

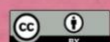
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ABSTRACT: The debate over maximizing the use and dissemination of information and communication technologies (ICTs) has created various expectations within the field and across national and global social contexts. Making such technologies accessible to all leads various social actors to seek advantages, growth opportunities, and the possibility of inclusion in social, cultural, and economic development, individually or in groups. Entrepreneurship, particularly in the technology sector, has provided opportunities for the development and empowerment of Mozambican women in various activities, enabling them to pursue self-sufficiency for themselves and their families. The objective of this article is to examine how technologies impact the empowerment of women in the Mozambican social context, with a particular emphasis on urban areas. The methodology was based on a mixed-method approach regarding the objectives, applied to 22 respondents residing in the cities of Maputo and Matola, focusing on the issue of gender development associated with entrepreneurship and technologies. The results obtained allow us to summarize that, despite there being a long way to go, women entrepreneurs residing in the urban cities of Maputo and Matola, who actively engage in business using technological means to pursue their activities, are characterized by being single and having completed higher education, which can positively influence their daily activities and the environment in which they are an active participant.

KEYWORDS: women's empowerment, female entrepreneurship, information and communication technologies, Mozambique.

RESUMO: O debate sobre a maximização do uso e da difusão das tecnologias de informação e comunicação (TIC) tem criado várias expectativas na área e no contexto social nacional e global, pois tornar tais tecnologias acessíveis para todos faz com que os diversos intervenientes sociais busquem vantagens, oportunidades de crescimento e a possibilidade de enquadramento no desenvolvimento social, cultural e económico, individualmente ou em grupos. O empreendedorismo, associado às tecnologias, tem dado oportunidades de desenvolvimento e empoderamento da mulher moçambicana nas suas diversas atividades em busca do autossustento, para si e para a sua família. O objetivo do presente artigo é o de compreender como as tecnologias influenciam o empoderamento da mulher no contexto social moçambicano, com ênfase no meio urbano. A metodologia foi baseada no método misto quanto aos objetivos, aplicada a 22 respondentes, residentes nas cidades de Maputo e Matola, tendo em vista a questão do desenvolvimento do género associado ao empreendedorismo e às tecnologias. O resultado a que se chegou permite, de forma resumida, constatar que apesar de haver um longo caminho a percorrer a mulher empreendedora residentes nas cidades de Maputo e Matola, em contexto urbano, e que desenvolvem uma atividade empresarial ativa com o uso de meios tecnológicos para a persecução das suas atividades caracterizam-se por serem solteiras e com o nível superior concluído, o que pode influenciar positivamente as suas atividades diárias e do meio no qual ela é uma interveniente ativa.

PALAVRAS-CHAVE: empoderamento da mulher, empreendedorismo feminino, tecnologias de informação e comunicação, Moçambique.

RESUMEN: El debate en torno a la maximización del uso y la difusión de las tecnologías de la información y la comunicación (TICs) ha creado diversas expectativas en el campo y en el contexto social nacional y global. Hacer que estas tecnologías sean accesibles para todos lleva a diversos actores sociales a buscar ventajas, oportunidades de crecimiento y la posibilidad de inclusión en el desarrollo social, cultural y o, tanto individual como en grupos. El emprendimiento, asociado a las tecnologías, ha brindado oportunidades para el desarrollo y el empoderamiento de las mujeres mozambiqueñas en sus diversas actividades, en la búsqueda de la autosuficiencia para ellas y sus familias. El objetivo de este artículo es comprender cómo las tecnologías influyen en el empoderamiento de las mujeres en el contexto social mozambiqueño, con énfasis en las áreas urbanas. La metodología se basó en un método mixto con respecto a los objetivos, aplicado a 22 encuestados residentes en las ciudades de Maputo y Matola, centrándose en la cuestión del desarrollo de género asociado al emprendimiento y las tecnologías. Los resultados obtenidos permiten resumir que, apesar de existir un largo camino por recorrer, las mujeres emprendedoras residentes en los municipios urbanos de Maputo y Matola, que se involucran activamente en negocios utilizando medios tecnológicos para desarrollar sus actividades, se caracterizan por ser solteras y tener educación superior completa, lo que puede influir positivamente en sus actividades diarias y en el entorno en el que participan activamente.

PALABRAS CLAVE: empoderamiento de la mujer, emprendimiento femenino, tecnologías de la información y la comunicación, Mozambique.

1. Introduction

The debate on the benefits of information and communication technologies in the development and empowerment of gender has created various expectations, both nationally and globally, regarding the evolution and discovery of new solutions resulting from the constant development provided by information and communication technologies.

In Africa, amidst constant wars, territorial and ethnic disputes, as seen in cases such as Sudan, the Democratic Republic of Congo, Niger, and Mozambique, technology and digital literacy processes are viewed as crucial elements for social inclusion and development, capable of creating the necessary conditions for connectivity, access, and maximizing the fight against poverty and underdevelopment based on gender.

In contemporary times, Information and Communication Technologies (ICTs) have transformed the world into a global web interconnected by the internet, so we can understand that "the Internet is the technological basis for the organizational form of the Information age: the network" (Castells, 2003, p. 1). Within the core of this structure, individuals' positions vary distinctly: some are fully integrated, characterizing the "being inside" the network (Alves, 2017, p. 43); those who face restrictions regarding access and usage, placing themselves on the margins or in a marginalized position; and, finally, those who remain completely on the outside, corresponding to the unconnected (Alves, 2017, p. 99).

The Constitution of the Republic of Mozambique of 2004 enshrines and promotes legal, social and economic equality; however, the Council of Ministers only approved, in its 5th Session on March 14, 2006, the document on Gender Policy and its Implementation Strategy, where the general objective was to promote gender equality, respect for human rights and the strengthening of women's participation in the country's development.

The inclusion of women in the processes and life of the country, according to the previously referenced document, opens new horizons for their participation in acts of legislation, policies, programs, strategies, action plans, budgets, and in all aspects and processes of Mozambique's development, based on 7 principles: unity; social justice; equity; equality; non-discrimination; gender integration; and non-violence (Política de Género e Estratégia da sua Implementação, 2006, pp. 8-9).

The issue of women's access to technology in Mozambique, given that they are largely outside the network, suggests that we must question how they would be able to create technological solutions and innovations for their growth, development, and social and economic integration. A clear answer to this situation would be found in the case of women being within the network, as is the case in more developed countries in the northern hemisphere.

In contrast to what was discussed in the previous paragraph, at the other extreme is the woman with the privilege of access to the internet. Clearly, the conditions of use and benefit would be different. However, considering that women are connected to the internet with limitations, there is a possibility that, albeit with deficiencies, a relationship can occur, even with minimal technological intervention.

According to Patrício & Osório (2015, p. 797), digital skills are now considered crucial, both for living in a constantly evolving society and for lifelong learning. Taking into account what these authors discuss, and adapting it to the subject of this article, we will focus on Mozambican women as the central figure to better understand how they can apply technology to their advantage in various areas, with a view to their empowerment.

The issues of income, education, digital literacy, and internet network expansion in Mozambique and Africa in general are largely responsible for the effort to expand and disseminate opportunities in choosing the right technology, which can influence the well-being of women and the surrounding cultural and socioeconomic context, which means that people appropriate language and automatically give it meaning (Pletsch et al., 2020).

Strobino & Teixeira (2014), in their publication on female entrepreneurship and the work-family conflict, highlighted that the female gender is still associated with domestic work, and this fact can be observed in our daily lives. However, it becomes necessary to understand how

entrepreneurship among women relates to technology, or vice versa, considering that there is a cause-and-effect relationship in the empowerment, recognition, and visibility of women in society.

In short, it will be the social and cultural context that will define the best technology to apply to women's empowerment, because only in this way will it be essential to master tools related to access and manipulation of information (Andrade et al., 2020). Thus, the need for women to be entrepreneurial in their context will dictate how they relate to their surroundings, which is the reason for this research, whose aim is to understand how technologies influence women's empowerment in the Mozambican social context, with an emphasis on urban areas.

2. Literature review

2.1 From the need for technology to the entrepreneurial role of women

Technology is an element that is part of our daily lives; on this basis, it is quite crucial for the development and growth of our society. Living without knowledge of the use of technology can constitute a barrier to the integration, participation, and social inclusion of all individuals in all aspects of society in the 21st century, regardless of gender (Patrício & Osório, 2015).

Mozambique faces a major unemployment problem, with women being the disadvantaged gender and, in a way, excluded from the benefits of the technological and globalized society, which in itself obliges them to make an additional effort towards social inclusion in the field of technology, especially in rural areas. According to 2023 data, the Mozambican population was 32.419,747 inhabitants, of which 16.736,066 were women (Instituto Nacional de Estatística, 2023). It should also be noted that 65.34% of the total population lives in rural areas.

Considering that technology plays a highly important role in the inclusion of individuals, using it to achieve broader results, including inclusion, makes it possible for everyone to participate in the essential and objective aspects of the information society.

Therefore, this study understands that it will be the use of diverse technologies existing in our environment that women, and any other gender, will rely on for the creation and inclusion in the various networks of interest necessary for the expansion and development of entrepreneurial action, which is why Gomes and Santana (2009) highlight the factor of flexible working hours as a fundamental element for the success of women entrepreneurs.

Since technologies allow all users, from anywhere in the world, to access various digital platforms, such as payment, sales, promotions, and purchasing platforms, they enable their inclusion and development in entrepreneurial activities that can operate within a vast global network based on mutual interest.

Alongside all the elements highlighted above, regarding possibilities and success, there is the issue of conflict between entrepreneurial activity and conflict with the family. Greenhaus and Beutell (1985) frame this issue within three dimensions: *“time*, which focuses on the excessive time spent at work; *strain*, which takes into account stress factors such as anxiety, fatigue, depression, and irritability caused by work; and *behaviour*, which considers self-confidence, emotional stability, aggressiveness, and objectivity, both at work and at home” (pp. 77-78).

However, it is a fact that “with each generation, new patterns of behaviour become acceptable. Society evolves and with that, the differences between what women can do and what is reserved for men decrease” (Boas, 2010, p. 35).

For her to succeed in the entrepreneurial process, a woman must study the market, deepen her knowledge of her business, analyse the risks to understand if she has the necessary skills to face them, and know to what extent what may have started as a hobby can be transformed into a business without losing the pleasure in developing it.

However, based on what we have observed around us, when a woman creates wealth for herself, she also benefits her family and dependents, including, in some cases, her partner.

2.2 Women's empowerment in the face of current challenges in the Mozambique urban context

The imperative to understand the social functions and roles of women within the Mozambican urban landscape – particularly their proficiency with technological resources – makes the study of female empowerment highly relevant to both general and scientific understanding. Historically, the socio-familial, economic, and political contributions of Mozambican women have been marked by significant milestones, tracing back to the national liberation struggle (Mabele, 2008). This vital social role is nationally commemorated on April 7th, a formal public holiday dedicated to recognizing Mozambican women, traditionally celebrated with public parades featuring the *capulana* as a symbol of cultural identity and feminine beauty.

Despite this symbolic recognition, structural inequalities persist. Data from the Bank of Mozambique (2024) reveal that 64% of Mozambican women experience financial exclusion. While the vast majority of these excluded women reside in rural areas (73%), a considerable portion (27%) live in urban centers. This urban financial exclusion significantly hinders women's capacity to access competitive market opportunities, stifling their integration, socio-economic development, and paths to self-empowerment. Furthermore, gender disparities are evident in digital financial systems, where women's lack of confidence in electronic money accounts is 49%, compared with 51% among men (Banco de Moçambique, 2024).

In response to these barriers, many women have come to view social networks and digital media as viable avenues for business. By leveraging these platforms, they circumvent traditional market exclusion, directly engage diverse consumer bases, and establish themselves as active entrepreneurs. According to *DataReportal* (2025), Mozambique has approximately 19.1 million active mobile phone users, representing 53.1% of the population. Within this digital ecosystem, 7.12 million people (19.8%) have internet access, and 4.1 million (11.4%) are active social media users—of whom 41.6% are women and 58.4% are men.

Consequently, contemporary research must focus on the dynamic between empowerment and entrepreneurship among urban Mozambican women, analysing how information and communication technologies (ICTs) influence their market integration. Etymologically, the concept of empowerment derives from the English term, expanding into Spanish and Portuguese as a framework for transforming passive subjects into active agents of change (Martins, 2003).

Historically rooted in the tenets of the Protestant Reformation and later catalysed by civil rights and feminist movements, empowerment operates on the philosophy that men and women possess fundamentally distinct experiences; thus, it posits that different individuals should be treated not under an identical standard of equality, but with equivalent value and respect (Narvaz & Koller, 2006).

Throughout the latter half of the 20th century, the ideology of empowerment evolved through self-help movements in the 1970s, community psychology in the 1980s, and citizenship and public health advocacy in the 1990s (Baquero, 2012). These historical shifts culminated in modern global frameworks, such as the 7 Women's Empowerment Principles established by UN Women, which advocate for equal leadership, fair workplace practices, non-discrimination, and targeted support for female entrepreneurship.

In the contemporary Mozambican context, despite persistent challenges involving low income, poverty, and systemic discrimination, women remain at the forefront of social and economic movements. This active participation has spurred several targeted institutional initiatives,

including: The EMPODERA Program (2025–2029) by the Ministry of Labor, Gender and Social Action; The National Program for the Economic Empowerment of Women, implemented in partnership with UN Women; The Program for the Empowerment of Women and Girls, facilitated alongside GAPI to foster female entrepreneurship; The Be Like a Woman Project (*New Voice New Face*), focusing on leadership and business management; The Junt@s Application, designed to combat gender-based violence.

Because traditional gender constraints often obstruct formal integration, many urban women engage in self-employed, subsistence-level economic activities, blending domestic duties with digital tools to balance their productive and reproductive roles (Casimiro, 2014). Although entrepreneurship in Mozambique is still culturally perceived through a masculine lens—particularly outside fields traditionally deemed suitable for women (Machado, 2012; Teixeira & Bomfim, 2016)—the strategic adoption of platforms like WhatsApp, Facebook, and Instagram has allowed women to follow market trends, scale businesses, and reach dispersed national niches.

Complementing these digital practices, the Bank of Mozambique (2024) spearheads structural initiatives, including financial inclusion lectures, mentoring networks, and specialized forums like the *Women in Finance Conference*, which addresses gender integration and innovative financial solutions.

Ultimately, entrepreneurship requires transforming ideas into profitable opportunities (Dornelas, 2005; Machado, 2012; Gebran et al., 2010). For women, this growth often serves as a direct response to corporate gender discrimination and the challenge of balancing professional ambitions with family responsibilities (Marques, 2017). Through ICTs, women build reciprocal economic networks to secure financial resources that would otherwise be inaccessible due to low institutional savings (Kabeer, 2003). This is highly visible in the Maputo-Matola metropolitan axis—where Maputo functions as the administrative capital (52% female population) and Matola acts as the primary industrial hub (53% female population) (Instituto Nacional de Estatística, 2019). In this region, women demonstrate a high capacity for income diversification, civic mobilization, and political expression (Agy, 2020; Avelino et al., 2022).

In conclusion, the socio-economic empowerment of Mozambican women not only fosters entrepreneurial behaviours and practical income-generating skills but also elevates collective social awareness, driving sustainable progress toward genuine gender equality.

The perceptions highlighted above lead to the understanding that women in Mozambique play a very important social role. In this context, the date April 7th demonstrates this, as it represents the day of national celebration and recognition of Mozambican women. This date is formally commemorated with a public holiday and a parade of *capulanas*, a symbol of women and feminine beauty in Mozambique.

Regarding financial exclusion, according to the Bank of Mozambique, analysing the gender issue, 64% of the Mozambican female population suffers from financial exclusion. The largest percentage of excluded women (73%) live in rural areas, compared to 27% in urban areas. This situation presents a worrying scenario, as women in large urban centers suffer considerably from financial exclusion, which influences their difficulty in accessing market opportunities for their integration and development, and in creating the appropriate conditions for their own empowerment. Furthermore, women's lack of confidence in electronic money accounts stands at 49%, compared to 51% of men (Banco de Moçambique, 2024).

Therefore, it is in this context that some of them see social networks (digital media in general) as an opportunity to conduct business and reach a diverse audience actively willing to purchase goods and services, creating the opportunity to establish themselves and overcome the barrier of exclusion that prevents their entry into business, making them entrepreneurial and empowered.

In total, approximately 19.1 million Mozambicans were active mobile phone users, equivalent to 53.1% of the population, according to DataReportal (2025). Of this number, 7.12 million (19.8%) had internet access, of which 4.1 million (11.4%) were social media users, with 41.6% being women and 58.4% men.

The focus of this study centres on the debate surrounding the issue of empowerment versus entrepreneurship among Mozambican women in the urban context, and its relationship with information and communication technologies. It is important to understand how these technologies have influenced the process of integration and the realization of their entrepreneurial activities. Therefore, it is crucial to understand the context and meaning of the terminology surrounding empowerment, which, according to Martins (2003, p.7), originated from the English term *empowerment*, whose use expanded to Spanish as *empowerment* and, subsequently, to Portuguese.

This word is not new; in fact, the 1958 edition of the Caldas Aulete dictionary defines the meaning of the reflexive verb *empowered* (to empower) as synonymous with to seize or to take possession of, and the adjective *empowered* meaning made more powerful, increased in power. In its prefix, *empowerment* signifies the action, and in its current sense, empowerment can be understood as transforming the subject into an active agent through a process that varies according to the situation and context.

Regarding its origin, according to Baquero (2012, p. 176), empowerment stems from the roots of the Protestant Reformation. In contemporary times, it is expressed in the struggles for civil rights and the feminist movement. It is considered a philosophy that recognizes that men and women have different experiences and claims that different people should be treated not as equals, but as equals (Narvaz & Koller, 2006, p. 648). In Mozambique, there is a constant struggle to combat inequality, where women seek to have the same opportunities as men.

It is important to emphasize that women, for historical reasons, as already mentioned in this study, in addition to their domestic, professional, and family activities, also face the labour market. Therefore, some studies refer to the need to highlight the presence of empowerment within the ideology of social action in the societies of developed countries since the second half of the 20th century (Baquero, 2012).

In the 1970s, according to Baquero (2012), this concept was influenced by self-help movements, and in the 1980s, by community psychology. In the 1990s, it received an influx of movements that sought to affirm the right of citizenship over different spheres of social life, including medical practice, health education, the physical environment, politics, justice, and community action.

These actions have influenced contemporary times, as they were a way to reduce inequalities related to women in social, economic, and political contexts. According to the United Nations (UN) Entity for Gender Equality and the Empowerment of Women (UN Women), seven principles of empowerment were created, namely: Establishing high-level corporate leadership for gender equality; treating women and men fairly at work; respecting and supporting human rights and non-discrimination; ensuring the health, safety, and well-being of workers; promoting the education, training, and professional development of women; supporting women's entrepreneurship and promoting women's empowerment policies through supply chains and communication and marketing; promoting equality through community-focused initiatives and social engagement; and measuring and documenting and publishing the company's progress in promoting gender equality.

The discussion about the need and relevance of empowering women is the result of various debates, including those specifically driven by feminist movements. It is recognized that development strategies and grassroots interventions have not achieved significant progress in

improving the condition of women, but efforts continue to be made, and in urban centers, such findings are visible (Avelino et al., 2022).

Currently, it is noticeable that in Mozambique, in the large urban centers, despite the existence of a social and political movement against social inequalities, low income, poverty, corruption, the need for transparency, and discrimination based on sex and skin colour, women have been at the center of all of these movements due to their function and social role, to the extent that various initiatives have been carried out by the government and partners.

Concrete initiatives, such as the EMPODERA Program (2025-2029) of the Ministry of Labor, Gender and Social Action; the National Program for the Economic Empowerment of Women, a government initiative in partnership with UN Women and other partners; the Program for the Empowerment of Women and Girls, a government and GAPI initiative aimed at fostering female entrepreneurship; the Be Like a Woman Project (New Voice New Face), which aims to empower women in leadership, business, and management; and the Junt@s App, which encourages women to speak openly about gender-based violence, have gained traction in the Mozambican socio-economic environment.

Women find their social integration hampered by gender-based constraints, so they develop subsistence-level economic activities as self-employed individuals, using technology and the domestic environment to fulfil their productive and reproductive activities (Casimiro, 2014).

There is a tacit recognition that society needs people who take risks; however, in Mozambique, entrepreneurship is still associated with a typically masculine way of being and activity, especially if the chosen field is not associated with professions considered suitable for women (Machado, 2012; Teixeira & Bomfim, 2016).

However, it is important to emphasize that most of these women end up finding in communication and information technologies, and in certain applications, an effective way to follow trends and seek their integration into the local, national, and global business market. It is common for them to resort to social networks such as WhatsApp, Facebook, Instagram, and other platforms, which are currently considered work tools, allowing users to share not only their social lives but also to promote businesses, enabling them to reach different niches more easily, even if these niches are dispersed throughout the country in some cases.

Alongside these findings, in 2024, several lectures aimed at high school and university students, as well as civil servants, were held in different districts, highlighting financial inclusion initiatives for women, with the main objective of supporting them in the area of knowledge about entrepreneurship, giving them access to financing, training and a vast network of mentoring for women, to improve their business and leadership skills.

Several other events were also held, with the Women in Finance Conference standing out for its discussion of the following themes: (1) Gender integration in organizations: Perspectives for promoting gender equality in the financial sector; (2) Gender integration in organizations: Perceptions for promoting gender equality in the financial sector; and (3) Innovative Gender Solutions to Enable Women's Financial Inclusion (Bank of Mozambique, 2024, p. 46).

According to Dornelas (2005), entrepreneurship presupposes the involvement of people and processes that, together, lead to the transformation of ideas into opportunities. It follows, therefore, that entrepreneurs always seek opportunities that can be transformed into business ideas, whether to obtain profit, satisfy their own needs, or satisfy the needs of their clients. Consequently, it follows that women's entrepreneurship is constantly growing around the world (Machado, 2012; Gebran et al., 2010).

It is within this growth process that discussions arise regarding the advancement of women in the labour market in response to the discrimination suffered in corporate environments, where the lack of equality between men and women persists.

It is in the face of this adverse situation, in which women seek equality, whether in hierarchical positions, salary, recognition, and well-being, that they are confronted with challenges imposed by the labour market, or by the ability to reconcile work and family, that it becomes clear that they need to have the flexibility to be able to thrive in both environments (Marques, 2017).

Taking into account the evolution of technology, as has been discussed, women end up driving the creation and participation in social networks, associations or economic networks based on reciprocity, to facilitate the obtaining of resources, such as financial resources, whether for their own sustenance, for the family unit, but also to make investments of various kinds that they would otherwise not be able to achieve due to their low incomes and scarce savings (Kabeer, 2003).

It is in this sense that Agy (2020), in her study about gender and development in Mozambique, concludes that women who live near the Maputo-Matola city axis demonstrate a greater capacity to diversify their sources of income through small businesses. They are also involved in politics, associations, social campaigns, marches, or strikes, expressing their concerns and vulnerabilities based on gender.

These acts, in themselves, represent the knowledge and education that these women have been accumulating as a result of the importance of their social role, supported by access to information and resources. It is not enough to simply have the desire for empowerment; a foundation in their education is necessary so that they can influence and create their own space for exercising citizenship.

Based on what has been discussed so far, the study concludes that women's empowerment at the economic and social levels can foster the development of behaviours that encourage women to become entrepreneurs and express their creative skills in a practical way, related to income-generation processes. Furthermore, this empowerment increases women's collective awareness and promotes actions that ensure the strengthening of gender equality.

The inhabitants of the cities of Maputo and Matola make up the group of inhabitants that represents the greater metropolitan region of Mozambique, located in the southern zone. Maputo is the main center where the political, administrative, and decision-making institutions are located, while Matola is the larger area where the major industrial infrastructures are situated. According to the 2017 Census, the city of Maputo had a total population of 1,088,449 individuals, of whom 563,748 (52%) were women, and Matola had a total population of 1,032,197 inhabitants, of whom 551,193 (53%) were women (Instituto Nacional de Estatística, 2019).

However, it should be noted that the research had some difficulty in determining the number of current social media users distributed across these two large urban centers. General data exists, but specific data is not available for consultation.

In general terms, DataReportal (<https://datareportal.com/>) in its report by Digital 2026: Mozambique, it summarizes that Facebook is the most widely used social network in Mozambique (4,10 million users), and generally serves for social communication, content dissemination, and, more recently, for the development of local and regional businesses.

3. Methods

The research presented here is classified as a mixed-methods exploratory approach, in terms of its objectives, justified by the fact that it was developed based on a literature review of published materials and by the fact that it sought to identify, understand, and deepen knowledge about studies and research done on the subject under analysis, as well as by the fact that it involved the

application of a questionnaire survey directed to the respondents identified for this research, composed of closed and open questions, combining quantitative survey data with qualitative interpretation (Creswell, 2014).

The quantitative approach allowed for the analysis of measurable data related to aspects of empowerment and the use of communication and information technologies, specifically women's perceptions of strategies for using social media for business. In turn, the qualitative approach made it possible to understand, in a more in-depth way, the practices adopted, the decisions and motivations, providing greater interpretative richness to the study (Creswell, 2014).

The study aimed to analyse women entrepreneurs seeking empowerment, all residing in the cities of Maputo and Matola, whose relationship with information and communication technologies is present, seeking to gather their opinions, attitudes, and behaviours to identify characteristics and, consequently, patterns of the phenomenon researched and it seeks to answer the following question: How do information and communication technologies influence the empowerment of women entrepreneurs in the Mozambican urban context?

It is important to note that the study is flawed because it was not submitted to an ethics committee for approval of the topic; however, the participants were informed about the objective of the research and therefore had to consent before beginning to answer the questionnaire.

To select respondents, the research contacted the organization MUVA (<https://muvamoz.org>), an organization that has been working since 2015 for the economic empowerment of young women, based in the city of Maputo, at Carlos Albers road, number 67, in the Polana Cimento neighbourhood, whose activity focuses on innovation, access to first job opportunities (public and private sectors), entrepreneurship and organizational transformation, covering the greater Maputo metropolitan area. This organization has delegations in the cities of Beira and Nampula.

From MUVA, the researchers were able to obtain a contact list of associated women who aimed to participate in any of the activities mentioned above, whose common element centers on the need to develop their individual and family well-being through entrepreneurship and business creation.

To carry out the study, the inclusion criteria were: (1) formally consenting to participate in the research, (2) residing in the city of Maputo or Matola, (3) owning a company or business, and (4) having a telephone contact. Therefore, since respondents did not meet any of the four inclusion criteria, they were excluded and could not proceed with the study. Additionally, the study requested the respondents' consent, informing them about the nature and objective of the research, before they answered the subsequent questions, safeguarding ethical and confidentiality issues.

Regarding the literature review, the study sought scientific articles, research papers, and books related to empowerment, entrepreneurship, and their relationship with information and communication technologies, with a greater emphasis on social networks.

Data were collected using Google Forms, with the link shared via WhatsApp, which facilitated data management and obtaining the answers. The list provided by MUVA consisted of over 250 female individuals in total; however, the sample consisted of 22 women entrepreneurs, selected through purposive sampling via the organization, and the inclusion criteria ensured relevance to the study objectives (urban location, business ownership, and ICT use). The data extracted from the survey were grouped, organized, and subsequently analysed using Excel and Power BI, enabling descriptive statistics analysis and thematic interpretation.

In turn, the shared questionnaire was divided into four parts, namely: (1) respondent characterization (age, place of birth, nationality, number of children, marital status, academic level), (2) on entrepreneurial activity/business (whether they are in business, type of business, years of

activity, business classification, number of employees, previous professional experience, courses and training attended), (3) on technology (whether they use any technology, which one they use, purpose for which they use it, how it helps), and (4) on influencing factors and results (how it helps, main difficulties, degree/level of satisfaction).

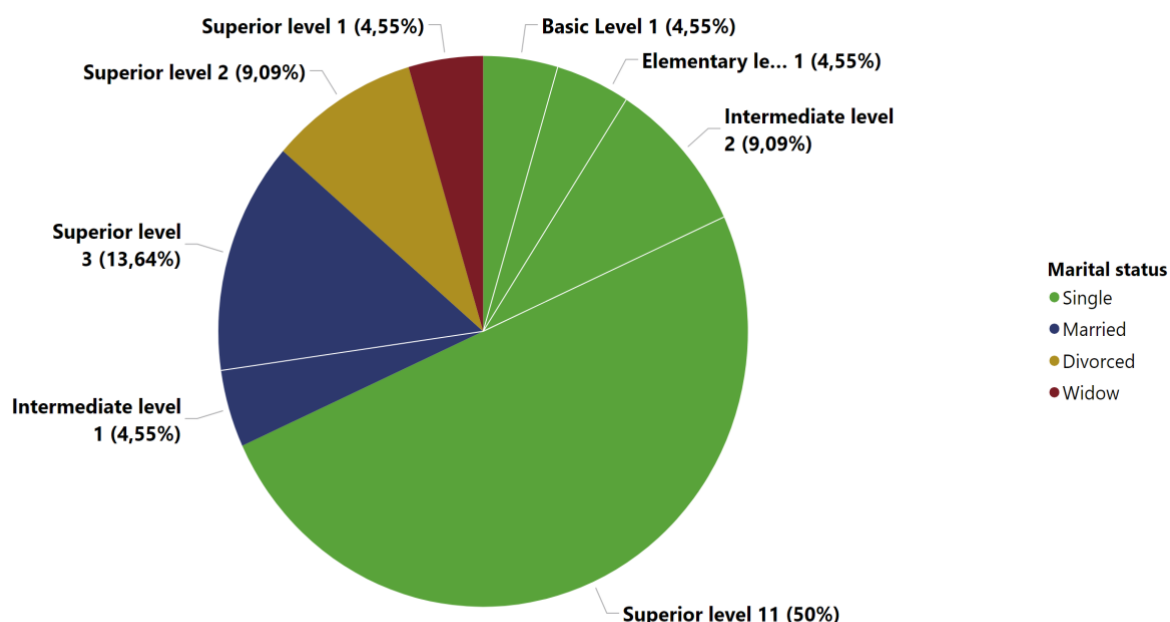
Although this study was not formally submitted to an institutional ethics committee, rigorous protocols for the protection of human participants were established and maintained across all research stages. Before the administration of the questionnaire, the research objectives, terms of data privacy, and the voluntary nature of participation were thoroughly disclosed to all potential respondents. Consequently, 100% of the surveyed participants provided their free, prior, and informed consent to participate in the study. To secure the integrity and strict anonymity of the interviewees, no real names or identifiable personal attributes are disclosed, and data protection was operationalized during the processing phase by assigning an alphanumeric code to each respondent (from R01 to R22).

Regarding the data analysis strategy, this study employs thematic analysis to process the qualitative dataset. The extracted textual responses were systematically coded, categorized, and organized into analytical clusters (such as motivational factors, perceived day-to-day benefits, and operational challenges) to rigorously support the derived conclusions and establish a synthesis integrating the qualitative insights with the descriptive statistics.

From the survey conducted with the 22 respondents, the study results highlight that 68.2% of the women surveyed are single, and 77.3% have higher education, as illustrated in Figure 1 below.

Figure 1

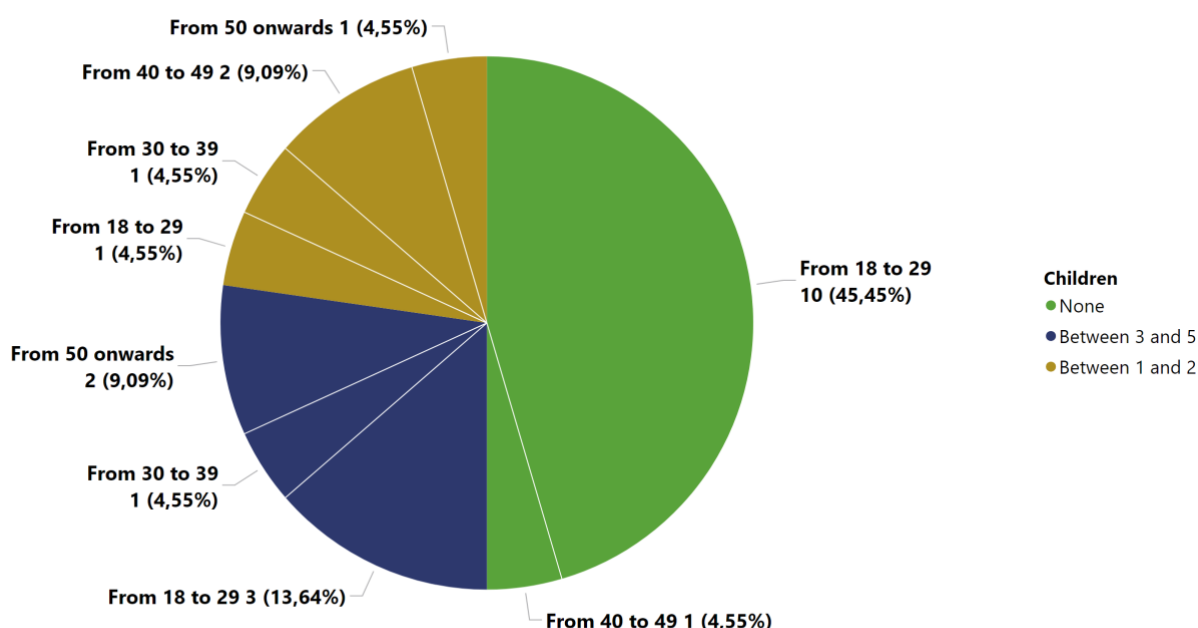
Profile of respondents by marital status and education level.



Source: prepared by the authors

The study's sample revealed that 50% have no children, and 54.6% (the majority) are in the 18-29 age range (Figure 2).

Figure 2
Profile of respondents by number of children and age.



Source: prepared by the authors

4. Results and discussion

After describing the 22 respondents in our study, we proceeded with the analysis using the analytical categories defined in the methodology, in which we also verified the differences and similarities between the cases, seeking possible relationships, following the theoretical basis developed.

4.1 Respondent profile

In this article, we begin with the need to understand how technology influences women's empowerment in the Mozambican social context.

The profile of the respondents, presented in Figure 1, shows that the majority of the participants are predominantly young between 18 and 29 years old (54.6%), single (68.2%), and with higher education (77.3%), what can suggests a strong relationship between educational capital and technological appropriation, corroborating the arguments of Patrício & Osório (2015), according to whom digital skills are fundamental for integration into contemporary society what also reinforces the perspective of Andrade et al. (2020), who indicate that mastery of technological tools tends to be associated with higher levels of education, acting as a catalyst for empowerment.

The analysis of the data obtained from the 22 respondents allows us not only to describe trends but also to establish a more in-depth dialogue with theoretical frameworks on female empowerment and entrepreneurship. The structural realities of the surveyed Mozambican women highlight that digital empowerment does not manifest uniformly. Although 100% of the respondents actively leverage tools such as Facebook, WhatsApp, and mobile financial micro-services (such as M-Pesa and E-Mola) to overcome systemic financial exclusion, they encounter severe structural barriers, and it seems that this dynamic directly mirrors the digital integration typologies described by contemporary scholars, emphasizing that individuals in developing economies frequently

operate as connected but with strict limitation due to uneven network infrastructure, poor internet quality, and volatile connectivity costs.

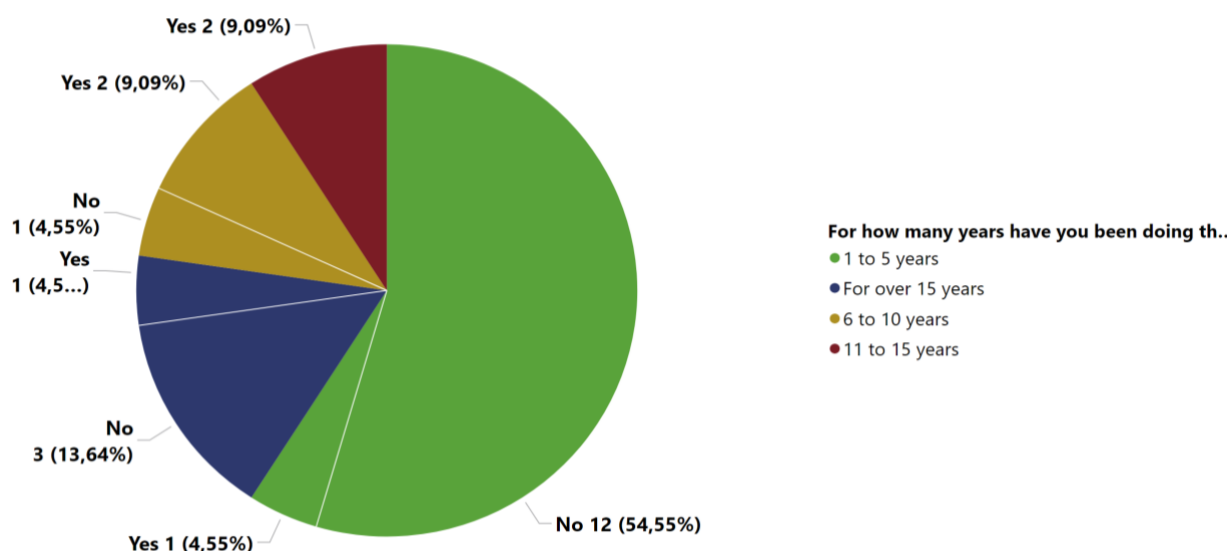
In comparison with international literature focusing on female entrepreneurship and ICT usage in the Global South, the empirical findings from the Maputo and Matola urban axis demonstrate both strong convergences and unique local nuances. Similar to empirical evidence from other developing nations, where mobile banking and social media act as critical catalysts for women's micro-business survival, the psychological dimensions of empowerment, namely the search for self-confidence (31.8%) and the proactive desire for change (36.4%), are strongly tied to economic survival. However, a distinct divergence observed in our urban case study context is the high concentration of single, highly educated young women leading these digital micro-enterprises. This can suggest that in Mozambique, higher educational capital strongly accelerates technological appropriation and shifts the entrepreneurial drive toward a more structured pursuit of autonomy, whereas studies in analogous sub-Saharan contexts often capture a broader demographic of informal, low-literacy market traders.

4.2 Characterization of the activity

When comparing the activities carried out by the respondents, in the search for supporting elements of the analysis performed, which proved to be relevant, the research presents Figure 3 below. All the women surveyed (100%) own a business, with the majority (59.1%) having been in business for between 1 and 5 years, suggesting a scenario of emerging entrepreneurship and, in many cases, out of necessity, which aligns with Dornelas (2005) and African studies that point to self-employment as a strategy for survival and social mobility. However, the high proportion of women without prior professional experience (72.7%) raises questions about the sustainability of these businesses, especially in a competitive environment with identified market limitations.

Figure 3

Result of characterizing entrepreneurial activity by year and prior experience.

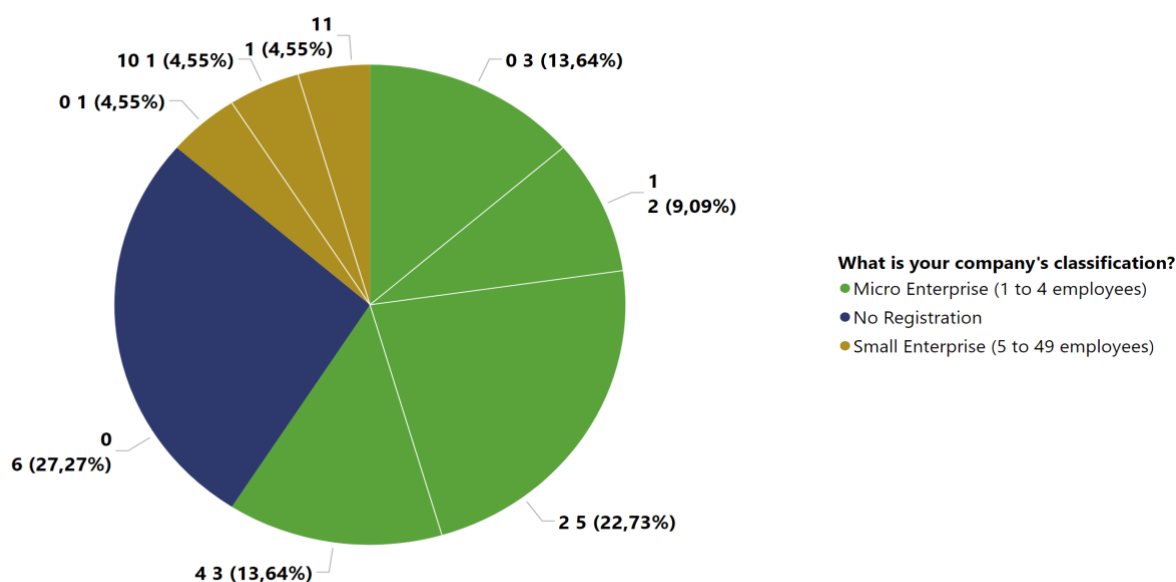


Source: prepared by the authors

The study also found that 59.1% of respondents own a micro-enterprise and 13.6% own a small enterprise, compared to a minority (27.3%) that conducts its business without formal registration.

Figure 4

Results of characterizing entrepreneurial activity: company registration and total number of employees.



Source: prepared by the authors

All respondents confirmed that they use technological means and platforms to develop their activities, highlighting Facebook, WhatsApp, Internet Banking, and mobile financial services (M-Pesa, E-Mola, and Mobile Account), for buying, promoting (the company, business, and product/service), and carrying out financial transactions.

This also reveals a significant structural tension: although all respondents use the digital technologies mentioned above, significant limitations persist in access, internet quality, and the digital literacy of potential and actual clients. This coexistence between active use and structural limitations partially confirms the typology of Alves (2017), who refers to users connected but with restrictions. Thus, the findings not only confirm the literature but expand upon it by showing that digital empowerment can occur even in contexts of imperfect access, albeit unequally and conditionally.

4.3 Empowerment, its benefits and challenges.

Women's empowerment brings great benefits and some challenges, as demonstrated below. Regarding which factors influence your business, 36.4% of respondents expressed a desire for change, while another 31.8% highlighted the search for self-confidence as the second-biggest influencing factor. Based on this analysis related to motivational factors, the subjective dimension of empowerment is reinforced, as discussed by Baquero (2012), who understands empowerment as a process of individual and social transformation, and from there, the results confirm that empowerment is not only economic, but also psychological and symbolic.

Regarding the question, *depending on your income, how does the business help you in your day-to-day life?* 36.4% responded that family support is the main benefit, followed by support for studies (18.2%) and payment of personal bills (18.2%).

Table 1*Summary of the main challenges faced in the use of communication technologies.*

Code	Answers
R01	Low participation from people
R02	Low participation from people
R03	Low participation from people; Not everyone knows how to use communication technologies correctly; Difficulty on the part of the public in giving credibility to/accepting communication technologies
R04	Low participation from people
R05	Payments via Internet Banking
R06	Competition
R07	Difficulty adapting on the part of certain members
R08	Finding essential tools for the business and adapting to technological changes.
R09	Easy communication
R10	Others
R11	Internet qualities
R12	Information sharing
R13	Sometimes the internet doesn't help
R14	Not having good-quality internet
R15	Access to technological products
R16	There is sometimes no internet access
R17	Poor communication
R18	No challenges for now
R19	No challenges for now
R20	No challenges for now
R21	I sometimes lack clients because my advertising has a low reach
R22	Competition

Source: prepared by the authors

A refined examination of the empirical data in Table 1 also reveals a critical paradox in how technologies are perceived. While digital media are structurally categorized under operational challenges due to overarching issues like low public reach or platform mistrust, specific participant accounts reveal hidden dualities. For instance, the feedback from respondent R09 (Easy communication) and respondent R12 (Information sharing), initially captured alongside general operational hurdles, fundamentally represents distinct operational benefits. This highlights that even within a highly restrictive digital ecosystem plagued by low public adoption and technical deficits, ICT platforms inherently yield underlying mechanisms of connectivity that women actively exploit to stabilize their micro-businesses.

With some reservations, but in line with the majority, the desire for change and self-confidence influence most respondents regarding the influences they have received in developing their entrepreneurial activity. However, the data also introduce elements that challenge the optimistic view of ICT's role, highlighting problems such as low public adoption, lack of trust in digital platforms, poor internet quality, and difficulties accessing technological tools. These findings reveal that technology, while potentially liberating, does not automatically eliminate structural barriers. These findings resonate with Casimiro (2014), who shows that many women continue to operate under precarious conditions, adapting technologies to domestic and informal contexts. Regarding the challenges and perspectives focused on the activity, it is worth highlighting the excessively high level of competition for the niche of the business developed; the low customer acceptance of the products offered; access to communication and service platforms, products and technologies; the

increased reach of the company and its products; the lack of a good quality internet connection, which hinders communication with customers; and the existence of essential tools for technological adoption and change.

5. Final considerations

The research presented here found that there is a long way to go in empowering women in Mozambique, particularly in urban contexts. The index of various entrepreneurial initiatives developed by women residing in the cities of Maputo and Matola demonstrated that women seek involvement in business activities as a means of supporting themselves and others who live and work around them.

The high level of education, coupled with the length of time women in Maputo and Matola have been involved in their entrepreneurial activities, constitutes a significant element for governmental and non-governmental institutions to strategically seek and plan the inclusion and development of activities for women's empowerment, focusing on continuous training aimed at enabling as many women as possible, with an emphasis on entrepreneurship and self-employment. Among the various possible activities, as demonstrated by this study, are financial literacy lectures in schools and public institutions, encouragement of associations aimed at women's empowerment, coaching activities, business incubation, and short- and medium-term training in areas aimed at combating the exclusion of women. Another relevant element, which can positively influence the growth process aimed at women's empowerment, according to the proposed object and objective under analysis, is the perceived need to expand and massify access to the Internet, existing mobile wallets in Mozambique (Mpesa, E-mola and Mkesh) and digital payment platforms used by commercial banks, as part of the technological inclusion initiative whose responsibility should be associated with the companies providing these services (Vodacom, Movitel and Tmcel), as well as the entity responsible for regulating financial activities, the Bank of Mozambique.

Regarding future challenges, access to information and communication technologies, with an emphasis on social media platforms, would greatly facilitate the articulation, engagement, and relationship with new and existing clients, whether for payment or sale of products and services. This would help develop women's entrepreneurial capacity and, consequently, increase their economic and social roles, making them visible and helping exclude them from the difficulties existing in Mozambique. Therefore, the findings should be interpreted as indicative and exploratory, which may be useful for understanding trends and raising hypotheses, but are insufficient for generalisations due to the small sample size. However, the study contributes by highlighting that women's empowerment mediated by ICTs is a complex process, marked by significant advances as well as persistent inequalities and structural contradictions.

Another relevant aspect concerns the apparent contradiction between the intensive use of social media for business and the persistence of low visibility and reach, as noted by some respondents. This paradox highlights that simply accessing the platforms does not guarantee business success, and that it is necessary to consider strategic skills such as digital marketing and market segmentation – dimensions not evidenced or poorly explored by the participants.

The immediate consequence would be improved living conditions for women with their own businesses, as well as for all those who surround them and depend on them. In parallel, the dissemination of initiatives from governmental and non-governmental institutions constitutes a highly important element for the materialization of the women's empowerment process with the support of information and communication technologies.

This study contributes to the existing state of the art by providing an empirical, mixed-methods diagnostic of how digital and mobile banking technologies intersect with female micro-

entrepreneurship specifically within the distinct socioeconomic landscape of urban Mozambique – a geographic area frequently underrepresented in broader sub-Saharan ICT literature. Nevertheless, given that the study relies on a purposive sample of 22 urban entrepreneurs affiliated with a single organization (MUVA), these findings must be interpreted strictly as indicative and exploratory. The insights reflect a specific, digitally integrated demographic and cannot be generalized to the broader population of Mozambican women, particularly those in rural regions where digital literacy gaps and financial exclusion metrics remain substantially more severe.

Finally, limiting the study to a small sample, selected from a single organization (MUVA) and restricted to the urban context (cities of Maputo and Matola), implies that the results reflect a specific reality (young women, relatively educated and with some level of digital inclusion) and are not representative of the majority of Mozambican women, especially those residing in rural areas, where, according to data from the Bank of Mozambique, published in 2024, levels of financial and digital exclusion are significantly higher. And, according to Castells (2003), without a consistent and evolving internet network, from the perspective of expanding and acquiring new members, we risk becoming isolated from the main daily events and life in general. Activities aimed at empowering women are inevitably based on it.

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