The Impact of Digitization in Entrepreneurship and Its Role on Supporting Women’s Economic Empowerment According to Egypt’s Vision 2030

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Abstract

According to the World Bank report 2020, engagement from all societal groups especially women, who constitute one of the groups with the greatest influence on the Egyptian economy—is necessary for the sustainability of economic progress. The world has shrunk and doing business has gotten simpler in the age of technology. Many women started their own businesses to improve their financial situations. Given that technology is a critical tool that plays a critical role in the development of women's skills and offers a wealth of chances for their economic empowerment, it has become crucial to combine entrepreneurship with technology in order to avoid numerous hurdles and obstacles that female entrepreneurs may encounter. From this vantage point, the research aims to present an all-encompassing perspective on women's entrepreneurship, to identify the role of technology in addressing the barriers to women's entrepreneurship, and to clarify the impact of relying on technology in supporting women's economic empowerment, gender equality, and economic growth in order to achieve Egypt's Vision 2030.
Introduction

"ICTs are becoming crucial drivers of socioeconomic progress. The Millennium Development Goals will be closer to being achieved owing to the technologies of today and tomorrow, Ban Ki-Moon", (UNCTAD,2014)

One of the most significant and long-lasting social and economic changes in recent decades is the increase in female labour force participation, which has not decreased throughout economic crises. However, after the turn of the 2000, development has halted and women's work status has remained as precarious as ever.
The highest rates of economic involvement are held by women who have greater education, less family responsibility, and resources to pay for caregiving. The segmentation of the job market itself and a lack of care services both contribute to the stratification of the female labour. (2013) Bárcena et al

Information and communication technology (ICT) has changed every area of our lives, including our professional lives. The digital sector has expanded considerably more quickly than the rest of the economy, yet the rapid advancement of digital technologies has made equitable growth difficult. For instance, it has been noted that women are underrepresented in economically important fields like ICTs (Pappas et al., 2017). The paper aims to understand how female managers and business owners use digital technologies in both their professional and personal life, as well as what they believe about digitalization. Our inquiry for research are (Rajahonka & Kaija,2019):

1)How do women's careers change as a result of their digital skills?
2) What kind of digital technology use do women make?, and 3) What challenges or opportunities do women face?
3)relating to digitization in terms of promoting professional growth and achieving work-life balance?

The relationship between digitalization and the careers and well-being of female managers and entrepreneurs is the main topic of this paper.

Without working to equalise the distribution of resources, opportunities, and choices for men and women so that they have the same ability to influence their lives and contribute to their families, communities, and nations (World Bank Group 2017a), no society can prosper sustainably. Countries face the danger of losing their competitive edge and stifling economic progress if they do not appreciate gender equality and do not properly integrate half of their human resources. According to research, gender disparities in employment of women reduce per capita income by 15% or more at the national level and have a negative influence on resource allocation and overall
productivity (Cuberes and Teignier 2016). Women's participation in economic activities and contributions to household income can have a positive impact on how they perceive themselves, their responsibilities in the family, and their roles in their communities on an individual level (The World Bank, 2021).

**Women’s Empowerment And Entrepreneurship**

A key strategy for increasing women's economic involvement is through entrepreneurship. It provides prospects for self-employment but can also aid in addressing another global issue that needs coordinated solutions: the creation of jobs across the whole economy. Supporting women's entrepreneurship, however, is a challenging endeavour because of interconnected inequalities and numerous barriers that women face (The World Bank, 2018). Entrepreneurship refers to a person's ability and willingness to start and run a profitable firm. It entails taking chances, comprehending opportunities as well as problems, creating something new, and coming up with creative ways to combine resources with the aim of achieving monetary and occasionally societal rewards.

Women make up the majority of aspiring entrepreneurs in the developing nations. A third of small and medium-sized businesses worldwide are run by women.

- Women's entrepreneurship produces financial stability for the businesswomen and their families, thereby maximizing the population's demographic potential in every nation.

Entrepreneurship can help women become more proactive in solving social issues, foster social development, and can provide them a platform to speak out against prejudice (Hussain, 2016).

- **What is entrepreneurship?**

Entrepreneurship refers to a person's ability and willingness to start and run a profitable firm. Entrepreneurship is about taking chances, seeing opportunities and difficulties in a broader context, creating something new or rediscovering an old idea, and coming up with innovative ways to combine resources with the ultimate goal of generating financial and, occasionally, societal rewards. Evidence suggests that entrepreneurship can help people develop personally and socially, empower those who are marginalised, and provide stability and prosperity to any nation or region. 2016 (Hussain)

A simplified definition of entrepreneurship describes it as "the resource, process, and state of being through which individuals utilise favourable market opportunities by founding and expanding new business firms." A more palatable and human-centered, on the other hand, is described as "involving innovation, development, recognition,
seizing opportunities and converting opportunities into marketable ideas while bearing the risk of competition” (Mkhavele & Thembie, 2018).
Entrepreneurs are new companies or partnerships that form in the face of danger and uncertainty with the goal of making a profit and expanding. Innovation, opportunity recognition, process, growth in a firm, and use of strategic management practices in the business are the characteristics that set entrepreneurs apart most significantly. "While scientific invention entails the development of a new product or concept almost for its own sake or to serve a purpose other than commerce, innovation involves finding new and better ways of doing things that are commercialised" (Mbhele, 2011).

- **Who is an entrepreneur?**
A businessperson is a change agent. She is a person who develops new concepts or possibilities in order to produce value on any level—economic, social, or political—and who establishes new organisations in order to do so. Taking initiative, producing value, spotting and seizing fresh chances, coming up with solutions despite resource limitations, and taking risks are some of an entrepreneur's defining traits (Hussain, 2016)

However, (Mkhavele & Thembie, 2018) defined an entrepreneur as a person who sees opportunities and then decides how to gather the resources needed to produce new and improved services and goods. They also stated that an entrepreneur "perceives a vision, commits himself to that vision, and almost single-handedly carries the vision to its successful implementation." This definition covers more than just someone who sees a need and fills it. Being entrepreneurial involves having ties to the industry.

- **Gender And Entrepreneurship**
Both the stereotype of the entrepreneur as a man and the idea of the entrepreneur as someone who works alone are poor representations of contemporary entrepreneurial practise.1 The amount of early-stage entrepreneurial activity by gender for each economy in 2020 is shown in Figure 4.1.

The ability of one group in society to start businesses on an equal footing with other groups will limit job creation, innovation, income generation, the accessibility of new goods and services, and all other positive effects that new businesses have on the economy and society (Bosma, 2021).
Women’s Entrepreneurship

In addition to being a worthwhile objective in and of itself, gender equality is crucial for both increasing economic growth and minimising inequality. According to research, 812 million of the 865 million women who could make a more significant contribution to the global economy in 2020 will reside in developing nations. Gains can be made everywhere because the underutilization of women's economic potential affects nations at diverse levels of development. Additionally, women have a tendency to devote a larger amount of their income to supporting the family, increasing spending on health and education and having a positive ripple effect that extends beyond direct economic benefits. 2018 (The World Bank)

How can female entrepreneurs support growth and women's empowerment?

One of the main factors contributing to the reduction of poverty and the promotion of economic growth is the promotion of women's economic empowerment.

Entrepreneurship is also acknowledged as a crucial engine of economic growth and development given the global challenge of employment. Therefore, it is crucial to enable women, who make up half of the world's population and participate positively in its economic activities, to think of entrepreneurship as a realistic career option (Cardella et al, 2020).

The number of economically independent women entrepreneurs is increasing on a global scale. To ensure that women's businesses expand sustainably, efforts must be
made to identify and address the problems that are unique to each region experienced by these businesswomen. Any entrepreneurial activity is acknowledged by experts as a multiphase endeavour. Entrepreneurship empowers women to rise to the occasion and take the lead in active decision-making. In addition to the initial aid to establish a firm, entrepreneurs' continual access to a support system is crucial. Sometimes, women's motivations for starting their own businesses differ from those of their male counterparts (Ogundana et al., 2021).

According to the Organisation for Economic Co-operation and Development (OECD) report on women's entrepreneurship, more women than men start their businesses for non-financial reasons, such as job satisfaction, the chance to make a difference in their community, or the desire to find a good work-life balance. This final motivation is especially important for women because self-employment allows for more flexibility in balancing work and family obligations (Ogundana et al., 2021).

While the empowerment of women through entrepreneurship benefits society as a whole and benefits women themselves, more needs to be done to help women entrepreneurs access opportunities like export, international markets, and higher growth sectors through financing, capacity development, networks, entrepreneurial education, and ICTs. The key issues with women's entrepreneurship are highlighted in the next section, along with some potential remedies.

- **Women entrepreneurs in Egypt**

In Egypt, the majority of women entrepreneurs are driven more by the need for income than by the chance to launch their own firm, according to the ILO report, 2016 The Assessment's Women Entrepreneur Survey (WES). The proportion of women entrepreneurs in Egypt has recently been the lowest in the Middle East and North Africa (MENA) and Sub-Saharan Africa countries. In 2012, there were 2% of women engaged in early-stage entrepreneurial activity in Egypt, compared to 4% in the MENA area and 27% in Sub-Saharan Africa.

In addition, the distribution of people in Egypt who are entrepreneurially engaged reveals that women are less entrepreneurially active than males across the various stages of the entrepreneurship process. Women business owners (including self-employed individuals) made up 613,100 in 2014, or about 9% of all self-employed and business owners in Egypt. Male business owners made up 6 million, with women owners primarily concentrated in rural areas (82%) and urban areas (18%). This was significantly different from the distribution of male business owners, which was 62% in rural and 38% in urban areas.

With an average of 1.85 employees against 2.12 employees, female-owned Micro and Small Enterprises (MSEs) are smaller than male-owned MSEs. In 2011, 38% of
MSEs owned by men had more than one employee, compared to close to 50% of MSEs owned by women. In contrast to the 94.2 percent of MSEs owned by men, 98.4 percent of MSEs owned by women had fewer than five employees. The percentage of women entrepreneurs with just one employee decreased from 58.4% in 2003 to 47.7% in 2011, but the percentage of women entrepreneurs with three or more employees doubled from 9.1% to 19.0% during the same time period, which is an interesting indication of a modest improvement in the size of women-owned MSEs. While the mean number of employees in male-owned MSEs decreased over the same period, the mean size of women-owned MSEs climbed significantly.

Men who are employed make up 33% of the self-employed population, compared to women who are employed at 12.2% of the time. In contrast to the 25% of self-employed males who employ staff, only 6.8% of self-employed women do so. The informal economy is where most of female entrepreneurs are located. Many of these women work from home on little tasks related to agriculture.

Male and female-owned businesses coexist in Egypt's commercial landscape, but they encounter different obstacles. Since they may be more frequently hampered by a lack of the essential human and financial capital, women may encounter greater difficulties than men in founding, maintaining, and expanding enterprises. Additionally, because of social standards that oblige women to take care of the home and family, they are less advantaged than men.

In some regions of the country, cultural norms downplay the economic contributions of women. Lack of a government strategy for WED, access to the labour market (which disadvantages them in terms of their ability to gain knowledge, experience, and networks), and access to financial services that can meet their needs at various stages of the business cycle (from start-up to growth) are some of the other major obstacles that women entrepreneurs must overcome. A concentration of women entrepreneurs in certain industries, such as agriculture, BDS, markets and technology, business-related information, networks of women entrepreneurs, informality, social duties, and movement restrictions. "ILO, 2016".
ICTs's technologies tools for achieving gender equality

Use of information and communication technology (ICT) can be very helpful in enabling women in general and female entrepreneurs in particular to reach their full potential. ICTs also seem to hold great promise for rural women who lack access to business-related information, services, and opportunities that are considerably more readily available to metropolitan residents. In this context, creative ICT use can assist to accelerating economic growth by including women in productive activities and, more crucially, by promoting the economic empowerment of women in the nation. For instance, ICTs are making it possible for individuals to obtain information about services and chances for development in many developing nations, which helps to improve people's quality of life. Experiences in Africa, Asia, and other countries demonstrate that ICTs, in particular mobile phones, help women and low-income people (Lesotho) save time and make money. Mobile money also makes it easier for women entrepreneurs to conduct their company.

Information Communication Technology

The internet and the devices that allow people to access it are crucial components of peoples' lives in a society that is driven by technology and is undergoing rapid change. Technological advancements have fundamentally changed how people live their lives, causing wide-ranging social and economic change. The nation's economy is reaping enormous rewards from its participation in the digital revolution. Despite improvements in digital literacy across the country, women continue to have a variety of challenges using technology and the internet.

The main determinants of how technology innovation might assist women achieve greater heights are their social class and degree of literacy. The fact that rural women use technology and the internet less than urban women cannot be disputed, nevertheless (Dhanamalar,2020)

Why ICTs for women’s entrepreneurship?

ICT provides crucial tools for operating a firm and maintaining competitiveness. Saving time, overcoming distance, giving access to new information and markets, connection with people remotely, and lowering transaction costs are only a few advantages of adopting ICTs for business. ICT can assist women business owners in overcoming a number of obstacles, such as time constraints (caused by women's multiple roles and responsibilities), social stigma, low physical mobility, and
restricted access to finance, education, skills training, information, and both current and potential markets (Hussain, 2016).

**Icts To Overcome Barriers And Constraints In Women’s Entrepreneurship**

The primary obstacles and enablers that women entrepreneurs encounter, particularly in the Asia-Pacific area, are highlighted in this section. It addresses issues with entrepreneurship related to sociocultural context, the governmental and regulatory environment, financing accessibility, and capacity building as follows:

1. **Adverse socio-cultural elements**

Social and cultural standards that affect women's access to support and recognition as business owners. Women's entrepreneurial skills and potential are continually underappreciated in comparison to men's, particularly in countries like Indonesia and Malaysia. Male clients and business partners that favour dealing with men discriminate against female entrepreneurs.

In Malaysia, for instance, starting a business may be socially acceptable, but women experience prejudice when dealing with male clients and suppliers, and male family members sometimes take over women's businesses as they expand. As their businesses succeed and garner more attention, negative attitudes of female business executives are likely to worsen (SPF, 2017).

2. **Country-and region-specific challenges**

For women's entrepreneurship, each region has its own advantages as well as difficulties. The kinds of entrepreneurship and the associated requirement for government help would differ depending on the socioeconomic structure and issues faced in that nation (Hussain, 2016).

3. **Access financing**

The difficulties that women encounter in obtaining financing are as follows (UNECE, 2004):
- Women may have lower personal resources available for start-up
- Women require more outside funding, but finding that funding can be challenging.
- Women are unaware of the possibilities and the expenses associated with obtaining this information.
- (measured in money, time, and energy) could be significant because of obligations to one's family.
- Banks may have incorrect perceptions of women's borrowing and entrepreneurial behaviour; they frequently rely on personal profiles and track records in reviewing loan applications.
- Women may be required to pay a higher interest rate or provide higher guarantees. Women may experience explicit or implicit (structural) gender discrimination.

**Egyptian Female Entrepreneurship as Driving Factors In The Digital Era**

Since technology is seen as the future of our planet, economies that invest in it succeed. Even though the transition to digitalization has been underway for years, Egypt has been among the nations seeking to improve its technology infrastructure. Egypt was compelled to reach a new level of awareness of the necessity of technology, particularly information and communication technology, as a result of the most recent pandemic, COVID-19, and the countries falling into lockdown. The COVID-19 epidemic had done more to advance ICTs than the nation could have, and it was now Egypt's official entry into the digital age (SALMAn, 2020).

Networking is a crucial part of beginning a new business. It is not only believed to have a substantial impact on women's tendency to become entrepreneurs, but also to present a significant opportunity for women to seize as their foundation for a robustly developed firm.

Women who are considering starting a business are more likely to find a mentorship opportunity through networking events and networking clubs. With the aid of which, companies are able to discover their market entrance chances and the marketing plans that best fit their overall business strategy and the state of the market, as well as receive reliable recommendations about their business strategies and how to enhance them. (El-Fiky, 2021)

ICTs have developed into one of the most significant and widespread technology areas that is expanding globally with new advancements every single day. As ICTs become more widely used and more people get familiar with them, a more stable work environment and a more sustainable digital era are produced. This helps to provide a large number of new jobs as well as business, economic, and entrepreneurial prospects for the entire community. This will open up new prospects for female entrepreneurs and increase employment opportunities, particularly for those with any level of technology knowledge, which has emerged as one of the most crucial skills in the modern world (Salman, 2020).
Scientific research on the subject separates out the factors that influence female entrepreneurship in Egypt. Education, economic opportunity, technology, saving, and financial inclusion are all indicators. The research model is shown in Figure 1 below.

Figure 1. Research model

![Research Model Diagram](image)

Figure 2. Employers, female during 2005 till 2019

![Employers Chart](image)

Source: [https://www.worldbank.org/](https://www.worldbank.org/)

Figure 5. ICT goods imports during 2005 till 2019

![ICT Goods Imports Chart](image)

Source: [https://www.worldbank.org/](https://www.worldbank.org/)
Digitization in Entrepreneurship and Its Role on Supporting Women’s Economic Empowerment

To improve the situation of women entrepreneurs in the contemporary economy powered by new technologies, it is essential to acknowledge the 'gender-divide' that currently exists in access to ICTs and find solutions to these impediments. On the other hand, it has been said that "women entrepreneurs risk becoming marginalised without equal access to ICT" (UNCTAD, 2014).

Making sure that women can benefit from ICTs and, in particular, that women entrepreneurs are well-equipped and capable of using ICTs in productive ways, is essential to attaining gender equality and women's empowerment. However, a number of factors related to infrastructure development, institutional, legal, and sociocultural gender norms have been disproportionately impeding the potential of women entrepreneurs to start and grow their business enterprises and compete well in the market in the context of the "rapidly changing ICT landscape."

Women entrepreneurs in the digital economy use ICTs

There has never been a better chance to involve more women in both developed and emerging economies because to the phenomenal rise of ICT in every sphere of society. New technologies make it more affordable and simple to communicate over geographic distances, enabling more flexible employment arrangements for people who live far from major cities. New technologies provide significant flexibility in terms of the times and locations where work is carried out, especially for women who live in regional and rural regions and whose work patterns are usually marked by pluriactivity (Ross and McCartney, 2005).

ICT is a key enabler for business and ebusiness for female entrepreneurs. Since 1995, the number of small enterprises operating in Australia has increased by 6.5%, and more women than ever are running these firms (Australian Bureau of Statistics, 2004). Despite these possibilities, Australia's SMEs still struggle to understand ICT and ebusiness, and women are currently underrepresented in the e-business market (Braun, 2005). Women-led firms lead in the usage of computers, but trail in the uptake of eBusiness, according to studies on the impact of gender on the adoption and use of the Internet among male and female entrepreneurs (Braun, 2008).

Benefits of economic empowerment (Diandra, 2020):
The realisation of women's rights and gender equality depends on women's economic empowerment. The ability of women to participate equally in the markets that already exist, their control over and access to productive resources, their ability to find decent employment, their ability to manage their own time, lives, and bodies, and their increased voice, agency, and meaningful participation in economic decision-making at all levels, from the family to international institutions, are all examples of how women can become more economically empowered.

The 2030 Agenda for Sustainable Development and the Sustainable Development Goals, including Goal 5 on achieving gender equality and Goal 8 on promoting full and productive employment and decent work for all, as well as Goal 1 on ending poverty, Goal 2 on ensuring food security, Goal 3 on ensuring health, and Goal 10 on reducing inequalities, depend on empowering women in the economy and closing gender gaps in the workplace.

Economies expand when more women work. In addition to other beneficial development results, the economic empowerment of women raises productivity, enhances economic diversification, and increases income equality. For instance, raising female employment rates in OECD nations to the level of Sweden might increase GDP by nearly USD 6 trillion, however it should be noted that growth does not always equate to a decline in gender-based inequality. On the other hand, it is estimated that gender disparities cost the economy about 15% of GDP.

Raising the level of education attained by women and girls promotes inclusive economic growth and the economic empowerment of women. For women's and girls' health and wellbeing, as well as their income-generating opportunities and participation in the formal labour market, education, upskilling, and re-skilling throughout life are essential. This is especially true in light of the rapid technological and digital transformations affecting jobs. About 50% of the economic growth in OECD nations over the past 50 years can be attributed to higher educational attainment. But for the vast majority of women, huge advancements in education have not led to better outcomes on the job market.

Economic equality for women benefits companies. It has been demonstrated that giving women more job and leadership chances increases organisational effectiveness and growth, which benefits businesses tremendously. According to estimates, organizations with three or more women in top management roles perform better across the board. (Diandra, 2020)

Conclusion:
Women's Economic Empowerment through Entrepreneurship is a key strategy for increasing women's economic involvement since it presents chances for self-
employment and job creation while generating significant benefits for the world economy. ICT literacy and other technical device proficiency help women become economically stable as well as technologically literate. Their economies are strengthened and more stable thanks to digitalization, which also helps them develop as technically astute people. Women can be empowered through encouraging digitization. The advent of digital payment methods enables women to make effective payments without falling victim to fraud of any kind. Women who are digitally literate are more likely to be computer-savvy and independent in their careers.
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أثر التحول الرقمي على ريادة الأعمال و دور ذلك في دعم التمكين الاقتصادي للمرأة وفقا لرؤية مصر 2030

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الملخص

تتحقق استدامة النمو الاقتصادي بمشاركة جميع فئات المجتمع لاسيما المرأة والتي تمثل أحد أهم الفئات التي تؤثر بالإفصاح المصري وذلك وفقا لتقرير البنك الدولي 2020. ففي ظل عصر الرقمة أصبح العالم أصغر وأصبحت التعاملات التجارية أكثر سهولة، ومع توجه العديد من السيدات إلى ريادة الأعمال لتحسين ظروفهن الاقتصادية اصبح من الضروري ربط ريادة الأعمال بالتقنية لتفادي العديد من التحديات والعقبات التي قد تواجه رائدات الأعمال بحيث تعد البنية التكنولوجيا إداة هامة تلعب دورا محوريا في تنمية مهارات المرأة وتوفير فرصا عديدة لتمكينها اقتصاديا. فمن هذا المنطلق استهدف هذا البحث طرح نظرة شاملة حول ريادة الأعمال للمرأة،どれ فرضة على دور التكنولوجيا في التصدي للعقبات التي تواجه ريادة الأعمال للمرأة، بالإضافة إلى ذلك توضح اثر الاعتماد على التكنولوجيا في دعم التمكين الاقتصادي للمرأة والمساواة بين الجنسين ودعم النمو الاقتصادي بما يحقق رؤية مصر 2030.