact Investing Network. 2015.

Examples of financial and non-financial support in East Africa

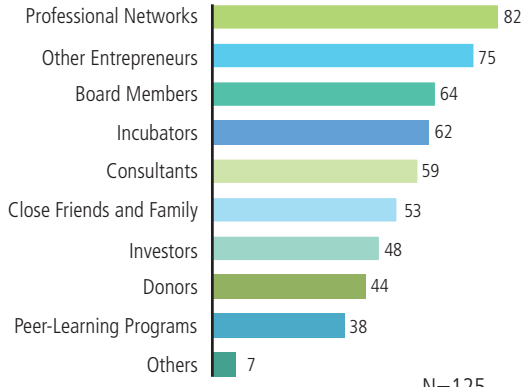
Business Competitions

- Anzisha Prize
- Africa Innovation Prize
- Innovate Kenya

Incubators and Accelerators

- AfriLabs, Pan Africa
- Enablis, Rwanda
- Hivecolab, Uganda
- Ice Addis, Ethiopia
- Klab, Rwanda
- Unreasonable Institute, Kenya

FIGURE 15: SOURCES OF NON-FINANCIAL SUPPORT



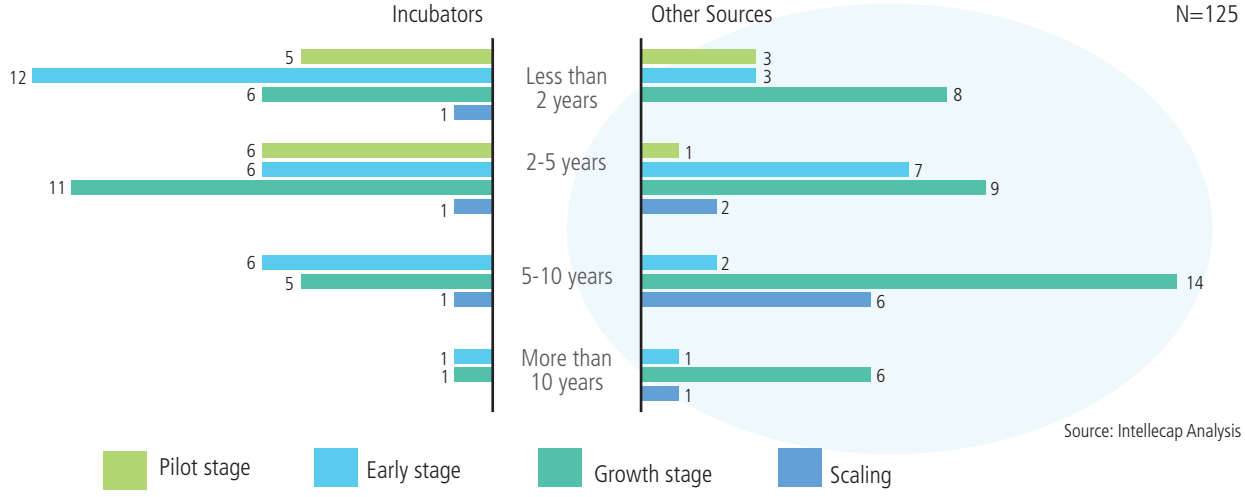
Source: Intellecap Analysis

support from incubators, with most of them in the early stages. Entrepreneurs shared that they lack formal incubator/accelerator support in the growth stages, as they explore new products, services and customer groups in East Africa.

While most enterprises have not yet achieved break-even, a small proportion of Access and Ability models are profitable. Among the survey respondents, a higher proportion of Ability

> *"Business models of many social enterprises are not yet market-driven; they are still at least partially dependent on traditional grants which dilute the urgency of proving concept with paying customers.*
>
> ***Lia Mayka***
> ***Village Capital***

FIGURE 16: INCUBATION SUPPORT FOR IMPACT ENTERPRISES BY GROWTH STAGES AND VINTAGE

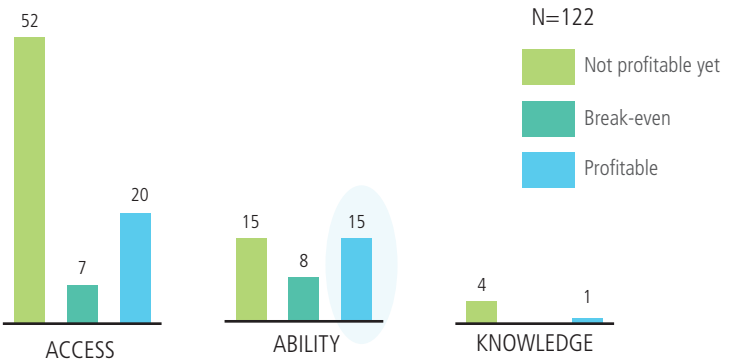


Source: Intellecap Analysis

enterprises are profitable. These models mostly build skills, aggregate farm produce, and go to market with an end-to-end approach. Several of these enterprises are able to achieve break-even as they target higher-income groups of consumers and export markets, and are therefore, unhindered by pricing limitations.

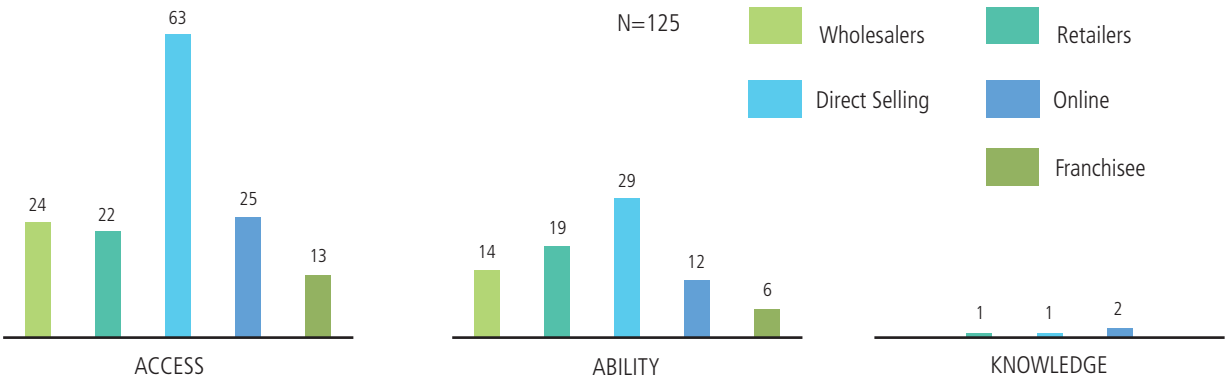
Although enterprises have attempted to increase their reach with multiple approaches, direct selling (by enterprise-owned sales teams) is the most common approach to engage with customers in East Africa. Fewer enterprises leverage other less conventional models of distribution such as village-level women micro-entrepreneurs and community/ credit groups. Knowledge enterprises mostly use online models as it allows them to disseminate information to a larger audience and optimize costs. These enterprises however, struggle to achieve profitability as they often lack steady revenue streams and are typically grant-funded.

FIGURE 17: PROFITABILITY OF IMPACT ENTERPRISES ACROSS LEVERS



Source: Intellecap Analysis

FIGURE 18: DISTRIBUTION MODELS OF IMPACT ENTERPRISES ACROSS LEVERS



Source: Intellecap Analysis

Most enterprises take more than five years to break even or attain profitability across East Africa. Most young enterprises are based in Kenya; in contrast, there is a higher number of mature enterprises in Uganda. The breakeven period for most enterprises in the region is high given the market complexities. A majority of enterprises started earning profits between 5 to 10 years of existence. Most enterprises that are less than five years old are not yet profitable.

A very small number of enterprises achieved break-even or became profitable in less than 5 years. Most of them operate in the clean energy sector. Nearly 50% of them, however, were supported by grants and only 30% raised equity. Enterprises that have reached break-even after 5 years of operation work in sectors such as education and clean energy. Here too, over 75% of the enterprises are supported by foundations through grants.

FIGURE19: IMPACT ENTERPRISES ACROSS VINTAGE AND COUNTRIES

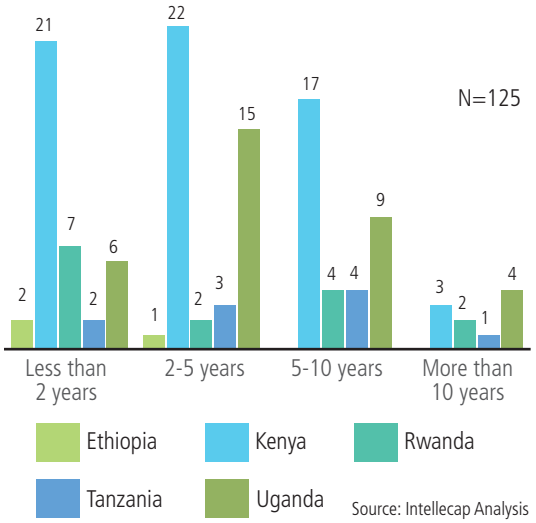
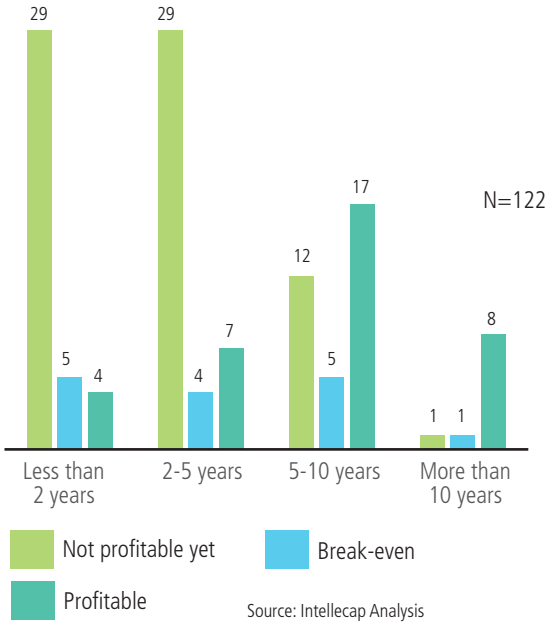


FIGURE20: PROFITABILITY OF IMPACT ENTERPRISES BY VINTAGE



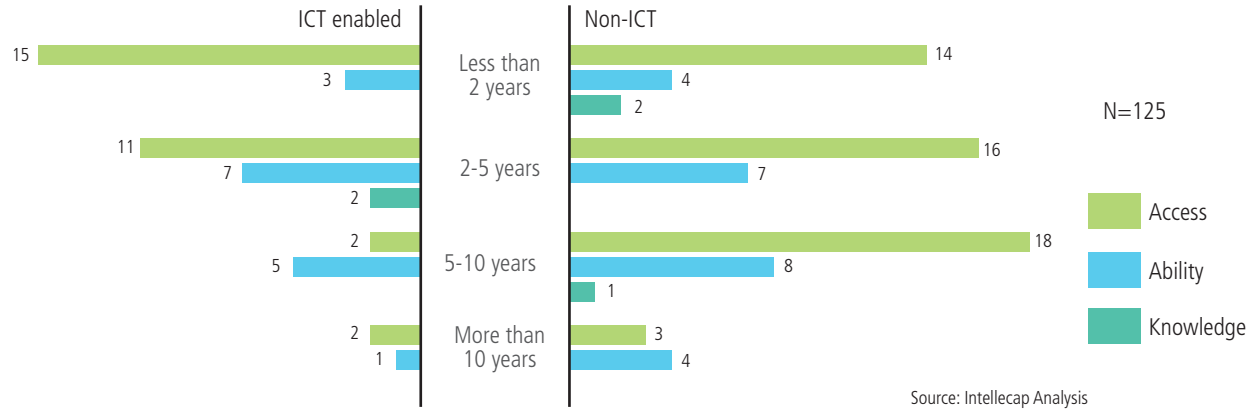
Several enterprises have developed internet/mobile based solutions to increase distribution, optimize payment solutions or design innovative products and services. Many enterprises that are less than two years old, particularly in the financial services and education sectors, use internet/mobile based applications to increase access to products.

Enterprises across levers use ICT in different ways. Access enterprises use ICT in payment and distribution innovations to improve reach and affordability. Ability enterprises use ICT to integrate value-chains to improve efficiency and optimize costs. Knowledge enterprises depend on ICT to disseminate information to achieve scale.

Uganda is the most popular expansion destination for enterprises due to its evolving entrepreneurship ecosystem and large potential customer base. Around 108 enterprises of the total 125 respondents plan to expand their presence beyond their home country in the next year. Most enterprises operating in Kenya plan to expand to Uganda, followed by Tanzania. Primary

> *"Businesses that are scalable and successful are tech-enabled but do not sell tech as an output itself.*
>
> ***Niraj Varia***
> ***Novastar Ventures***

FIGURE 21: USE OF ICT BY IMPACT ENTERPRISES BY VINTAGE



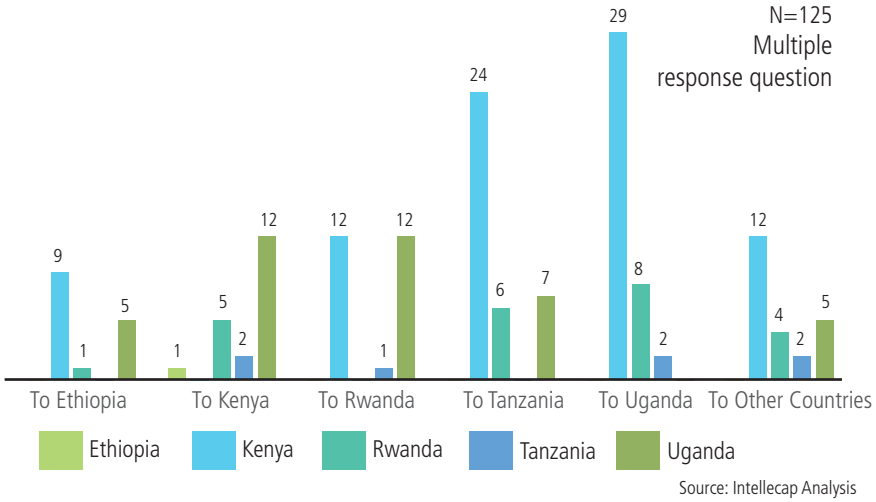
Source: Intellecap Analysis

interviews indicate that restrictions on land ownership in Tanzania probably make Uganda a more favorable destination. Uganda also ranks higher than Tanzania in ease of doing business. Around 40% of enterprises that operate outside Uganda, plan to expand to the country.

Although Rwanda ranks the highest in terms of ease of doing business, it has a small domestic market. As per the survey, fewer enterprises want to expand to Rwanda in comparison to Uganda and Tanzania. Around 30% of the enterprises with operations in Uganda, Tanzania and Rwanda plan to expand to Kenya. Nearly 50% of them are from the agriculture and clean energy sectors, and most of them are Access models providing agriculture inputs or clean energy products. Among the 15 enterprises that indicated plans to expand to Ethiopia, several are from the education and agriculture sectors.

Besides countries in East Africa, other countries of interest to Impact enterprises include Malawi, Zambia, Mozambique, Nigeria, Burundi, DR Congo, South Sudan, Togo and Ghana.

FIGURE 22: EXPANSION PLANS OF IMPACT ENTERPRISES

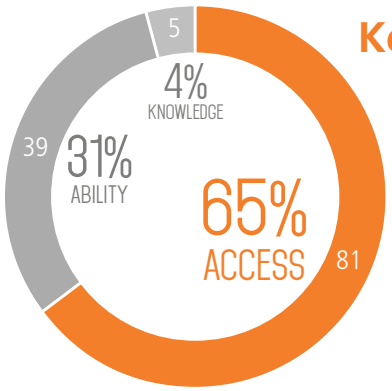


Source: Intellecap Analysis

Enterprises across the three levers cater to diverse customer demands and have distinct business models. Each of these enterprises is using a blend of innovations to serve their customers efficiently. The following sections dive deeper into the business models across the three levers.

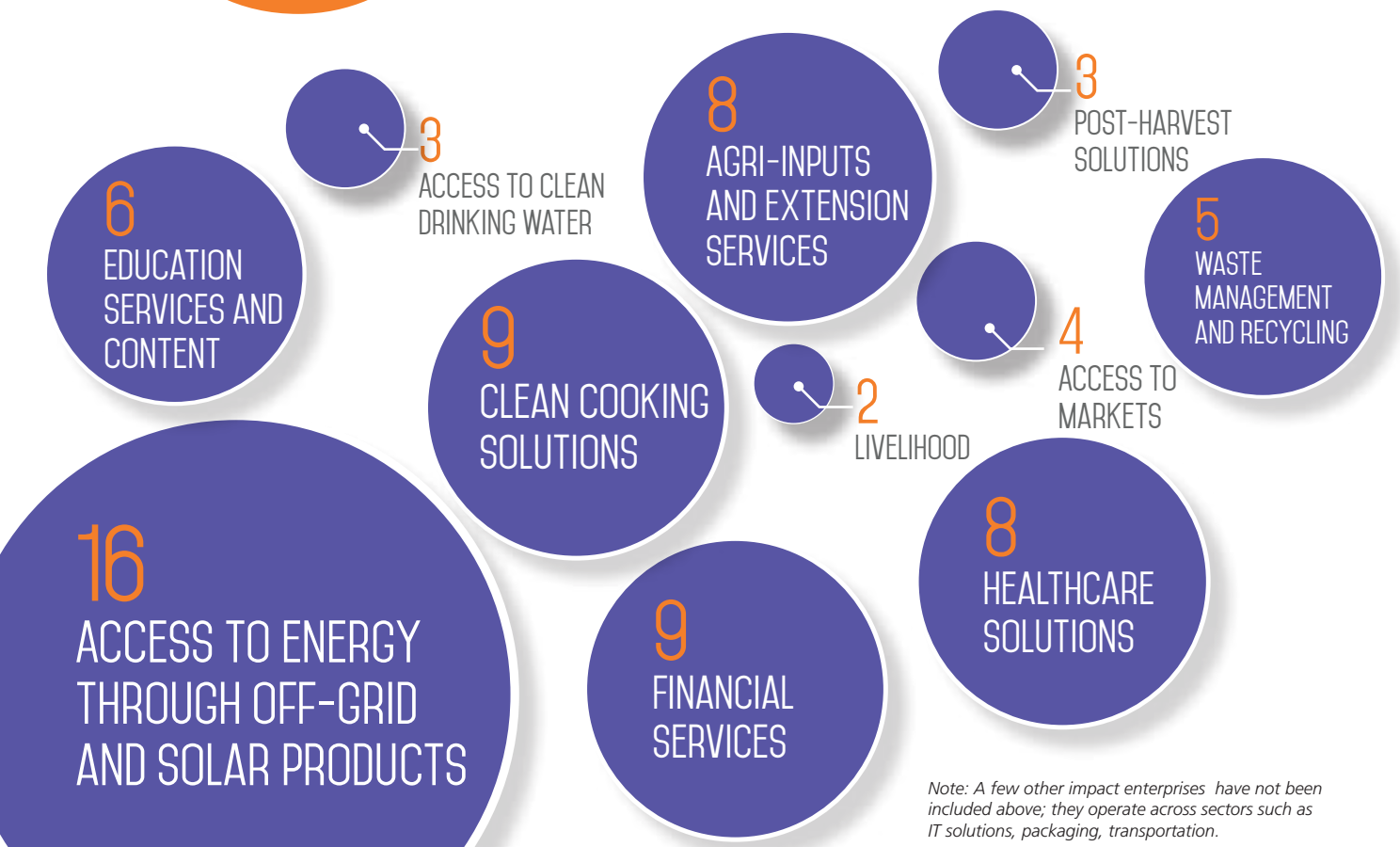
ACCESS

Access enterprises provide critical goods and services to low income and underserved population



Key trends

- Pricing and payment innovations to improve affordability
- Distribution innovations to increase reach
- Templatizing products and services to achieve scale with quality



Note: A few other impact enterprises have not been included above; they operate across sectors such as IT solutions, packaging, transportation.

ACCESS

Impact enterprises provide increased access to products and services across sectors and target markets enabling the underserved to improve their quality of life and graduate to better standards of living. Among the impact enterprises examined in the study, around 65% (81 of 125) seek to provide critical products and services to the low income population in East Africa.

Key Activities

Access enterprises in East Africa innovate with pricing, distribution and scale strategies to provide quality products and services to low income and underserved populations. In East Africa, access to products and services is restricted due to a range of challenges such as the lack of purchasing power among target consumers, the absence of infrastructure for last mile delivery, the lack of motivation to shift away from suboptimal solutions, and other socio-economic barriers. These challenges often induce low income families to not only rely on suboptimal solutions, but also pay the "poverty penalty". The use of biomass and kerosene for energy is one example of dependence on suboptimal solutions. In addition to paying a premium price for available alternatives, poor families also run a health risk. More than 600,000 lives are lost in Sub-Saharan Africa every year due to exposure to biomass smoke, thus, increasing indirect costs associated with its use.[26] Similarly, due to limited access to quality and affordable healthcare, people living in remote areas often have to travel long distances and incur high travel costs and lose daily wages. In remote and underserved areas, where even suboptimal solutions are absent, people do not have any option but to forego basic facilities like education, maternal and neonatal healthcare, clean water and sanitation facilities.

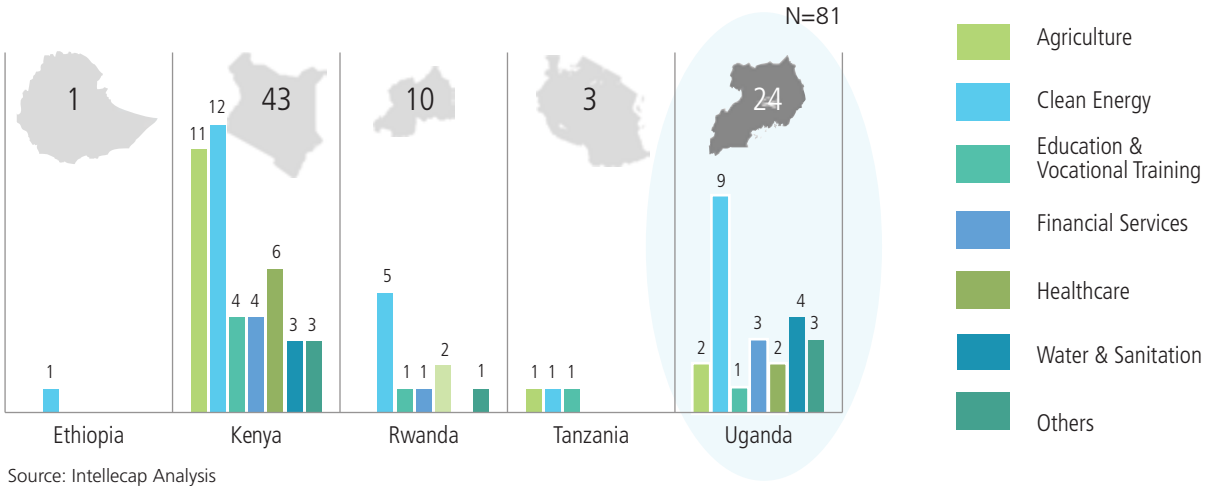
Enterprises venturing into these markets often need to educate customers and build demand, paving the way for others, leading to a "first mover disadvantage". This deters mainstream businesses from engaging with the underserved. The gap between the demand for critical products and their supply has, thus, created business opportunities for Access enterprises that develop innovative and affordable products and services. They also experiment with new approaches to increase reach, while standardizing and templatizing their offerings to overcome scale challenges.

Enterprise Profile

Most Access enterprises provide products such as agriculture inputs, solar home systems and services such as clean energy solutions. Over 50% of the Access enterprises are headquartered in Kenya. Uganda has the potential to see increased entrepreneurial activity as the government is committed to improving the business environment and strengthening the emerging impact entrepreneurship ecosystem in the country. The small population of Rwanda inhibits entrepreneurship currently as most businesses find it difficult to build financially viable models given the small consumer base. While most of the older models were established in countries such as Uganda, Rwanda and Tanzania, the younger models are being established more rapidly in Kenya.

26. Bringing Clean, Safe, Affordable Cooking Energy to Households across Africa: An Agenda for Action. The New Climate Economy. 2015.

FIGURE 23: ACCESS ENTERPRISES ACROSS COUNTRIES AND SECTORS



Source: Intellecap Analysis

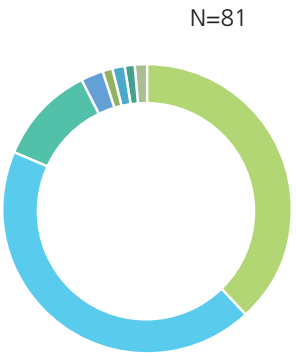
Most Access enterprises in East Africa currently focus on the agriculture, clean energy, and healthcare sectors. Agriculture-based impact enterprises provide inputs and access to markets. A significant number of enterprises offer clean energy solutions as only 20% of the region's population is connected to the grid.[27] These enterprises mainly provide solar home systems, cookstoves, biomass pellets, and off-grid electricity supply in off grid areas. Healthcare enterprises provide improved access to healthcare services and products that focus on health and hygiene. There are a few education models that provide interactive learning solutions. Enterprises in water & sanitation have emerged recently and provide interesting waste management and recycling solutions. Fintech enterprises offer financial services using mobile and internet to improve access to finance among low income communities.

Majority of the enterprises were established in the last 5 years and consequently most enterprises operate in early and growth stages of the enterprise life cycle. Access enterprises are relatively young with close to 70% (56 of 81 enterprises) of the enterprises established in the last 5 years. Most of the older Access enterprises provide clean energy and agriculture related products and services, while younger enterprises are found in healthcare, financial services, and water & sanitation.

Most enterprises that were established in the last two years operate in the early stage, with their product or service rolled out in one market. Typically, enterprises take around 3 years to move to the growth stage, where they deepen their engagement in the existing market with new products and services or expand to new markets.

FIGURE 24: AVERAGE EMPLOYEE BASE IN ACCESS ENTERPRISES

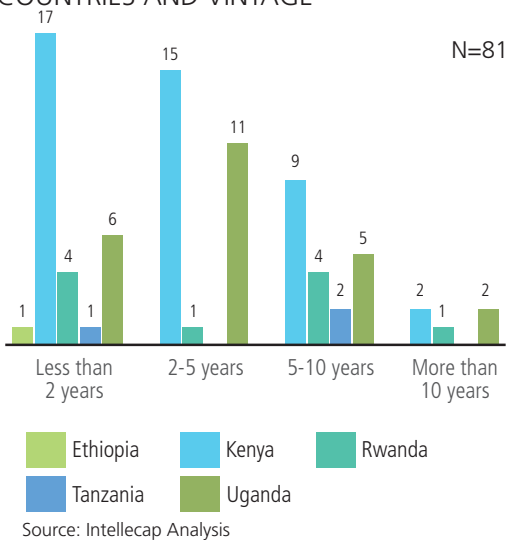
Full time employees	Total
0-5	31
6-20	35
21-40	9
41-60	2
81-100	1
101-200	1
201-500	1
>500	1



Source: Intellecap Analysis

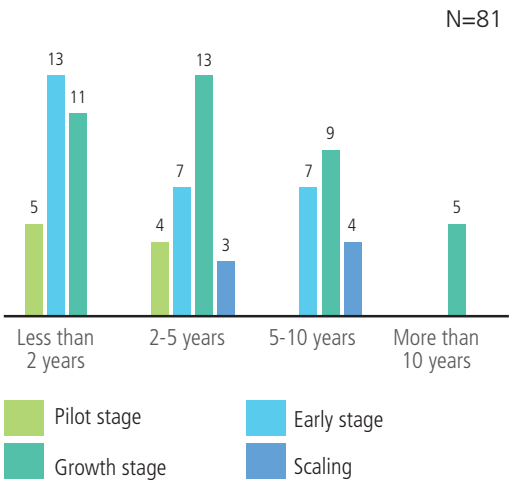
27. Access to Electricity. World Development Indicators. World Bank Data. http://data.worldbank.org/indicator/EG.ELC.ACCS.ZS

FIGURE 25: ACCESS ENTERPRISES ACROSS COUNTRIES AND VINTAGE



Source: Intellecap Analysis

FIGURE 26: ACCESS ENTERPRISES ACROSS STAGE AND VINTAGE



Pilot stage: *Testing the market with product/ service*

Early stage: *Fully rolled out product/service in one market*

Growth stage*: Growing in existing market- with new customers and/or products and services*

Scaling: *In new markets and territories*

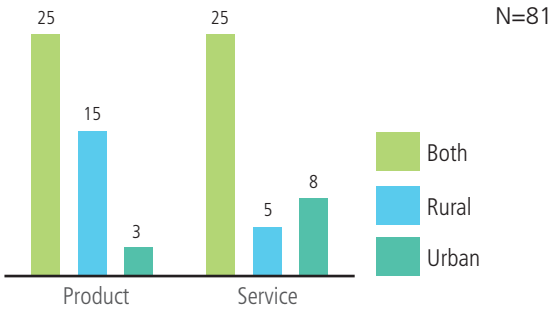
Source: Intellecap Analysis

Customer Engagement

A majority of Access enterprises have their headquarters in urban areas, but cater to both, urban and rural markets. More recent enterprises use innovative distribution and revenue models such as online selling and pay-per-use.

Majority of Access enterprises serving only rural markets provide products related to agriculture and clean energy, while a majority of Access enterprises which serve only urban markets provide services related to education, healthcare and water & sanitation.

FIGURE 27: TYPE OF OFFERING BY ACCESS ENTERPRISES ACROSS TARGET MARKETS



Source: Intellecap Analysis

There has been a shift in the way impact enterprises view affordability. Earlier, creating affordable products was synonymous to creating low-cost products with basic features. Impact enterprises now focus on designing innovative pricing and payment solutions for full-feature products and services. Limited purchasing power and irregular cash flows constrain and restrict the low income population in East Africa from accessing basic products and services. As per the latest World Bank Development Indicators data, over 60% of the population in East Africa lives on less than US$3.10 a day.[28] As a result, a majority of the population in the region finds it difficult to procure basic products and services.

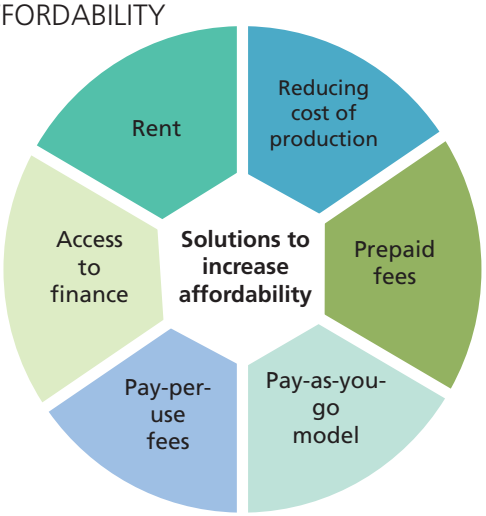
28. Poverty headcount ratio at $3.10 a day. World Development Indicators. World Bank Data. http://data.worldbank.org/indicator/SI.POV.2DAY

Impact enterprises realize that the low income population aspires and seeks to purchase products available to better-off customer groups, eschewing low cost options with reduced features (strongly demonstrated in mainstream products such as mobile phones). In contrast, enterprises that have provided the same product in smaller packs (hence lower prices, as seen in the sachet marketing success across products) or with payment options have been successful in increasing market penetration as it made high quality products more affordable. Similar innovations in production, payments and pricing to increase the affordability of critical products are observed among Access enterprise models.

As per our survey, enterprises that serve either only rural markets or both, urban and rural markets use a wider mix of revenue models. A number of young enterprises (0-5 years) have developed pricing innovations that allow consumers to opt for prepaid and pay-per-use options that support frequent low value transactions. A few clean energy enterprises also use ICT for designing payment solutions such as pay-as-you-go models that allow progressive ownership.

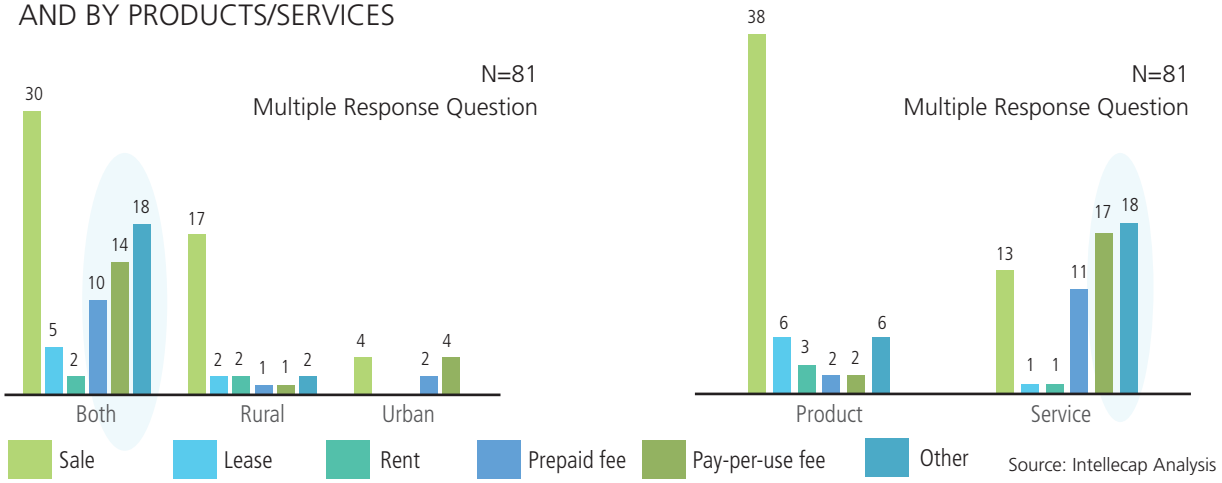
Traditional prepaid models based on cash cards, recharge vouchers, or subscription fees are popular in East Africa. A traditional prepaid model requires the customer to purchase a particular amount of credit before services can be used. Prepaid models create a win-win situation for both, low income customers and impact enterprises. For customers, the prepaid model allows them to purchase services as and when cash is available, while for enterprises, the model allows them to eliminate the risk of payment defaults. For instance,

FIGURE 28: POTENTIAL SOLUTIONS TO INCREASE AFFORDABILITY



Source: Intellecap Analysis

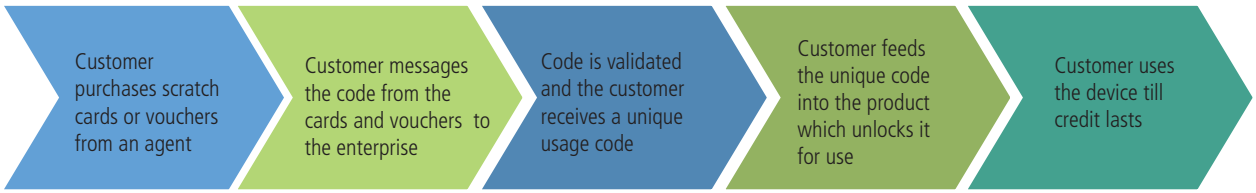
FIGURE 29: REVENUE MODEL OF ACCESS ENTERPRISES ACROSS TARGET MARKETS AND BY PRODUCTS/SERVICES



Source: Intellecap Analysis

enterprises such as Off:grid Electric, Tanzania and SunTransfer, Ethiopia and Kenya, allow customers to purchase energy vouchers and scratch cards from authorized agents which are used to validate the usage of a product. Similarly a prepaid fee referred to as a subscription fee model is also used by models providing services and online platforms that create market linkages or provide access to educational material. The fee allows the use of a service for a particular duration of time. For example, SokoNect uses a technology-based platform to eliminate brokers in the agriculture value chain, thus enabling farmers to access markets directly. Farmers prepay a pre-determined fee to use the platform.

FIGURE 30: HOW PREPAID MODELS WORK



Source: Intellecap Analysis

An increasing number of impact enterprises are using pay-as-you-go (PAYG) or progressive ownership models, which allow for real time monitoring of product usage while improving ease of payments.

The pay-as-you-go model is also referred to as a progressive ownership model or rent-to-own model. Many enterprises use this model to provide asset financing for the low income population. In this model, a consumer pays an initial deposit for an asset, and pays installments through mobile money or agents on a regular basis. Once the installments are paid to cover the balance cost, the consumer owns the product and can stop paying installments.

> *"Asset financing models like pay-as-you-go are scaling well in East Africa.*
>
> ***Niraj Varia,***
> ***Novastar Ventures***

M-Kopa is a pioneer in the use and development of the PAYG solution to create a rent-to-own model. When customers purchase a system from M-Kopa, they make an initial down payment of US$34, and pay the balance in equal daily installments in the form of top-ups of US$.50 approximately over a period of 12 months, and eventually own the system. If the customer stops paying before the 12 months, M-Kopa is notified through GSM sensors installed in the energy systems, and it has the option to halt the functioning of the system. Since M-Kopa, engages and observes a customer's payment behavior over time, it is able to assess the customer's credit behavior and history. Based on this credit information, the enterprise now provides financing for other products such as energy efficient cookstoves, smart phones, and water tanks. The financing facility, however, is only extended to customers who have successfully acquired products from M-Kopa in the past.

The model is now being used by many other solar home system providers including d.Light, Angaza Designs, and MESH Power. MESH Power uses the PAYG model to make micro-grid connectivity more affordable. In East Africa, the model is popular and has scaled rapidly only in the energy sector. The PAYG model also allows for tracking of usage data on a real-time basis helping enterprises improve their products through data analysis.

Pay-per-use models are increasingly popular in East Africa, and have helped enterprises build markets by shifting consumer preferences away from suboptimal solutions. Many Access enterprises have developed pay-per-use models that motivate the low income population to move away from suboptimal solutions. For example, Sanergy sells prefabricated toilets in urban slums of Kenya through a franchise model. Each toilet costs around US$500 which includes installation, painting, and daily waste collection charges. The franchisee is expected to provide toilet paper, soap, and a handwashing stand, and charges customers approximately 5 Kenyan Shillings (KES) per toilet use. Sanergy collects waste on a daily basis and converts it into fertilizer. It then sells the fertilizer at market prices, improving the sustainability of its business. Likewise, digital financial service providers such as Tracopay, which allows customers to make payments via mobile money, also charge a pay-per-use fee on every transaction. The small transaction fee increases uptake and also demonstrates the advantages of using mobile money. Inuka Pap, a mobile money platform that connects MFIs to potential borrowers for instant loans, charges a pay-per-use transaction fee.

Some Access enterprises have designed rental models which are preferred by low income consumers constrained by limited purchasing power and irregular cash flows. A few models charge a rental fee to provide products and services. Sanivation installs container-based toilets in homes and communities for free and charges a monthly fee for maintaining the toilet and collecting waste. The monthly fee is designed to be affordable and incentivizes consumers to demand the product and shift from using the less hygienic pit latrines. In turn, Sanivation uses the waste collected to produce charcoal briquettes which can be used as a cooking substitute to kerosene. Another enterprise, Baridi Stores, uses a similar model to solve one of the biggest challenges in East Africa: wastage of agricultural produce due to lack of affordable storage infrastructure. Post-harvest, the shelf life of produce is limited, and hence, farmers are forced to agree to unfavorable prices or allow wastage. Baridi Stores has designed and developed solar powered storehouses exclusively for agricultural products. These storehouses are leased out to farmers for a rental fee, preventing food wastage, and simultaneously enabling farmers to negotiate a better price for their produce.

Access enterprises also tie up with financial institutions to enable more target customers to purchase and use their products and services. As in other developing countries, the low income population in East Africa often does not have regular employment and cash flows. They are unable to avail of credit from formal financial institutions due to lack of creditworthiness, further restricting their purchasing power. Access enterprises enable them to purchase basic and essential products by providing access to consumer finance. Cobitech Solar procures home energy systems from China for its customers in rural Kenya. These home systems support three bulbs and charging of small electronic devices. The enterprise connects customers to MFIs that provide asset financing. The MFIs pay Cobitech in full, while they recover the loans over a fixed period of time, normally 12 months, in the form of installments paid by the customer. The solar kits are sold at around US$64.5, while the consumers pay back in monthly installments of around US$5.5 over a period of 12 months. Some Access enterprises strengthen the efficiency of lending by mining the credit history of potential customers for financial institutions. FarmDrive, for instance, conducts credit assessment of smallholder farmers using a digital bookkeeping platform. The

enterprise's technology enables farmers to track their productivity, expenses, and revenues which are analyzed to reveal performance patterns. This information helps financiers make lending decisions based on credit profiles of borrowers.

Another off-grid energy service provider, PowerGen Renewable Energy uses a similar model for setting up mini and micro-grids. PowerGen connects communities with investors such as Kiva and SunFunder. These investors provide the capital required for setting up micro and mini-grids at an affordable rate of interest. The communities pay back the loan over a fixed period of time, and eventually own the grid. PowerGen charges a small fee for on-going maintenance. Jibu, an enterprise that provides safe and affordable drinking water through a franchise model, provides in-house financing to its franchisees to enable them to set up water outlets. In exchange, Jibu provides technology and business consulting support to the franchisee.

Some Access enterprises have optimized their procurement and manufacturing processes to lower the cost of production, and pass on the benefit of lower cost to customers in form of lower prices. Many enterprises source their products from countries where manufacturers are able to assure reasonable quality at lower costs. This enables them to sell at more affordable prices. This is seen primarily among enterprises that retail solar home systems such as Cobitech which sources its products from China.[29] Sustainable Health Enterprises (SHE) uses banana fiber to manufacture sanitary pads lowering the cost of production and making the product more affordable. A to Z Textile Mills increases the affordability of its anti-malaria nets by leveraging its experience in textiles to reduce production costs, and increasing the durability of the mosquito nets. A to Z's nets last for five to six years in comparison to the normal life of six months, making the product more attractive to low income customers.

A few Access enterprises cater to customers across different socio-economic groups. They charge premium prices to those that can afford to pay, and cross-subsidize prices to increase affordability of their products to low income customers. A number of products and services lend themselves to the cross-subsidy model, although, it is not used by too many enterprises due to its complex structure that necessitates selection of customers for different price points. In East Africa though, there are a few models that are able to successfully charge lower prices without impacting their viability. Inkisha, for example, provides ecofriendly packaging material to small scale vendors for free. It covers its cost of production and also makes a profit margin by selling advertising space on the packaging material to bigger mainstream companies such as Safaricom and Coca-Cola. The Upper Hill Eye and Laser Center cross subsidizes fees at its outreach camp which caters to low income populations by charging a premium fee at its clinics that also treat patients from higher income groups.

Pricing and payment solutions create maximum impact when they are backed by efficient distribution channels. Consequently, many Access enterprises have adopted innovative distribution strategies to increase outreach to both, urban and rural customers.

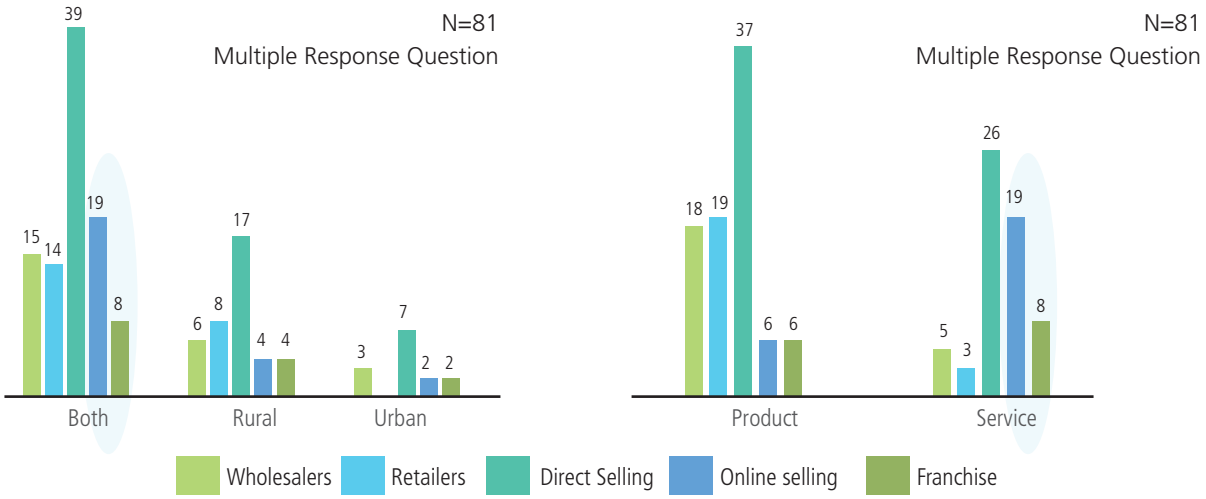
29. Seeding Social Enterprise in Papua New Guinea. Intellecap. 2015

Distribution Strategy

While direct selling is the most common approach, some Access enterprises use innovative distribution channels to overcome infrastructure-related challenges and to avoid charging prohibitive costs to the customers. Enterprises need to maximize the reach of their products and services while avoiding additional direct or indirect costs. In East Africa, Access enterprises face some challenges in building traditional vendor partnerships such as high costs, lack of infrastructure, and lack of electricity which make it difficult to maintain quality and continued supply. Currently, direct selling is the most commonly used distribution model. This either results in high costs related to building a sales force that can travel to remote locations or less optimal reach to potential markets – impacting profitability, and often, the viability of the model. Some Access enterprises have developed smart last mile innovations such as collaborations with community organizations working at the grassroots-level, training and developing village level entrepreneurs and leveraging ecommerce to increase the depth and width of reach. As per our survey, enterprises serving both urban and rural markets and only rural markets use a wider mix of pricing and distribution models. They also leverage the high penetration of mobile phones and the internet to increase the efficiency of their distribution channels. These innovations have allowed the enterprises to reduce time to scale and connect with customers in remote markets.

> *"One of the business innovations required to build a profitable business model in East Africa is to aggregate consumers into a critical mass.*
>
> ***Duncan Onyango, Acumen***

FIGURE 31: DISTRIBUTION MODEL OF ACCESS ENTERPRISES ACROSS TARGET MARKETS AND BY PRODUCTS/SERVICES

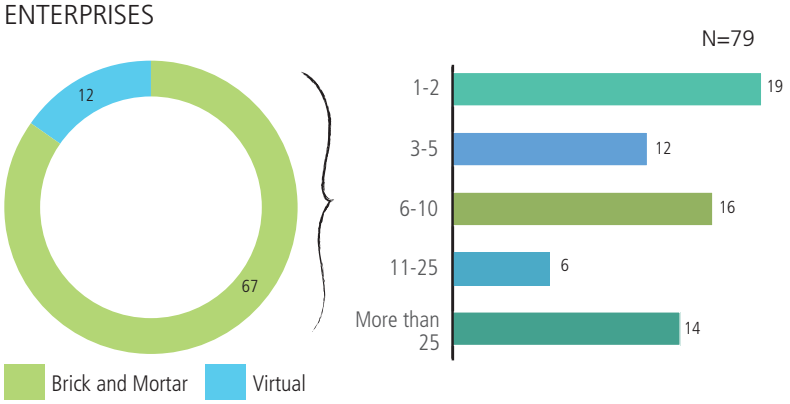


Source: Intellecap Analysis

Access enterprises have developed alternate traditional and technology enabled models to overcome distribution challenges. Given the size and age of impact enterprises in East Africa, most enterprises have a limited geographic footprint. They use a combination of distribution models based on their offerings and customer preferences. Models such as hub and spoke, franchise, and those that leverage existing systems help in reducing the cost of distribution.

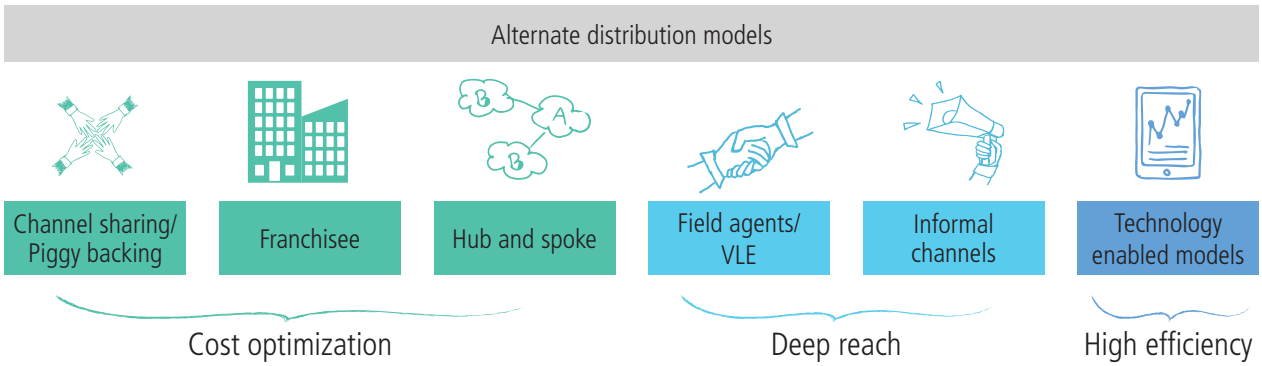
Enterprises also leverage informal retail chains, micro-enterprises, and village-level entrepreneurs to increase their reach across East Africa. BanaPads, a sanitary pad manufacturer uses a micro-franchise model where it provides a toolkit to women entrepreneurs who distribute the product.[30] By 2016, BanaPads seeks to build a network of over 400 women entrepreneurs that will reach more than 50,000 rural girls and women.[31] Envirofit has also built a women micro-entrepreneur network under the Women's Empowerment Program for distributing its cookstoves as it found that the hub and spoke model works only for its urban markets.[32] SunnyMoney Kenya distributes lamps through cooperatives as well as local shops and agents.

FIGURE 32: NUMBER OF CITIES OF OPERATION OF ACCESS ENTERPRISES



Source: Intellecap Analysis

FIGURE 33: TYPES OF ALTERNATE DISTRIBUTION MODELS



Source: Intellecap Analysis, Inclusive Business Solutions, IFC

30. Producing affordable, eco-friendly sanitary pads in Uganda – Banapads. http://www.inclusivebusinesshub.org/page/seed-africa-symposium-2014-interview-with-banapads

31. Banapads. Healthmarketinnovations. http://healthmarketinnovations.org/program/banapads

32. Cooking in one million kitchens: Lessons Learned in Scaling a Clean Cookstove Business. Envirofit. http://www.envirofit.org/images/news/Lessons_learned.pdf

Besides the above mentioned models, many enterprises adopt technology enabled solutions to reduce time per transaction and increase reach to areas where traditional distribution models are either more complex or less effective. For instance, in Uganda, Mimba Bora[33] connects pregnant women to healthcare personnel and provides health information such as recommended tests per trimesters of pregnancy and vaccinations in remote areas through its mobile solution. Most businesses use a channel mix to reach their target customers.

Enterprises optimize their distribution costs through channel sharing, franchisee and hub and spoke models. Several Access enterprises have partnered with organizations that have existing channels to rapidly increase reach. This not only reduces cost, but also the time involved in building own networks. For instance, One Degree Solar entered into a partnership with Coca-Cola to market its solar power kits- Brightbox - to kiosk owners selling Coca-Cola. As part of the partnership, Coca-Cola holds workshops across rural Kenya with kiosk owners to demonstrate and share information about the product. In 2013, Coca-Cola and One Degree Solar brought solar power to 2,000 rural kiosks.[34] East Africa also has some emerging business models that solely focus on providing last mile distribution for a variety of products. Shekhere Africa is a distribution service that provides last mile delivery for several product categories such as solar lamps, water purifiers, and cookstoves.[35] It builds effective BoP distribution networks that are scalable in order to overcome the constraints that currently prevent innovative products and services to find markets and achieve potential.

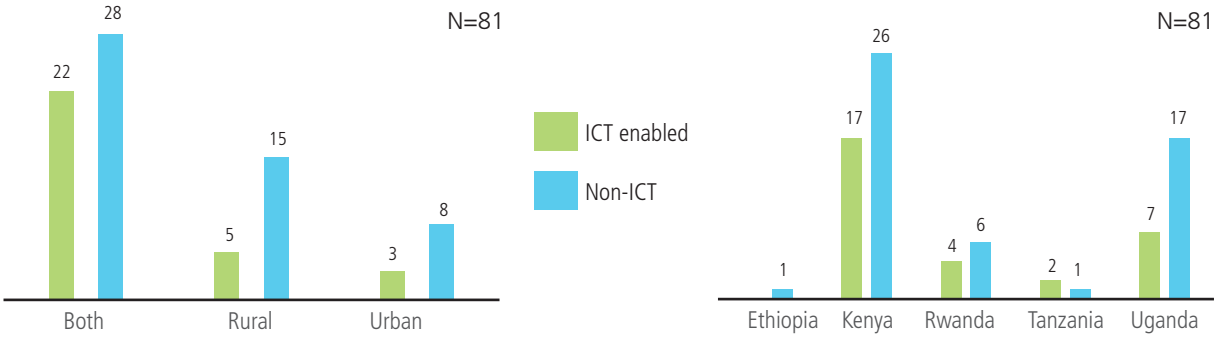
Access enterprises have used the franchise approach for some time now. For instance, Jibu adopted a franchise model to make safe water available in more communities. It supports and trains franchisees and supplies the water purification units, bottles with seals, labels, detailed operations manuals, marketing, and ongoing business consulting. In the current model, the franchisee operates a water depot where customers purchase water packed in sealed bottles and pay in cash.[36] Enterprises have also used traditional distribution networks efficiently to reduce costs. Envirofit set up regional manufacturing and distribution centers in East Africa (Nairobi, Kenya) and other regions for its cookstoves. In order to make its model scalable, it adopted a hub and spoke model that allowed it to set up a base of operations to coordinate the production and distribution of its clean cookstoves in urban and peri-urban markets.[37]

> *"If enterprises want to leverage mobile technology for the bottom of the pyramid, content has to achieve a delicate balance between being basic enough on the user-front to function on a feature phone, and engaging and informative enough to meet users' needs.*
>
> ***Lia Mayka,***
> ***Village Capital***

Enterprises use technology to increase the efficiency of distribution models by reducing transaction time and increasing quality of services. As per our survey, around 38% of Access enterprises use ICT enabled

33. *Mimba Bora. http://www.mimbabora.com/*
34. *Why Coke Is Bringing Solar Power To Rural Kenya. http://www.fastcoexist.com/1682126/why-coke-is-bringing-solar-power-to-rural-kenya*
35. *Shekere Africa. from http://www.shekereafrica.com/*
36. *Jibu company. http://www.jibuco.com/*
37. *Cooking in one million kitchens: Lessons Learned in Scaling a Clean Cookstove Business. Envirofit.*

FIGURE 34: USE OF ICT BY ACCESS ENTERPRISES ACROSS TARGET MARKETS AND COUNTRIES

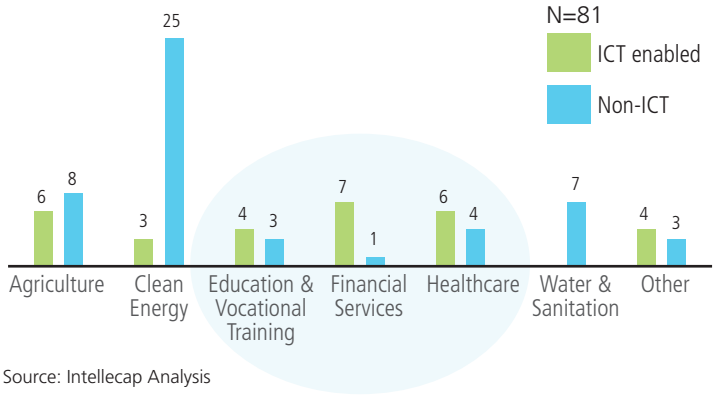


Source: Intellecap Analysis

Source: Intellecap Analysis

models. Over 80% of these enterprises leverage ICT for distribution through online selling, and most of them are based in Kenya. Other countries are catching up in ICT adoption, but there are fewer ICT-based models in countries other than Kenya. Not many ICT-based models are profitable yet, as close to 88% of these businesses have been established in the last five years.

FIGURE 35: USE OF ICT BY ACCESS ENTERPRISES ACROSS SECTORS



Source: Intellecap Analysis

Enterprises which provide services in sectors such as education, healthcare, and financial services have a larger proportion of mobile/internet based models. Inuka Pap,[38] a mobile phone platform, allows credit groups and MFI customers to receive instant micro-loans through their mobile phones. Eneza Education[39] offers a technology enabled solution in the form of a virtual tutor and teacher's assistant facility allowing both, students and teachers to access course content and assessments while interacting with live instructors through a low-cost mobile phone.

Some Access enterprises have developed e-commerce models to increase reach using existing trade channels. They help customers in remote areas avail of a larger basket of products and services. The enterprises also use the technology to overcome inventory management issues that small retailers face. Copia, an e-commerce enterprise, allows its customers to place orders at local shops through the Copia app. Customers pay the shopkeeper in one lump sum or in small installments on a "layaway" plan. Shopkeepers use a mobile payment system to pay Copia.

38. Inuka Pap website. http://www.inukapap.co.ke/

39. Eneza Education. http://enezaeducation.com/

The enterprise delivers the products to the shopkeeper within 48 hours for peri-urban locations and within one week for rural locations.

Access enterprises providing services that are highly dependent on the skill of delivery agents such as teachers and trained medical staff have attempted template-based approaches, easy-to-use solutions and customer aggregation to ensure replicability and scale. Availability of skilled manpower is a challenge in East Africa, particularly in rural areas. In certain sectors, quality varies significantly because of the dependence on skilled delivery agents such as teachers, nurses, and doctors. Enterprises have tried to reduce this dependence to support rapid scaling. Bridge International has developed a school-in-a-box approach which not only ensures faster replication and scale, but also standard quality of education delivery across its schools.[40] Bridge manages every step in delivering quality education – from building an academy to teaching in classrooms. Teachers are supported with pre-developed lesson plans, which are used across all Bridge academies. The lesson plans are delivered through data-enabled tablets that are synced to Bridge headquarters. This enables Bridge to monitor lesson pacing, record attendance, track assessment scores, and update or add lesson scripts in real time. Another enterprise, BRCK, has designed a tablet to provide a digital classroom experience in slums of Kenya to ensure quality of education irrespective of the skills of the teachers.

Some enterprises have developed products and solutions that can be easily used by people with limited training and skill sets. WinSenga provides a mobile smartphone-based electronic fetal heart monitor that allows for scaling a critical healthcare solution.[41] WinSenga's solution allows semi-skilled and untrained medical personnel such as midwives and healthcare workers to deliver standardized care.

The distribution of population is unequal in East Africa, with highly dispersed rural areas and highly congested urban slum settlements. A few enterprises aggregate customers through local community forums, microfinance groups, cooperatives and technology to increase scale and viability. For instance, small vendors lack the money to maintain regular inventory of perishable vegetables. They also do not have adequate time to travel distances to local markets on a regular basis. SokoText uses text messaging to aggregate demand for vegetables and provide wholesale prices for small entrepreneurs in urban slums.

Financial Performance

Around 70% of Access enterprises have been established in last 5 years. Therefore, most models have not yet achieved break even. Majority of the enterprises earn revenues less than US$100,000 and have not yet reached break even. Most enterprises with revenues more than US$100,000 are either profitable or have reached break even. Among these, service-based enterprises that provide warehousing for crops, maintenance services for clean energy products, access to healthcare services, and waste recycling are profitable.

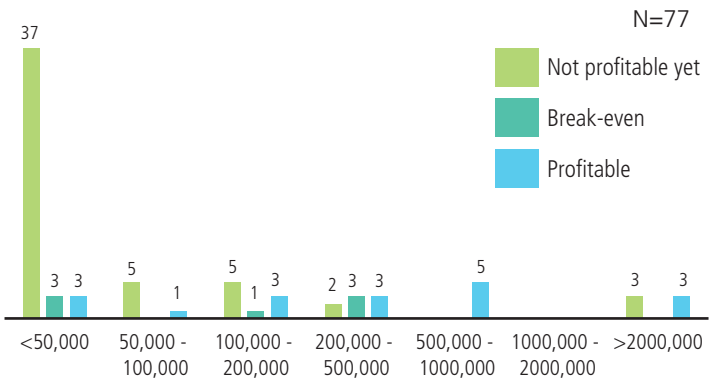
Overall, only 14% of the enterprises have reached break even or profitability. Access enterprises take an average of 5-10 years to break even or become profitable. Some of the enterprises that have been able to break even in less than 5 years include waste management and waste recycling models, as well as clean energy products.

40. Bridge International Academies. http://www.bridgeinternationalacademies.com/approach/model/

41. Winsenga website. http://winsenga.org/

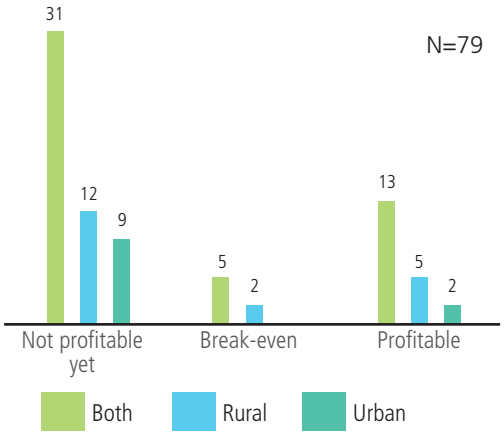
Since technology uptake is recent, only 20% of the profitable models are technology enabled. About 88% of the enterprises that use ICT and are not profitable have been established less than 5 years ago. 36% of enterprises serving both rural and urban markets achieved break even or profitability. Most of these enterprises operate in the clean energy space with models such as biogas plants, energy consulting, LPG supply, and solar products. Close to 70% of the profitable impact enterprises offer products.

FIGURE 36: REVENUE AND PROFITABILITY OF ACCESS ENTERPRISES

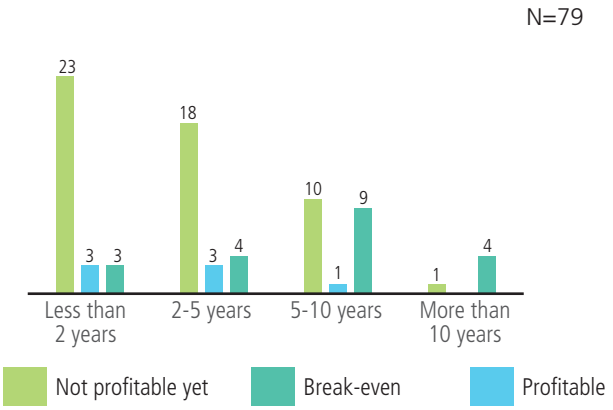


Source: Intellecap Analysis

FIGURE 37: PROFITABILITY OF ACCESS ENTERPRISES ACROSS TARGET MARKETS AND VINTAGE

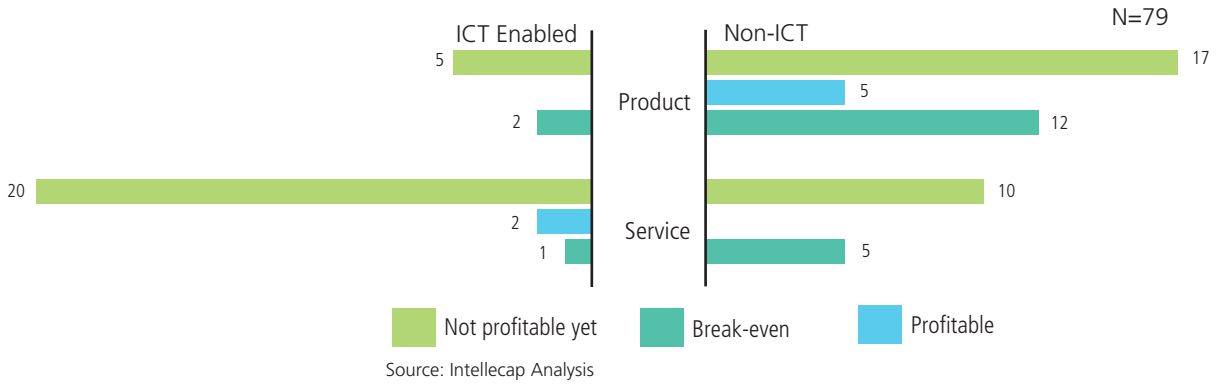


Source: Intellecap Analysis



Source: Intellecap Analysis

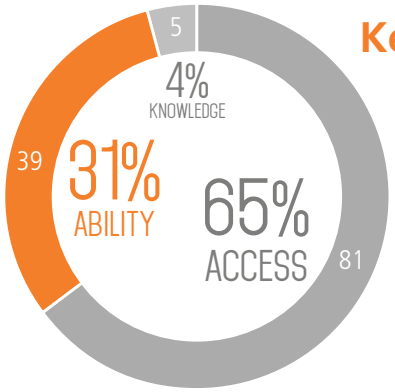
FIGURE 38: PROFITABILITY OF ACCESS ENTERPRISES BY TYPE OF OFFERING



Source: Intellecap Analysis

ABILITY

Ability enterprises increase the purchasing power of the low income population by including them in their value chains or by providing training required to develop employable skills.



Key Trends

- Providing end-to-end support across all the stages of value chain to improve productivity and provide market-linkage
- Capacity building of low income groups through skill development

10 END-TO-END SUPPORT IN AGRICULTURE

8 PROCESSING AND MARKETING

7 CAPACITY BUILDING IN AGRICULTURE

5 VOCATIONAL EDUCATION AND TRAINING

4 LIVELIHOOD

2 LIVESTOCK MANAGEMENT

Note: A few other impact enterprises have not been included above; they operate across sectors such as nature conservation and logistics

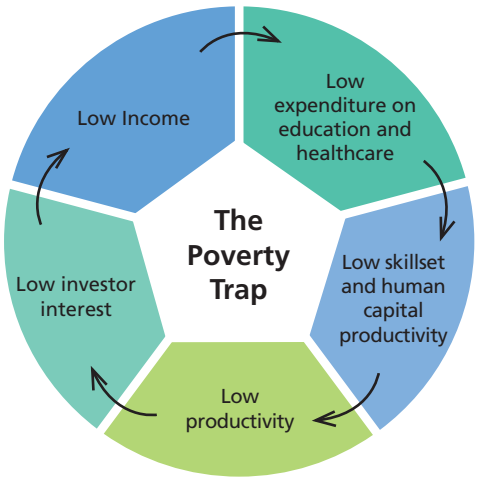
ABILITY

Ability enterprises work on the premise that for development to be holistic, it is important to increase the capacity of the low income population to acquire critical products and services. They empower customers by increasing their income either by involving them in the supply chain as partners or by training them in marketable and employable skills. Of the 125 enterprises that responded to the survey, around 39 enterprises (31%) operate as Ability enterprises.

Key Activities

Ability enterprises address challenges related to productivity through capacity building or partnering with low income communities. More than 70% of the population in East Africa earns less than US$3.10 per day.[42] In most developing countries, low education and skill levels, limited awareness, low productivity and low incomes cumulatively leads to a 'Poverty Trap'.[43] For instance, in the agriculture sector, smallholder farmers use traditional methods of cultivation leading to low yields. The average global yield of cereal as measured is 3851.31kg/hectare. In East Africa, it is only 1935.4kg/hectare.[44] Ability enterprises in agriculture intervene to increase productivity through capacity building or integrating farmers in their value chain. Similarly, a few enterprises provide training for marketable or employable skills in fields other than agriculture, such as ICT, hospitality, and entrepreneurship.

FIGURE 39: REASONS FOR HIGH POVERTY IN DEVELOPING COUNTRIES



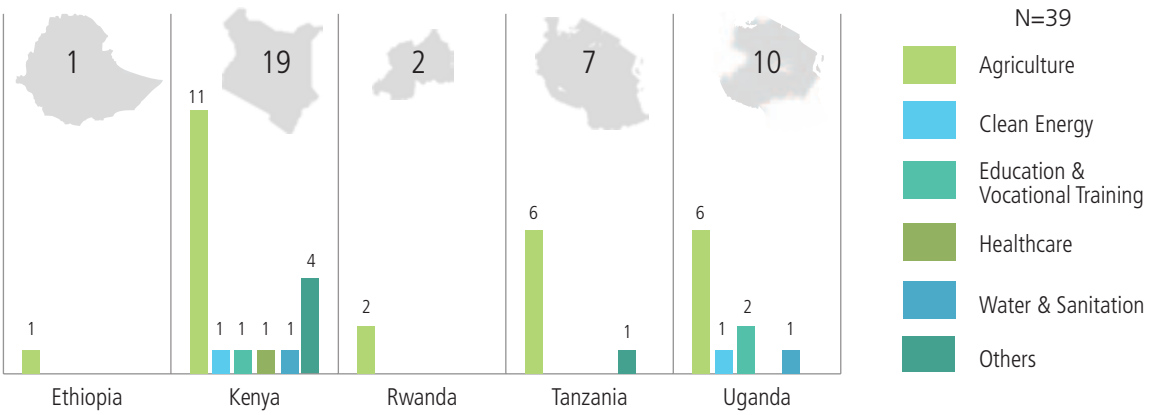
Enterprise Profiles

Since a majority of the region's population is engaged in agriculture, most Ability enterprises are agribusinesses. Almost all these enterprises involve farmers as partners in the value chain. When enterprises source produce from smallholder farmers, they derive certain benefits making the relationship symbiotic. Working directly with farmers enables impact enterprises to not only meet high volumes, but also ensure that they have multiple suppliers and a continuous supply of inputs. Famers benefit from the guidance and training to adopt better farming methods and increase productivity. Some impact enterprises provide either agriculture inputs or access to finance to farmers who work with them. Others support farmers with agricultural technology which they would not have been able to afford individually.

42. World Development Indicators. World Bank. http://data.worldbank.org/indicator/AG.YLD.CREL.KG
43. Poverty Traps, Aid, and Growth. Journal of Development Economics. 2006. http://siteresources.worldbank.org/DEC/Resources/RaddatzPovertyTrapsJDE.pdf
44. Poverty Headcount Ratio. World Development Indicators. World Bank Data. http://data.worldbank.org/indicator/SI.POV.2DAY

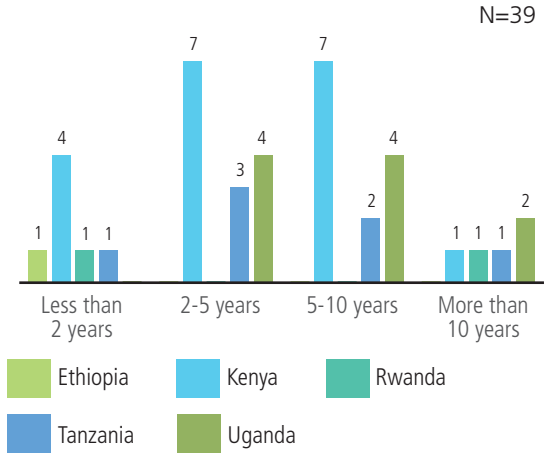
Among the survey respondents, most Ability enterprises were headquartered in Kenya, followed by Uganda and Tanzania. Almost 67% of the Ability enterprises operate in the agriculture sector, while there are very few enterprises in other sectors such as education, vocational training and livelihoods. Ability enterprises in other sectors impart training in ICT, handicrafts, and hospitality. More than 50% of the enterprises in Kenya are less than 5 years old, while in Uganda, more than half of the enterprises are older than 5 years. Given the region's dependence on agriculture, most of the older enterprises operate in the sector. Younger models are seen in clean energy and water & sanitation. These include models in which waste is procured from farmers and converted into energy and models that provide training for handicrafts, motor driving, and hospitality.

FIGURE 40: ABILITY ENTERPRISES ACROSS COUNTRIES AND SECTORS



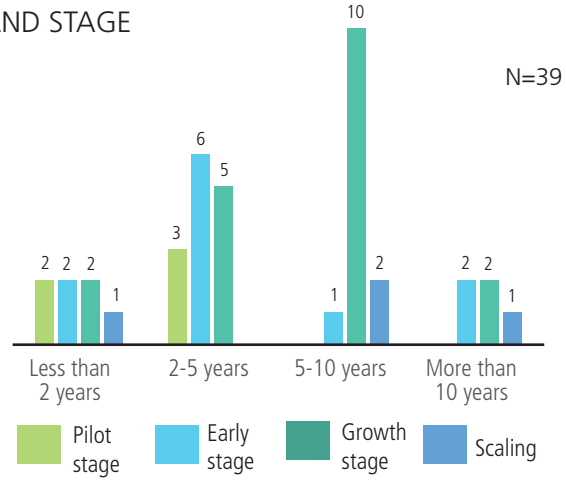
Source: Intellecap Analysis

FIGURE 41: ABILITY ENTERPRISES BY VINTAGE AND COUNTRIES



Source: Intellecap Analysis

FIGURE 42: ABILITY ENTERPRISES BY VINTAGE AND STAGE



Pilot stage: *Testing the market with product/service*

Early stage: *Fully rolled out product/service in one market*

Growth stage*: Growing in existing marketwith new customers and/or products and services*

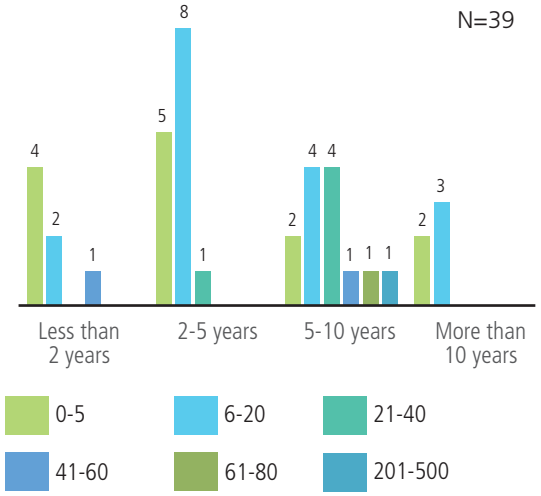
Scaling: *In new markets and territories*

Source: Intellecap Analysis

A majority of the Ability enterprises took at least 5 years to reach the growth stage. Almost 60% of the Ability enterprises are in the growth stage or are scaling into new territories. Most enterprises took more than 5 years to reach this stage. These mostly include models that source produce from farmers and export processed food. Similarly, younger enterprises with the same model (procure products - handicrafts and farm produce from the low income population and export to other countries) have grown rapidly in less than five years. The use of ICT and a lean workforce further aids the growth of this successful model.

Barring a few outliers, most Ability enterprises have less than 20 full-time employees. A majority of the Ability enterprises deal with improving productivity of farmers and providing market linkages, and are not directly involved in the production process. They tend to have a smaller workforce, with full-time employees being responsible for aggregation and providing training to farmers. Almost 78% of the Ability enterprises have fewer than 20 full-time employees, however they engage with a larger number of people from low income communities who act as suppliers.

FIGURE 43: AVERAGE NUMBER OF EMPLOYEES IN ABILITY ENTERPRISES



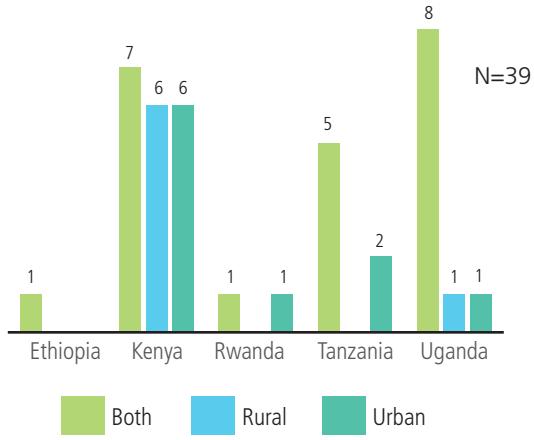
Source: Intellecap Analysis

Customer Engagement

Almost 82% of the Ability enterprises are headquartered in urban areas, while 74% of the total enterprises work with rural low income groups. Most Ability agribusinesses target distribution in urban areas and export to developed countries. As a result, these enterprises are mostly headquartered in urban areas. Since they primarily target customers from the middle and upper income brackets, the percentage of Ability enterprises which serve only urban markets is comparatively higher. In contrast, Ability enterprises from sectors such as vocational education and training target both urban and rural customers.

Ability enterprises engage with their customers through a mix of both, products and services. Agriculture is the only sector where more Ability enterprises offer products (agri-inputs, equipment) than services.

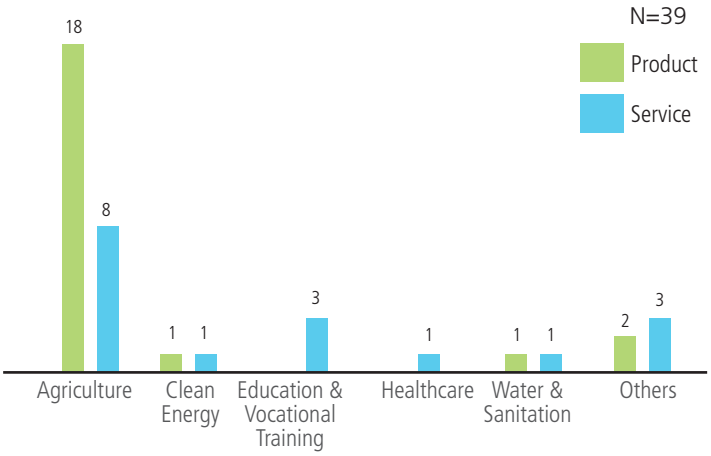
FIGURE 44: ABILITY ENTERPRISES ACROSS TARGET MARKET AND COUNTRIES



Source: Intellecap Analysis

A few Ability enterprises have designed innovative services to help customers develop employable skills such as ICT training, driving instruction, and training in housekeeping and cleaning. Besides these, there are enterprises which provide entrepreneurship training and skills for making basic household products such as candles and paper bags. Services offered by agribusinesses include market linkages, processing facilities on lease, and ICT-enabled training and capacity building.

FIGURE 45: TYPE OF OFFERING BY ABILITY ENTERPRISES ACROSS SECTORS

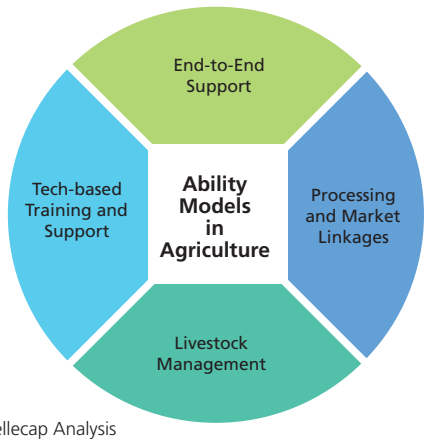


Source: Intellecap Analysis

Most Ability enterprises in the agriculture sector provide end-to-end support across all stages of the value chain. A large number of Ability agribusinesses provide support across several stages of the agricultural value chain. These enterprises provide quality inputs and processing facilities, support capacity building of farmers, and ensure market linkages. Such models lock in revenue streams and increase their ability to breakeven. Most of these models collectivize smallholder farmers to reap economies of scale. They ensure that farmers receive fair prices for their products on a regular basis.

Kenya-based Akili Holdings collectivizes small farmer groups, provides them with finance for inputs, and trains them to improve productivity. Membership into the group is based on peer approval. Group members are also trained in ancillary skills such as financial literacy, product management, and team work. Akili establishes partnerships between its farmers and local food processing firms. In order to provide farmers with short-term and long-term gains, Akili not only ensures that farmers receive cash payments on delivery of harvest, but

FIGURE 46: ABILITY ENTERPRISES IN AGRICULTURE



Source: Intellecap Analysis

> *"The 'market linkage' model is very impactful in terms of creating incremental income for farmers. Enterprises with such model and those that trade in commodities that are in high demand, have good growth prospects which they are able to share with their farmers.*
>
> ***Lilian Mramba,***
> ***Grassroot Business Fund***

also offers them equity stakes in the local processing firms over time. Tanzania-based East Africa (EA) Fruits Farm leases out farmland to farmers who earn less than US$1 per day. It provides training and support to farmers to increase yield and procures the harvest for distribution. EA Fruits Farm then cleans, processes, and packages the produce for distribution in retail outlets and for door-to-door delivery. The enterprise pays farmers at regular intervals of 7 to 10 days. Some other enterprises which provide support across all stages of the value chain include Moringa Consultancy (Tanzania), Mtanga Foods and Kigali Farms (Rwanda). Moringa Consultancy focuses exclusively on the production, processing, and marketing of Moringa, while Kigali Farms provides inputs, training and support for producing mushrooms which it buys back for processing and export. It plans to increase production to meet demand from other countries, including Kenya and Uganda.

The next big cluster of Ability agribusinesses supports the low income population by providing post-production processing facilities. Among Ability enterprises in East Africa, 17% engage with farmers only in the post-harvest stage by procuring the produce, processing, and marketing processed output. For example, Prosoya Kenya procures maize, sorghum, soya beans, and finger millets from smallholder farmers, and processes the products into health food fortified with vitamins and minerals. Similarly, Stawi Foods and Fruits helps farmers prevent wastage of banana caused by lack of storage and processing facilities. Banana farmers in the Meru region of Kenya earn extremely low market prices due to oversupply during harvest. As a result, bananas became extremely cheap around harvest and expensive during other periods of the year, Stawi Foods and Fruits procures bananas and other products such as maize, millet, sorghum, soya beans, and wheat from smallholder farmers and processes the produce for export to international markets.

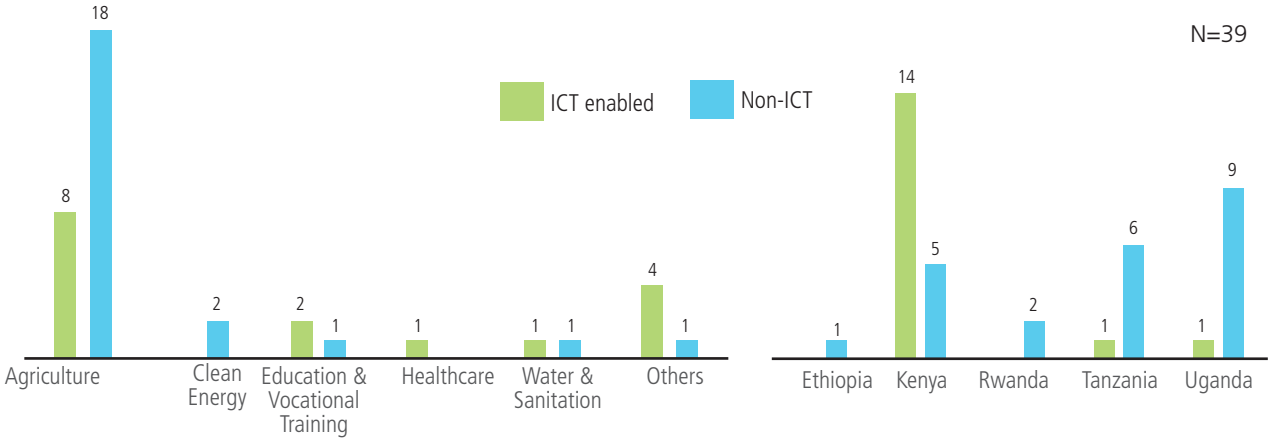
Some enterprises among the Ability agribusinesses specifically work with the textile industry, where the low income population is involved as employees in textile processing. For example, Tosheka Textiles engages with more than 3,000 rural households in Kenya. Similarly, Gulu Agricultural Development Company works with over 55,000 smallholder farmers to process cotton for export.

The livestock cluster among the Ability enterprises specialize in livestock management, provide capacity building and market linkages to farmers. In East Africa, there is a large gap in the prices that smallholder dairy farmers earn for milk and the price at which milk retails. For example, in Kenya, on an average, a dairy farmer receives around KES28 to 35 per liter of milk while milk retails at KES100. Enterprises such as Nu Bree Diary in Kenya and Tanga Fresh in Tanzania reduce this gap and ensure better prices to farmers. These enterprises train farmers in livestock management and provide processing facilities. Both enterprises are also engaged in marketing processed milk. Tanga Fresh processes approximately 50,000 liters of milk every day, and in addition to providing training to farmers, it provides them finance to procure inputs. Similarly, there are enterprises which focus exclusively on poultry. Daluc Poultry enables farmers in East Africa to establish profitable indigenous poultry businesses. It operates a hatchery, feed mill, and processing unit, and also breeds chicken.

Only a few enterprises use ICT-enabled models to engage with farmers and manage supply chains. Ability enterprises have leveraged the use of mobile technology to benefit smallholders and retailers of farm produce. Of the 16 ICT-enabled Ability enterprises that responded to the survey, 50% were engaged in the agriculture sector. Most of these models are based in Kenya (90%), while the use of ICT is still nascent in other countries. Most of the enterprises that used ICT-enabled models were less than 5 years old.

In an innovative use of ICT for logistics, Twiga Foods has developed a tool that vendors can use to order stocks. Twiga procures the produce directly from farmers at a guaranteed price and delivers it to the vendors. The

FIGURE 47: USE OF ICT BY ABILITY ENTERPRISES ACROSS SECTORS AND COUNTRIES



Source: Intellecap Analysis

vendors are allowed to make flexible payments depending on what they sell during the day. Other enterprises use tech-based solutions to educate farmers and provide market linkages. Kenya-based Ojay Greene uses a mobile-based platform to support smallholder farmers. Automated weekly text messages are sent to farmers providing them technical assistance on the practices and processes to increase agricultural productivity. The company also aggregates harvest sourced from these smallholder farmers and sells it to urban clients including large supermarkets and restaurant chains. Esoko, a technology company, focuses only on development of apps for farmers. These apps train and provide support to farmers in areas such as monitoring production, increasing yield, and marketing. Esoko tracks data generated from these apps for analytics that inform development of methods to further improve farm yields. The enterprise has also set up a call center that provides specialized support services exclusively for rural communities. Similarly, M-Shamba is a platform that provides farmers information on the right agronomic practices and links them to markets.

There is very limited representation of Ability enterprises that provide training and capacity building in sectors other than agriculture, signifying a business opportunity. Sectors including manufacturing, mining, construction, and tourism have the potential to absorb human resources and generate employment in East Africa. The availability of technical or vocational training in relevant skills to enable people for employment in these sectors, however, seems to be limited. Only around 20% of the Ability enterprises examined in the study cater to capacity building or creating livelihoods in sectors other than agriculture. For example, Mazuri Kenya trains and empowers underserved people in handicraft production. The enterprise sells the handicrafts through an online platform. It distributes 75% of the sales proceeds within the community, and retains 25% of the proceeds for maintaining the platform. On similar lines, SafeBoda and SafeMotos, create employment by

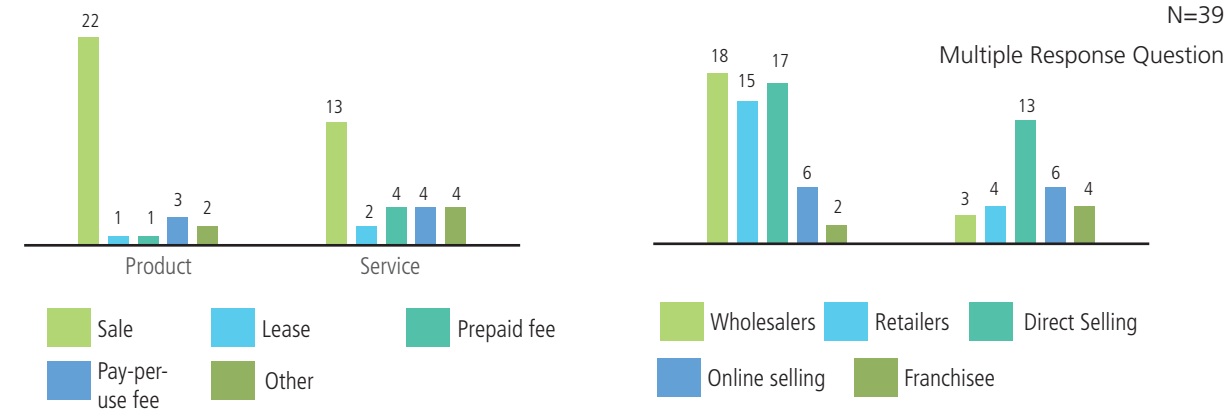
training people to be safer motorcycle drivers. They use a mobile platform to connect potential customers with these drivers, increasing road safety and easy access for consumers and incomes for the drivers.

Ability entrepreneurs have also explored other training spaces to empower the low income population. ICT for Development Kenya has established mobile ICT training centers in rural Kenya. These centers provide two-month training courses in ICT at an affordable fee. Until the end of 2014, the enterprise had trained more than 17,000 people. Other enterprises such as the Aristeph Entrepreneurs Center and Africa Management Initiative provide training and consulting services to youth to encourage them to become entrepreneurs or to make them employment ready.

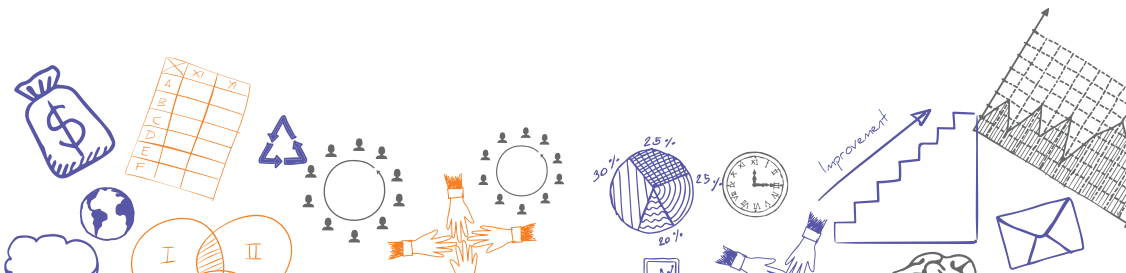
Distribution Strategy

Ability enterprises providing products distribute through wholesalers, while those offering services directly engage with their customers. Most Ability enterprises choose the direct sale model for their products, with very few opting for prepaid and lease options. Comparatively, more alternative revenue models are observed for Ability enterprises that provide services. Of the 27 such enterprises, 14 enterprises use revenue models such as prepaid, lease, and pay-per-use. The lease model is particularly popular in agriculture where enterprises lease out processing facilities to farmers and train them to use the facility. The prepaid fee approach, in the form of subscription payments, is mostly used in ICT-enabled models that provide capacity building through mobile phones.

FIGURE 48 : REVENUE AND DISTRIBUTION MODELS OF ABILITY ENTERPRISES BY PRODUCTS/ SERVICES

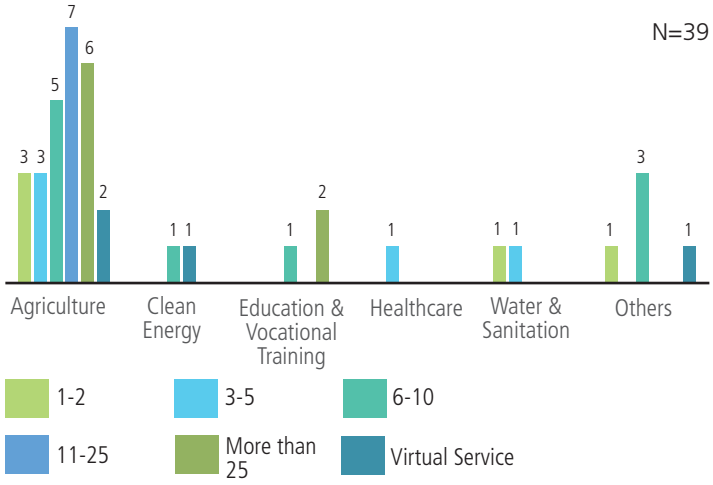


Source: Intellecap Analysis



Around 57% of the Ability agribusinesses operate in more than 10 villages/towns/cities. Since some of these enterprises are engaged in exports of processed food, they operate in more than 25 villages, towns or cities. Around 87% of the enterprises that served more than 25 villages, towns or cities are more than 5 years old. Use of online selling was restricted to agriculture and livelihoods, with the one enterprise in the latter category selling handicrafts through an online platform. Ability enterprises in water & sanitation and health have not yet scaled over 5 villages, towns or cities, but could scale in the future as they are comparatively young, established less than 5 years ago.

FIGURE 49: NUMBER OF CITIES OF OPERATION OF ABILITY ENTERPRISES ACROSS SECTORS



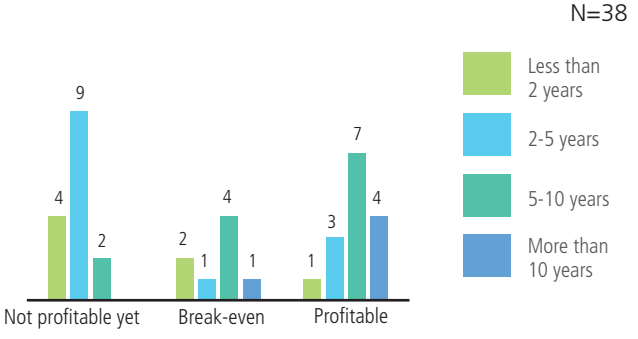
Source: Intellecap Analysis

Financial Performance

Among Ability enterprises, models providing technical and vocational training and most agribusinesses have achieved break-even. Survey responses indicate that almost 70% of Ability agribusinesses are at break-even. Across sectors, there are only 4 enterprises that are older than 10 years. All these enterprises are profitable and operate in the agriculture sector. Few Ability models have seen profitability in less than 5 years. Although, these enterprises do not come from a single sector, most of them employ less than 5 employees, target 6-10 towns, cities, or villages, and use multiple distribution channels. Most enterprises with revenue over US$200,000 have achieved break even and are all in the agriculture sector, typically with market aggregation models. Enterprises that earn revenue less than US$100,000 and are profitable mostly work with very small teams and leverage ICT.

Ability agribusinesses have attracted significant interest from impact investors because they can scale and become profitable even as they achieve impact by enhancing the livelihoods of farmers. Ability enterprises that provide end-to-end support to farmers create a large socio-economic impact and survey responses indicate that they have a high probability of being profitable. Hence, funds such as Grassroots Business Fund, Root Capital, One Acre Fund predominantly invest in Ability agribusinesses and share that all such investments have been profitable.

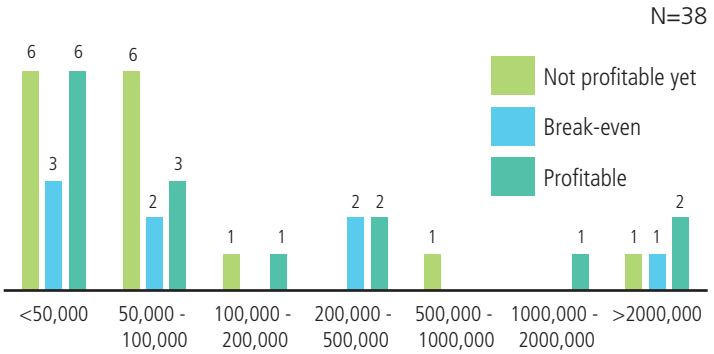
FIGURE 50: PROFITABILITY OF ABILITY ENTERPRISES BY VINTAGE



Source: Intellecap Analysis

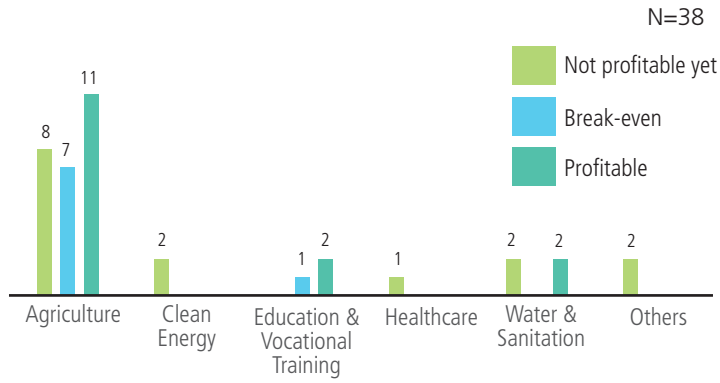
High impact investments in agribusinesses have the potential to increase incomes and create jobs through better productivity and improved skills of farmers. Rwanda-based KZ Noir purchases raw cherries and semi-processed parchment from smallholder coffee farmers and cooperatives for processing. Processed coffee is then exported to international buyers in Europe, Asia and the US. KZ Noir directly impacts 15,000 smallholder farmers and coffee processors, who are mostly women. Acumen has invested US$1.2mn in KZ Noir while Grassroots Business Fund has invested US$1.5mn in the enterprise. Root Capital has invested in Gulu Agricultural Development Company (GADC), which is stimulating cotton growth in Uganda's impoverished Gulu district and creating economic opportunities for more than 55,000 smallholder farmers. The enterprise gins the cotton and sells cotton lint to international buyers, providing farmers with much-needed market access. GADC also empowers local smallholder farmers by providing them support, training, and agricultural inputs.

FIGURE 51: REVENUE AND PROFITABILITY OF ABILITY ENTERPRISES



Source: Intellecap Analysis

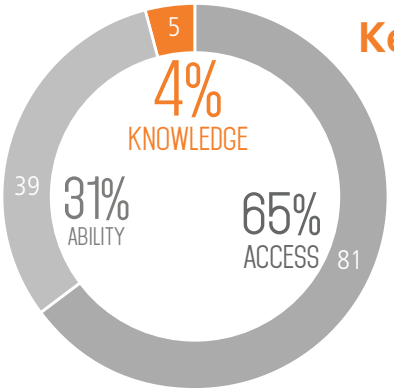
FIGURE 52: PROFITABILITY OF ABILITY ENTERPRISES BY SECTOR



Source: Intellecap Analysis

KNOWLEDGE

Enterprises build awareness and share information to develop markets and inculcate behavior change



Key Trends

- Shift from grant support to sustainable business models such as subscription, advertisement and big data
- Leveraging ICT to increase reach and earn revenue

1 ACCESS TO ENERGY SOLUTIONS

2 HEALTHCARE SOLUTIONS

Note: A few other impact enterprises have not been included above; they operate across sectors such as creating awareness about compliance and audit and sports.

KNOWLEDGE

Knowledge enterprises provide information, motivate low income customers to use safe, hygienic or optimal solutions, and inculcate behavior change. Their efforts are critical to build the market in impact-focused sectors, especially in water & sanitation and healthcare. Traditionally, awareness creation models were supported by grants as there were limited channels for monetization. Although Access and Ability enterprises have to invest in educating customers as a part of their promotion activities, they are usually focused on sharing product or service-related information as a means to increase uptake. Knowledge enterprises differ from Access and Ability enterprises as their outcome and goal is to create awareness and encourage behavior change.

The Knowledge lever is an emerging space with for-profit enterprises that build financially viable business models with innovative revenue streams around their core activities of providing information and driving behavior change. The survey received responses from a small number of knowledge enterprises. In our secondary research, we identified 11 Knowledge enterprises (2.8% of the database) from a total of 398 impact enterprises. Our survey received a response from 5 Knowledge enterprises from a total of 125 respondents.

Key Activities

Knowledge enterprises provide information to the low income population to enable them to assess the value and perceived risks of adopting a solution, which results in behavior change. In addition to business challenges of limited infrastructure or lack of finance, impact enterprises also grapple with the challenge of working against the flow of deep-rooted beliefs and habits formed over time – be they about traditional farming practices, need for education, medical assistance during childbirth, or safe water & sanitation. Often, there is low uptake of several products and services despite customers having the capacity to pay. They continue to use suboptimal solutions due to lack of information and motivation to opt for safer or optimal solutions.

FIGURE 53: ROLE OF KNOWLEDGE ENTERPRISES

Customers adhere to established habits and traditional practices even when better alternatives are provided free of cost by the government or development organizations.[45] For instance, they resist adopting clean cooking solutions even when costs are lowered through subsidies or the stoves are distributed free of cost.[46] This suggests that provision of access to solutions must be supported by complementary efforts to disseminate information and motivate customers. Information about technological advancements, changes in regulation, current and best practices, and potential impact of new solutions allows customers to assess

45. Behavioral Attitudes and Preferences in Cooking Practices with Traditional Open-Fire Stoves in Peru, Nepal, and Kenya: Implications for Improved Cook-stove Interventions. 2014.

46. Behavioral Attitudes and Preferences in Cooking Practices with Traditional Open-Fire Stoves in Peru, Nepal, and Kenya: Implications for Improved Cook-stove Interventions. 2014.

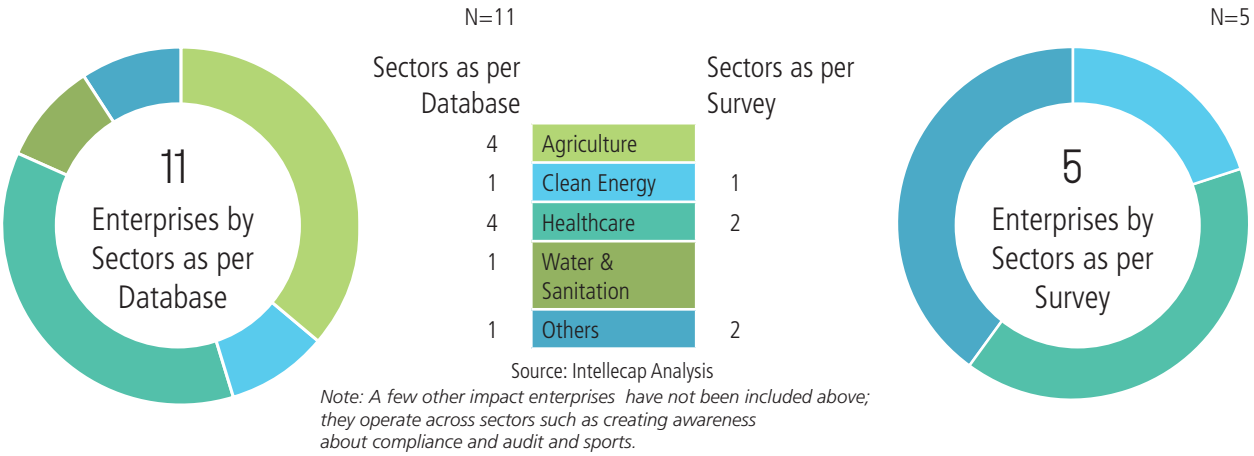
the value of the product, its associated benefits and resolve issues of perceived risks of a product or service.[47]

Enterprise Profile

Knowledge enterprises are young and have a significant role to play across sectors, although most enterprises currently operate in healthcare and agriculture. Knowledge is an emerging area in the for-profit space and most impact enterprises were established in the last five years.

The survey received limited responses from Knowledge enterprises due to a very small number of for-profit

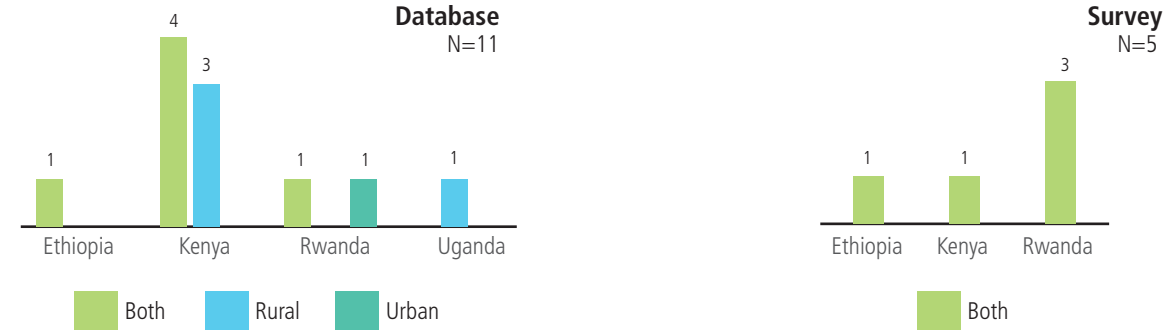
FIGURE 54: KNOWLEDGE ENTERPRISES ACROSS SECTORS



Source: Intellecap Analysis

Note: A few other impact enterprises have not been included above; they operate across sectors such as creating awareness about compliance and audit and sports.

FIGURE 55: KNOWLEDGE ENTERPRISES ACROSS TARGET MARKETS AND COUNTRIES



Source: Intellecap Analysis

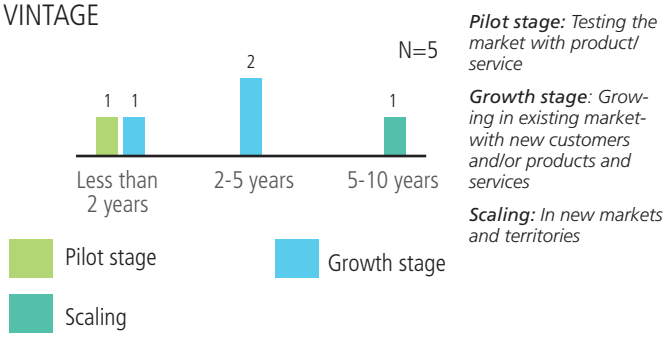
Source: Intellecap Analysis

models in this space. As per survey responses, most Knowledge enterprises are established in Rwanda and operate in healthcare and clean energy, which serve both urban and rural customers. However, a larger number of Knowledge enterprises were identified across sectors through secondary research. Most of these enterprises

47. Shared Prosperity through Inclusive Business: How successful companies reach the base of the pyramid. IFC. 2014.

operate in the healthcare and agriculture sectors. Many of those enterprises are located in Kenya, and have models that cater to only rural customers or both rural and urban customers. Most Knowledge enterprises in agriculture disseminate information on modern farming practices to increase resource-use efficiency, while enterprises in healthcare mostly focused on the need for vaccinations and disseminating information on neonatal and maternal healthcare.

FIGURE 56: KNOWLEDGE ENTERPRISES BY STAGE AND VINTAGE



Source: Intellecap Analysis

Customer Engagement and Distribution Strategy

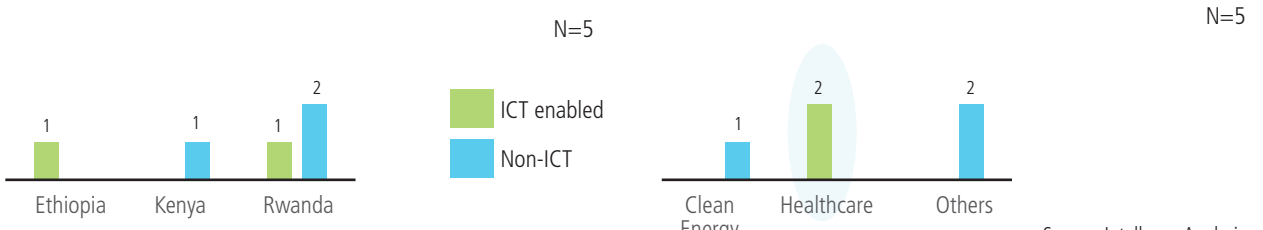
Most Knowledge enterprises engage with customers directly. Few enterprises also partner with other Access and Ability enterprises to promote uptake of critical products and services. Knowledge enterprises engage with customers to increase awareness about themes that form the core of their mission. For instance, Cojengo's app, VetAfrica, disseminates information related to livestock diseases and effective drugs to treat these diseases through a mobile platform. Cojengo allows farmers to try the app for 15 days, after which it can be accessed through subscription. The app is currently available in Kenya, Ethiopia, Uganda and Tanzania. Similarly, a television show, Shamba Shape-Up, provides expert insights on agriculture to rural farmers. In each episode, the team visits smallholder farms and addresses the challenges faced by farmers. It uses the knowledge base of its partners, such as the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS).[48]

Enterprises also partner with other enterprises including corporates across sectors such as pharma, hygiene, and education to help them increase their customer base as well as deepen their engagement with customers. For example, Shamba Shape-Up has partnered with Access agribusinesses such as MEA Fertilizers and Syngenta to promote their products and increase uptake.

Most Knowledge enterprises currently use low touch media such as television and mobile platforms to engage with the target market and provide frequent reminders. Low income customers are motivated through continuous touch points and reminders. Knowledge enterprises engage with customers mostly through low-touch media. These low-touch media include radio, television, celebrity endorsements, and point of sale advertisements at retail shops. Utugi TV uses television to increase awareness about agricultural practices. On the other hand, the use of high-touch media is yet to see traction. They include activities such as live interactions with customers through demos, lectures, and street plays. High-touch point media have deep reach, but limited width of operation as it is a human resource dependent model which leads to higher operational costs. Such models are predominantly used by non-government and donor organizations that aim to encourage behavior change.

48. Shamba Shape Up Company website, http://www.shambashapeup.com/; Communicating behavior change: how a Kenyan TV show is changing rural agriculture. https://ccafs.cgiar.org/blog/communicating-behavior-change-how-kenyan-tv-show-changing-rural-agriculture#.VrXWc_l97IU

FIGURE 57: USE OF ICT BY KNOWLEDGE ENTERPRISES ACROSS COUNTRIES AND SECTORS



Source: Intellecap Analysis

Source: Intellecap Analysis

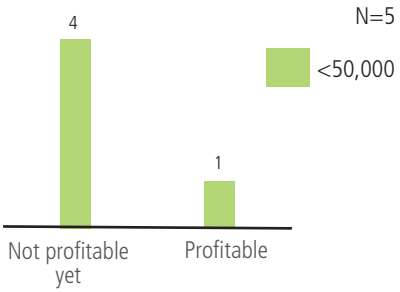
Low touch media has a wider reach, and is useful for information that does not need in-person dialog or conversations. Few technology enabled solutions that use mobile and internet services have the capacity to scale as well as maintain frequent touch points with customers. For instance, Totohealth engages with expectant mothers through their SMS service and informs them about nutrition, reproductive health, parenting, and care during pregnancy and developmental milestones. As per the survey 3 out of the 5 enterprises use online channels to reach a larger population. The internet/mobile based models are mainly used to disseminate healthcare-related information.

Financial Performance

Most for-profit Knowledge enterprises have built small revenue streams through advertisements, subscriptions and cross selling models. Knowledge creation and behavior change related activities for low income customers were traditionally led by not-for-profit enterprises. The mobile and internet disruption allows these models to generate revenue through advertising and cross-selling, which has led to the emergence of for-profit and hybrid models that solely focus on increasing awareness and information dissemination. For instance, Standards for Sustainability has a hybrid structure with for-profit and not-for-profit arms. It primarily creates awareness about the importance of standards, compliance audits, and reporting.[49]

Most Knowledge enterprises have revenues less than US$50,000 and are not profitable. For-profit Knowledge enterprises use multiple models for establishing viable businesses. Subscription based models allow enterprises to ensure regular contact with interested customers. For instance, in Kenya about 81% of children aged between 12-23 months are immunized compared to over 90% in developed countries such as USA.[50] mChild works towards resolving the immunization challenge in the region.[51] mChild uses a subscription model and provides maternal care related services where it informs mothers about vaccination schedules through an

FIGURE 59: KNOWLEDGE ENTERPRISES BY REVENUE AND PROFITABILITY



Source: Intellecap Analysis

49. Primary interviews/ Survey responses

50. Immunization rate. World Bank Data. 2014. http://data.worldbank.org/indicator/SH.IMM.MEAS

51. mChild. VC4 Africa. https://vc4africa.biz/ventures/mchild/

SMS based platform. The system sends two messages, one three days before the immunization date, and the other on the due date. Utugi TV[52] or the Farmer's TV, is a channel that shares information on best practices in livestock farming, cash crops, aquaculture horticulture and floriculture. It uses easy-to-understand formats in local languages (Kiswahili and Kikuyu) and communicates through farmer interaction, dialogues, simulations, and demonstrations. Utugi TV has partnered with agricultural organizations, research and financial institutions, farmers groups, cooperative societies and credit groups, and governments to prepare and deliver programs to promote agriculture in Kenya. Advertisements are one of the key sources of revenue for such channels.

Knowledge enterprises collect significant data while interacting with consumers, and this could be an additional source of revenue for them. Some Knowledge enterprises leverage technology to interact with the customers. Instead of only disseminating information, these enterprises engage with the customers directly in an interactive manner. This leads to personalization of the relationship, which is an important factor in encouraging behavior change, and also allows the enterprises to collect consumer data about usage, preferences, use patterns, price barriers and more. Some of these enterprises analyze the data they gather to generate insights on consumer behavior and sell it to mainstream business partners. FOYO Group[53] provides multiple services such as Foyo m-Health and Foyo T-health that provide information on various health related topics to customer through the use of mobile phones and television. Foyo uses multiple touch points such as the healthcare app where the customer provides his/her information and a mobile app to vote for competitions and collect customer information, which it processes for use by other companies. This data is analyzed to study healthcare trends, disease burden and provides precise and focused information to the business. Telemed, a healthcare teleconsulting firm, is currently piloting a new product to track chronic diseases, allow care providers and patients to connect and offer referrals, and most importantly, feed the data into national disease surveillance systems.[54]

> *"Mobile technology can be leveraged beyond mobile money. Businesses are using it for marketing and behavior change.*
>
> ***Nicolas Chevrollier,***
> ***BoP Innovation Center***

52. Utugi TV company website. http://www.utugitv.co.ke/

53. FOYO Group company. http://www.foyo.rw/

54. HANSHEP Health Enterprise Fund Awardees - Telemed Medical Services (Ethiopia). http://www.healthenterprisefund.org/awardees/telemedmedical-services-ethiopia/

CONCLUSION: WHITE SPACES & OPPORTUNITIES

CONCLUSION: WHITE SPACES & OPPORTUNITIES

Access, Ability, and Knowledge enterprises are engaged in different value chain activities within the critical needs sectors, i.e. agriculture, clean energy, education and vocational training, healthcare, water & sanitation and financial services. Their presence however is uneven, highlighting both, the depth of value chain development in a given sector, and the opportunities and white spaces within sectors for innovative and sustainable models.

Impact enterprises should continue to develop and innovate with current business models that provide market linkages, agro-processing, storage facilities, and other extension services. There is a huge opportunity to expand these services across different agro-product value chains. Agriculture is the mainstay of most East African economies, with smallholder farming accounting for almost 75% of agricultural production and more than 70% of total employment.[55] As a result, most impact enterprises across the focus countries are agribusinesses. Nearly 50% of the enterprises in Kenya and 60% of the enterprises in Ethiopia operate in the agriculture sector. These models provide agriculture inputs, storage and processing facilities, and build market linkages. The technology wave has also encouraged agribusinesses, especially in Kenya and Tanzania, to develop mobile and web applications providing farmers with information on best practices, weather and access to credit.

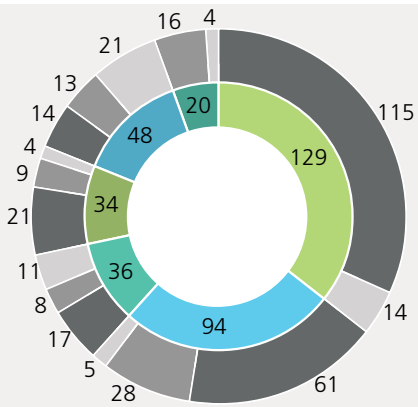
> *"There is a lot of opportunity in export-oriented, value-added manufacturing, especially in food processing, which has massive potential to drive economic development. In our experience, these kinds of standard business models often create much more impact than really innovative social enterprise models.*
>
> ***Brad Vanderford, Sinapis***

Of all the segments within agriculture, over 31% enterprises create market linkages – providing end-to-end support such as access to financing, farming inputs like fertilizers and seeds, and training in best practices, access to technology, storage and transportation. These models are mostly profitable and have a significant opportunity to expand across different farm produce. Also, more than 75% of the agricultural produce from East Africa is exported with little or no processing which presents a whitespace for development of processing industry.[56]

Given the low level of electrification and its impact on the growth of other small businesses, impact enterprises should focus on micro-grid solutions to cater to B2B market to trigger economic activities. These small businesses can be the anchor load or cross-subsidize the cost of providing electricity in nearby households. The low income population spends as much as 16% of their income on energy and pay up to US$10 per kWh on sources of energy such as disposable batteries and kerosene for lighting and cooking respectively. This is almost 100 times more costly than the per unit price in developed countries. Hence, clean energy has emerged as the second most important sector in East Africa, with a large number of impact

55. Smallholder Agriculture in East Africa: Trends, Constraints and Opportunities. African Bank Development Group. 2010.

56. Agricultural Value Chains in Sub-Saharan Africa. Deutsche Bank. 2014.



Agriculture
Clean Energy
Education
Financial Services
Healthcare
Water & Sanitation

High
Medium
Low

Entrepreneurs' Response to Market Challenges

	AGRICULTURE	CLEAN ENERGY	EDUCATION	FINANCIAL SERVICES	HEALTHCARE	WATER & SANITATION
HIGH (>12)	Market linkage (40) Food processing/ storage (23) Extension services (19) Quality inputs (18) Livestock (15)	Solar products (23) Electricity supply (22) Biogas/ Biomass (16)	Education content (17)	Payments/ remittance (21)	Affordable basic healthcare in rural areas (14)	
MEDIUM (6 TO 12)		Clean cooking solutions (12) Consultancy services (10) Financing solutions (6)	Affordable schooling/ education (8)	Credit (9)	Awareness (7) Quality/ availability of medicines/ hygiene products (6)	Waste management (9) Safe water (7)
LOW (1 TO 5)	Dairy (4) Agri-financing (4) Irrigation (4) Machinery & Equipment (2)	Waste to energy (3) Installation/ Maintenance (2)	Non-agri vocational training (5) Market linkage for jobs (3) Teacher training (2) Virtual/ Distance education (1)	Financial data analysis (3) Insurance (1)	Food and nutrition (5) Maternal/ Child care (3) Transportation for health (3) Data analytics (3) Preventive healthcare (3) Health insurance (2) Equipment (1) Diagnostic services (1)	Sanitation in urban slums (3) Data analytics (1)

Sectors

Business Model of Impact Enterprises (Number): Represents number of enterprises in our database (n=361) using the particular business model. Enterprises that fall under the 'Others' category have been excluded from this analysis.

enterprises emerging across different segments. Kenya has the largest number of clean energy enterprises, while Ethiopia is trailing in the sector. In recent years, enterprises providing clean cooking solutions have emerged apace. In the absence of grid supply, the sector is dominated by social enterprises supplying electricity and other energy alternatives such biogas, and solar products - almost 90% of the enterprises across countries operate in these segments. There are a few micro-grid solutions serving the low income population and have been able to scale considerably by using tech innovations in payment solutions. Many of them also cater to small scale impact businesses which require continuous supply of electricity for their operations. This space still has a significant demand-supply gap and impact enterprises have an opportunity to build B2B micro-grid solutions for SMEs in the region.

Supply of affordable and quality healthcare services for low income households should continue to be the focus of impact enterprises in the sector in East Africa. More than 60% of the deaths in East Africa happen due to preventable and treatable diseases because of poor healthcare infrastructure, lack of trained human resources and limited capacity of low income population to afford healthcare expenditure. Therefore, in healthcare, a number of impact enterprises provide affordable healthcare services in rural and remote areas through models based on telemedicine and online services. Few of the models are well-developed, and some of those deploy technology-driven products in their operations. Again, Kenya has the maximum number of models, while countries such as Ethiopia and Tanzania are lagging far behind with only one and two models respectively. Kenya and Rwanda have models focused on food and nutrition, wherein they provide food and health products to combat food security, malnutrition, and degenerative diseases. There are a few Knowledge enterprises that disseminate information on maternal and child healthcare. There are, however, considerable gaps in diagnostic services, preventive healthcare, transportation for health and availability of skilled staff to ensure effective delivery of healthcare services in the region. Intellecap's database has no impact enterprises that build skills of healthcare workers in East Africa.

> *"The most important innovation required in the healthcare sector is to make it affordable for the consumer.*
>
> ***Duncan Onyango, Acumen***

While many waste management models are already profitable, impact enterprises in other segments of the water & sanitation sector will have to build awareness and encourage behavior change to generate demand for clean water and urban sanitation solutions. Water & sanitation is emerging as an important sector in East Africa, with a number of models working at the intersection of water & sanitation and clean energy. These waste management models collect and convert waste into clean energy. Such models increase energy availability in rural and remote areas, and hence present both, a business case and high impact. Lack of access to clean drinking water is a huge challenge across East Africa where more than 70% of the population in urban and rural areas has to travel long distances or pay exorbitant prices for clean drinking water. Similarly, access to sanitation is an equally important challenge specifically for the urban poor, and very few enterprises focus on this challenge. Almost 70% of the water & sanitation enterprises are in Kenya, while the database had no enterprise in this segment in Ethiopia. There is a lack of understanding of health implications

among customers which constrains the growth of demand for these services in the region. Hence, impact enterprises focusing on this challenge will have to invest in building awareness to cause behavior change, and thereby create demand for their products and services.

While affordability is an issue in ICT-enabled education products, there is huge scope in ICT-assisted education models. Also, there are significant opportunities to establish impact businesses in vocational training for construction, healthcare, metals and mining, and ICT sectors. In education, there are a number of enterprises innovating delivery of educational content through technology, providing interactive learning and edutainment services. Similarly, there are some models scaling affordable education through innovative solutions such as online exchange of books between schools and 'school in a box' franchisee models. While there is a high concentration of technology based models, currently most of these models cater to middle to higher income consumers who have access to both, internet and tech-devices. Few models provide their courses on low cost tablets to make their product affordable.

There is scope for expansion in ICT assisted models to strengthen teaching quality through supplementary teacher training and vocational education. Overall, ancillary or tertiary education such as vocational training is weak in East Africa. Given the stage of development of the region, there is an opportunity to provide vocational education across sectors and geographies.

> *"Technology has a role to reduce cost and control quality.*
>
> ***Duncan Onyango, Acumen***

Access to consumer finance will continue to be a focus area in order to increase the affordability of products and services. Financial inclusion enterprises should continue to innovate to provide microcredit and other services. Parallel efforts to improve financial literacy will further boost uptake. Financial services is one of the most vibrant sectors in most developing countries because of the increased use of technology across product and service categories. The digital financial services space is opening up and people are getting accustomed to mobile money - consumers in Kenya, Uganda, Rwanda and Tanzania together made mobile transactions of US$45.75bn in 2015, accounting for 32% of their combined GDP. In 2009, mobile transactions in these countries totaled US$4.86bn (3.4% GDP).[57] According to another report by the Central Bank of Kenya, mobile money service providers made 733 million transactions worth US$23bn approximately. In 2012, there were 579 million transactions worth US$14.69bn.[58] The digital finance revolution is mainly seen in Kenya where two-thirds of the population uses mobile money.[59] There are several multinational companies such as MTN, Airtel, Uganda Telecom, Orange, MobiCash and Eeezy Money in Uganda, Tigo Pesa, Airtel Money and Zantel's EzyPesa in Tanzania, and MTN, Airtel and Tigo in Rwanda.[60] The number of mobile money subscribers is increasing; however, it will take some time to scale. There is a big void in the microcredit, insurance and financial literacy categories that provides further opportunities for enterprises in the sector.

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57. East Africa: Mobile Money Subscribers On the Rise Across the Region. All Africa. 2015. http://allafrica.com/stories/201508172245.html

58. What lessons can we learn from East Africa's mobile money developments?, Memeburn. 2016. http://memeburn.com/2016/01/what-lessons-can-we-learn-from-east-africas-mobile-money-developments/

59. 20 Years of Financial Inclusion in East Africa: 4 Major Shifts. CGAP. 2016.

60. Kenya tops list of banked population due to high mobile money uptake. The East African. 2015. http://www.theeastafrican.co.ke/business/Kenya-tops-list-of-banked-population/-/2560/2697138/-/d4euaiz/-/index.html

Impact enterprises gather significant data about low income customers in their day-to-day operations. This data, if systematically mined, has the potential to drive the future of impact innovations. Impact enterprises that work directly with customers - be they Access enterprises providing products and services or Knowledge enterprises disseminating information - gather significant data in the course of their work. This data is of enormous use to other SMEs, corporations and other stakeholders, who seek such data for analyzing customer behavior and design appropriate products.

> *"To facilitate consumer spending, enterprises are trying to provide access to finance through strategic partnerships with lending institutions or easy payment options such as pay-per-use or pay-as-you-go.*
>
> ***I-DEV International***

Technology leverage is visible across segments and sectors and demonstrates the potential for effecting paradigm shifts. Enterprises with access to customer data can collect, analyze, and predict future sectoral trends and highlight business opportunities. In the absence of such data, customer insights remain locked within individuals and enterprises, and enterprise responses to challenges remain reactive.

The impact enterprise space in East Africa is just beginning to open up to new and emerging opportunities. Its capacity to provide employment and bridge the chasm in availability and affordability of basic products and services is huge. The potential of impact enterprises – evident in the young and agile business models and strong local context – can be harnessed to develop a vibrant regional hub for innovations that can disperse across the global south.

ANNEXURE 1: RESEARCH METHODOLOGY

This study examines how impact enterprises in five countries in East Africa: Ethiopia, Kenya, Rwanda, Tanzania, and Uganda respond to market challenges and stimulate inclusive growth in the region.

The team conducted literature review to update its existing database on impact enterprises in the region. The activity resulted in a database of 398 enterprises which operated primarily in six focus sectors: Agriculture, Clean Energy, Healthcare, Education, Water & Sanitation, and Financial Services. The database also includes a few enterprises from other sectors such as technology for development, livelihoods, logistics, and nature conservation which have the potential to create socio-economic impact among the low income population.

The team conducted the research through three key steps:

1. Literature review on entrepreneurship in East Africa
2. Impact Enterprise Evaluation
    a. Initial assessments of the enterprises in Intellecap's database
    b. Detailed assessment of survey respondents
3. Key stakeholder interviews to validate findings

Step 1: Review of literature on entrepreneurship in East Africa

The team conducted a review of secondary data sources and other publications on entrepreneurship in East Africa, while maintaining a special focus on impact entrepreneurship. It analyzed key trends, the market challenges that exist in the region, how the concept of entrepreneurship has evolved in response to these challenges, and the interaction of entrepreneurs with the low income population. The review also helped understand how the entrepreneurial ecosystems in the different countries vary and its impact on the growth of impact entrepreneurship. It also helped inform our research framework and design.

Step 2: Impact Enterprise Evaluation

The team conducted rigorous assessment of all the enterprises in our database using secondary and primary information.

a. Initial assessment of the enterprises in Intellecap's database

The keystone of the project involved identifying impact enterprises in East Africa and examining their business models in clusters. The team then classified all 398 enterprises across three levers: Access, Ability, and Knowledge and analyzed the business models of each cluster. Some of the parameters that were used for the analysis included sector and sub-sector of operation, vintage, target markets, engagement and interaction with the low income population, use of technology, revenue models, and distribution channels.

b. On-line survey for detailed assessment of business models

The team reached out to the enterprises through an online survey to validate findings of the secondary research and dive deeper into the business models. The survey included questions on profitability, revenue, and expansion plans. The survey received responses from 125 enterprises which created a strong ground for further analysis. This list of survey respondents is included in annexure 2.

Step 3: Key stakeholder interviews

In parallel, the team also conducted interviews with key stakeholders in the impact entrepreneurial ecosystem in the region. The stakeholders included experts from Development Finance Institutions, Incubators, Venture Capital and Private Equity Funds, and Non-profit Investors. The list of primary interviewees is included in annexure 3.

Listing of Sectors and Stakeholders

SECTORS	STAKEHOLDER TYPE
Agriculture & Food	Impact/ Non-profit investors
Clean energy	Mainstream investors
Education & Vocational Training	DFIs
Financial services	Financial Intermediary
Health	Incubator/ Accelerator
Water & Sanitation	Investor network
Others (Livelihood, Tech for development, etc.)	

ANNEXURE 2: LIST OF SURVEY RESPONDENTS

A	Academic Bridge Ltd
	African Renewable Energy Distributor (ARED)
	African Solar Designs Ltd
	Africaqua
	Afrisol Energy
	Agromax (u) Ltd
	Appropriate Energy Saving Technologies (AEST) Ltd
	Aquila Investments Ltd
	Aristeph Entrepreneurs Centre ASTEC E.A
	Arusha Women Entreprenuer
	Awamu Biomass Energy
B	Baridi Stores
	Beyonic
	Bicycles Against Poverty
	Biocoop Rwanda
	Biogas International Ltd
	BioLite
	Budongo Women Bee Enterprise
	Burn Manufacturing
C	Chura Ltd
	Claphijo Enterprise Ltd
	Classic Foods Ltd
	Cobitech Solar Ltd
	Cowsoko
	Cyber School Technology Solutions Ltd
D	DASSY Enterprise
E	East Africa Fruits Farm
	EcoAct Tanzania
	Energy Private Developers
	Esoko
	Essentia Organic Fertilizer and Compost
F	FOYO Group
G	GLAS Ltd
	Great Lakes Energy
	Green Bio Energy
	Green Heat
	Green Organic Watch Growers Co-operative Society Ltd
	Greenlink
	GreenPath Food
	GRS Commodities Ltd
H	Health-E-Net Ltd
	Hollanda FairFoods Ltd
	Hydroponics Africa
I	I-Care Pads
	ICT for Development Kenya
	Impetus Africa Ltd
	INKISHA
	International Research & Development Africa Ltd
	iNuka Pap
	Isamado Homecare Ltd
J	Jibu

K	Kentaste Products Ltd
	Kenya Biologics
	Kidogo
	Kilimo Markets Ltd
	KingFire Energy Solutions Ltd
	Kisoboka Food Products Ltd
	KOFAr Ltd (Kenya Organic Finest Aromas Ltd)
	Kosmerc Systems Ltd
	Kytabu Inc
L	Lachlan Kenya Lts
	LishaBora Hydroponics Ltd
	Lowell Investments Ltd
M	Markets Merger Ltd (MERGIMS)
	Mazuri Kenya
	M-Changa
	MeshPower
	MicroClinic Technologies Ltd
	Mimba Bora
	Miti Health
	M-KOPA Solar
	Moringa Natural Products
	M-shamba
N	Natural Extracts Industries Ltd
	Newcastle Agrovet
	Notonlab
	Nu Bree Dairy Ltd
O	Ojay Greene
P	Pig Production and Marketing Uganda Ltd
	Play Guru Ltd
	Prosoya Kenya Ltd
R	Real IPM
	Recafo Co. Ltd
	Redcore Interactive
	Rwanda Best Ltd
S	S.T.O.P Ltd
	SafeBoda
	SafeMotos
	Sanivation
	SCODE Ltd
	Seeds of Hope
	Sendy Ltd
	Shalom Fish Farm Ltd
	SHE
	Shekere
	Shield Finance
	Simoshi Ltd
	Skynotch Energy Africa
	Soko Huru
	SokoNect
	SPOUTS of Water
	Standards for Sustainability
	Strauss Energy Ltd
	Sulma Foods Ltd
	SunCulture
	SunFunder
	Sustainable Energy Strategies

ANNEXURE 2: LIST OF SURVEY RESPONDENTS (CONTD.)

T	TakaTaka Solutions
	Telemed Medical Services
	Ten Senses Africa Ltd
	ThinVoid
	Tosheka Textiles Ltd
	Tracopay
	Tugende
U	Ultipedia
	UpEnergy Group
	Upper Hill Eye and Laser Centre
V	Village Energy Ltd
	Village Inc. Africa
W	Wana Energy Solutions
	Waste Masters Ltd
	Wilsafrales Enterprises
	WinSenga Ltd
	Winsol Green Power Engineering Plc
	Wisedorme Multipurpose Centre School

ANNEXURE 3: LIST OF INTERVIEWEES

Andreas Zeller & Annie Roberts, Open Capital Advisors

Brad Vanderford, Sinapis

Duncan Onyango, Acumen Fund

Florian Manderscheid, Iceaddis

Johnni Kjelsgaard, Growth Africa

Julia Brethenoux, Dutch Good Growth Fund

Lia Mayka, Village Capital

Lilian Mramba, Grassroots Business Fund

Mary Mwangi, Aspen Network of Development Entrepreneurs

Nicolas Chevrollier, BoP Innovation Center

Niraj Varia, Novastar Ventures

Robert Karanja, Villgro Kenya

Samuel Eyob & May Mumo, I-DEV International

Sara Leedom, Inkomoko

Sofanit Mulugeta, Deldeyoch

OUR ECOSYSTEM PARTNERS

ARGIDIUS FOUNDATION

The Argidius Foundation is a Swiss-based charitable organization. It aims to help entrepreneurs build profitable businesses and contribute to the sustainable development of their communities. They do so by helping to build effective ecosystems that provide SMEs with the right services in all stages of their growth such as supporting growing small businesses to be investment ready and gain access to finance, and by providing tailored capacity development services that enable entrepreneurs to meet the challenges of growth, such as incubation, acceleration, training, coaching, mentoring and networking.

PACE INITIATIVE – USAID

The Partnering to Accelerate Entrepreneurship (PACE) Initiative of USAID aims to catalyze private sector investment into early-stage enterprises and identify innovative models or approaches that help entrepreneurs bridge the pioneer gap, thus unlocking the potential of thousands of promising enterprises around the world. Working in partnership with over 25 incubators, accelerators, and seed-stage impact investors, USAID's U.S. Global Development Lab has created ten public-private partnerships dedicated to testing innovative models or approaches to bridge this gap and foster entrepreneurship.

SHELL FOUNDATION

Shell Foundation is an independent charity that works to create and scale new solutions to global development challenges by applying business thinking to major social and environmental issues linked to energy and mobility. Shell Foundation has established an "enterprise-based" model to catalyse lasting social and environmental impact on a global scale. This sees them deploy a blend of financial and non-financial resources to accelerate transformative innovation and harness private markets to deliver public benefit at scale.

This document reflects the findings of Intellecap's research. They do not necessarily reflect the opinions of the Argidius Foundation, Shell Foundation, U.S. Agency for International Development (USAID) or the United States Government. The ecosystem partners are not responsible for the accuracy of any information supplied herein.

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