Empowering Women as Key Changemakers: Why Female-Driven Social Innovation Matters

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1 Introduction

Female leaders assume a key role on the global political and economic stage: as research by the World Economic Forum (2021) and the Harvard Business Review (Zenger & Folkman, 2020) shows, trust in them is increasing. While there is some debate about these findings (see Windsor et al., 2020), one reason seems to lie in their documented ability to continuously learn and develop—while showing empathy, honesty, and integrity. On the contrary, disasters like the Deepwater Horizon (United States Environmental Protection Agency, 2020) and Ford Pinto case (Leggett, 1999) impressively show that a lack of diversity may produce spectacular wrong decisions, entailing massive destruction of wealth as well as environmental and public health hazards. Hence, more diverse organizational structures and decision-making enhances business performance significantly (Hunt et al., 2015) with even investors increasingly requiring companies to adapt (Wiley, 2021). Active diversity management and as a result more female leadership are perceived to promote practically wise decision-making (Stangel-Mesecke et al., 2018) and good governance.

While the given sources primarily concentrate on OECD countries, our contribution focuses on the overall importance of female entrepreneurship in the economic development of the Global South, specifically Sub-Saharan Africa. Negative effects of the pandemic with the burden of building back the economy (Mahler et al., 2020) as well as climate change (World Meteorological Organization, 2020) are hitting this region hardest of all. In this context, according to recent research by the World Bank,

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women make up 58% of all entrepreneurs, but earn 34% less profits than men (World Bank Group, 2019). Moreover, female-led enterprises are usually smaller, not as likely to grow (Femi Ademiluyi, 2019), and are more likely to fail than those owned by men (Minniti & Naudé, 2010). Reasons for these facts cover disadvantages such as inadequate access to capital, gender-biased business rules and regulations, or gender unfriendly ethnic cultures (Femi Ademiluyi, 2019). Particularly in societies across Sub-Saharan Africa, most women lack access to finance and education, thus hindering them to realize their full potential (Ndemo & Mkalama, 2019). Nevertheless, entrepreneurship is widely popular and admired across the region, with more women being part of the workforce than elsewhere in the world (ibid.). Given the great potential of female entrepreneurs in the fight against poverty (Femi Ademiluyi, 2019), they represent a key ingredient to developing societies.

With this contribution, we aim to highlight support structures which allow female social entrepreneurs in the Global South to grow their business. We show how international multi-stakeholder initiatives can help women-led social impact startups to thrive. Moreover, the proposal offers an action learning cross-sector framework involving a variety of different stakeholders from industry and academia. Learning through experience, knowledge sharing, as well as network-building, strengthens female-led entrepreneurial solutions and role models for building ecosystems of positive socio-economic development along the lines of the UN SDG Impact Goals (SDG Impact, 2020). We will begin by outlining the key concepts and methods underlying this approach.

2 Theoretical Framework

2.1 Challenges of Social Entrepreneurship

Social entrepreneurship has increasingly gained recognition during the past decades (Light, 2006). While a number of definitions exist, the notion of social entrepreneurship is increasingly defined more narrowly along the lines of Tracey and Phillips' (2007, p. 265) understanding of social entrepreneurship as an "enterprise for a social purpose" that requires the identification and exploitation of market opportunities with the aim to develop products and services that can be reinvested in a social project. However, social entrepreneurs are faced with various challenges, such as balancing market-based and charity-based organizing (Battilana & Dorado, 2010; Tracey et al., 2011), as well as accountability to a wider range of different stakeholders than conventional businesses. As a result, they have to present the organization in different ways toward actors in both the for-profit and nonprofit domains (Tracey & Phillips, 2007).

Such challenges are even more severe for female social entrepreneurs operating in Africa: While Africa is the continent with the highest rate of female entrepreneurial activity, women still struggle with lower education levels and lower asset endowment. As women often operate small businesses, mostly for subsistence (Benarousse, 2020), failure to meet loan conditions and financial self-exclusion

prevail. However, the very need to procure for themselves and their families makes them drivers of entrepreneurship: As they often are confronted with limited job offers, they have to create alternative sources of income to survive. Their lack of access to traditional funding makes women important actors of microcredit policies, as they are considered more trustworthy, productive, and less corrupt than their male counterparts. Moreover, an increase in female-led financial structures would make funding more easily accessible to other women (De Panafieu & Benarousse, n.d.). We therefore believe that strengthening the networks of female entrepreneurs—also with respect to expertise and social capital—will increase the success of female-led social enterprises in Africa, thereby contributing to enhancing livelihoods in the developing world.

2.2 Market-Creating (Social) Innovations

To bridge the gap to success at scale for social entrepreneurs, putting the focus on market-creating innovations as described in Clayton Christensen's "Prosperity Paradox" (Christensen et al., 2018) serves as a guideline. Christensen describes three types of innovation: efficiency innovation, sustaining innovation, and market-creating innovation (ibid.). Following his line of argumentation, only the latter of the three has the potential to bring about sustainable economic prosperity for the Global South in the mid- and long term. While efficiency innovations reduce employment opportunities to increase profits (e.g., in the oil and gas industry) and sustaining innovations increase the quality of existing products while cannibalizing its own market share (e.g., new car or smartphone models), market-creating innovations mainly evolve around products and services that bring about new employment opportunities, infrastructure, and therefore increased net worth on a micro and macroeconomic level (ibid.).

A prominent example Christensen gives in an interview with the Wharton University of Pennsylvania (2019) is the case of Tolaram's Indomie Noodles, a company that created a whole new market for their product in Nigeria, including a completely new supply chain, logistics, and sales infrastructure, thereby making nonconsumers into consumers and enabling simple access to nutrition (ibid.). As of 2017, Tolaram had a market share of 70% in the Nigerian noodle market, selling 4.5 billion Indomie noodle packets per year (Mohanty, 2017). Further examples related to Sub-Saharan Africa are the cases of Mo Ibrahim, who laid the groundwork to today's vast African cellphone network some two decades ago, simply because of the lack of landline infrastructure. The elimination of unattainability (through easily built signal transmission infrastructure) and unaffordability (via prepaid cards vs. monthly plans) created a completely new market that enabled accessible an affordable communication to a large part of the population that was completely left out of the market before (Ibrahim, 2012).

Against the backdrop of the enormous societal challenges that especially women entrepreneurs are facing as key changemakers (Benarousse, 2020; Boateng, 2018) in countries across Sub-Saharan Africa (Benarousse, 2020), the approaches featured in

our contribution seek to highlight the relevance of female role models that develop (possibly) market-creating social innovations (Boateng, 2018). These innovations do not only focus on increased market share and profits but pursue a societal empowerment agenda that promotes inclusive business (Lashitew & Van Tulder, 2017) for shared prosperity, going beyond Christensen's original approach toward a triple bottom line (Elkington, 1997).

2.3 Business Model Development

Social innovation—the development of better solutions to social and environmental challenges—faces more constraints than tech innovation due to issues like limits in funding or the difficulty of measuring social outcomes (Chang, 2019). By providing support in listening to customers, iterating on solutions, and designing sustainability-oriented business models (ibid.), the lean startup method (Ries, 2017), as well as the Business Model Canvas (Osterwalder & Pigneur, 2013) lie at the heart of the program. The process of developing and enhancing the social entrepreneurs' business models is centered around the so called "build-measure-learn" cycle, which is one of the key concepts of the lean startup methodology (Ries, 2017): Instead of starting with a product, the challenge is to start with a problem that needs to be solved and then developing a minimum viable product (MVP) to start learning to what extent the product is able to solve the problem at hand. This involves measurement and learning along the development process. It should become clear whether the solution is suitable to solve the problem for the relevant user group or whether it is necessary to pivot or make structural changes to the proposal. As the success of each entrepreneurial solution hinges on a number of assumptions, frequent experimentation is necessary to validate or invalidate these assumptions (Chang, 2019). It is therefore that testing of assumptions is a key component of the action learning approach presented in this chapter.

3 The Social Impact Startup Academy (SISTAC)

3.1 Purpose

As we have laid out before, women are key changemakers that have an essential role in achieving the Sustainable Development Goals in Sub-Saharan Africa (United Nations, 2021) while, on the other hand, they face more severe challenges than their male counterparts. However, many approaches to the problem are mainly focused on Western solutions and therefore generally fail to meet the needs of local populations in the developing world. Instead, we propose solutions by which university students work directly with (female) social entrepreneurs from Sub-Saharan Africa to find the best way to implement and adapt the market-creating solutions they propose. Thereby, the underlying thought of founding a Social Impact Startup Academy

(SISTAC) is the notion of market-creating innovations (Christensen et al., 2018) that paves the way for sustainable economic prosperity for the Global South.

3.2 Framework

To foster mutual learning for entrepreneurs and students by working on the real-life challenges of social entrepreneurship, SISTAC was founded—a platform that connects students and social impact startups from seed to exploration stage. SISTAC was co-developed by the Bayer Foundation and Prof. Dr. André Habisch, who teaches a "Social Innovation" program for master students in Business Administration at Ingolstadt School of Management. It was first launched in 2018 with Bayer Foundation as its principal funder. The bi-annual program contributes to Bayer's sustainability ambitions, which in turn support the United Nations Sustainability Goals, specifically #2 (zero hunger) and #3 (good health and wellbeing) (United Nations, 2021). The long-term goal is to implement SISTAC in management education across the Global South in order to effectuate systemic mindset change, inspiring future leaders to recognize the economic and social impact potential of local innovators. With guidance from other partners like university scholars and global players, it aims to battle poverty, malnutrition, and women's health issues using new entrepreneurial approaches—thus helping the young female social entrepreneurs to overcome challenges like lack of public infrastructure and knowledge gaps in resources and applied business. However, the SISTAC network goes well beyond the Bayer Foundation and Ingolstadt School of Management: It is comprised of a variety of companies from different fields, such as the German consulting company Achtzig20 (2021), and female-led Fintech company Unconventional Capital (2021). With respect to access to relevant founder networks, the cooperation with Get in the Ring (2020), a global startup competition has been particularly valuable to increase SISTAC's reach. By establishing the Women Empowerment Award (see below), the Bayer Foundation has been able to reach out to a great number of high-potential female social entrepreneurs who have become part of the SISTAC network.

In its endeavor to help Sub-Saharan African companies to grow their business, SISTAC continues to look for new partnerships with social impact startups—particularly those who are owned and managed by women. The process of selecting partners is a crucial step, as it paves the way for a long-term relationship that requires constant exchange and mutual learning. One challenge in selecting partner companies is to identify companies with the necessary willingness and ability to maintain the communication with the students and respond to their queries. Non-communication and withdrawal from the project with the students have been found to be major issues, so the selection process follows several steps of interaction and clear-cut criteria. First and foremost, the business must have a major focus on Sustainable Development Goals as a whole, with extra emphasis on SDG 2 and 3:

#2 Zero Hunger: Startups focusing on ending hunger, achieving food security and improving nutrition and promoting sustainable agriculture are all in scope.

#3 Good Health and Wellbeing: Startups that focus on ensuring healthy lives and that promote well-being for all ages are the target for this SDG goal.

In selecting suitable partners, the idea of market-creating innovations (Christensen et al., 2018) provides further guidance, as the focus of SISTAC is to collaborate with those companies which have the potential of opening up completely new opportunities of serving the needs of new, mostly less affluent customer segments, creating employment in their target region, providing infrastructure, and thereby increasing wealth for the whole region. Prior to the collaboration, interviews are conducted with selected founders, assessing factors like fit with these goals but also evaluating the maturity and scalability of the business model, as well as the founder's readiness to engage with students on a regular basis.

3.3 Methodology

SISTAC applies an action learning approach that combines the concepts of the lean startup methodology (Ries, 2017) and the Business Model Canvas (Osterwalder & Pigneur, 2013) with hands-on group work and counselling sessions with coaches from different fields. Thereby, student groups from the "Social Innovation" class at Ingolstadt School of Management engage with the course instructors in weekly meetings, while meeting their entrepreneurs outside class in regular intervals. In applying these methods, the students who collaborate with the social entrepreneurs use the so-called Bayer Catalyst Box—a physical and digital box, which provides innovators with tools, learning materials, templates, and an experimentation budget of up to 1500 Euros. The digital box provides access to a step-by-step online course in which innovators learn about the Business Model Canvas and how to run fast experimentation with few resources to gain evidence of customers' behaviors. The Catalyst Box Program includes a variety of tools and methods that allow users to test the underlying assumptions behind the proposed solution through creating mock-ups like landing pages, clickable app prototypes, or flyers that can be presented to relevant target groups. In addition to the online course, the Catalyst Box Program provides access to experienced lean startup coaches for additional 4.5 h of one-to-one coaching. Thus, the students are additionally supported by the lean startup coaches from the Catalyst Box Program, who provide them guidance on testing the assumptions of their proposals. The learning process, which is consistent with the "build-measure-learn" cycle (Ries, 2017), will be explained in the following section.

3.3.1 Problem Identification

In a first step, the students and entrepreneurs identify the most pressing problems in the entrepreneur's business model by means of a rigorous analysis done with a

Business Model Canvas (Osterwalder & Pigneur, 2013). Students and startups meet for the first time in a 3-day workshop, the so-called Social Innovation Bootcamp, where they visualize the startups' Business Model Canvas together. In a next step, the students are asked to identify the most pressing issues within their startups Business Model Canvas. The tools provided in the Bayer Catalyst Box support them with their analysis. Thereby, the entrepreneur's economic needs, as well as the companies' key stakeholder needs, are taken into consideration. Based upon the analysis, the students identify the issues that require the most attention and make a proposal of how they intend to solve them as a group. The process and outcomes of the analysis are presented to the class and the entrepreneurs in order to obtain feedback on the viability of the proposed solution (Fig. 1).

3.3.2 Minimum Viable Product Development

Based on the analysis, the students start working on the solutions that are supposed to solve the key issues in the business model development. The core of this step is the development of a minimum viable product (MVP), as postulated by Eric Ries

Fig. 1 The action learning process in social innovation

(2017). Thereby, based on the startup's needs and the needs of its key stakeholders, the students are asked not only to develop the MVP for their solution (e.g., a customer relationship management system, an online store, a delivery app) but also to test the key assumptions underlying their proposal to validate its viability and fit for the users. Based on their testing, the students are asked to modify their proposal if necessary. The final solution is then handed over to their startup partner in the form of a written paper, explaining how to implement the solution in their company.

3.3.3 Social Impact Measurement and Communication

In the second part of the Social Innovation course, the students are asked to conduct a social impact analysis by calculating the social return on investment (SROI). The SROI was developed by REDF, a venture philanthropy organization in California. It represents a definition and monetization of the impact of particular activities on socio-economic policy indicators (Hall & Millo, 2018). By calculating the SROI for their startups' social impact, the student groups should provide evidence of whether the company's activities really make a social change for their target audience and whether the students' proposal contributes to its success. Resulting from the analysis, further steps need to be envisioned: for example, a high social return on investment should be well-embedded into investor communication and nonfinancial reporting to attract funding. A low SROI should lead to a review of the company's business model and induce questions on the basic assumptions underlying the company's offering.

After completing the program, each student should understand the social role of entrepreneurship in society, analyze a social impact business model, and develop a functioning business solution for social enterprises, henceforth, contributing value for both the students and the startups. The program generates motivation in students as they can create tangible impact with the application of their knowledge and develop personal skills. On the other hand, the startup not only receives qualified support free of charge and access to a strong network of coaches, investors, and partners—founders are encouraged to engage in a constant learning process that challenges them to constantly question and develop their business model. In the following section, we will present selected cases to illustrate the nature of the projects developed by the students and entrepreneurs.

3.4 Selected Cases

3.4.1 Uganics (Uganda)

Uganics is a Ugandan social startup that found a solution to fighting malaria through the introduction of a locally produced organic mosquito soap. The company's vision is to make malaria prevention safe and accessible to everyone without needing to incur behavioral changes. It was founded in 2016 by Joan Nalubega, who had suffered from malaria as a child and decided to address the issue through an entrepreneurial approach (Uganics, 2021) to fighting the life-threatening disease,

which mostly affects children under the age of 5: The percentage of total malaria deaths was 67% in 2019 (World Health Organization, 2020). It is therefore that the company targets its activities to provide mosquito-repellent soaps for mothers with little children, along with training to sensitize and educate communities on malaria. While malaria prevention traditionally occurs by means of antimalarial medication, or vector control (insecticide-treated mosquito nets and indoor residual spraying) (World Health Organization, 2021), Uganics opened up a market for integrating malaria prevention into the daily routine of two very different customer segments: tourists and the less affluent local community. In summer 2020, while the world was shaken by the COVID-19 pandemic, Uganics started a cooperation with a student group from the "Social Innovation I" course at Ingolstadt School of Management in Germany. As the business model of Uganics relied heavily on selling soaps to tourists in order to be able to offer them at more affordable prices to the local community, the COVID-19 pandemic affected this income stream very severely. Therefore, the students made efforts to identify alternative ways to finance Uganics' business and its social mission. They proposed a social matchmaking model, whereby both customers and noncustomers from inside and outside Uganda could fund soaps for vulnerable communities so these could be sold at more affordable prices. To support their proposal, the group designed an online payment option to be integrated into the Uganics website, so payment of soaps and donations could be made more convenient.

3.4.2 The Palmoil Honey Company (Kenya)

The Palmoil Honey Company, founded by Deborah Munyekenye in 2017, is an inspiring example of how women can use "feminine wisdom to turn despondency into a bright and wealthy future," as Munyekenye (2018) writes in her story for World Pulse. The company is an agribusiness enterprise that processes palm oil for sale but also offers a variety of other products, such as honey, soap, vegetables, and dairy products. While in principle, this form of agriculture is not new, it represents a market-creating innovation (Christensen et al., 2018) in several respects: With her business, the founder was not only able to offer fresh oil and food to the local community. She also created employment, mainly to the women in her community, as well as a completely new income source for local farmers by buying the berries from their palm oil trees. In spring 2021, a student group from the "Social Innovation I" course at Ingolstadt School of Management started working with the Palmoil Honey Company. The students decided to help Deborah Munyekenye attract more customers by creating a Facebook marketing strategy. Along with a detailed implementation plan, the students created the company profile, fed the channel with information and pictures, and tested the content with relevant target groups. In addition, a corporate design, including a logo (Fig. 2), was created for the company by using the Bayer Catalyst Box.

In the following section, we will describe a further example of how female-led social enterprises with market-creating (social) innovations from Sub-Saharan Africa can be supported in their business model development and growth, namely, Bayer Foundation's Women Empowerment Award (Fig. 2).

Fig. 2 The Palmoil Honey Company logo

4 Bayer Foundation's Women Empowerment Award

4.1 Purpose

As we have laid out above, supporting women as key changemakers is essential in driving sustainable development in the Global South. This has become a central element of Bayer Foundation's architecture and its vision to catalyze science and social innovation for a world with health for all and hunger for none. In 2021, Bayer Foundation has therefore launched its first Women Empowerment Award with the goal to empower female entrepreneurs in the incubation stage to generate social impact in health and nutrition across Sub-Saharan Africa, attracting over 400 applications, 95% of which originated from the target region (Bayer Foundation, 2021). By supporting female entrepreneurs with groundbreaking, market-creating ideas, Bayer Foundation specifically recognizes and celebrates their role as game changers driving sustainability and social impact through entrepreneurial innovation in health, nutrition, and sustainable agriculture.

4.2 Framework

The award includes 25,000 EUR in cash plus an in-kind contribution that equals 25,000 EUR in the form of a 24-week growth accelerator, with the support of the Academy for Corporate Entrepreneurship (2021) and the NGO Endeva (2021). During this period, winners receive tailored support and training for scaling, including active investor feedback. In addition, all winners tap into an extensive network of experts, offering coaching both in health and nutrition as well as sustainable agriculture related focus areas. Furthermore, winners and finalists become part of Bayer Foundation's global alumni and partner network exposing them to investors and other players that can help raise capital and exchange knowledge about experience gained.

4.3 Structure

The growth accelerator is made up of customized workshops and mentoring for all winning teams, including opportunities to exchange with the other awardees. The focus lies on key startup accelerator topics as well as social ecosystem barrier topics that help the social enterprises grow and scale their models. During the accelerator they have opportunities to pitch to investors. The accelerator consists of a training and mentoring program to help teams along their intrapreneurship journey to test and validate new innovative ideas. Teams require external weekly mentoring, assignments, and support in building and executing experiments. This includes 12 90-minute virtual mentoring sessions per team, all educational materials for the accelerator and workshops (assignments, tutorials, mural canvas', etc.) and project management. The mentors "meet the team where they are" and offer the most needed support, leveraging any curriculum or other content mentors have access to. In addition, social enterprises are often constrained by barriers in the ecosystem, such as unconducive regulation, lack of user capacities, or limited infrastructure. A system perspective helps to identify potential allies to address these barriers, as well as solutions to collaborate effectively. Three 1/2-day Workshops are planned throughout the 24-week program to help enterprises define their ecosystem scale up strategy. They can be attended by all five teams using an online webinar format and will be delivered by two mentors (Bayer Foundation, 2020). The structure is as follows:

1. **Customer and Business Model Gaps**
   Analyzing and prioritizing critical assumptions and weaknesses around:
   - Early adopters, customer segmentation, opportunity size
   - Competitor landscape, traction channels, business model
   - Messaging and startup financials
2. **Ecosystem Barrier: Build Hypothesize**
   Identifying ecosystem barriers and potential partners:
   - Introduction to systems approach
   - Mapping the ecosystem
   - Identifying barriers to scale and potential allies
   - Building hypothesis for scaling partners
3. **Go to Market Launch and Scale Up**
   Analyzing and prioritizing the product roadmap with a go to market strategy:
   - Product owner and agile sprint methodology
   - Critical features and Kano Model
   - Customer journey and conversion (pirate metrics)
4. **Ecosystem Barrier: Concretize**
   Develop scaling pathways via new partnerships:
   - Review insights on potential scaling partners
   - Select a pathway to scale
   - Develop partnership approach (incentives/governance)
5. **Ecosystem Barriers: Prepare for Implementation**

Plan for execution and understand challenges in partnership management:
- Develop implementation plan
- Identify risks and mitigation strategies
- Preview exit strategies from partnerships

6. **Customized Mentoring: Pitch Prep and Raising Funds**
Analyzing your investment requirements and preparing to pitch investors:
- Understanding your investment requirements
- Identifying and targeting suitable investors
- Developing your pitch deck
- How to deliver your investor pitch

Once the first batch of winners has undergone this process, the program will be analyzed and improved in an iterative process. Along the scaling journey of the winners, Bayer Foundation will furthermore offer access to resources in order to help realize the full potential of the social enterprises and their market-creating innovations.

4.4 Selected Cases

Vetsark (Nigeria)

The Problem

In Sub-Saharan Africa, livestock farming is a major contributor to economic growth. However, the occurrence of livestock diseases like African swine fever, fowl cholera, PPR, and foot and mouth disease is not only rampant but usually strikes without warning. This results in an estimated loss of $2 billion dollars annually. In Nigeria, this problem has worsened because farmers and the federal government alike are unprepared and ill-equipped to prevent and quell outbreaks. Farmers are poorly educated on disease symptoms, farm management, record-keeping, lack affordable tools, veterinary products, and access to quality disease-resistant animal breeds. Similarly, the government tracks disease spread manually, often catching outbreaks too late. All these result in the potential closure of farms and loss of hundreds of thousands of jobs (Vetsark, 2020).

The Solution

Vetsark's Farmgod application is a farm management app which allows farmers to track and monitor their livestock production and financial transactions on a daily basis. Unlike most other farm management applications, Farmgod also offers real-time disease surveillance mechanism for predictive analytics on disease spread so that countermeasures can be implemented quickly Farmgod and uniquely addresses the challenges that livestock farmers face with respect to pests and diseases and poor digitization of their business operations by offering a bundle of agricultural services in one application. Vetsark's product development is guided by design thinking, rapid prototyping, and a Markets for the Poor (M4P) approach. Vetsark has worked closely with 100+ stakeholders and 3000+ farmers to date. Due to its digital nature, it

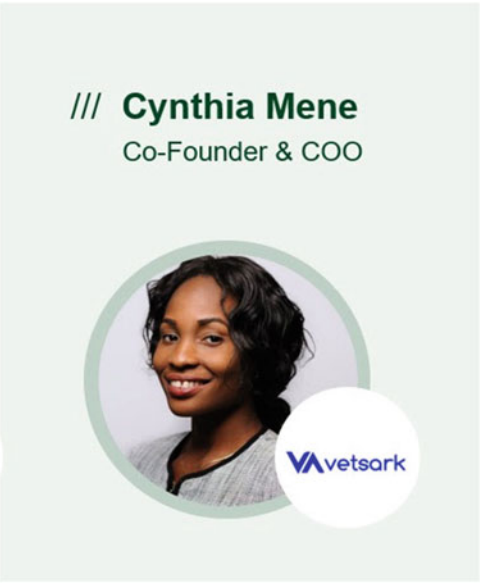

Fig. 3 The founder of Vetsark, Cynthia Mene

is an easily scalable solution that helps farmers record, track, and analyze data on livestock production and financial transactions. It offers a low-cost tool for sending disease alerts and providing precision agricultural advisory services (Vetsark, 2020) (Fig. 3).

Kaaro Health (Uganda)

The Problem

In Uganda, more than 75% of all private healthcare facilities are located in major urban areas (Dowhaniuk, 2021), while roughly 80% of the population lives outside urban areas (World Bank Group, 2021) and, therefore, have limited access to healthcare services. This leads to severe challenges in access to health and medicine for rural populations, which are typically especially vulnerable (Fig. 4).

The Solution

Kaaro Health provides rural health facilities with remote access to doctors and specialists so that women in rural communities do not have to walk long distances to access healthcare (Fig. 4).

Furthermore, Kaaro Health aims to finance healthcare facilities to support rural healthcare entrepreneurs. The social enterprise supplies healthcare SMEs with financing instruments they need to expand their operations into new underserved areas. Kaaro Health's work helps to provide more sophisticated medical equipment in rural areas. Therefore, Kaaro Health provides targeted financial management training to current and prospective clients, so they have the skills they need to grow and sustain their businesses. Their advisory services prepare healthcare SMEs with growth potential to qualify for financing and to mitigate the risk of lending to these businesses. On a practical level, Kaaro Health manufactures and

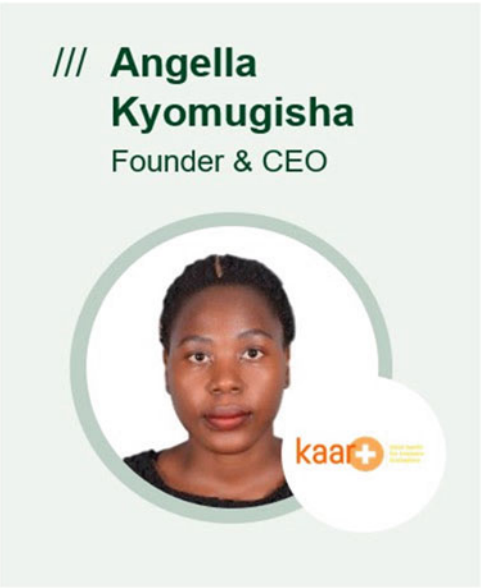

Fig. 4 The Founder of Kaaro Health, Angella Kyomugisha

installs solar-powered, telehealth-connected container clinics in rural and hard-to-reach villages across rural Uganda. Each rural clinic uses the Internet to connect remotely to 24 city-based medical doctors who provide life-saving treatment and public health messaging. Clinics are managed by nurses and local leaders as a community resource, while patients pay a small fee to access doctors remotely, saving up to 85% in costs and ensuring each clinic remains sustainable. In 68 of Kaaro Health's 74 locations, the container clinics are the only health facility within a 20 km radius (Kaaro Health, 2020).

5 Conclusion and Call to Action

In this contribution, our goal was to highlight the social role of female social impact entrepreneurship in Sub-Saharan Africa. Albeit it is facing multiple challenges, it clearly possesses potential to contribute to the realization of UN-SDGs through (market-creating) innovation in their home countries. We have shown how business education could contribute to fill the gap of lacking support infrastructure for these promising entrepreneurial endeavors. As a part of Bayer Foundation's funding infrastructure, SISTAC involves MA and MBA students in business and business engineering in order to analyze and support promising social impact startup founders in Africa and other parts of the Southern hemisphere. One of the medium- and long-term goals of our efforts is to take initiatives like SISTAC and its methodology to other countries and thus to extend the network of academics, practitioners, and startups to a global level in order to use entrepreneurial approaches for achieving

the UN Global Goals in as many different areas of the world as possible. A pilot project with Purdue University from Indiana (Purdue University, 2021) was established to teach the action learning approach from the Social Innovation classes in Ingolstadt in different cultural contexts. Thereby, students from Purdue University will work together with Saving Grains, an early-stage social startup from Berlin that provides digital, platform-based solutions to reduce postharvest losses among smallholder farmers in West, Central, and East Africa (Saving Grains, 2020). Similarly, Bayer Foundation's Women Empowerment Award and the connected growth accelerator program described above provide a unique opportunity for incubation stage social impact startups across the Sub-Saharan African region to enhance the reach and impact of their potentially market-creating innovations.

By disseminating the SISTAC methodology and the Women Empowerment Award and applying it in different contexts, our aim is to encourage social innovators from different fields and cultural areas to join forces to achieve the UN Global Goals. In particular, we want to inspire female entrepreneurs to put their innovative potential into action and tap into the networks that help them achieve a greater good and overcome the challenges of being a social entrepreneur. Thereby, they may also serve as a role model for a large number of women across the African continent, who consider founding their own business in order to make a living for themselves and their families as well as contribute to the socio-economic development of their countries.

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