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Effect of Government Support and Support Services on the Sustainability of Solar Social Enterprises: A Case Study of Nairobi, Kenya

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Abstract

This study examines the effect of government support and support services provided by incubators and accelerators on the sustainability of solar social enterprises (SSEs) in Nairobi County, Kenya. Employing a qualitative case study methodology, data was collected from 20 managers and founders through semi-structured interviews and analysis of relevant reports and online news articles. Key findings revealed that policy consistency, targeted financial incentives, and tailored support services enhance SSE growth, market expansion and resilience. However, policy unpredictability and generic support services hinder long-term growth. From a practical perspective, the research uncovers the entrepreneurial dynamic capabilities that managers and founders of social enterprises in constrained entrepreneurship ecosystems employ to drive long-term growth of their enterprises. Theoretically, the study extends the use of dynamic capabilities in resource constrained entrepreneurship ecosystems.

Keywords: Entrepreneurship Ecosystem, Government Support, Incubators, Accelerators, Sustainability, Social Enterprises

Introduction

Solar social enterprises (SSEs) have emerged as a vital component in Kenya's efforts to enhance energy access and promote sustainable development. These enterprises leverage solar technology to provide affordable and reliable energy solutions to underserved communities, particularly in rural and remote areas where access to electricity is limited. Solar social enterprises operate with a dual mission: to generate profit and to create social impact. By addressing the energy needs of marginalized populations, SSEs contribute to poverty alleviation, improved health outcomes, and economic empowerment. The growth of SSEs in Kenya has been driven by the country's abundant solar resources, supportive policies, and the entrepreneurial spirit of local innovators.

Government support and the availability of support services are crucial for the success and scalability of SSEs in Kenya. The government plays a pivotal role in creating an enabling environment through policies, regulations, and incentives that encourage investment in renewable energy. Support services that provide technical assistance, and capacity-building programs, are essential for SSEs to overcome operational challenges and achieve sustainability. Collaboration between the government, private sector, and non-governmental organizations (NGOs) can foster a conducive ecosystem for SSEs, facilitating their growth and impact. Effective government support and robust support services can enhance the ability of SSEs to reach more communities, innovate, and contribute to Kenya's energy transition.

Literature Review

Entrepreneurship Ecosystem

According to Alvedalen and Boschma (2017), there are multiple definitions of an entrepreneurship ecosystem but all of them consist of culture, policy, regulations, infrastructure, market, human capital, networks and financial aspects. Over the last 10 years, scholars and policymakers have been paying close attention to the entrepreneurship ecosystem (Spigel, 2017). This is because the entrepreneurship ecosystem is increasingly seen as providing opportunities for better economic performance (Breznit & Taylor, 2014). According to the Global Entrepreneurship Index (GEI) countries with advanced entrepreneurship ecosystems are in North America, Europe and Australia. In the 2019 GEI report, South Africa was the best country in sub-Saharan Africa at position 52, followed by Botswana at position 66 with Kenya coming fifth at position 86, globally (Acs et al., 2021).

The history of Nairobi's entrepreneurship ecosystem can be traced to the launch of M-Pesa by Safaricom in 2007. In 2010, the founders of Ushahidi – a crowdsourced crisis map that uses short messaging services – launched iHub, Kenya's first incubator and co-working space for information and communication technologies enterprises (Ankarcona & Holm, 2016). Other developments that contributed to the vibrant growth of Nairobi's entrepreneurship ecosystem were the rapid drop in phone prices from 2004 and the completion of the first undersea internet cable in 2006 (Passqui et al., 2014). Launched in 2011, M-Kopa, an SSE, is also one of the first success stories that put Nairobi on the map as a business option for international investors (Ankarcona & Holm, 2016). Even today, Nairobi has the highest concentration of incubators, accelerators, co-working spaces, international organisations, financial institutions, business associations and development actors supporting entrepreneurship across the country (Were, 2021).

Government Support

Government support is vital for the entry, survival and growth of SEs, in developing countries (Pan, 2014; Ullah, 2019). Social enterprises mostly fill gaps in the provision of essential services that government has not been able to address either due to resource constraints or factors such as remoteness, low population or competing priorities (Hanley et al., 2015). Governments across the world have been trying to create an enabling environment for SEs to grow by creating policies and strategies that recognise the hybrid nature of their work, that is transforming people's lives, profit and caring for the planet (Sottini, 2022). The support system for SEs especially in Africa, has roughly evolved over the last 15 years.

Parasnath et al., (2024), conducted a systematic review of the relationship between government support and entrepreneurial orientation. The study categorised direct government support into financial (grants, subsidies, credit, loans), and non- financial

(education, training, information, advice, coaching and mentoring) assistance. Indirect government support included access to technology and innovation, taxation, regulatory framework, competition policy, supportive entrepreneurship ecosystem and fostering an entrepreneurial culture. Utilization of direct and indirect government support depends on how well people know and can access the services. According to Brown and Mason (2017), entrepreneurship ecosystems are intricate and necessitate tailored government interventions to facilitate business growth. Awareness of government policies and support services is therefore crucial as entrepreneurs only use what they know exists (Shamsuddin, 2014). Government support enhances comprehension of market opportunities, mitigates innovation-related risks, and strengthens the overall innovation capacity of enterprises (Prasannath et al, 2024). Additionally, Buba et al (2021) in a quantitative study on the effect of internal factors (competencies, orientation) and the external environment (networks, government support) on the performance of small enterprises found that government support services were significantly and positively related to good performance.

In Kenya, Naess et al. (2015) found that the deployment of solar home systems (SHS) received substantial governmental backing and aligned with national priorities to expand electrification and promote renewable energy adoption. The solar systems played a pivotal role in providing essential services such as lighting, mobile phone charging, radio and television access. These services are frequently associated with broader notions of political autonomy, including mitigating reliance on kerosene, reducing the frequency of blackouts, and alleviating delays in grid extension. Concurrently, several impediments to widespread SHS adoption were identified, including insufficient policy frameworks, restricted access to financing, limited consumer awareness, and inadequate availability of technical support services (Da Silva, 2015).

Building on this landscape, Adwek et al. (2019) conducted a review of the pay-as-you-go (PAYG) business model and advocated for the formal integration of SHS into Kenya's rural electrification policy. In response, the Kenya National Electrification Strategy established an ambitious target of installing 1.2 million solar home systems by 2022, specifically aimed at electrifying regions that are not economically feasible for grid extension (Ministry of Energy, 2018). As a result of these policy initiatives, Kenya garnered recognition for creating an enabling environment that has positioned the country as a market leader in sub-Saharan Africa, attracting significant investment for leading SSEs (Lighting Global et al., 2018; Power Africa, 2019). Furthermore, the Kenyan government collaborated with the World Bank through the Kenya Off-grid Solar Project (KOSAP) to facilitate access to SHS for low-income populations in arid and semi-arid regions (Ministry of Energy, 2018).

Despite having favourable energy policies and government programmes, Kenya has been grappling with the inconsistent application of tax polices (ACE TAF, 2021; Adwek et al., 2019). For instance, the removal of VAT and import duty exemption in the Finance Act 2020 increased the prices of solar products, pushing them further out of reach for low-income households. In 2021, following successful advocacy by the Kenya Renewable Energy Association and other industry actors, the VAT exemption was reinstated in the Finance Act 2021, but the import duty remains (GOGLA, 2021). Moreover, in 2018, the Kenya government in partnership with the World Bank developed the Kenya Off-grid Solar Access Project (KOSAP) for vulnerable populations in arid and semi-arid regions to access SHS (Ministry of

Energy, 2018). The project that was initially planned to end in 2022 was extended to 2026. It provides results-based financing to SSEs to reach 1.2 million households with SHS in marginalized communities.

Support Services

Lall et al., (2013) define accelerators and incubators as, "support organisations that provide SEs with business development support (skills and knowledge building, technology assistance), infrastructure (office space, shared back-office services), access to networks (potential customers, investors, mentors), and financial support (grants, debt or equity)". Shared workspaces and hubs are also emerging as vital intermediaries in facilitating entrepreneurial growth, but little research has been done to ascertain their impact (Avdikos & Merkel, 2019).

Most of the existing literature on incubators and accelerators in the entrepreneurship ecosystem focusses on Europe and North America, with little coverage of Africa, Asia and Latin America (Guerrero 2021). This observation is in tandem with Lall et al. (2013) who noted the paucity of empirical research on what makes incubators and accelerators successful, especially in developing countries. There is a weak link in measuring the success of these organisations partly because of the frequency and methods of collecting data from enterprises that graduate from their programmes (Lall et al., 2013). More recently, there have been attempts to develop a framework that business accelerators can use to establish their effectiveness (Galiyeva & Fuschi, 2018).

In Kenya, SMEs, which include SEs, are faced with several challenges leading to a death rate of up to 68% within the first three to four years of operation (KNBS, 2017). In the countrywide survey by KNBS (2017), the key challenges were cited as lack of markets, stiff local competition, poor roads, lack of collateral for credit, shortage of raw materials/stock and interference from authorities. In response to these challenges, during the last 15 years several incubators and accelerators have been set up to increase the survival rate of businesses like SSEs that provide solutions to climate change. Examples are the Kenya Climate Innovation Center, Growth Hub, E4Impact and Energy4Impact. With time, researchers have started to study these support services organisations.

Dynamic Capabilities and SSEs

Past studies show that dynamic capabilities enable SSEs to sense, seize and transform the resources in their environment, which contributes to their sustainability (Alaassar et al., 2021; Bhardwaj & Srivastava, 2021; Rashid & Rattten, 2020; Roundy & Fayard, 2018). Rashid and Rattten (2020) used the dynamic capabilities lens to find out how 20 entrepreneurs in Pakistan tried to remain afloat in an environment affected by the Covid-19 pandemic. Findings from the study showed that entrepreneurs made changes such as operational modifications, preparation for the worst-case scenario, optimising their workforce, growing their networks and increasing their visibility through digital platforms. Another meta synthesis study by Bhardwaj and Srivastava (2021) on the dynamic capabilities of SEs had similar findings. That study found bricolage, network building, government support, effectuation, marketing capability and learning capacity as the dynamic capabilities that enabled SEs to achieve their social mission and attain financial sustainability.

Alaassar et al. (2021) used a qualitative study to establish how ecosystem dynamics accelerated or inhibited the growth of new ventures in the fintech entrepreneurship ecosystem in Singapore. The study found that interaction, intermediation, ecosystem development and regulatory dynamics influenced the establishment and growth of new ventures in the country. More generally, dynamic capabilities have a theoretical background.

Theoretical Integration

The concept of dynamic capabilities, originally introduced by Teece et al., (1997), provides a critical framework for understanding how organizations adapt and thrive in dynamic environments. The foundational model identified three core components—processes, positions, and paths—which were later refined by Teece (2007) into the categories of sensing, seizing, and transforming. Specifically, 'sensing' refers to the ability to identify and evaluate new opportunities; 'seizing' involves mobilizing resources to capitalize on these opportunities and generate value; and 'transforming' encompasses the continual renewal and reconfiguration of resources to maintain competitiveness and pursue future opportunities.

According to Teece et al. (1997), dynamic capabilities are essential for enterprises to effectively sense, seize, and transform resources and opportunities in rapidly evolving contexts. This theoretical perspective is particularly relevant amidst contemporary challenges such as climate change, conflict, and the aftermath of the Covid-19 pandemic, all of which demand heightened organizational adaptability. Furthermore, Teece (2014) distinguishes between 'ordinary capabilities,' which are sufficient for routine operations but inadequate for sustained growth, and 'dynamic capabilities,' which underpin long-term organizational resilience and sustainable development.

The rest of the article starts with the methods section, which outlines the research design, data collection methods, and analytical approaches employed in the study. The next section covers findings of the study, alongside comparison with existing literature. The recommendations section delivers practical suggestions for enhancing government support and improving support services for SSEs in Kenya. Finally, the conclusion highlights the study's contributions and identifies areas for future research.

Methods

The study used the qualitative research design to investigate the entrepreneurship ecosystem, dynamic capabilities and sustainability of SSEs in Nairobi, Kenya. The qualitative approach was used given the limited theory development on entrepreneurship in Africa and calls for research on entrepreneurship theories in context (Bruton et al., 2018; Shephard et al., 2020). Specifically, case study research of the entrepreneurship ecosystem in Nairobi, Kenya was conducted, consistent with the research methodology used in other similar studies (Sottini et al., 2022; Sydow et al.,2022). Nairobi was selected because it is recognized as one of the leading entrepreneurship ecosystems in Africa (Chirchietti, 2017; StartupBlink, 2025). Furthermore, Kenya has been a market leader in the adoption of renewable energy technologies, especially solar home systems (ESMAP et al., 2024). As such, the target population was 55 SSEs with headquarters in Nairobi, a vantage point they use to access resources in the entrepreneurship ecosystem while serving customers in peri-urban and rural areas across the country. Theoretical sampling was used to determine the study sample (Hagaman and Wutich, 2017; Sottini et al., 2022).

Case Selection and Data Collection

The criteria used for selecting the cases was: 1) SSE with a head office in Nairobi County; 2) SSE with operations/branches in rural areas of the country where communities are not connected to the national grid; 3) In existence for at least five years. A semi-structured interview guide was used to collect data from SSE managers and founders. The questions explored the participants' experience of the entrepreneurship ecosystem. In addition, data was collected from annual reports and publicly available information sources including news articles, websites and industry reports. The additional data enhanced validity of the research instruments. Reliability was achieved by pre-testing the semi-structured interview guide and comparing emerging codes against other studies.

SSEs were found from the Kenya Climate Innovation Center's incubatees, and online platforms Asoko Insights and the SunConnect portal that have databases of companies distributing decentralized renewable energy products. Once SSEs agreed to participate in the study, an interview was scheduled, and the interview guide was shared. Additional data was also collected from publicly available information including websites, news articles and relevant reports. All interviews were conducted between April and September 2024 through Google Meet.

Table 1
Data Collection

Data Source	Type of Data	Quantity	Use in Analysis
Documents and reports	Reports from development organizations, entrepreneurship ecosystem players	Many	Comprehend solar market trends, and how government support, the financing landscape and support services providers have evolved.
Interviews	Semi structured interviews	20 virtual interviews via Google Meet: 17 hours of recording	Main source of data. Interviews were recorded and transcribed
SSE secondary data	Annual Reports News articles on SSE websites	160 pages (pdf)	To enhance validity and triangulate data collected from the interviews.

The interviews were conducted with founders and managers in SSEs. Only one manager/founder in each SSE was interviewed. The breakdown of the respondents is provided in Table 2

Table 2
Summary of respondents

Function	Frequency	Percent
Founder	7	35
Manager	13	65
Total	20	100

Data Analysis

Data analysis followed the Gioia methodology that is suitable for inductive theory building and narrative approach (Gioia et al., 2013). The narrative data collected was inductively coded into first-order categories using the NVivo software, abstracted to second-level themes and then aggregated. In the first step, first order categories were created from the data collected from the interviewees. In this step, the data collected was annotated and preliminary labels were assigned to the transcribed interview data related to government support and support services (Corbin & Strauss, 2015). At the same time, data from annual reports and websites was considered to validate the impressions obtained from the interview data. Gradually, the preliminary labels were combined into first order categories.

In the second step, second order themes based on theory, and emerging from a process of alternating between the first order categories and relevant literature were developed. The first order categories were gathered and collapsed into second order themes. This was followed by systematic comparison of emerging constructs with concepts in existing literature, and the labels adjusted accordingly. Finally, the labels collapsed into second order themes (Gioia et al, 2013; Strauss & Corbin, 1998). For example, codes like changing taxation, inconsistent support, room for improvement and supportive policies were grouped into supportive but inconsistent policies. In the third step, connecting the second order themes yielded a grand picture out of the data. For instance, the themes networking and monitoring opportunities, and diversification were aggregated into entrepreneurial opportunities. A data structure illustrating the first order categories, second level themes and the aggregate dimensions was developed as shown in figure 1.

Demographic Characteristics

Demographic characteristics on the gender and nationality of founders, number of employees in each enterprise, number of counties covered in Kenya and annual sales for 2022 was collected and analyzed. The findings showed that the 20 SSEs had a total of 43 founders, of which 37 (86%) were men while only 6 (14%) were female. Further, 48% (21) of the founders were Kenyans, followed by 24% (10) UK nationals, and 12% (5) US nationals. Indians were 5% (2) and the other countries had one each – Canadian, Danish, Somali, South Africa and Netherlands. In total, 52% of the founders were non-Kenyans. This is consistent with existing literature that shows Kenya's SSE sector is dominated by non-Kenyans. However, the gender representation was significantly skewed. Male founders were 86%, while only 14% were female.

On geographical coverage, 40% of the SSEs covered 10 or less counties, while 35% covered over 40 counties in the country. Kenya has a total of 47 countries, and 14 of them are classified as arid and semi-arid by the government. Poverty levels in the 14 counties are much higher than in other parts of the country (Ministry of Energy, 2018). Seventy-five percent of the SSEs had less than 50 employees, while only 15% had over 200 employees. The minimum number of employees was 5 while the maximum was 2500. All the enterprises, with more than 200 employees had international founders. The respondents were also asked to share their annual sales in 2022. Up to 55% of the SSEs had annual sales of over Ksh 20 million, and only 5% had annual sales of below Ksh 1million.

Findings and Discussion

Government Support

Perceptions of SSE managers on government policies and taxation

SSE managers generally perceived government policies and regulations as supportive but noted inconsistencies in their application. Four of the 20 interviewed managers considered tax policies favorable, specifically highlighting the removal of tax on solar panels. For instance, manager (E5) stated, "our experience with taxation and regulations has been positive, especially with the VAT exemption on renewable energy products." However, half of the respondents expressed dissatisfaction with unpredictable changes in taxation. Founder (E8) remarked, "policies on taxation have experienced changes. For example, the government imposed 16% VAT on solar products in 2020 but again removed it in 2021 after much lobbying by industry players," while manager (E3) observed, "VAT on solar panels, batteries and accessories keeps on changing."

Regarding solar policies and regulations, managers agreed that they intended to promote renewable energy and address climate change, yet their implementation lacked consistency. Manager (E9) commented, "Government policies on solar are progressive as they are aimed at promoting renewable energy sources, reducing dependency on fossil fuels and addressing climate change issues." In terms of subsidies, manager (E14) noted,

> "Due to constant change in policies, the meagre amounts of subsidies that are provided, are not enough for low-income households to buy SHS." Founder (E3) reflected on policy trends, stating, "Government policies were more consistent between 2012 and 2017."

Comparing Kenya's experience to other countries highlights both strengths and challenges in policy implementation for solar energy access. In Bangladesh, the government's IDCOL program, similar in intent to Kenya's KOSAP, enabled the installation of over 4 million solar home systems (SHS) by 2014, earning global recognition for its energy access model. However, a subsequent shift in policy focus toward grid expansion and shortcomings in after-sales service led to a sharp drop in SHS adoption (Podder et al., 2021). South Africa, meanwhile, faced policy fragmentation and weak legal frameworks at both national and regional levels, limiting the impact of supportive measures on the growth of social enterprises (Dumisani, 2018). These international experiences underscore how policy inconsistency and inadequate implementation can hinder sector growth.

Kenya's situation is distinctive. The presence of a high number of SSEs in 2019, compared to neighboring countries, was attributed to favorable, though sometimes inconsistent, government policies (Power Africa, 2019). SSE managers interviewed in this study confirmed that supportive policies remain a key factor, despite ongoing concerns about unpredictability. Notably, the closure of six SSEs between 2020 and 2024 aligns with national data that shows taxation affects the survivability of MSMEs in Kenya (KNBS, 2017). Increased taxes have made SHS less affordable, particularly for underserved communities that rely on consumer financing. This upfront tax burden affects cash flow and business viability, ultimately constraining the sector's growth (ACE TAF, 2021; Phillips et al., 2020). As Kenya strives for universal electricity access by 2030—a goal postponed from its original 2022 target—addressing tax inconsistencies and supporting SSEs will be crucial. With approximately 12 million people still lacking electricity in 2021 and electrification needing to outpace

population growth, Kenya remains among the top 20 countries globally with the largest electricity access deficits, despite recent progress (IEA et al., 2023).

Government Support and Dynamic Capabilities

Networking and Monitoring Opportunities

The study sought to establish how SSE managers sensed, seized and transformed resources and opportunities availed by the government. Managers reported that they sensed government opportunities through networking and monitoring opportunities. Some managers checked online sources for policy updates, while others attended relevant events. Manager (E8) reported sensing opportunities, 'by establishing contacts with organizations and authorities to obtain information about future policy changes and cooperation possibilities." Manager (E12) added, 'Attending exhibitions organized by the government and membership associations like the Kenya Private Sector Alliance and Electricity Sector Association of Kenya also help with knowing about the existing government opportunities.' However, other managers had contrary views. Founder (E1) noted his enterprise was not involved in any government program because, 'Tendering is cumbersome and there are many vested interests.' While manager (E15) remarked,

The opportunities provided by the government are usually hard to spot and evaluate since the support offered is erratic and limited in amount. There is no single place where one goes to find out what programs and grants are available and consequently many opportunities are lost (May 15, 2024).

SSE managers accessed crucial information on anticipated policy changes, sector updates, collaboration opportunities, and government programs such as KOSAP, Solar for Schools, and World Bank renewable energy initiatives. This information enabled them to anticipate sector developments and strategically position their enterprises. Busch and Barkema (2022) highlight that, in markets with weak formal institutions like Kenya, building trusted relationships with government officials becomes increasingly important as social enterprises scale. Their findings indicate that while government engagement may initially pose challenges, it becomes essential for accessing financial resources and support during growth phases. Strategic networking with high-level government actors is thus a key factor in successful scaling.

The practice of networking and monitoring opportunities, as observed among SSE managers, aligns with the concept of entrepreneurial alertness—defined by Roundy et al. (2018) as the ability to sense and anticipate opportunities in evolving business environments. Drawing from Kirzner's (1973) theory and extension by Tang et al. (2012), alertness encompasses scanning for information, making relevant connections, and evaluating new opportunities. Roundy et al. (2018) further demonstrate that heightened entrepreneurial alertness positively influences organizational performance amid disruption. In this study, SSE managers' proactive engagement with government policies and programs exemplifies dynamic capabilities, reinforcing the literature's consensus that entrepreneurial alertness and strategic networking are critical drivers of sustainable growth in challenging institutional contexts.

Mobilizing Resources

The study explored how SSE founders and managers seized opportunities from government-supported solar programs, focusing on resource mobilization and participation in initiatives like KOSAP. Managers highlighted proactive approaches, with one stating, "We mobilize resources to explore the opportunities emanating from government support through strategic planning, securing financing, and building partnerships," while another added, "We activate resources using internal and external funds and cooperation with various organizations. Within the company, we have budget set aside for projects initiated by the government." These responses demonstrate that some managers actively allocate resources and seek collaborations to engage in government programs.

Engagement with government initiatives was generally seen as beneficial, as managers reported that "The support from the government helped us in scaling up our operations and reaching more customers," and "Participation in government programs enabled us to expand our reach and provide solar solutions to more people especially in underserved areas." Another emphasized, "We have experienced significant growth due to our involvement in the Electricity Sector Association of Kenya, and the government opportunities they share with us."

However, challenges were also noted, with some managers describing negative experiences: "KOSAP is a good program, but it has struggled to take shape. In phase one and two, we experienced delayed payments. There has also been a lot of bureaucracy... At least, in 2024, they have standardized the parameters for everyone, and we are hoping that things will improve." Others cited time-consuming processes, lack of transparency, and insufficient support as barriers to meaningful impact.

Consistent with the findings of Hellqvist and Heubaum (2024), the reintroduction of VAT on solar products in 2020 forced SSEs to raise prices, eroding two decades of progress in affordability, even within targeted programs like KOSAP. Managers highlighted that, despite government support through results-based financing, delays in payments and increased taxation disrupted cash flow and complicated business models designed for low-income households, underscoring a persistent gap between policy and practice. These challenges—ranging from bureaucratic hurdles and limited transparency to insufficient support—mirror those reported by ESMAP et al. (2024), reflecting the mixed experiences of SSEs with government initiatives. To address these barriers, the Ministry of Energy should clarify both financial and non-financial support mechanisms and streamline access procedures, as recommended by Shamsuddin (2014), to unlock growth opportunities for SSEs.

These findings align with Busch and Burkema (2021), who note that social enterprises operate in resource-constrained environments and must overcome financial, human, and policy limitations. In addition, the resource orchestration theory (Sirmon et al., 2011) offers a useful lens, emphasizing the importance of acquiring and allocating resources—a strategy evident in how SSE managers mobilize assets in response to government support. Moreover, Saad (2019) found that combining mobilized resources with dynamic capabilities and business processes drives enterprise growth. Thus, effective resource orchestration emerges as a critical dynamic capability for SSEs navigating policy-practice gaps and resource constraints.

Impact of Government Support on SSE Sustainability

Managers of SSEs reported that government support played a pivotal role in advancing the sustainability of their enterprises through increased sales, job creation, and expansion into underserved regions. Four SSE managers highlighted that government initiatives such as tax incentives, subsidies, and grants have directly contributed to making solar energy solutions more accessible and affordable, leading to higher sales: "tax incentives and subsidies have made solar energy solutions more affordable, leading to increased sales." Additionally, government-backed programs like the Electricity Sector Association of Kenya (ESAK) and the Kenya Industry and Entrepreneurship Project (KIEP) have strengthened the entrepreneurship ecosystem, and fostered an innovation-driven economy. As one manager emphasized, "Initiatives like the ESAK have been instrumental in formalizing the innovation and entrepreneurship ecosystem."

Government interventions also facilitated job creation, with managers reporting the ability to hire additional staff because of expanded markets: "Increased government support has led to expansion of the SHS market and enabled us to hire more salespeople and technicians." Furthermore, programs such as KOSAP have enabled SSEs to extend their reach into Arid and Semi-Arid Lands (ASALs) and other underserved areas, overcoming barriers like high distribution costs: "KOSAP was created to incentivise private sector to sell their products in the arid and semi-arid areas, and it has achieved that goal." This is critical because according to ESMAP et al., (2024), reaching remote counties like Mandera and Turkana has been challenging due to accessibility and affordability problems. Supportive finance is needed for communities in low-income counties to access solar systems, which are the most cost-effective way of electrifying them (Phillips et al., 2020). In addition, it is argued that most of the commercially viable market for SHS in Kenya has been reached making programmes like KOSAP even more important. According to ESMAP et al., (2024), government support in the form of public funding has been shown to increase access to SHS and create jobs. The remaining market segment needs government support and collaboration with other development actors for electricity access through SHS, in areas where it is still the least-cost solution. However, globally, an estimated USD 9.3 billion is required to electrify 216 million people through SHS, by 2030, while 660 million people will still be unelectrified (ESMAP et al., 2024).

Despite the positive community impact and enterprise growth resulting from government support, challenges such as stringent eligibility requirements, delayed disbursements, and inconsistent policy implementation persist. These issues highlight the need to close the policy-practice gap to ensure the sustainability of SSEs.

Support Services

Relevance of Support Services Influences Uptake

The process by which respondents identified and engaged with support services in Nairobi's entrepreneurship ecosystem was multifaceted, driven by proactive monitoring, leveraging networks, and strategic assessment. Managers consistently emphasized the importance of staying informed and connected, with Manager (E7) stating, "by continuously monitoring the start-up ecosystem and staying abreast of the latest trends," and Manager (E9) highlighting the need to "stay up to date on the latest trends and advancements in the solar sector, attending industry events and maintaining connections with other professionals in the field."

Participants prioritized the alignment and relevance of support services to their organizational needs. For instance, Manager (E10) based their engagement "on the skills gaps within the team," while Founder (E12) noted, "We get to learn what is on offer through our networks and online advertisements. We then apply for what we qualify for." Strategic evaluation was a recurring theme, as Manager (E5) stated, "We assess support services from incubators and accelerators by evaluating their relevance," and further explained, "We analyse our current needs and strategic goals, then look at the track record of the accelerator before applying for any support."

Ongoing alignment with business objectives also guided engagement. Manager (E7) explained, "they assessed the relevance of the support services against their business needs and growth objectives," while Manager (E8) remarked, "We look at our current problems and future development goals then compare them against the services provided by different incubators and accelerators." Founder (E13) described a selective approach: "We usually do not work with incubators because we have outgrown them. For accelerators, we look at what they have to offer and their relevance to our business. Like recently, I took part in the SEED Transformation Program. They provide consulting services, coaching and even interns. I was drawn to them because of their expansive network across Africa and Asia (September 4, 2024)."

Though most participants reported positive experiences, some highlighted barriers such as lack of awareness, perceived irrelevance, and generic support. Nevertheless, those who engaged with support services benefited from networking, market insights, investor readiness, and business development. Manager (E7) reflected, "During the Covid-19 pandemic, incubators and accelerators provided valuable guidance on business continuity planning, facilitated access to emergency funding, and offered platforms for virtual networking and collaboration. They were instrumental in helping us to navigate the crisis." Founder (E13) and Founder (E12) echoed these benefits, underscoring the transformative impact of support services on their ventures.

Early-stage enterprises differ from growth stage enterprises in the kind of support services that they require. Incubators are usually designed to support early-stage enterprises while accelerators are designed to support growth stage enterprises. A mismatch between the SSE and the support services provider makes the services available irrelevant to the enterprise. Moreover, serial entrepreneurs who have started multiple companies may not need any support services having acquired experience from other businesses. Enterprises seeking support services must develop the capabilities to effectively leverage them for greater sustainability.

Managers of 16 SSEs demonstrated entrepreneurial alertness in identifying and engaging with support services, actively monitoring the ecosystem and staying abreast of sector trends. This proactive approach—attending industry events, leveraging professional networks, and utilizing digital platforms—aligns with findings by Alpenidze et al. (2019), who emphasize the importance of scanning the entrepreneurship landscape to access relevant resources.

Consistent with the literature, SSE managers selectively utilized support services that matched their enterprise's stage and specific needs, rather than adopting generic offerings.

Bergmann and Utikal (2021), Games et al. (2020), and Karahan et al. (2022) similarly advocate for tailoring incubator and accelerator interventions to the knowledge requirements of entrepreneurs. Games et al. (2020) further confirm that targeted, rather than broad, support programs are preferred by entrepreneurs seeking maximum value.

The benefits accrued from support service engagement—business development, marketing, skills enhancement, investor access, and networking—are well-established in prior research. Assenova and Bacq (2023) highlight accelerated growth and job creation, while Lall et al. (2013) and Gonslaves and Rogerson (2019) note improved network access, shortened growth timelines, and increased venture capital attraction. Crupi et al. (2021) and Nascimento et al. (2020) underscore the role of support providers in crisis navigation and sustainable model development.

Nonetheless, some SSE founders did not use support services due to perceived irrelevance or negative experiences, echoing concerns raised by Lukosiute et al. (2019) and Kato and Chiloane-Tsoka (2024) regarding generic training, misaligned networks, and potential risks to intellectual property or long-term growth. Overall, the findings reinforce entrepreneurial alertness as a pivotal dynamic capability, enabling SSEs to leverage support services for sustainable growth while remaining cognizant of associated limitations.

Seizing and Transforming Agility

The study also explored the strategies employed by SSE managers to seize and transform support services, with agility emerging as a central theme. Managers described various approaches to leveraging these services. For instance, Manager (E12) stated, “We accessed proof of concept funding from incubators and international development partners.” Founder (E6) emphasized the importance of ongoing evaluation, remarking, “We conduct regular performance reviews and resource audits which allows us to identify areas where resources can be reallocated or reconfigured to better align with our strategic goals.”

Manager (E7) highlighted the role of dedicated teams in engaging support providers: “To seize the opportunities and resources from accelerators and incubators, we have a dedicated team that engages them. They also prepare detailed project proposals that are aligned to our strategic goals.” Similarly, Manager (E8) described their process: “There is a team tasked with the responsibility of packaging applications, participating in networks and coordinating opportunities. This ensure that we get the best services from what is available.” Manager (E9) further noted the importance of strategic planning, stating, “We have a detailed plan that shows the resources we need, the potentials risks and potential sources. That plan guides our engagement with incubators and accelerators.” In addition, Manager (E14) explained their approach to resource mobilization and opportunity exploitation.

We prepare comprehensive applications, detailed business plans, financial projections and impact assessments to meet the application requirements. We also loop in advisors and selected partners to strengthen our application and demonstrate a robust support network. Lastly, we use customer testimonials, pilot project data and market research to show our business potential and readiness for growth (August 19, 2024).

Other managers focused on the skills their teams received from accelerators and incubators. Founder (E1) highlighted, “Accelerator programs are quite a boost. We learnt from one how to scale our operations efficiently.” Manager (E10) added, their workshops and trainings are many but very beneficial.” Founder (E2) remarked, “We got beneficial skills from the Energy4Impact incubator. Another incubator shared with us a grant opportunity and supported us to put in a strong application.” Manager (E8) added, “We got good ideas on sales from a specific incubator and that has enabled us to significantly expand our market.” Manager (E6) had an almost similar response and noted, “The capacity building allows me to make sure our team is ready to maximize new opportunities.”

When asked about strategies for transforming, reconfiguring, and redeploying resources to capitalize on future support service opportunities, most SSE managers emphasized the importance of organizational agility. For example, Manager (E7) stated, “We foster a culture of innovation and agility within our organization.” In contrast, Manager (E15) expressed reservations, noting that “Resource mobilization is usually hindered by limited internal capacity and external support leading to missed opportunities.” Notably, Manager (E15)’s responses were consistently negative across all three domains of the entrepreneurship ecosystem, suggesting a possible leadership gap or perhaps negative experiences with resource providers in the ecosystem.

Generally, respondents had fewer answers for support services compared to financing and government support. This shows that respondents had fewer interactions support service providers. Nation-wide surveys by the Kenya National Bureau of Statistics have identified access to finance as one of the biggest challenges for enterprises in Kenya. All in all, support services still contribute to growth and inclusiveness.

Organizational agility emerged as a critical strategy among SSE managers for effectively seizing and transforming support services. Consistent with prior studies, managers emphasized the reorganization of internal resources and the cultivation of a culture of innovation to maximize the value of external support. This aligns with Jan and Maulida (2022), who identified agility as a driver of knowledge acquisition, product enhancement, and competitive advantage in Indonesian enterprises. Similarly, Crupi et al. (2021) demonstrated that adaptive resource reconfiguration is essential for enterprise survival during periods of crisis, requiring firms to reframe innovation and maintain fluidity in resource allocation.

Several SSE managers highlighted the development of strategic resource plans and the establishment of dedicated teams to navigate application processes for incubators and accelerators, underscoring the operationalization of agility within their organizations. Drawing on Doz and Kosonen’s (2010) framework, these practices reflect both strategic sensitivity—where managers continuously align support services with evolving enterprise needs—and resource fluidity, enabling rapid response to changing market conditions. Although leadership unity was not explicitly identified, it remains a foundational element for sustaining transformative agility. Collectively, these findings reinforce the centrality of agility as a dynamic capability in leveraging support services for SSEs.

Support Services Promote Growth and Reach of Underserved Communities

The analysis of SSE managers' perspectives reveals that targeted support services have delivered measurable benefits in market expansion, outreach to underserved populations, sales growth, workforce development, and crisis resilience. Six enterprises attributed their ability to reach vulnerable households, expand into new regions, increase sales, and hire additional staff directly to support services. As Manager (E14) explained, "An accelerator supported our entry into new geographic regions by providing market insights, logistical support and connections with local partners." Echoing this, Manager (E8) emphasized, "They provided guidance especially on expansion strategies such as market segmentation, determining which regions to focus on, dealing with bureaucracy and integrating ourselves with the local people."

Support service providers also played a critical role in advancing social impact. Manager (E14) stated, "Support service providers enabled us to offer affordable solar solutions to underserved communities through grants." This was reinforced by Manager (E5): "They helped us to develop innovative business models and financing schemes that make our solar products more affordable to vulnerable population segments." Nonetheless, Manager (E15) cautioned that "Incubators and accelerators often focus on high-growth businesses neglecting those that aim to serve vulnerable populations," highlighting the need for more inclusive approaches.

Sales growth was another significant outcome, with Manager (E9) noting, "Through mentorship and training programs we refined our sales strategy and improved customer engagement leading to increased sales." Workforce development was similarly supported; Manager (E14) noted, "They facilitated the hiring of skilled personnel through mentorship and funding," while Manager (E5) added, "We accessed the skills and knowledge to scale our operations and create more jobs."

During the Covid-19 pandemic, support services proved vital for enterprise resilience. Manager (E7) observed, "Incubators and accelerators in Nairobi were instrumental in helping us navigate the crisis. They provided valuable guidance on business continuity planning, facilitated access to emergency funding and offered platforms for virtual networking and collaboration." These findings underscore the multifaceted and strategic value of support services for SSEs, contingent on alignment with enterprise needs.

Overall, managers noted that incubators and accelerators provided grants, brokered partnerships, and provided strategic guidance that helped SSEs to better serve vulnerable communities and navigate crises like the Covid-19 pandemic. These findings are consistent with other studies (Bergmann & Utikal, 2021; Crupi et al., 2021; Gonslaves & Rogerson, 2019; Karahan et al., (2022); Nascimento et al., 2020).

In addition, Bergmann and Utikal (2021), found that accelerators helped SEs to build their knowledge on sustainable business models. Furthermore, the credibility that came with being associated with an accelerator was useful in attracting philanthropic funding. Karahan et al. (2022) uncovered that the support services by incubators enabled SEs to enhance social and ecological outcomes among the communities they were serving. Gonslaves and Rogerson (2019) also revealed that support services enabled enterprises to grow and mature faster than

those that did not join incubators and accelerators. In this sense SSE founders and managers utilized resource orchestration to achieve long-term growth.

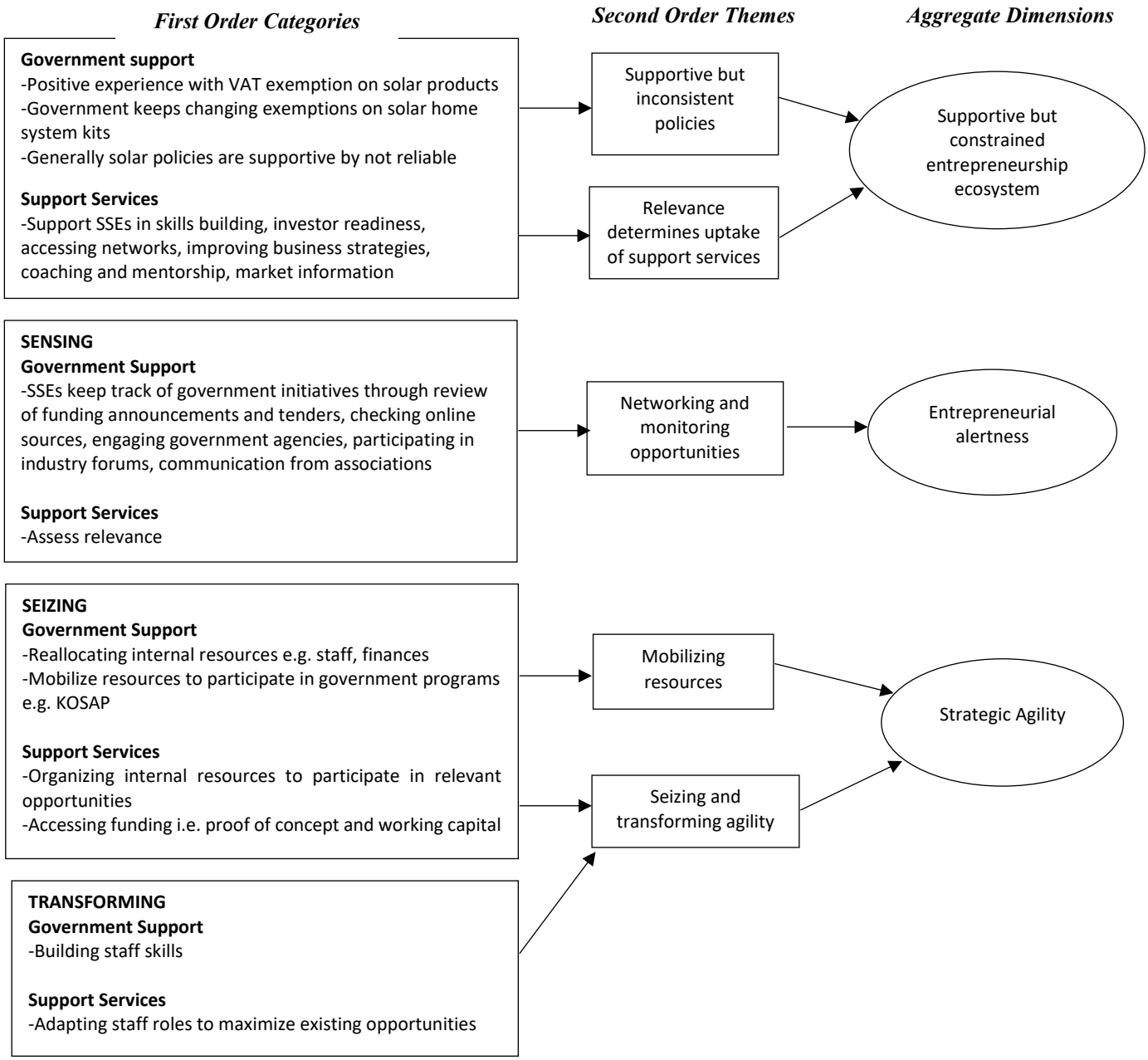

Figure 1 Data Structure

Significance of the Study

The study was motivated by the need to understand how SSEs in emerging markets can attain long-term growth by utilizing resources from the entrepreneurship ecosystem, specifically government support and support services. By focusing on the lived experiences of SSE managers and founders, the research contributes novel insights into the mechanisms by which these organizations sense, seize, and transform opportunities amidst policy uncertainty and evolving sectoral challenges. Uniquely, this work uncovers how managers and founders use entrepreneurial dynamic capabilities - entrepreneurial alertness, resource orchestration, and organizational agility—offering a nuanced perspective on how SSEs foster long-term

growth while broadening their impact in underserved communities. The findings not only enrich the theoretical discourse on dynamic capabilities within entrepreneurship ecosystems in emerging countries but also provide actionable guidance for policymakers and support service providers seeking to foster inclusive and resilient enterprise development. Ultimately, this study aspires to spark further dialogue and research in leveraging public and private sector collaboration to drive meaningful social change.

Recommendations

The research carries important implications for policy and practice. Governments should prioritize policy consistency and transparency, especially regarding taxation and renewable energy regulations. Unpredictable changes in VAT have undermined affordability and business planning, so establishing stable, well-communicated frameworks is essential. Streamlining application and tendering processes for government programs can reduce bureaucracy and improve access to opportunities, while a centralized platform listing available grants, initiatives and opportunities would help SSEs identify and pursue support more efficiently.

Governments should also expand targeted financial incentives, such as tax exemptions and results-based subsidies, focusing on low-income and underserved communities to bridge the electrification gap. Regular stakeholder engagement and feedback mechanisms can ensure policies remain responsive to evolving sector needs. Support service providers—including incubators, accelerators, and industry associations—should tailor their offerings to match the specific stage and requirements of social enterprises, avoiding generic programs. This includes providing stage-specific training, mentorship, and guidance, and facilitating networking with relevant partners, government officials, and funders.

Support services providers should also support the development of organizational agility among SSEs by encouraging strategic planning, resource mobilization, and performance reviews. Dedicated teams and strategic resource plans can help enterprises effectively seize opportunities and transform support into measurable outcomes. Inclusivity should be a guiding principle, with programs designed to reach vulnerable populations and regions that commercial markets may not serve. During crises, such as the Covid-19 pandemic, providers should be prepared to offer business continuity guidance, emergency funding, and virtual collaboration platforms. By addressing these recommendations, governments and support service providers can strengthen the resilience, growth, and social impact of SSEs, particularly in challenging institutional environments.

Conclusion

This study examined the influence of support services—including incubators, accelerators, and non-governmental organizations—on the growth and resilience of social enterprises within entrepreneurship ecosystems. The findings reveal that targeted support services can significantly enhance the capacity of social enterprises to reach underserved and vulnerable populations, refine business and sales strategies, and expand workforce capabilities. Notably, managers attributed increased affordability of solar solutions, innovative business models, and improved operational skills to engagement with support providers. However, divergent perspectives emerged, with some managers highlighting the limited or marginal impact of

generalized support services, particularly when such interventions lacked alignment with specific enterprise needs.

Despite these insights, the study is subject to several limitations. The reliance on qualitative accounts from a limited sample of managers may restrict the generalizability of findings across different regions or sectors. Additionally, the study's focus on solar solutions and related enterprises may not fully capture the diverse experiences of social enterprises in other domains. Future research should adopt mixed-methods approaches, incorporate larger and more diverse samples, and explore longitudinal outcomes to deepen understanding of support service effectiveness. Investigating the interplay between various forms of support, enterprise characteristics, and ecosystem dynamics would further enrich the evidence base.
In summary, this research highlights the transformative potential of well-designed support services within entrepreneurship ecosystems. By addressing identified limitations and pursuing targeted policy and practice innovations, stakeholders can better enable social enterprises to deliver sustainable impact, particularly for vulnerable and underserved communities.

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