

BRIDGING DIGITAL INNOVATION IN AFRICA: ASSESSING THE IMPACT OF THE FIRST TRANSCONTINENTAL NETWORKING ACADEMY FOR AFRICAN AND EUROPEAN DIGITAL INNOVATION HUBS

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Abstract

This paper presents an elaborate methodological approach, as well as the main findings, from the impact assessment of the AfriConEU project, a capacity building and networking endeavour for digital innovation hubs in Nigeria, Ghana, Tanzania, and Uganda. The project aimed to enhance the capacity of digital innovation ecosystems in the studied African countries and establish connections with European digital innovation hubs, start-ups and investors. Through a comprehensive evaluation, the study examines the outcomes and effects of the capacity building and networking interventions on various stakeholders, including hub managers, entrepreneurs and policymakers. The research design employed a mixed-methods approach, combining quantitative data analysis with qualitative research focusing on multiple levels throughout a 15-month period. Quantitative data were collected through pre- and post-project surveys, measuring the projects effect on individual skills and attitudes towards contemporary digital innovation approaches, as well as organizational level shifts on the performance and growth of the digital innovation hubs. Qualitative data were obtained through in-depth interviews with hub managers, entrepreneurs and administrative staff, capturing the perspectives, behavioural shifts and experiences of the stakeholders involved. The impact assessment findings reveal the great potential and demand for this type of capacity development and networking programmes in African ecosystems and indicate significant improvements in several key areas. Firstly, the capacity building interventions contributed to the development of essential skills and knowledge among hub managers and entrepreneurs, enhancing their ability to foster innovation and entrepreneurship in the digital domain. Secondly, the project facilitated knowledge exchange and collaboration between African and European digital ecosystems, enabling African hubs to tap into international expertise, resources, and markets, while the study also identified positive changes in the innovation culture. Furthermore, the impact assessment highlighted critical success factors and challenges encountered during the implementation of the capacity building project. The findings provide valuable insights for digital innovation practitioners, and researchers seeking to design and implement similar initiatives in other regions. The study contributes to the growing body of knowledge on digital innovation ecosystems in Africa and the potential of international collaborations to foster innovation and economic growth. Ultimately, the research underscores the transformative power of capacity building initiatives in strengthening digital innovation ecosystems, bridging regional divides, and facilitating the emergence of a vibrant and globally connected African digital innovation landscape.

Keywords: Digital innovation, impact assessment, evaluation.

1 INTRODUCTION

In an era marked by continuous digital transformation, digital innovation has become increasingly pivotal in fostering economic growth and enhancing competitiveness. Also, digital technologies play a central role in enabling solutions to address societal challenges and create employment, investment, and entrepreneurial opportunities. The advent of the COVID-19 pandemic further underscored the urgency of this transformation, forcing organizations and economies worldwide to recalibrate their digital strategies to remain resilient and relevant. Within this transforming landscape, the role of Digital Innovation Hubs (DIHs) in supporting and connecting actors operating within digital innovation ecosystems has become increasingly important, and the need for robust and adaptable DIHs has never been more pronounced.

More specifically, focusing on an African context, digital innovation has increasingly become an important driver for Africa's social and economic development. Africa's youthful population and growing digital markets are offering a plethora of opportunities for attracting investment, strengthening trade and economic relations, and establishing transcontinental partnerships (Vollgraaf, 2015).

Nevertheless, although African DIHs are considered among the most significant drivers of socio-economic progress and global engagement (De Beer et al, 2017), they are still facing various organizational and systemic challenges, which are limiting their potential in acting as catalysts for digital innovation ecosystems in Africa (Bar-Shany, 2018).

This paper embarks on a comprehensive exploration of the impact of the first transcontinental networking Academy, developed under the H2020 funded project AfriConEU, which included two meticulously designed flagship Programmes tailored to the specific needs of African DIHs, focusing on capacity building and transcontinental partnership building respectively. The development of the Academy was based on a multifaceted research approach combining desk research, in-depth interviews with 60 hub leaders, entrepreneurs, ecosystem enablers and policymakers, 4 country-specific roundtables, and two systematic surveys focusing on ecosystem and DIH capacity needs respectively. The overarching goal of the aforementioned research was twofold: first, to ascertain the existing state of play within DIHs across four African countries, namely Nigeria, Ghana, Uganda and Tanzania, and second, to identify, assess, and propose solutions to the challenges faced by DIHs in these countries and the digital ecosystems in Africa in general, particularly in light of the pandemic-induced disruptions.

Drawing from Isenberg's (2011) Entrepreneurial Ecosystem Analysis Framework, the studies outlined above analysed each country's digital entrepreneurship ecosystem in terms of human capital, finance, market, policy, infrastructure, support structures and the overall culture and societal norms, a comprehensive report (Baguma-Ball et al, 2021) scrutinizing the nuanced dynamics of digital innovation ecosystems in Africa was produced. The report explored current conditions in each of the studied countries, including the challenges and opportunities from the COVID-19 crisis on these ecosystems' functionality and adaptability. Moreover, a wide range of challenges encountered by DIHs in their mission to facilitate digital innovation and support entrepreneurship, as well as recommendations for reinforcing their potential, are extensively discussed in the report.

The report findings indicate that COVID-19 has led to a wide range of opportunities for the digital economies of the researched countries, as it significantly raised the demand for digital services, accelerated the adoption of digital tools, expanded the demand for digital employment, lowered cultural barriers to the adoption of digital technologies, and prioritized investment in digital infrastructure. At the same time, evidence suggests that the economic downturn that emerged from the pandemic has highlighted and widened existing financial gaps and digital divides among youth and women, as well as the gender employment gap, with numerous women dropping out the labour force. Overall, research findings highlight the need for the evolution of African DIHs models, in order to enhance their potential to support their communities, expand their networks, develop talent and skills required for digital innovation, address digital divides and raise their access to investment.

Taking into account these considerations, the development of the AfriConEU Academy programmes focused on the core challenges faced by African DIHs. More specifically, the programme consisted of four sub-programmes aiming to address DIHs' i) lack of in-depth business development expertise, ii) lack of capacity in facilitating investment, iii) fundraising capacity and iv) lack of digital and entrepreneurial skills, respectively. Similarly, the transcontinental partnership building programme focused on supporting African and European digital ecosystems overcome cultural differences and lack of trust originating from negative perceptions of Africa and power imbalances, as well as infrastructure, skill and information gaps across continents. Moreover, research revealed several valuable insights for increasing the programmes' effectiveness, which were considered during the programme design, such as i) involving hub leaders in a co-creation process with the Porto Business School, who led the development of the programmes, ii) focusing on generating tangible outcomes, iii) spreading the programme over a long period of time, iv) maintaining face to face interaction by organizing physical events, and v) making peer-to-peer learning a key component of the capacity building effort. The resulting AfriConEU capacity building programme included a series of webinars, virtual masterclasses and hybrid workshops held in DIHs in the four African countries targeted by the project. In total, 40 capacity building events were implemented from May 2022 until June 2023 attracting over 800 individual participants, including DIH managers and staff, entrepreneurs, business consultants and students. In the same vein, an international brokerage event, 4 design-thinking bootcamps in African DIHs, and an international capitalization event were designed for promoting partnerships between African and European ecosystems.

This paper is structured to provide a holistic understanding of the AfriConEU Academy's effectiveness, offering valuable insights, data-driven analysis, and practical recommendations that can be applied in similar initiatives across diverse contexts. Our study employs a multi-method approach aiming to

evaluate the efficiency and effectiveness of the performed activities and assess the impact of the AfriConEU Academy on the performance and evolution of African DIHs and the digital innovation ecosystem at large. In that respect, the main research question this paper seeks to answer is whether the AfriConEU Academy programmes have contributed in raising the capacity and networking capabilities of African DIHs and the digital innovation ecosystems in the countries under study.

In line with the aforementioned evidence, in order to assess the Academy's impact, the research effort presented in this paper aims to test the following hypotheses:

H1: AfriConEU Academy capacity and transcontinental partnership building programmes, are efficient and relevant for addressing the knowledge and skills gap within African digital innovation ecosystems and to foster the development of collaboration within Africa's DIHs network, as well as between African and EU digital innovation actors.

H2: The involvement of African DIHs and other digital innovation actors in AfriConEU Academy programmes, will a) increase participants' digital and entrepreneurial skills, b) facilitate the evolution of African DIHs through fostering the adoption of innovative approaches, tools and practices, c) foster the development of partnerships across African digital innovation ecosystems and European actors.

Our findings aim to inform DIH leaders, entrepreneurs, and stakeholders on the potential and significance of capacity building and networking initiatives in fostering the evolution of digital innovation ecosystems and facilitating the emergence of globally connected digital innovation landscapes.

2 METHODOLOGY

Aiming to provide a holistic understanding of AfriConEU academy's efficiency, effectiveness and impact, this section outlines the methodological approach and tools employed for evaluating the implementation and assessing the programmes' outcomes. To gauge the program's success in achieving its stated objectives and producing the expected outcomes, a comprehensive and data-driven approach was employed. The methodology described herein represents a systematic framework designed to yield empirically grounded insights, combining quantitative and qualitative methods. The key steps, data collection techniques, analytical tools, are discussed along with the evaluation processes employed in assessing the program's impact.

The purpose of the methodological approach we adopted is two-fold: first, to evaluate the efficacy of the Academy against predefined objectives and qualitative criteria, and second, to assess the outcomes and impacts on the digital innovation ecosystems in the studied countries. To achieve these objectives, the methodology involves a series of key steps: Initially, programme objectives and expected outcomes were clearly defined according to the SMART criteria. Subsequently, a systematic quantitative and qualitative data collection scheme, running throughout the program's duration, was designed. Data-collection included participant feedback before and after participating in the events, in-depth interviews with participants for identifying behavioural and organizational shifts in African DIHs, and follow-up questionnaires to measure the achievement of predefined goals and relevant indicators. The data presented in this paper were collected over a period of 15-months, starting from May 2022 when the AfriConEU Academy was launched until September 2023. Throughout this period, collected data are analyzed and assessed, to inform subsequent data-collection rounds and provide insights for improving the Academy's performance. Additional data are expected to be collected, as at the time of writing of this paper the AfriConEU Transcontinental partnership building programme is still ongoing with two events pending, while some of the expected outcomes of the Capacity building programme are anticipated by January 2024. These steps collectively form a robust and systematic approach to evaluating the program's effectiveness and ensuring the credibility of the assessment process.

To capture all the diverse aspects of the AfriConEU Academy's potential outcomes, the impact assessment strategy that was chosen, was based on the New World Kirkpatrick Model for training evaluation (Kirkpatrick, 2021). The Kirkpatrick model maintains a result-oriented approach, emphasizing on training effectiveness on work performance and organizational results, which matches the complex structure of AfriConEU and allows for evaluation in multiple levels. The model distinguishes four levels of training evaluation, which are used to capture training quality, training effects, training implementation and its overall outcomes. In line with this approach, the AfriConEU impact assessment plan employs a similar four-level assessment of the Academy's activities, adapted to the particular characteristics and targets of the AfriConEU project. At the first level, participants' reactions to the Academy's training and networking activities are evaluated, focusing on specific

attitudes that are considered crucial for promoting active participation, high level of learning and motivation to adopt the acquired knowledge and skills in their work routines. The second level of assessment focuses on the achievement of the specific learning and networking outcomes of each activity at an individual level, while the third level and fourth assessment levels are mostly oriented towards measuring behavioural and performance shifts, respectively, in order to assess the overall effects of the Academy at an organization level. Table 1 summarizes the structure of the impact assessment methodology, illustrating the complexity of the research effort and the diverse purposes served by each of the four levels evaluation.

Table 1. Impact assessment plan structure.

<i>Evaluation Level</i>	<i>Level 1 Reaction</i>	<i>Level 2 Learning</i>	<i>Level 3 Behaviour</i>	<i>Level 4 Results</i>
Measurement Target	Quality	Effect	Implementation	Outcomes
Linked Objectives	Activity-specific	Activity-specific	Subprogramme-specific	Subprogramme-specific
Expected impact level	Individual	Individual	Individual / Organizational	Organizational
Timing of evaluation activities	Short-term	Short-term	Mid-term	Mid-term/ Long-term
Assessment instrument	Questionnaires	Questionnaires	Semi-structured interviews	Performance Indicators

In order to accommodate the various requirements associated with each of the four levels of assessment, a diverse array of impact assessment tools was employed. This comprehensive approach ensured a holistic understanding of the Academy's effectiveness and its impact on individual participants, DIHs and the broader ecosystem. These tools were purposefully selected to capture both quantitative and qualitative data, providing a nuanced understanding of the programmes' outcomes. The following is an overview of the key impact assessment tools utilized:

1. **Evaluation Questionnaires:** Structured questionnaires were administered to program participants before, during, and after each capacity building and networking activity. These instruments were designed to measure the effectiveness of the implemented activities, by focusing on participants' satisfaction, engagement, and attitudes, as well as on the achievement of activity-specific learning and networking objectives. This part of the research was aimed at capturing the short-term effects of the Academy on individual participants, gaining feedback to improve the implementation of the programmes, and acquire insights into designing data-collection tools for subsequent evaluation phases.
2. **Interviews:** Semi-structured interviews were conducted with program participants to delve deeper into their experiences and provide qualitative insights into how the program influenced their personal and professional development. Interviews were focused into exploring how involvement in the Academy's activities has affected their entrepreneurial thinking, their individual skills and performance, as well as the business approach and networking capabilities of their organization.
3. **Longitudinal Analysis:** Long-term impact was assessed by revisiting participants and stakeholders several months after the completion of each Academy sub-programme, based on the mapping of expected outcomes that was done during the impact assessment design. A series of online follow-up surveys was conducted, aiming to measure whether involvement in the Academy's activities has helped African DIHs enhance their entrepreneurial approach, develop tools and strategies to improve their services and financing capabilities, and expand their networks and develop partnerships.

In summary, the methodological framework presented herein lays the foundation for a comprehensive assessment of the AfriConEU academy's effectiveness. By employing this diverse set of impact assessment tools, both quantitative and qualitative, we aimed to construct a multifaceted evaluation

framework that not only assesses Academy effects through predefined performance indicators, but also offers in-depth insights of how the programmes' have influenced the involved digital innovation actors and the entrepreneurial culture within the ecosystem. The results derived from this methodology will not only contribute valuable insights to the current discourse on supporting digital innovation but also serve as a basis for informed decision-making, program improvement, and the advancement of best practices in the field. In the following sections, we present the findings and dig into their implications, offering a deeper understanding of AfriConEU achievements and areas for growth.

3 RESULTS

The impact assessment process of the AfriConEU Academy programmes was rooted in a comprehensive framework that rested upon two foundational pillars, focusing on short-term and mid/long terms effects, according to the structure illustrated on Table 1. The first of these pillars was the evaluation of the programmes' implementation, in terms of their relevance to the participants' needs, their efficiency in engaging participants and achieving predefined learning and networking objectives, as well as shifting participants' attitudes towards adopting what they gain from their involvement in the Academy. The second impact assessment pillar focuses on measuring the Academy's effects on participants' perceptions and behaviours, as well as organizational, administrative, and strategic changes in their organizations.

3.1 Evaluation of Academy programmes' implementation

The data used for evaluating the Academy's implementation were collected through evaluation forms, distributed at the end of each AfriConEU event which were voluntarily answered by the participants. Moreover, a series of pre-evaluation questions were introduced during the event registration process, in order to establish a baseline for measuring attitude shifts among participants. A uniform questionnaire was distributed in 41 capacity building activities yielding nearly 400 responses, while separate questionnaires were developed for the networking activities, collecting responses from another 130 participants.

Evidence from the capacity building programme evaluation, indicate that the programme has achieved its predefined objectives, as the programme attracted more than 800 unique participants, 70% of which came from African countries with over 40% female participants. Participants' feedback further supports the argument for the programmes efficacy, as participants rated highly the programme's relevance to their needs (9/10 average ratings on items measuring relevance), with 86% expressing the opinion that the programme's material will contribute to their future success. Furthermore, participants provided high ratings on how engaging the programme was (8.8/10), as well as on their overall satisfaction (8.9/10) from their involvement in AfriConEU capacity building activities. Moreover, more than 85% of the respondents stated that they have acquired the knowledge and skills that were the target in each activity, which is also reflected in attitude shifts, as respondents appear more confident (86%) and willing to adopt (87%) innovative tools and practices in their everyday work routines, after attending the capacity building activities.

In a similar vein, evaluation findings from the transcontinental partnership programme indicate high degree of participants' satisfaction with the activities, relevance to their needs and engagement in the events' activities. More specifically, over 92% of participants rated the AfriConEU Brokerage event as very relevant to their needs, while 86% declared their intention to apply what they gained from the event in their everyday work practices. Moreover, over 90% of the respondents expressed their satisfaction with the opportunities they had to connect with and gain access to networks, investors, and collaborators, and 93% were optimistic that they would be able to turn the connections they made into formal partnerships. In line with the aforementioned findings, evidence from the evaluation of the AfriConEU design-thinking bootcamps, also illustrates the efficiency of the Academy's programmes. The overwhelming majority of the respondents (over 97%) found the activities relevant for supporting their effort to expand their networks and develop partnerships and collaborative projects. Also, satisfaction rates exceeded 90% in every diverse activity performed during the bootcamps, while more than 85% of the respondents stated that they expect that the work that was done during the bootcamps will lead to joint projects and partnerships within few months.

Overall, empirical findings firmly support the assumptions and expectations that underpinned the development of the AfriConEU Academy programmes. The program's remarkable success in meeting the criteria of relevance, engagement, satisfaction, learning outcomes, and networking objectives, substantiates the initial premise upon which it was designed and underscores the significance of this

type of capacity development and networking programmes for African ecosystems. Participants' feedback on the programmes' implementation offers valuable insights digital innovation practitioners, and researchers seeking to design and implement similar initiatives, such as the importance of programme co-creation, clearly stated and tangible objectives, flexible schedules and peer-to-peer learning, for designing user-friendly and relevant programmes that are tailored to participants' needs.

3.2 Academy programmes' impact assessment

To understand the full scope and significance of the project, the focus inevitably shifts to its actual outcomes—the tangible and lasting effects it has on its intended beneficiaries and stakeholders. This section presents the impact assessment results, by looking into the real-world consequences and transformations brought about by the AfriConEU Academy. Through a rigorous analysis of longitudinal and qualitative data, we seek to uncover the true extent of the project's impact, providing insights that transcend assumptions and contribute to a more nuanced understanding of its implications. More specifically, the assessment of the project's actual outcomes draws from a series of follow-up surveys addressing DIH managers and digital innovation entrepreneurs, and from qualitative interviews with AfriConEU Academy participants.

3.2.1 Longitudinal surveys

Follow-up surveys were conducted in predefined intervals from April to September 2023, based on a thorough analysis of the Academy's specific objectives, which determined the expected outcomes of the capacity building and networking activities along with the time when they are expected to materialize. According to the timeline that was created from the analysis, participants involved in the Academy events were targeted with short surveys exploring whether their organization has achieved the intended outcomes, as well as the reasons for not achieving them. It should be noted that at the time of writing of this paper, some of the intended outcomes are not planned to be achieved yet, while two AfriConEU Transcontinental partnership building events are still pending, therefore additional data are scheduled to be collected until January 2024, when the final impact assessment report will be issued.

Empirical findings clearly indicate a significant and positive impact of the AfriConEU capacity building programme on African DIHs and digital innovation initiatives. As illustrated in Figure 1, the overwhelming majority of the respondents was mobilized to improve their organizations' operations, as a result of their involvement in the AfriConEU capacity building events. Although 43.2% has achieved the expected targets, such as drafting a business and financing plan, mapping their stakeholders and relevant financial actors, or designing a theory of change and impact assessment strategy, another 34.2% is on ongoing process of implementing the knowledge and skills acquired through participation in the AfriConEU Academy, in order to improve their organization's performance and their potential to support their local ecosystems.

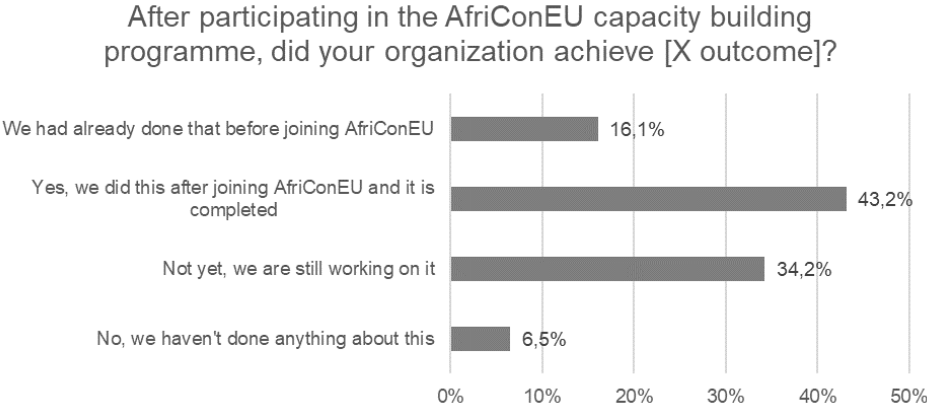


Figure 1. Capacity-building outcomes.

One noteworthy finding emerging from these surveys pertains to the program's relevance for the target audience, as merely 6.7% of respondents, of those who indicated that their respective organizations had not achieved the anticipated outcomes, attribute it to a lack of significance of the intended results

within their organizational context. As shown on Figure2, evidence suggests that lack of resources, time, and support after the training, are the reasons why targets were not achieved in most cases.

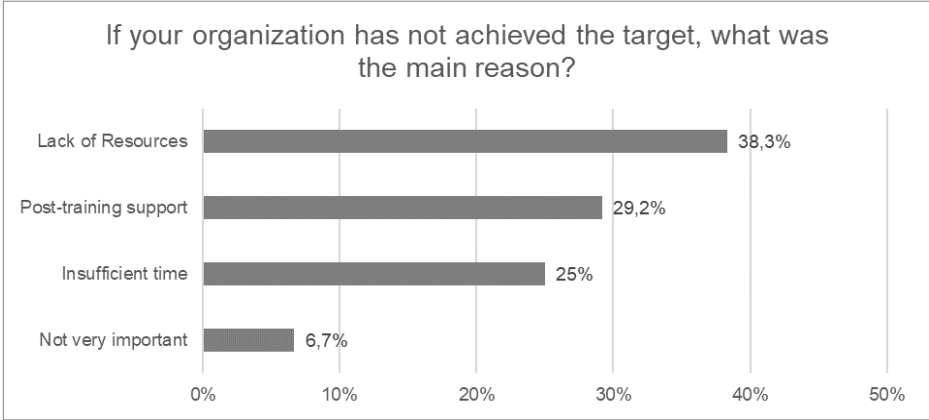


Figure 2. Reasons for not achieving expected outcomes.

As far as the AfriConEU transcontinental partnership building programme is concerned, impact assessment was not possible to be completed, as most the programmes activities were scheduled for the period July - October 2023, therefore the overwhelming majority of the intended outcomes are expected to materialize within the following months. Nevertheless, preliminary evidence from assessing the impact of the AfriConEU Brokerage event, which was held in November 2022 in Bologna, Italy, offers strong indications that AfriConEU networking activities, may also have significant benefits for the involved parties. More specifically, in a follow-up survey that was conducted six months after the Brokerage event, 87% of respondents stated that the lessons they learnt through their involvement have been relevant and useful during that time. Furthermore, 85% of the respondents managed to keep in touch with people they met in the event, while in half of these cases these contacts have led to joint projects and partnerships. Overall, more that 57% of the respondents stated that their involvement in the event contributed in their effort to expand their networks and over 40% referred to changes in the way their organizations operate.

3.2.2 Qualitative interviews

While quantitative data provides a structured and numerical perspective the Academy's impact, it is often through qualitative research that the richness and depth of human experiences come to light. This section discusses the main findings from in-depth interviews conducted with participants in the Academy activities aiming to reveal their thoughts, experiences, and insights, from their involvement with the AfriConEU Academy and to uncover the Academy's impact in ways that quantitative data alone cannot capture. The interviews discussed in this paper were conducted in July 2023 during the AfriConEU design-thinking bootcamps in Uganda and Tanzania, and targeted participants who have attended several AfriConEU activities. The discussion provides a holistic view of the research findings, complementing and augmenting the quantitative evidence with qualitative insights that contribute to a better understanding of AfriConEU's impact.

The initial objective of the in-depth interviews was to explore participants overall perceptions of the Academy and to identify the aspects that had the most significant impact on DIHs in Africa. Evidence drawn from the interviews indicate that all the participants were positively affected by their involvement with the Academy and highlighted several elements that differentiated AfriConEU from other similar initiatives. More specifically, a recurrent theme in the interviews focused on the fact that the Academy programmes were tailored to the needs and aspirations of DIHs, corroborating quantitative evidence of the programmes' highly relevance to its stakeholders. Participants notes that, through their exposure to AfriConEU activities, they acquired knowledge that is directly applicable and which is essential for setting the foundations for their business sustainability and growth. Also, interviewees argued that the programmes' collaborative approach, including peer-to-peer learning and knowledge exchange between African and European ecosystems, had a profound effect on their business philosophy and has raised their confidence in expanding their operations beyond local context. Finally, respondents emphasized the importance of networking and match-making aspects of the project, arguing that by coming together individuals from diverse communities and backgrounds they managed to expand their networks and improve the performance of their businesses.

One of the most significant findings from qualitative research, was interviewees' insights into how their participation in the project's activities has influenced their entrepreneurial approach. Firstly, the project played a pivotal role in the development of a distinctive culture and identity for their companies. Participants spoke of how the knowledge and skills they acquired from the AfriConEU Academy contributed in shaping a clear vision for growth and formulating a strategy for developing and marketing their products and services. Importantly, participation in the AfriConEU Academy fostered a global perspective, encouraging participants to think beyond borders and explore international markets. The importance of expanding their perspectives is evident in one interviewees' argument that "... you get also to get a perspective of more experienced people in different markets rather than yours... to tell us what has worked in Europe that we can also do in the particular project we're working on" and another explaining that it is important to "get more insight on finding better strategies to get outside markets because ... we want to make solutions which work outside. So, if we meet people from outside countries, we can know what they need, what they like what are their motivation on using products". This global outlook, in turn, translated into a newfound trust in building collaborations, both locally and internationally, as the following statement shows: "the difference is, you know, having been given the ability to trust in others that you can collaborate with others... you share and then like they can advise you or they can even collaborate with you. I think this is why AfriConEU has been so essential to being more positive in building partnerships". As a result, participants reported increased confidence in their entrepreneurial endeavors, bolstered by a clear vision for growth and a commitment to making a positive difference in the world. They emphasized that the project had sharpened their focus on creating tangible impact within their communities and industries, shifting their emphasis from mere profit generation to meaningful societal contributions. Also, the project's emphasis on out-of-the-box thinking and creative problem-solving had tangible effects on their work practices, inspiring innovative solutions to challenges that they were previously facing. One respondent argued: "I've learned that really to sustain the business I need to think outside the box, like every time I come up with something new like daily tasks and the goals and objectives that I want to achieve". These changes collectively underscore the AfriConEU Academy's contribution in transforming entrepreneurial mindsets in digital innovation ecosystems in Africa, which is essential for supporting their development and safeguarding their sustainability.

Another common theme that emerged during the interviews, involved the positive effects on DIHs' day-to-day business operations and work practices, as respondents reported significant improvements in efficiency through structural changes and the assignment of specific roles within their companies. Participants contended that knowledge and skills acquired through their involvement in the Academy, helped them produce streamlined workflows and clearly defined responsibilities, resulting in a more agile and effective operational environment. In addition, participants highlighted how the project enhanced their capabilities in pitching to investors, making them more compelling and persuasive when presenting their ideas, and finding alternative revenue streams to sustain their operations. An interviewee explained "That is the knowledge you're going to apply to showcase to an investor ... as a person, I have that experience whereby I've gotten a fund. So to me, AfriConEU, it has been a channel for me to say that I've moved from A to B. And I really think... we are going to see ourselves as business entrepreneurs in Africa here, but it's just through AfriConEU", while another reaffirmed that "through this AfriConEU capacity building on bootstrapping, what I realized is that to solve the financial gap, like finding capital for my startup, I decided to monetize my skills". This transformation of everyday work practices was coupled with an increased focus on gender balance within their teams, leading to greater diversity and more women actively involved in their entrepreneurial endeavors. One participant explained how AfriConEU helped him realize that "we are forced to see that we've changed that. That way to integrating three women on our board. And right now we have we have grown up to a team of 13, where we have six female, and the other male, but having a female as our gender lead". Participants also highlighted their improved digital skills, particularly in online marketing and product branding, which enabled them to reach broader audiences and enhance their market presence beyond their local contexts. Lastly, the project motivated the development of a structured impact assessment process within their organizations, underscoring their commitment to measuring and maximizing the positive effects of their initiatives.

Additionally, the interviewees emphasized that the project's orientation towards collaboration and networking had yielded substantial benefits in various dimensions. These included opportunities to discover new customers through their involvement to the events, as well as potential partnerships, as they we offered plenty of opportunities to identify and collaborate with organizations that shared complementary goals and resources. An additional important finding that was not revealed through the quantitative analyses, was that interviewees acknowledged the invaluable role of mentors and

advisors they encountered through the project's network, providing them with guidance and expert insights critical for their professional growth. One of the interviewees was excited to share that *"...I met some other good people who are giving me some good advice, which I tried to apply, but then later I did a zoom call, and it unlocked everything. So the value of the business skyrocketed like 1.6 million in like, one month just from that one zoom call and that's all thanks to AfriConEU!"*

Finally, some interviewees explained how the Academy's impact was diffused to their wide communities, generating societal effects that extended beyond their own organizations. Participants themselves became sources of inspiration for others in their communities, serving as living examples of what could be achieved through dedication and access to resources. Moreover, community empowerment was fostered through mentorship, as Academy participants applied the knowledge and skills they acquired in order to support their peers in improving their entrepreneurial endeavors and overcoming daily challenges. One respondent focusing on women entrepreneurship argued *"... it actually changed the way I learned my business in a very, very different level. So I started my own startup... I teach this women entrepreneurs to make a branding, to label their products to communicate to have logos and all that... , we have like 500 Women now who are entrepreneurs, or handmade producers from Tanzania. And then we actually train them in series..."*. Particular attention should be paid on the project's impact on women empowerment, as some of the participants' activities were directly linked to women's networks, who were positively affected by the application of knowledge the interviewees gained through their participation in AfriConEU activities focusing on gender lens innovation. The story of one participant working on women empowerment in Massai communities showcases how the project's impact diffuses to the communities in unexpected ways: *"before engaging AfriConEU, I was only waiting for funders to support but after learning about the (AfriConEU) platform, we started to think to ourselves outside the box, where shall we get some other revenues, which will help the women to empower themselves. So, we started the village community banks, whereby those women want to save their money and if they need some loan, then take with small interest"*, further explaining that these women became more aware *"because of the capacity building we have done them but also gained their independence because they get support from their own projects, they're not depending on the man"*.

Predictably, qualitative research also revealed some aspects of the project that could be improved in order to increase its impact and appeal to the ecosystems needs. Interviewees underscored the need for expanding the scope of future initiatives in order to directly address stakeholders from other regions within their countries, particularly in rural areas, as well as more specialized niches within the broader digital innovation landscape. Additionally, more informative event promotion and post-activities support and assignments, should be considered while designing similar programmes in the future, as they were mentioned as crucial factors for mobilizing active participation. Finally, respondents asked for better mobilization of investors and other international actors and project involved in digital innovation in Africa, in order to increase impact by tapping into their networks.

4 CONCLUSIONS

Summarizing our extensive evaluation effort, several key conclusions can be drawn regarding the project's impact and effectiveness. Firstly, it is evident that the project can be deemed largely successful in achieving its objectives. Participants' accounts, backed by empirical data, consistently demonstrate tangible outcomes that align with the project's intended goals, and support this paper's hypotheses. The high relevance of the project emerges as a second noteworthy conclusion. This relevance can be attributed to the co-creation process, involving active participation and engagement of stakeholders. The project's success in addressing the specific needs and aspirations of its target audience is a testament to the collaborative efforts that informed its design and implementation. Furthermore, our findings emphasize the pivotal role of knowledge exchange and peer-to-peer learning in the development of digital innovation ecosystems in Africa. Through the project, participants not only acquired knowledge but also actively engaged in the exchange of ideas and experiences with their peers, fostering an environment of continuous learning and innovation, with direct impact on DIHs performance and growth which was also diffused to their communities. Lastly, our conclusions highlight the transformative effects of the project on participants' entrepreneurial perspectives, organizational structures, and work practices. The project played a vital role in reshaping their mindsets, enhancing their operational efficiency, and instigating innovative work practices. These changes reflect a deeper and more lasting impact that extends beyond the program's immediate objectives, underlining the pivotal role of such initiatives in shaping the broader entrepreneurial landscape.

Limitations

Despite the valuable insights garnered from our evaluation and impact assessment efforts, it is essential to acknowledge certain limitations that temper the scope and generalizability of our findings. One of the primary limitations of our study is the limited response rate in both the evaluation and impact assessment phases. A subset of participants chose to respond to our surveys and interviews, potentially introducing bias into the data. It is plausible that the most engaged and enthusiastic participants were more likely to participate, which could lead to an overestimation of the project's impact. While we took measures to encourage participation from a representative sample, it remains important to exercise caution in interpreting the results, recognizing the potential for respondent bias. Moreover, some of the scheduled activities of the project have not yet been completed at the time of writing of this paper. Consequently, we anticipate that more data will become available as these activities progress, which could potentially impact our findings. The evolving nature of the project underscores the need for ongoing evaluation and a recognition that the project's full impact may not be fully discernible until all activities have been implemented and allowed sufficient time to mature. Similarly, some of the anticipated impacts of the project are inherently time-dependent and may materialize gradually over an extended period. Therefore, it is important to consider that the project's lasting effects and more substantial changes may only become evident in the months and years following its completion. In light of these limitations, our findings should be interpreted with a degree of caution and an awareness of the evolving nature of the project and its potential long-term impact, which may extend beyond the scope of this assessment. Continued monitoring and evaluation will be essential to capture the project's dynamic effects comprehensively and accurately.

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