

ERF

Policy Research Report

Gender Equality and Inclusion in MENA: Bridging Gender Gaps in Energy and MSMEs

(Egypt, Jordan, Lebanon, Morocco, Sudan, Tunisia)

Sara Ragab and Esraa Medhat

Table of Contents

Table of Contents	2
List of Figures and Tables	4
Summary	6
1. Introduction	9
2. MENA region overview	10
2.1. Unveiling the gender landscape in the MENA region	12
2.2. Navigating the paradox	12
2.3. Unlocking potential	13
2.4. Empowering women	16
2.4.1. Fostering entrepreneurship	16
2.4.2. Overcoming obstacles	19
2.5. Reflections from other countries	25
3. Uncovering the role of gender in MMEs and clean energy transition	28
3.1 Egypt	28
3.1.1. Labor market outlook	28
3.1.2. Renewable energy outlook	29
3.1.3. Nurturing education for a sustainable future	30
3.1.4. The era of digitalization	30
3.1.5. Exploring MSMEs landscape	31
3.1.6. Challenges hindering MSMEs in Egypt	32
3.1.7. The influence of social norms on MSMEs	32
3.1.8. Navigating the challenges of informality	33
3.1.9. Examining the legal and regulatory landscape for MSMEs	36
3.1.10. Enhancing access to credit for MSMEs: challenges and opportunities	37
3.1.11. Conclusion	37
3.2. Jordan	38
3.2.1. Labor market outlook	38
3.2.2. Renewable energy outlook	39
3.2.3. Nurturing education for a sustainable future	40
3.2.4. The era of digitalization	42
3.2.5. Refugees	43
3.2.6. Exploring MSMEs landscape	43
3.2.7. Challenges hindering MSMEs in Jordan	45
3.2.8. Conclusion	51

Table of Contents

3.3. Lebanon	51
3.3.1. Labor market outlook	51
3.3.2. Renewable energy outlook	52
3.3.3. Nurturing education for a sustainable future	53
3.3.4. The era of digitalization	55
3.3.5. Exploring MSMEs landscape	56
3.3.6. Challenges hindering MSMEs in Lebanon	56
3.3.7. Conclusion	59
3.4. Morocco	60
3.4.1. Labor market outlook	61
3.4.2. Renewable energy outlook	62
3.4.3. Nurturing education for a sustainable future	63
3.4.4. The era of digitalization	64
3.4.5. Exploring MSMEs landscape	64
3.4.6. Challenges hindering MSMEs in Morocco	65
3.4.7. Conclusion	70
3.5. Sudan	70
3.5.1. Labor market outlook	71
3.5.2. Renewable energy outlook	74
3.5.3. Nurturing education for a sustainable future	75
3.5.4. The era of digitalization	77
3.5.5. Refugees	77
3.5.6. Exploring MSMEs landscape	78
3.5.7. Challenges hindering MSMEs in Sudan	82
3.5.8. Conclusion	88
3.6. Tunisia	89
3.6.1. Labor market outlook	89
3.6.2. Renewable energy outlook	91
3.6.3. Nurturing education for a sustainable future	91
3.6.4. The era of digitalization	92
3.6.5. Exploring MSMEs landscape	92
3.6.6. Challenges hindering MSMEs in Tunisia	94
3.6.7. Conclusion	98
4. Conclusion	99
4.1. Key messages	99
4.2. Untapped opportunities	102

List of Figures and Tables

Figures

Figure 1. Labor force participation rate, by sex (% of population ages 15+) (modeled ILO estimate)	15
Figure 2. Labor force participation rate by sex in Egypt	31
Figure 3. The increase in number of jobs (average annual) and growth rate (average annual, percentage)	33
Figure 4. The increase in number of jobs (average annual) and growth rate (average annual, percentage) by sex between 2009 and 2021, ICT jobs versus non-ICT jobs, both public and private sectors, ages 15-64	34
Figure 5. Labor force participation rate, by sex (% of population ages 15+) (modeled ILO estimate)	41
Figure 6. Distribution of Jordanian females aged 15 years and above by employment status	42
Figure 7. Proportion of Individuals that used a mobile phone or the internet to pay bills in the past year, by sex (% age 15+)	45
Figure 8. Unemployment rate versus female TEA	46
Figure 9. Distribution of female entrepreneurs by age groups	47
Figure 10. Ratio of female-to-male unemployment in Lebanon in 2012, 2018, and 2022	54
Figure 11. Regional distribution of male and female students in STEM fields (2018 data)	58
Figure 12. Share of Employment in unregistered businesses by gender (%), 2018-2019	60
Figure 13. Employment in the informal sector by governorate and gender (%), 2018-2019	60
Figure 14. Formality of the employed by gender and nationality (%), 2018-2019	60
Figure 15. Gender gap in monthly wage of employees at main job, by age and nationality, 2004, 2007 & 2018-19	62

List of Figures and Tables

Figure 16. Labor force participation rate, by sex (% of population ages 15+) (modeled ILO estimate)	65
Figure 17. Graduates by degree types	67
Figure 18. Technical and vocational education and training still low	68
Figure 19. Population out of the labor force, by gender, age, and locality	74
Figure 20. Labor force participation rate by locality and region	76
Figure 21. Work category by gender and by age cohort	77
Figure 22. Graduates in tertiary education fields of study, by gender	79
Figure 23. Gender representation of entrepreneurs engaged in TEA (as % adult population aged 18-64) by state in Sudan in 2021	80
Figure 24. Labor force participation rate, by sex (% of population ages 15+) (modeled ILO estimate)	94

Tables

Table 1. Distribution of Jordanian females aged 15 years and above by education level and economic activity	44
--	----

Summary

Background

The Middle East and North Africa (MENA) region continues to grapple with entrenched gender disparities, particularly in labor market participation, economic empowerment, and access to energy. Women and youth in MENA face systemic barriers that limit their ability to engage in entrepreneurship, participate in the energy transition, and fully integrate into the micro, small, and medium-sized enterprises (MSMEs) sector. Despite progress in education, where female enrollment in tertiary education often surpasses that of men, women's participation in the workforce remains among the lowest globally. Female business participation in MENA stands at only 19%, significantly below the global average of 34%, with stark variations across the region. Countries such as Tunisia and Bahrain report relatively higher levels of female entrepreneurship, whereas others, such as Yemen and Jordan, exhibit alarmingly low female business ownership rates. While some MENA nations have made policy advancements to promote gender equality, others remain constrained by legal and socio-cultural barriers that hinder women's economic participation.

Energy access and the clean energy transition are critical components of sustainable economic development in MENA, yet they remain highly gendered. Women disproportionately bear the burden of energy poverty, primarily due to their roles in domestic labor, while also being underrepresented in the formal energy sector. Research suggests that renewable energy (RE) could provide new opportunities for women's employment and entrepreneurship, yet the gender gap in STEM education, cultural biases, and limited access to finance prevent women from fully participating in this transition. MSMEs, which account for a substantial portion of economic activity in MENA, play a crucial role in fostering economic growth, job creation, and innovation. However, MSMEs owned by women and youth face unique challenges, including financial exclusion, legal restrictions, and a lack of targeted support mechanisms. Given the interconnections between gender, MSMEs, and energy, this study aims to provide a cross-thematic analysis of gender equality and inclusion in six MENA countries—Egypt, Jordan, Lebanon, Morocco, Sudan, and Tunisia—highlighting both the barriers and opportunities for integrating women and youth into the clean energy and MSME sectors.

Methods

The study employs a comprehensive mixed-methods approach, incorporating both qualitative and quantitative analyses to assess the gender-energy-MSME nexus in MENA. A thorough literature review examines existing research on gender, MSMEs, and energy transition policies across the region, identifying key barriers and knowledge gaps. Country-specific case studies provide a nuanced understanding of gender disparities in entrepreneurship, access to finance, labor market participation, and renewable energy opportunities in Egypt, Jordan, Lebanon, Morocco, Sudan, and Tunisia. Data collection draws from national statistics, international reports, and labor force surveys to assess economic indicators, labor market trends, and gender gaps in MSME ownership and financing. The study also includes an assessment of legal and regulatory frameworks that influence gender inclusion in MSMEs and the energy sector, highlighting policy best practices and areas in need of reform.

Summary

A key methodological component involves stakeholder mapping, identifying the roles and influences of governments, financial institutions, civil society organizations, and international donors in shaping gender-responsive policies. The study further explores the intersection of education, digitalization, and the clean energy transition, particularly examining how access to STEM education and digital tools can enhance women's participation in entrepreneurship and energy-related employment. Comparative analyses between MENA countries and global case studies provide additional insights into successful strategies for gender inclusion in the clean energy economy. By integrating both qualitative narratives and quantitative data, the study presents a holistic perspective on the challenges and opportunities at the intersection of gender, MSMEs, and energy transition in MENA.

Findings and Recommendations

The findings reveal significant gender disparities in economic participation, entrepreneurship, and access to energy resources across the six studied countries. Women in MENA face deeply rooted socio-cultural barriers, legal restrictions, and financial exclusion, limiting their ability to engage in MSMEs and benefit from the energy transition. The informal sector remains a dominant source of employment for women, yet it lacks social protections, financial access, and policy support. Labor force participation rates for women are exceptionally low, and the gender wage gap remains substantial. In some countries, restrictive labor laws prevent women from engaging in certain sectors, reinforcing occupational segregation. Women also face disproportionate unpaid care responsibilities, further limiting their entrepreneurial and employment opportunities.

The study highlights the role of MSMEs in providing economic opportunities for women and youth, but access to finance remains a major constraint. Women-owned MSMEs in MENA struggle to secure investment due to discriminatory financial policies, lack of collateral, and limited financial literacy. The legal and regulatory environment often reinforces these barriers; for instance, inheritance laws restricting women's land ownership reduce their ability to access credit. The COVID-19 pandemic further exacerbated gender disparities, with female-led businesses experiencing higher closure rates due to financial insecurity and increased unpaid care burdens. However, digitalization presents an emerging opportunity for women entrepreneurs, as digital tools can enhance financial inclusion, market access, and business resilience. Countries such as Morocco and Tunisia have made strides in promoting digital literacy and women's entrepreneurship, but the digital gender divide remains a pressing challenge, particularly in rural areas.

In the energy sector, the clean energy transition presents both opportunities and challenges for gender inclusion. While renewable energy jobs are growing, women's participation in the sector remains limited due to gender biases in STEM education and employment. The share of women in MENA's RE sector ranges from 7% to 9%, significantly below the global average of 32%. However, research suggests that integrating a gender lens into energy policies can enhance the effectiveness of clean energy initiatives. Women's leadership in energy entrepreneurship can drive inclusive growth, but targeted policies and financial mechanisms are needed to support female entrepreneurs in the sector. Public-private partnerships, international climate funds, and gender-sensitive energy policies can help bridge these gaps and create inclusive opportunities in the renewable energy industry.

Summary

The report provides several key policy recommendations. Governments must prioritize gender-inclusive policies in economic and energy planning by removing legal barriers, enhancing financial access for women entrepreneurs, and investing in gender-responsive labor market reforms. Financial institutions should develop tailored financial products for women-owned MSMEs, such as low-interest loans and collateral-free credit schemes. Policymakers must also integrate gender considerations into national energy strategies, ensuring that women benefit from renewable energy investments and employment opportunities. Enhancing STEM education and digital skills for women and youth is crucial to expanding their participation in high-growth industries, including renewable energy and digital entrepreneurship. International stakeholders should support gender-inclusive policies through technical assistance, funding for women-led energy enterprises, and cross-border knowledge-sharing initiatives.

The study concludes that gender equality and inclusion are essential for driving sustainable economic growth and advancing the clean energy transition in MENA. While significant barriers persist, targeted policy interventions, financial reforms, and educational advancements can create pathways for women and youth to engage in MSMEs and energy sectors. By addressing systemic gender inequalities, MENA countries can unlock the full potential of their human capital, promote inclusive economic development, and accelerate progress toward a sustainable and equitable energy future.

Conclusion

The study highlights persistent gender disparities in MENA's MSMEs and energy sector, driven by legal, financial, and socio-cultural barriers. Despite progress in education and digitalization, women remain underrepresented in entrepreneurship and renewable energy. The clean energy transition offers a key opportunity for inclusive growth, but achieving this requires gender-responsive policies, improved financial access, and targeted capacity-building. Addressing these barriers will unlock economic potential, enhance resilience, and drive a more sustainable and equitable energy future for the region.

1. Introduction

A significant segment of the existing literature addressing the intersection of gender and energy in low- and middle-income countries (LMICs) has typically portrayed women in two limited roles: as victims of energy poverty or as beneficiaries of energy access. While it is undeniable that women bear a disproportionate burden of energy poverty due to their primary responsibility for household care work, and stand to gain significantly from improved energy access, these representations present challenges as they undermine women's agency and depict them as passive participants in development initiatives. Furthermore, framing clean energy solutions solely as meeting "women's needs" can inadvertently perpetuate gender inequalities and hinder progress towards gender equality and women's economic empowerment by reinforcing traditional gendered divisions of labor and the notion that care work is exclusively women's responsibility.

In recent years, a growing number of stakeholders in this field have advocated for new approaches that position women not as victims or mere beneficiaries, but as vital drivers and catalysts of change in the transition to clean energy. They argue that addressing gender-specific barriers and shifting the prevailing paradigm is crucial, transforming women from passive providers and users of energy to active agents of change who promote sustainable energy technologies and their productive applications. Without such transformative actions, there is no guarantee that women, especially those living in poverty, will truly reap the benefits of new renewable energy sources.¹

The status of women-owned businesses in the MENA region remains the lowest with regards to the average female business participation rate globally, standing at 19 percent compared to a global average of 34 percent.² The proportion of women entrepreneurs and female business participation varies considerably among the different countries of the region. For instance, the percentage is as high as 49 percent in Tunisia and as low as 7 percent in Yemen and it ranges from 43 percent in Bahrain to 14 percent in Jordan, respectively.³ While some countries have made notable advancements in promoting gender

equality, others continue to face persistent obstacles. Morocco has implemented progressive reforms aimed at empowering women, whereas Jordan encounters ongoing challenges in achieving women's inclusion in the labor force. Egypt has experienced noteworthy enhancements in its regulatory framework, and Tunisia has emerged as a pioneering nation in the implementation of inclusive policies, leading the way for other countries to follow suit. Lebanon grapples with multifaceted gender discrimination, while Sudan aspires to enact transformative change.

Recognizing and comprehending the intricacies inherent to each country can pave the path for us to examine how women fit within MSMEs and the energy sector and what are the implications of involving them in the energy transition. Climate change amplifies pre-existing gender inequalities within the realm of employment. The impact of climate change on women and girls in the region is influenced by deeply rooted gender inequalities, creating unique challenges that require a gender-specific approach. Women and girls remain first responders during climate disasters and play vital roles as influential decision-makers in matters concerning energy and waste management within their households. Hence, women's participation in global climate policy making is essential, as they possess valuable knowledge and firsthand experience regarding climate change issues and consequences. In addition, women serve as catalysts for effecting meaningful change towards a fair transition to renewable energy, and any successful and sustainable climate action necessitates their active and inclusive engagement. To this end, prioritizing women's leadership and engagement in the climate movement is crucial for effectively tackling the climate emergency in the MENA region.

This baseline research of gender equality examines closely the cases of Morocco, Jordan, Egypt, Tunisia, Lebanon, and Sudan, considering that each country is characterized by distinct cultural, historical, and socio-political contexts. It seeks to examine existing literature and data that can help identify the availability or lack thereof of resources on the role of women-led enterprises in the transition to renewable energy sources. By examining existing data on gender issues in the six countries, this pre-analysis aims to determine where additional quantitative or qualitative data is required to gain a better understanding of the involvement of women-led MSMEs in the region's energy transition. It will also allow us to fine-tune the methodological framework and our measurement tools to tackle gender specificities across the selected countries. The analysis presented below delves into the particularities of these countries,

¹ Mapping the Intersection of Women's Economic Empowerment, Care Work and Clean Energy, Dr. Kate Grantham. 2022.

² Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

³ Ibid.



encompassing aspects such as gender discrimination, labor force participation, inclusive policies, regulatory frameworks, wage differentials and the pursuit of gender-equitable development.

This study intends to investigate whether gender equality can be a driver for more effective clean energy investments, and that this gender lens can be applied at every level of the energy value chain. The findings will identify and address knowledge gaps, for actions and further research to implement gender-responsive clean energy and climate change mitigation and adaptation initiatives. The study also explores the primary issues and challenges of the topic, identifies knowledge gaps and entry points, and suggests a few avenues to explore moving forward. In section 2, we start off by offering an overview of the gender-energy dynamics in the MENA region and how this aligns with the MSMEs sector and its gendered nature. In the same section we review other case studies which navigate the interplay between gender, energy, and MSMEs and the different overlapping factors. In section 3 we dive into each country's specificities, and we thoroughly examine the gender divide in the energy-MSMEs nexus. This section particularly seeks to provide an overview of the knowledge gaps and opportunities for future exploration within each country. This includes examining the status of women's role in employment, entrepreneurship, and leadership in each of these countries, as well as the different impediments and enablers to women and women-led MSMEs in the energy sector. This is in addition to other country-specific factors that are crucial to each country's energy-MSME context. In section 4, the report identifies the qualitative and quantitative gaps in literature focused on the intersection of gender and clean energy in the MENA region, while acknowledging existing research and experience on gender issues around energy at the household and micro to medium scales.

2. MENA region overview

The Middle East and North Africa region possesses the second largest gender gap to address, following South Asia.⁴

One notable area of progress in MENA is the economic participation and opportunity sub index, which has increased the level of advancement in closing the

gender gap from 44 percent to 46 percent in 2022.⁵ At the sub index level Kuwait and Jordan lead the regional rankings, while Morocco, Tunisia, and Egypt fall behind in terms of economic parity. Key economic indicators have generally shown improvement, except for the labor force participation rate. Several countries, led by Kuwait, Oman, and the United Arab Emirates, have increased the representation of women in technical roles, although only Oman has shown an increase in the proportion of women in senior positions. Saudi Arabia, Morocco, and Tunisia have witnessed positive growth in gender gap scores for labor force participation between last year and 2022, whereas most countries in the region experienced a decline.⁶ Overall, more than half of the 13 countries in the region have improved their sub index scores, with Saudi Arabia, Kuwait, and Morocco making the most progress. Conversely, six countries saw a decline in their sub index scores, with Bahrain and Egypt experiencing the most negative changes.⁷

In terms of educational attainment, the Middle East and North Africa region has achieved 96.2 percent of gender parity. In the region, Oman, Morocco, Tunisia, and Algeria are the only countries that have closed less than 95 percent of the gender gap in this sub-index. Saudi Arabia, United Arab Emirates, Egypt, Kuwait, and Qatar have successfully closed their gender gaps in primary education. While Jordan has a slight gender gap in primary enrolment, equivalent to 98 percent, yet the country has lower enrollment rates for both girls and boys compared to other countries. In secondary education, Algeria, United Arab Emirates, Bahrain, Jordan, Kuwait, Lebanon, and Tunisia have all achieved parity, although Jordan and Lebanon still have lower overall enrollment rates compared to other countries. All countries in the region have closed their gender gaps in tertiary education.⁸

Regarding health and survival, the Middle East and North Africa region has closed 96.4 percent of its gender gap. Only Qatar has more than 5 percent of the gender gap remaining. Lebanon, Tunisia, and Kuwait stand out as the best-performing countries in this sub-index, having closed 96 percent or more of the gender gap. There is a lag in closing the gender gap in healthy life expectancy within the region, with Bahrain, Algeria, Jordan, and Qatar performing poorly compared to global standards.

⁵Ibid.

⁶Ibid.

⁷Ibid.

⁸Ibid.

⁴Global Gender Gap Report 2022.



Out of the 13 countries, 11 have achieved gender parity in the sex ratio at birth, with Egypt and Morocco being the exceptions.⁹

In terms of political empowerment, the region has closed 15.2 percent of its gender gap, which represents a slight decrease of 1 percent compared to the previous year (based on constant countries). This places the Middle East and North Africa as the third lowest region on this sub-index, following East Asia and the Pacific and Central Asia. The level of women's participation in political life across the region varies significantly, as evident in both sub-index and indicator scores. The United Arab Emirates holds the highest sub-index score at 0.402, while Kuwait has the lowest at 0.023. Only the United Arab Emirates has achieved gender parity at the parliamentary level, while Saudi Arabia remains at 0 percent. Lebanon has made notable progress in achieving parity in ministerial positions, with women holding 32 percent of seats. In contrast, Saudi Arabia has the lowest level of parity in ministerial positions at 0 percent. It is worth mentioning that Tunisia appointed its first female head of government in 2021, making it the second economy in the region, to have a female head of state in the past 50 years.¹⁰

MENA claims that the clean energy sector could be preferred by women compared to the broader energy sector. According to the 2017 IRENA report, the reason behind this finding is that they are generally more receptive to sustainability issues.¹¹ Globally, women account for an average of 32 percent of the workforce in the renewable energy sector. In contrast, within the MENA region, the representation of women in the renewable energy sector ranges from 7 percent to 9 percent.¹² Nevertheless, simply transitioning to renewable energy sources is insufficient to attract a substantial number of women to the energy sector.¹³ According to a report by IRENA, the global representation of women in the renewable energy sector stands at 32 percent, which is 10 percent points higher than the overall energy sector average.¹⁴ This figure is significantly below the global average. Furthermore, the introduction of renewable

energy in this region does not appear to generate the same level of women's involvement as seen in global trends.¹⁵ For instance, in Jordan and Egypt, the labor force surveys conducted in 2016 and 2019, respectively reveal that women's participation in the renewable energy sector surpasses that of the overall energy sector by a mere 1 percentage point.¹⁶ While these countries are just two examples within the region, they are among the most advanced in managing the energy transition and have emerged as regional centers for renewable energy development in the past decade.¹⁷ The same applies to Morocco, representing the first producer of renewable energies in Africa, and with one of the most competitive green energies in the world, while still grappling with gender inequality where women's participation in the workforce was low at only 4 percent.¹⁸ Regrettably, initiatives to promote gender equality in renewable energy in the country do not include programs to support female entrepreneurship or women's ability to participate in decision-making in the sector.¹⁹

Our study points out the contributing factors to gender disparity in initiating and advancing businesses in the MENA region.²⁰ These factors include: lack of access to Science, Technology, Engineering and Mathematics (STEM) education, the biased legal landscape, female labor force participation, the gender digital divide, inequality in land inheritance, and sociocultural perceptions and attitudes.²¹ Each of these factors are further discussed in the subsequent sections to help us gain a deeper understanding of the contextual factors that affect gender and youth, MSMEs, and the clean energy nexus.

Entrepreneurship as an opportunity versus entrepreneurship as a necessity. It is important to note that the most successful women participating in these initiatives often come from more privileged backgrounds,

⁹ Ibid.

¹⁰ Ibid.

¹¹ IRENA. (2017). Women in Clean Energy, Middle East and North Africa Survey

¹² World Bank Group (WBG). "RENEW MENA." 2022.

¹³ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Islamic Development Bank. (2019). Country Gender Profile: Morocco. Islamic Development Bank.

¹⁹ Ibid.

²⁰ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

²¹ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.



both in rural and urban areas. These women engage in entrepreneurship within the clean energy sector as a way to supplement the income of male breadwinners in their families. This pattern suggests that while women are making strides in clean energy entrepreneurship, there may still be barriers and limitations that prevent women from diverse socioeconomic backgrounds from fully accessing and benefiting from such opportunities. Addressing these barriers and ensuring inclusivity across different socioeconomic groups is crucial for achieving true gender equality and empowerment in the clean energy sector. Women possess a pivotal position in driving transformative change towards a sustainable and inclusive transition to clean energy. They contribute as energy consumers, producers, entrepreneurs, and decision-makers. Realizing this potential necessitates concerted efforts from various stakeholders to address the gender-specific barriers and caregiving responsibilities that impede women's access to clean energy resources, solutions, employment opportunities, and entrepreneurship. Furthermore, it demands a deeper comprehension and acknowledgment of the substantial benefits that the clean energy sector can derive from the meaningful engagement of women throughout the value chain, particularly considering their pivotal role in household energy provisioning and caregiving responsibilities.²²

2.1. Unveiling the gender landscape in the MENA region: exploring demographics and current status

Women represent a highly underutilized human resource that plays a crucial role in a country's economic and social development. The socio-economic impact of women entrepreneurs has been prominently manifested in job creation not only for themselves but others, and providing innovative solutions to deal with a myriad of managerial, organizational, and business issues.²³ Nonetheless, gender inequality poses a significant challenge to the human, social, and economic development of the MENA region. Data shows that the size of women-led enterprises in the region is considerably lower than males where women are 23 percent more likely to have 1-5 employees and 18 percent more likely to be solo

²² Mapping the Intersection of Women's Economic Empowerment, Care Work and Clean Energy, Dr. Kate Grantham.

²³ Salim, M., & Anis, J. (2021). Has female entrepreneurship been a formidable engine of economic and Social Development in Tunisia

entrepreneurs, compared to men.²⁴ In fact, 70 percent of women entrepreneurs within the region reported that their business falls within the 1-5 range.²⁵ For larger businesses; ones that entail 6-19 and 20+ employees, women are one-third and four-fifths less likely than men to report having businesses within those ranges.²⁶

Demographics are also extremely important when looking at the entrepreneurial landscape in MENA.²⁷ Factors such as age, education, and income levels play a critical role in understanding the entrepreneurial structure and the type of businesses that individuals initiate. The majority of women entrepreneurs in the region, more than half, fall within the 18-35 age group, however; around one-third of them are more likely to launch their businesses over the age of 55. Household income is also another important factor that can impact women's decision on the type of business they undertake.²⁸ It's estimated that women entrepreneurs have a 20 percent higher chance relative to males to report household income in the upper third, and they are 24 percent more likely to report household income in the middle third.²⁹

2.2. Navigating the paradox: understanding women's enrollment in STEM & TVET education across the MENA region

Education plays a crucial role in enabling women to access information, secure funding, and gain the confidence to pursue their business ideas. Women possessing targeted and appropriate educational backgrounds are less likely to participate in the informal economy, thereby reducing their exposure to exploitative environments characterized by low wages and job insecurity.³⁰ Achieving parity in educational opportunities and ensuring access to high-quality education are vital factors that drive women's engagement in entrepreneurship. According to the ILO, a contributing factor to occupational and sector segregation is the limited educational opportunities

²⁴ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

²⁵ Ibid.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Ibid.

²⁹ Ibid.

³⁰ World Bank Group (WBG). "RENEW MENA." 2022.



available to women and girls in comparison to their male counterparts, along with the existing gender-based segregation within educational systems. Without the implementation of specific policies aimed at advancing gender equality in Technical and Vocational Education and Training (TVET) and facilitating reskilling initiatives, the ongoing issue of gender-based occupational and sectoral segregation is expected to persist. Moreover, the Commission on the Status of Women (CSW) has expressed concerns regarding the detrimental impact of discriminatory social norms, gender gaps in secondary and tertiary education related to Science, Technology, Engineering, and Mathematics (STEM), and occupational segregation, all of which hinder young women from accessing quality jobs in the green economy, as well as in climate, environment, and disaster risk fields.³¹

Interestingly, women in the MENA region tend to have attained higher education compared to men. In fact 22 percent of women in MENA completed secondary education compared to 17.9 percent of men and both genders are almost at par when it comes to postsecondary and graduate education levels.³² Yet this is not translated into higher enrollment in STEM programs, where the MENA region is characterized by an uneven gender-based access to STEM education at the high school and collegiate levels which acts as a major impediment to women participating in the energy sector.³³ This lies in line with the results of the 2017 IRENA survey which lists women's lower enrollment in STEM programs as a strong barrier that inhibits their participation in the renewable energy sector.³⁴ This is also linked to a preconceived notion of gendered roles with a bias favoring males' enrollment in STEM majors.³⁵ In line with this, 34 percent of the respondents cited low STEM enrollment and stereotyped gender roles as a hindrance to their entering the renewable energy sector.³⁶

Despite the region's endeavors in mitigating the gender discrepancy in education, these efforts were not reflected

in greater levels of employment for women nor business participation as women business participation remains the lowest in the MENA region when looking at the global scale.³⁷ Notable advancements in this sector and the implementation of educational reforms by governments were not sufficient to enhance the quality of education.³⁸ This is because the educational programs in place do not sufficiently tackle entrepreneurial skills, particularly for girls, in school curricula thereby hindering girls' ability to develop the necessary competencies required for successful business ventures. In addition to deficiencies in terms of educational quality, the outdated nature of school curricula fails to align with the evolving needs of the labor market.³⁹ Consequently, women have been graduating with skill sets that do not effectively align with their economic engagement, particularly in the realm of entrepreneurship.

2.3. Unlocking potential: examining female labor force participation in the MENA region

The growing significance of women engagement in the labor force within the MENA region carries profound implications for economic progress, gender parity, and societal advancement. The MENA region possesses a plethora of untapped human and natural resources, if utilized properly can lead to considerable growth. These resources are manifested in its geographic location, a young population, and an increasingly active women population. While significant strides have been made towards inclusivity of women in the region's different sectors, the region is still far from harnessing the potential of women entrepreneurs in the region.⁴⁰ It has also been proven that the general difficulties women encounter in the workforce are related to their low representation in the MENA energy market.⁴¹

While progress has been made in closing the gender gap in education and health, substantial disparities persist in women's access to economic opportunities as well as their agency and representation. Compared to other

³¹ International Labour Organization (ILO). (2022). Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice.

³² GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

³³ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

³⁴ IRENA (2017). Women in Clean Energy, Middle East and North Africa Survey

³⁵ Ibid.

³⁶ Ibid

³⁷ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

³⁸ Ibid.

³⁹ Ibid.

⁴⁰ Ibid.

⁴¹ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.



regions, MENA exhibits the widest gender gaps in labor market and enterprise metrics, reflecting perhaps its comparatively lower performance on economic indicators.⁴² In the MENA region the labor market prospects are not only worsening for women but they are also not harnessing the untapped potential of their young population.⁴³ It has been projected that by the year 2030, among 10 million new entrants to the labor market, women will only constitute 2 million.⁴⁴ The situation is also not that better off for youth, where it is anticipated that these new entrants will result in only a 27 percent increase in youth employment. At a first glance it might seem that women's status in the region is improving where the proportion of women that graduate supersedes that of men, yet this is not reflected in an increase in their participation in the labor market.⁴⁵ This conveys how entrenched the gender disparities are in the region, rendering difficult the efforts to integrate women. Within the Middle East & North Africa region, the labor force participation rate among females stands at 18.8 percent, whereas among males it reaches 70.9 percent. The labor force participation rate pertains to the percent of individuals aged 15 and above who are economically active. Over the years, there has been an upward trend in female labor force participation, signifying progress in this area.

Female labor force participation in the region is characterized by high levels of unemployment, the burden of unpaid care work, and reliance on informal employment opportunities, and legal prohibitions that support gender stereotypes. All of which contribute to reduced prospects for women to engage in entrepreneurship.⁴⁶ Enterprise development policies and rights at work policies play essential roles as critical pathways in the framework of a just transition, fostering an enabling business environment and promoting quality jobs that uphold decent work standards. This encompasses providing equal opportunities and treatment, along with safe and healthy working conditions.⁴⁷

⁴² World Bank Group (WBG). "RENEW MENA." 2022.

⁴³ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁴⁴ Ibid.

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ International Labour Organization (ILO). (2022). Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice.

Women in the region spend 89 percent of their work day in unpaid care, compared to 20 percent for males. This reflects the significant discrepancy between the time spent on domestic and unpaid care work which is six times more for females compared to their male counterparts.⁴⁸ This gap has been further exacerbated by the COVID-19 pandemic where the heavy burden of unpaid care work fell on the shoulders of female entrepreneurs as they had to devote more time to cater to their family needs in comparison to their male counterparts. In addition to its contribution to the unequal distribution of unpaid care and domestic work, the negative impact that the pandemic had on women business was much stronger than that of males; 46 percent of female-owned businesses were shut down as a result of the Pandemic compared to only 28 percent for males.⁴⁹ Hence, the disproportionate impact of the Pandemic on female-owned businesses further accentuated the gender gap in the MSMEs sector in the region.⁵⁰

It has also been noted that women in the region occupy a great deal of positions within the informal sector, a sector that is characterized by having the most vulnerable employment categories. An example of which would be domestic work.⁵¹ Enhancing opportunities for women to participate in the formal economy can not only enhance their skills and confidence, but also prepare them to explore their own ideas and pursue entrepreneurial ventures.⁵²

Some of the barriers that women in the region face in accessing the energy sector are reflected in legal prohibitions that support gender stereotypes. Studies revealed that women face particular challenges when trying to enter or participate in the energy industry.⁵³ These include; women not being allowed to work in industrial or hazardous jobs in any MENA country other than Saudi Arabia and the United Arab Emirates.⁵⁴ Given the industry's structure, this might have an effect on employment. Such limitations in labor laws reinforce

⁴⁸ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ Ibid.

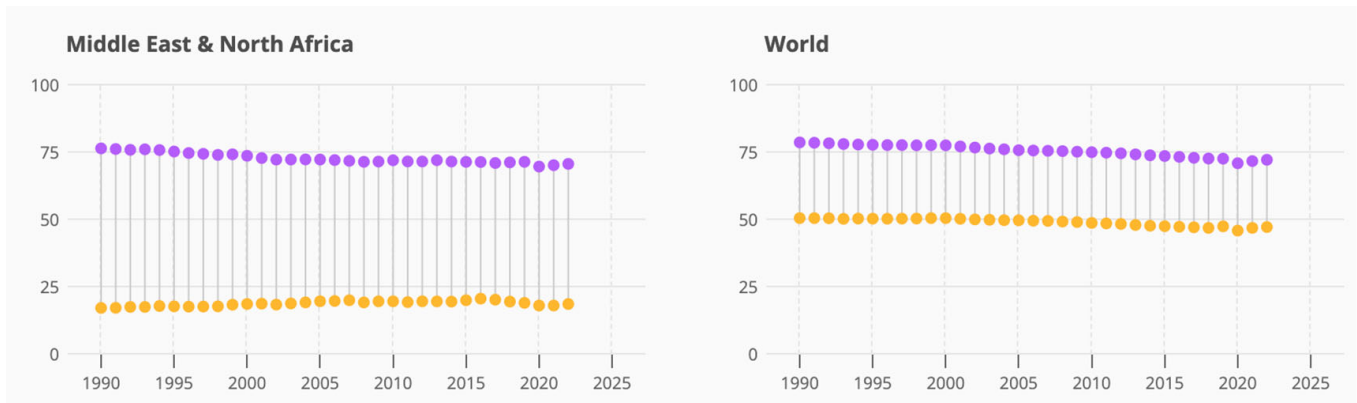
⁵² Ibid.

⁵³ Ibid.

⁵⁴ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.



Figure 1. Labor force participation rate, by sex (% of population ages 15+) (modeled ILO estimate)



Source: International Labour Organization. "ILO Modeled Estimates and Projections database (ILOEST)" ILOSTAT. Accessed February 21, 2023. <https://ilostat.ilo.org/data/>.

Note: The orange dotted line represents female labor force participation rate while the purple dotted line represents male labor force participation rate.

widespread gender stereotypes that dictate what jobs women should or shouldn't hold.⁵⁵ Furthermore, the lack of access to education and unequal opportunities for skills development prevents women from entering the sector where they must acquire future-ready skills in order to advance their careers as well as enter the workforce. More than half of the respondents of the 2017 IRENA survey stated that their workplace employed less women relative to men, while 29 percent stated an even gender balance.⁵⁶ That being said, 62 percent of respondents did not actually believe that women faced such barriers.⁵⁷ The latter score represents an average, based on individual and institutional responses, without taking into account their gender. When examining responses based on their gender, the 2019 IRENA the Gender Perspective report shows that 40 percent of male respondents perceive the existence of gender-related barriers, compared to 75 percent of women.⁵⁸

This goes hand in hand with similar patterns of gender differences that emerged regarding perceptions of pay equity in the RE sector where 60 percent of male respondents compared to only 29 percent of female respondents agreed with the statement that women and men were paid equally for the same work in the RE sector. While the IRENA A Gender Perspective report claims that men working in the RE sector, including those with

responsibilities for making policy decisions, are unaware that women face specific barriers entering the sector and advancing within it.⁵⁹ Yet, the report claims that it is also important to note that women's underrepresentation is affected by the interaction of misperception about their capabilities in a male dominated society, the unequal access to network, as well as lack of information about the opportunities.⁶⁰

According to a study that involved 1,500 companies, those with boards of directors containing more women have a considerably higher likelihood of investing in renewable energy and taking into account environmental risks when considering financial decisions.⁶¹ The survey argues that regardless of the availability of multiple national level studies on women in clean energy technologies, yet the topic has not been thoroughly investigated within the MENA region highlighting a potential gap in the literature. Therefore, through gathering data, the survey serves as a starting point to identify the various challenges affecting women in the Middle East and North Africa (MENA) as they seek to penetrate the clean energy sector.⁶² While doing so it also seeks to propose solutions to integrate women into the clean energy sector.⁶³

⁵⁵ Ibid.

⁵⁶ IRENA (2017). Women in Clean Energy, Middle East and North Africa Survey.

⁵⁷ Ibid.

⁵⁸ International Renewable Energy Agency (IRENA). (2019). The gender perspective. In IRENA Gender Action Plan 2019-2023. Abu Dhabi, United Arab Emirates: IRENA.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ IRENA (2017). Women in Clean Energy, Middle East and North Africa Survey.

⁶² Ibid.

⁶³ Ibid.



2.4. Empowering women: enhancing representativeness and inclusion in MSMEs across the MENA region

MSMEs have been proven to be engines for economic growth and have massive implications for women. Several studies confirm the vital economic, social, and environmental role that entrepreneurship plays, making it an engine of economic growth as well as social and sustainable development.⁶⁴ MSMEs play a significant role in reducing poverty and inequality by contributing to job creation and livelihoods, particularly for vulnerable populations. MSMEs, including those led by women, contribute to the creation of jobs in low-and middle-income countries. Over 90 percent of all businesses worldwide are MSMEs, both formal and informal. MSMEs play a significant role in reducing poverty and inequality by making a significant contribution to job creation and livelihoods, particularly for the most vulnerable and disadvantaged segments of the population.⁶⁵ They also help advance the economic empowerment of women and young people. The MSMEs and informal enterprises as a whole significantly contribute to the creation of jobs in low- and middle-income countries, between 80 and 90 percent. They also show to be crucial in assisting with recovery and social cohesion in settings affected by crisis and conflict.

In recent times, there has been a notable emphasis on the role played by women entrepreneurs in fostering economic growth within developing nations and improving overall societal well-being. The term “woman entrepreneur” refers to a woman who takes the initiative in organizing and managing a business venture. Across the MENA region, the average rate for women entrepreneurship stands at 23 percent, with considerable variation across different countries. There exists a dearth of comprehensive research on the specific challenges encountered by women entrepreneurs, particularly in the Middle Eastern context. It is imperative to give due consideration to the socio-cultural and political environment and its influence on the performance and achievements of women entrepreneurs across various countries and societies. Investing in the advancement of women’s business endeavors stands as one of the most impactful tools for fostering gender equality and promoting women’s empowerment in society.

While women in the region focus more on local markets compared to men, yet they comprise less than

⁶⁴ Salim, M., & Anis, J. (2021). Has female entrepreneurship been a formidable engine of economic and Social Development in Tunisia?

⁶⁵ UNDP. “Scoping Note: MSMEs and Informal Sector.” 2022.

half of entrepreneurs with a local market focus. One in three women entrepreneurs in the region are focused on national markets and more than one in four have an international market focus.⁶⁶ With regards to the latter, women comprise the majority of entrepreneurs with international market focus.⁶⁷ Morocco for instance has 75 percent of its women entrepreneurs with international focus.⁶⁸ This is also linked to export activity, where women entrepreneurs are dominating.⁶⁹ The growth orientation of female entrepreneurs remains especially low in the region where women represent less than one in ten entrepreneurs starting a business with twenty or more employees and one in five who expect to hire twenty or more employees over the course of five years.⁷⁰

2.4.1. Fostering entrepreneurship: examining the key enablers

Understanding gender-related concerns, particularly the significant role women play in household energy provision, is relevant when designing and implementing energy interventions. That is why reviewing the impact of energy on improving women’s lives and the potential of women in delivering energy services is crucial. This entails recognizing the significance and ramifications of integrating gender perspectives in the energy sector in specific and in MSMEs in general. Energy can serve as a catalyst for poverty reduction by increasing disposable income through enhancing the energy efficiency of micro-enterprises or creating new entrepreneurial opportunities. In essence, sustainable energy can contribute to transitioning out of poverty. Furthermore, access to modern forms of energy, facilitated in part by enhanced employment opportunities and higher incomes prospects, contributes to women’s overall well-being, a key developmental objective.⁷¹

The role of markets and private enterprises is becoming more evident every day particularly in the MENA region. A region that despite its inclination towards public sector employment; is nowadays witnessing a noticeable increase in entrepreneurship activities. The latter can

⁶⁶ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women’s Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Ibid.

⁷⁰ Ibid.

⁷¹ J S Clancy “Gender as a Factor in Delivering Sustainable Energy”



be particularly promising if coupled with increased educational attainment in the region. Several MENA countries have already been working towards amending discriminatory laws; however, despite their efforts this is insufficient to guarantee shifting the socio-cultural mind-set towards women. Hence the effectiveness of such laws is contingent upon strong, transparent implementation mechanisms.⁷² The GEM (Global Entrepreneurship Monitor) (2022), report claims that the business environments in the United Arab Emirates, Saudi Arabia and Oman are the most conducive to female entrepreneurs in the region.⁷³ These countries differ on so many levels when compared to the countries under study. While MENA is still lagging behind in terms of women empowerment during the pandemic, digital tools have paved the path for women entrepreneurs to access the labor market, also many MENA countries witnessed a significant improvement in bridging the gender gap in education, and also countries started to integrate the gender dimensions to their Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs) and in their Sustainable development Goals (SDGs) commitment. In the past decade, educational attainment of women and girls has advanced a great deal in the MENA region – girls are catching up with boys at all levels of education in terms of participation and performance. Some countries have witnessed significant improvement in science, technology, engineering and mathematics (STEM) subjects. Such progress, however, will need more time to be translated into better market outcomes.⁷⁴

2.4.1.1. Embracing the digital era: exploring the impact of digitalization

The concept of the “digital gender divide” pertains to the unequal digital inclusion based on gender, highlighting the disparities between women’s and men’s access to, utilization of, and advantages from digital technologies, often due to prevailing social and economic inequalities. Globally, there are approximately 327 million fewer women with smartphone access and mobile internet connectivity compared to men, with this gap being even more pronounced and expanding in low and middle-income countries (LMICs). Women’s digital disadvantage goes beyond mere physical barriers

and encompasses social and cultural obstacles, shaped by gender-specific societal norms, which significantly contribute to the emergence of the digital gender divide. Notably, despite the improvements in ICT penetration worldwide, enhanced physical access has not necessarily translated into increased usage and the associated benefits like economic advancement or women’s overall well-being. The intricate ways through which sociocultural norms play a role in fostering the digital gender gap are context-specific and multifaceted.⁷⁵

Spatial factors play a significant role in determining barriers to access, and the gender disparity in the utilization of ICTs, such as mobile phones, remains most pronounced in rural regions. Additionally, the prevailing notion that ICTs belong primarily to the domain of men is particularly prevalent in rural areas, leading to gender-skewed and gender-blind ICT-focused initiatives. Other socio-cultural attitudes that impede mobile phone access for women include the perception that phones could potentially facilitate socially undesirable activities, like interactions with men. This justification has been reported in various locations, including Egypt, Jordan, Niger, and India, leading to restrictions on young girls’ and married women’s access to mobile phones. Ensuring women’s equitable access to digital technologies is fundamentally a matter of women’s rights, as ICT access is pivotal for economic engagement, fostering social connections, and attaining resources, support, and information.⁷⁶

Simultaneously, women encounter persistent obstacles in their access to, utilization of, and capacity to derive advantages from ICTs, resulting in Arab nations trailing in their efforts to narrow the digital gender gap. The digital gender divide remains notably pronounced in the MENA region, characterized by persistent gender disparities in internet and mobile phone access and usage [55, 56]. Over the period spanning from 2017 to 2020, the gender gap in mobile phone ownership actually increased from 8 percent to 9 percent, and the gender gap in mobile internet utilization only saw a marginal reduction from 18 percent to 17 percent [57]. Substantial variations are evident among countries within this region. For instance, Iraq, Algeria, Tunisia, and Egypt display the most significant gender gap in internet usage, whereas the United Arab Emirates exhibits the least disparity.⁷⁷

⁷² Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. “Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia.” Report. Wilson Center, 2023.

⁷³ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women’s Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

⁷⁴ World Bank (2023). Women, Business and the Law Report.

⁷⁵ Ragetlie, R.; Najjar, D.; Oueslati, D. “Dear Brother Farmer”: Gender-Responsive Digital Extension in Tunisia during the COVID-19 Pandemic. *Sustainability* 2022, 14, 4162. <https://doi.org/10.3390/su14074162>

⁷⁶ Ibid.

⁷⁷ Ibid.



Labor markets are experiencing significant transformations due to the widespread adoption of digitalization and automation.⁷⁸ Consequently, there is an urgent need to expedite women's access to sustainable employment opportunities.⁷⁹ Amidst shutdowns and limitations as a result of COVID-19, numerous entrepreneurs have adapted their business models by incorporating digital technologies.⁸⁰ Gender disparity in digital access poses yet another problem in the region.⁸¹ Women residing in rural and marginalized communities face significant barriers to accessing technology and often lack the necessary digital skills, exacerbating the existing gender digital divide.⁸² The expansion of the digital economy holds the potential to increase the participation of women entrepreneurs and foster innovation.⁸³

Within the region, it was observed that female entrepreneurs exhibited a slightly higher inclination towards adopting new digital technologies in response to the pandemic compared to female-owned established businesses (37.8 percent vs. 31.8 percent, respectively).⁸⁴ Although the rates varied to some extent across countries for both groups, they generally remained high.⁸⁵ Women early-stage entrepreneurs were more likely to report plans to use more digital technologies within the next six months than women established business owners at the regional level (45.3 percent vs. 56.4 percent).⁸⁶ Once more, both groups of women business owners have quite high rates for using more digital technologies. In six nations—Iran, Morocco, Oman, Saudi Arabia, Sudan, and Turkey—the rates for women early-stage entrepreneurs were equal to or higher than those for men. Women's startup intentions at the regional level decreased linearly each year, from a peak of 39.4 percent in 2019 to 33.9

percent in 2020 and 32.3 percent in 2021, a 19 percent drop.⁸⁷

2.4.1.2. Advancing sustainable development goals and national action plans: empowering gender and youth through MSMEs' adoption of renewable energy

It has been argued that promoting gender and youth inclusivity is encouraged through the adoption of renewable energy within MSMEs. Enabling MSMEs to adopt sustainable business models in alignment with the SDGs holds significant importance. Incorporating environmentally and socially sustainable practices within MSME operations presents significant prospects for bolstering competitiveness and resilience. It also contributes to the development of inclusive and sustainable economies.⁸⁸

In the MENA region, the impact of climate change on women and girls is influenced by deeply rooted gender inequalities, which are compounded by factors like limited resources, restricted economic, social, and political participation, limited access to information, and ongoing conflicts. These circumstances create unique challenges that require a gender-specific approach.⁸⁹ Women possess valuable knowledge and firsthand experience regarding climate change issues, making their participation in global climate policy-making essential. To effectively tackle the climate emergency in the Arab region, it is crucial to prioritize women's leadership and full engagement in the climate movement. This approach ensures that solutions and responses to climate change reflect their contributions and address their specific needs. One way to address this is by developing National Adaptation Plans (NAPs) on climate change that explicitly integrate gender and intersectional concerns. These plans should also incorporate climate change considerations into broader development priorities and strategies related to gender equality and women's empowerment. This presents an opportunity to create a comprehensive framework that acknowledges and addresses the gendered impacts of climate change in the region.⁹⁰

Despite the existence of multiple challenges facing MSMEs, the incorporation of environmentally and socially sustainable practices within their operations, along

⁷⁸ GEM (Global Entrepreneurship Monitor) (2022). *Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity*. London: GEM.

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁸² Ibid.

⁸³ Ibid.

⁸⁴ GEM (Global Entrepreneurship Monitor) (2022). *Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity*. London: GEM.

⁸⁵ Ibid.

⁸⁶ Ibid.

⁸⁷ Ibid.

⁸⁸ This is the UNDP. "Scoping Note: MSMEs and Informal Sector." 2022.

⁸⁹ ESCWA, "Mainstreaming Gender in Climate Action".

⁹⁰ Ibid.



with active involvement in key SDG domains such as the circular economy, energy efficiency, and climate adaptation, presents significant prospects for MSMEs to bolster their competitiveness and resilience. Moreover, it enables them to make substantial contributions to the development of inclusive and sustainable economies.⁹¹ Sustainable Development Goal (SDG) 7 and Sustainable Development Goal (SDG) 5 are intimately interconnected, as the achievement of universal access to modern energy (SDG7) and the promotion of gender equality (SDG5) are mutually reinforcing objectives that can collectively drive sustainable development and social progress. Since 2015, efforts have been made to achieve SDG 7 and its ambitious goals, which include ensuring that everyone has access to modern energy, increasing the share of renewable energy in the world's energy mix by twofold, and quickening the rate of global energy efficiency growth.⁹² Although gender equality is acknowledged as a separate goal in SDG 5, it is critical to understand the inherent interdependence between energy access and gender equality. Numerous developmental advantages can be attained by addressing these jointly connected problems. The unavoidable fact is that meeting the targets for universal access to affordable, dependable, sustainable, and modern energy by 2030 will depend on how well the energy needs of women are met.⁹³ The crucial factor in facilitating the achievement of the SDGs lies in adopting a sustainable energy transition strategy that prioritizes social equity and inclusiveness.⁹⁴ By promoting the widespread adoption of cost-effective small-scale energy technologies and implementing innovative financing mechanisms, women entrepreneurs engaged in modern energy endeavors can unlock business prospects. This approach is especially beneficial for women-owned businesses operating in remote or rural areas. By gaining access to reliable and affordable electricity, female business owners can effectively manage or expand their working hours, while simultaneously reducing operational expenses.⁹⁵

2.4.2. Overcoming obstacles: empowering MSMEs in youth and gender dynamics

As per the 2022 Women, Business, and the Law (WBL) report, the MENA region superseded other countries in terms of implementing reforms and regulations that would impact women's economic opportunities in the year 2022. These reforms did not exactly yield their expected outcomes where the WBL score in MENA was 53 out of 100 compared to a global average score of 76.5.⁹⁶ This score reflects that women in MENA are entitled to only half of the rights of men which in turn reflect the myriad challenges and restrictions that women face and that inhibit their labor force participation.⁹⁷ Women-owned businesses in MENA are equivalent to 23 percent compared to a global percent of 34. Additionally, the region is characterized by having the lowest average female business participation rate globally, 19 percent.⁹⁸ The expected shifts in labor markets caused by climate change possess a significant gender aspect, carrying profound policy implications. Without the implementation of purposeful gender-transformative measures to enhance female involvement in emerging green occupations, prevailing occupational gender stereotypes are likely to persist, resulting in women securing only a fraction of the job opportunities that arise. For example, while the renewable energy sector holds substantial potential for job creation within a green economy, women's employment in this sector remains limited to approximately 20 to 25 percent in certain advanced economies.⁹⁹

Over the past decade, notable advancements have been observed in terms of gender equality and the empowerment of women and girls across various spheres. This region has witnessed the expansion of laws, policies, and initiatives focused on gender equality, resulting in increased representation of women in government and national initiatives. Many countries have established dedicated bodies and institutions to advocate for the rights and well-being of women and girls. Areas like education and health have experienced significant improvements in gender-

⁹¹ Ibid

⁹² Energia (2019). Gender in the Transition to Sustainable Energy for All.

⁹³ Energia (2019). Gender in the Transition to Sustainable Energy for All.

⁹⁴ UNDP. "Scoping Note: MSMEs and Informal Sector." 2022.

⁹⁵ Ibid

⁹⁶ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁹⁷ Ibid.

⁹⁸ Ibid.

⁹⁹ International Labour Organization (ILO). (2022). Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice.



related indicators, and specialized programs aimed at bolstering women's and girls' rights and empowerment have gained momentum in numerous regional countries. While governments have taken significant strides to fulfill their gender-based human rights commitments, it's important to highlight the growing involvement of civil society, especially women's and youth feminist groups, in advocating for and achieving progress. Women's civil society within the region has actively engaged with the international Women, Peace, and Security agenda, including presenting testimony before the Security Council to shed light on the gender-specific impact of conflict and occupation on the lives of women and girls in the region.¹⁰⁰

Women encounter a wide range of challenges that impede their access and survival in the MSMEs sector. These challenges include but are not limited to financial constraints, limited involvement of women investors, the biased socio-cultural norms, legal and regulatory frameworks that reinforce gender biases, the COVID-19 pandemic which had a disproportionately negative impact on women-led MSMEs.¹⁰¹ These factors are explored in further detail in the sections below.

2.4.2.1. The interplay between the legal framework and the financial sector giving birth to gender specific financial constraints and limited access to financial capital

Notably, the proportion of financially constrained women-owned microenterprises is high in the East Asia Pacific region (37 percent), Middle East and North Africa (20 percent), and Europe Central Asia (26 percent). Moreover, the East Asia Pacific, Sub-Saharan Africa, and Middle East and North Africa regions hold the largest share of financially constrained women-owned small and medium enterprises, accounting for 59 percent, 17 percent, and 16 percent respectively.¹⁰² Microenterprises within the MSME sector exhibit comparatively higher levels of unmet financing needs from formal sources in contrast to small and medium enterprises. Microenterprises constitute 86 percent of credit-constrained MSMEs, yet they only account for 14 percent of the overall MSME finance gap. In contrast, small and medium enterprises make up 14 percent of credit-constrained MSMEs, but contribute to 86 percent

of the total MSME finance gap. Women-owned MSMEs, representing 28 percent of the global MSME landscape, contribute to 32 percent of the global MSMEs finance gap. Specifically, they account for 24 percent of the finance gap for microenterprises and 33 percent of the finance gap for small and medium enterprises.

The two main obstacles faced by women in start-up investments in the MENA region as mentioned in The Gender Gap in Startup Investment report are; the inability to raise investment capital as well as the lack of financial literacy.¹⁰³ This is reflected in the following statistics, where among 125 females in the study, 26 percent reported the first reason and 65.9 percent reported the second one.¹⁰⁴ According to the International Finance Corporation report, the region encountered a finance gap as big as 88 percent in 2018. This gap represents the highest finance gap discrepancy relative to potential demand in the world. This is followed by a 29 percent finance gap in female microenterprise, which is the second highest gap.¹⁰⁵ This displays the complexity of the accessibility to funds by SMEs, women, in the region; the proportion of potential demand worldwide among MSMEs being the highest in MENA.¹⁰⁶ Another financial constraint impeding women's ability to start and sustain their own business in the region is the right to opening a bank account.¹⁰⁷ A paradox here is that regardless of the fact that women in the region are entitled to the right of opening a bank account, yet only 38 percent of women possess bank accounts versus 57 percent of men.¹⁰⁸

Women investors' involvement can play an important role in fostering the growth of women-led businesses.¹⁰⁹ Nowadays, more women are inclined towards investing in businesses but despite this women in the MENA region are still around two-fifths less likely to have invested in a business in the prior 12 months compared to males, where this likelihood is around 5.9 percent and 9.5 percent for

¹⁰⁰ United Nations Economic and Social Commission for Western Asia (ESCWA). (2021). Situational analysis of women and girls in the MENA and Arab States region: A decade review 2010 – 2020. Beirut, Lebanon: ESCWA.

¹⁰¹ UNDP. "Scoping Note: MSMEs and Informal Sector." 2022.

¹⁰² Ibid.

¹⁰³ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

¹⁰⁴ Ibid.

¹⁰⁵ Ibid.

¹⁰⁶ Ibid.

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

¹⁰⁹ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity. London: GEM.



women and men, respectively.¹¹⁰ Additionally, women in general tend to invest about 40 percent less money on average compared to men; however it is important to note that this tendency varies significantly across countries.¹¹¹

2.4.2.2. Navigating business closures: understanding the impact of the pandemic

MSMEs, especially those led by women, have been disproportionately impacted by the COVID-19 pandemic, leading to financial instability and job losses. Region-specific institutional barriers, such as gender-based violence, limited access to finance, unemployment, and the underrepresentation of women in leadership roles across both public and private sectors, rendered women's jobs, businesses, and incomes more vulnerable to the economic repercussions of the pandemic compared to those of men.¹¹²

This is in addition to facing compounded challenges due to limited access to public social safety nets, formal financial channels, and other essential resources. The systemic deficiency in effective risk reduction and management capacities among MSMEs in developing countries is further demonstrated by the fact that those MSMEs previously affected by other shocks or crises are encountering additional difficulties in recovering from the financial repercussions of the COVID-19 pandemic. For example, empirical evidence indicates that MSMEs in Colombia, Indonesia, and Nigeria, which had previously experienced climate-related shocks such as flooding, droughts, or heatwaves, were more likely to report declining profit trends in the aftermath of the COVID-19 crisis.

The reasons behind business closure differ widely across the region reflecting varying levels of gender disparities across the different countries.¹¹³ Business closure is more likely to impact women rather than men, and the most common reported factor in the region was the pandemic. Prior to the pandemic; however, the lack of profitability was then the most common factor reported

as the reason for closure.¹¹⁴ This applied to all but five countries: Egypt, Morocco, Qatar, Sudan and Turkey.¹¹⁵ One in four women stated the lack of profitability as the most common reason in the year 2021 for their business closure.¹¹⁶ This represented an 8 percent gap between females and their male counterparts. Following this the next most cited reason is family/personal reasons which were reported by females 70 percent of the time more than males.¹¹⁷ Both women and men were almost at par when referring to the lack of finance as a reason for business closure, 13.5 percent and 13.9 percent, respectively.¹¹⁸ Finally, the least mentioned factor for business closure is the opportunity to sell.¹¹⁹

In the region, there was a noticeable decline in the rate of women's Entrepreneurial Business Ownership (EBO), while it slightly increased for men, thereby widening the gender gap. Specifically, EBO rates for women decreased in five countries, including Morocco, while it increased in three countries, including Egypt. Over the period from 2019 to 2021, the rate experienced a significant tenfold increase, rising from 0.3 percent to 3 percent. This progress contributed to a substantial improvement in reducing the gender gap, as the female-to-male ratio increased from 0.08 to 0.44.¹²⁰ In terms of business closure rates, there was relatively stable performance among females, while it increased for males, leading to a decline in the female-to-male ratio from 0.80 to 0.66.¹²¹ The COVID-19 pandemic had varying effects on males and females in the region, with women demonstrating a remarkable resilience. Interestingly, women in the region exhibited a lower rate of discontinuation in their businesses and acknowledged the emergence of new opportunities resulting from the pandemic. Approximately 24 percent of women in the region agreed with this statement, surpassing the percent among males. Additionally, when comparing women early-stage entrepreneurs to established women business owners, the former expressed a more positive view regarding the effectiveness of the government's response to the pandemic.¹²²

¹¹⁰ Ibid.

¹¹¹ Ibid.

¹¹² Center for International Private Enterprise. (2021). *The impact of COVID-19 Pandemic on Women-led Businesses and Women Entrepreneurs in MENA*.

¹¹³ GEM (Global Entrepreneurship Monitor) (2022). *Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity*. London: GEM.

¹¹⁴ Ibid.

¹¹⁵ Ibid.

¹¹⁶ Ibid.

¹¹⁷ Ibid.

¹¹⁸ Ibid.

¹¹⁹ Ibid.

¹²⁰ Ibid.

¹²¹ Ibid.

¹²² Ibid.



2.4.2.3. *Biased societal views and cultural norms*

Another factor that poses challenges for women founders in MENA is manifested in societal expectations, following the lack of visibility and role models. The Gender Gap in Startup Investment report confirms these societal biases, where it states that the prevailing stereotypes in the region suggest that women are less credible and capable compared to men, which fact adds another impediment for women starting their own businesses.¹²³ Sociocultural perceptions and attitudes regarding the roles and abilities of women have hindered their ability to initiate and expand businesses.¹²⁴ This is because women entrepreneurs are sometimes subject to perceptions of being less credible and capable compared to men.¹²⁵

These societal biases are crystallized when we examine the status of female entrepreneurship in the MENA region.¹²⁶ Despite evidence indicating that companies with gender diversity exhibit higher productivity, the representation of women in managerial and ownership positions in the MENA region remains disproportionately low. Reports indicate that less than 2 percent of employed women in the region hold positions as employers, and only 4 percent of firms have majority ownership by women, which is lower than any other region. Research highlights that firms owned by women tend to demonstrate higher levels of female employment, including in top management roles.¹²⁷ Another struggle that women in the MENA region have to deal with is their low representation in managerial positions, where firms with female top managers constitute only 6 percent versus 18 percent globally.¹²⁸ Thus, discrimination in occupying managerial and high level positions adds another factor perpetuating the gender gap in the region.¹²⁹

In the MENA region there are preconceived gender roles and gender stereotypes that are reflected also in

the types of businesses and sectors that women operate in.¹³⁰ Women entrepreneurs in the region are more active than men in three industry sectors; the Wholesale/Retail sector, Manufacturing and Transport, and finally Government, Health, Education & Social Services.¹³¹ Surprisingly, women are almost in parity to males in the ICT sector, yet they represent significantly lower shares than men in Agriculture, Forestry & Mining, Financial, Professional, Administrative & Consumer Services sectors.¹³²

While it might seem counterintuitive to observe women representing a higher share compared to men in the Manufacturing and Transport sector yet particularly in the private sector, MENA women represent a significant share within these industries. For instance, in Tunisia 26 percent of women are employed in the manufacturing sector. The share is significant probably because women are over-represented in low-skilled and low-paying sectors such as the textile sector.

2.4.2.4. *Mapping the legal and regulatory landscape of the MENA region*

It has been noted that care and social protection policies play a crucial role in ensuring the safety and well-being of women, as well as creating favorable conditions for their engagement in the labor market and the transformation of gender norms.¹³³ The legal landscape in the MENA region presents subtle obstacles that impede female entrepreneurship.¹³⁴ Women continue to encounter significant challenges, such as gender pay gaps, persistent harassment, and discriminatory practices during the hiring process.¹³⁵

These challenges become evident through the difficulty female entrepreneurs face in raising or posting of collaterals and their limited access to assets.¹³⁶ These factors reinforce existing inequalities and hinder women's entrepreneurial

¹²³ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

¹²⁴ Ibid.

¹²⁵ Ibid.

¹²⁶ World Bank Group (WBG). "RENEW MENA." 2022.

¹²⁷ Ibid.

¹²⁸ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

¹²⁹ Ibid.

¹³⁰ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

¹³¹ Ibid.

¹³² Ibid.

¹³³ International Labour Organization (ILO). (2022). Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice.

¹³⁴ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

¹³⁵ Ibid.

¹³⁶ Ibid.



pursuits.¹³⁷ In 2017, the MENA region had a gender gap in access to finance equivalent to 18 percent, the highest gap worldwide, according to Findex. Accordingly, the lack of access to funding from formal financial institutions represents a major barrier for women entrepreneurs in the region.¹³⁸ For instance, in some MENA countries, despite men and women legally having equal financial rights, such as the rights to opening a bank account or obtaining credit from formal financial institutions, women-specific financial challenges still apply and negatively impact female entrepreneurs.¹³⁹

That being said, the rate of active formal savings among women is lowest in MENA, 4 percent of urban women. Additionally, with regards to SMEs access to loans among women-owned formal SMEs is also lowest in the region standing at less than 6 percent. This is attributed to the lack of property rights due to customary laws and cultural norms where women are prohibited from exercising their legal property rights through social pressure and threats. Accessing loans becomes a more critical issue for female entrepreneurs in the MENA region where relative to their male counterparts; female SME owners encounter more constraints, including legal and financial ones. For instance, the husband's co-signature serves as a precondition for women to obtain loans in some MENA countries. In addition to this, a survey of women entrepreneurs in five MENA region countries showed the difficulties that women faced in obtaining a loan included high interest rates, collateral requirements, lack of track record, and complexity of the application process. This is exacerbated by women's lack of accessibility to their own assets, especially land which undermines their ability to fulfill bank collateral requirements. Furthermore, guardianship laws still exist in some MENA countries undermining women's autonomy and their freedom to manage their own assets even when they have access to them. Even when property rights are at best guaranteed by the law, they are still undermined by other laws limiting women's property rights in their own selves.¹⁴⁰ Although several countries

in the region started implementing legal reforms where they have adopted several amendments to discriminatory laws, mere legal changes still remain insufficient.¹⁴¹ Efficient implementation of laws is crucial to address this underlying issue, which is manifested in the prevailing biased societal mindsets and attitudes towards women.¹⁴² Inequality in land inheritance is yet another factor that reinforces the gender gap in the region. Women own an insignificant portion of land relative to men, indicating the dominance of men in asset ownership.¹⁴³ In the MENA region, women own land that is both smaller in size and of lower quality compared to men. This discrepancy is significant because it represents only 5 percent of the total land ownership, highlighting it as one of the major legal obstacles hindering women's economic empowerment in the region.¹⁴⁴

According to the 2018 Women, Business, and Law Report, equality in access to inheritance is linked to enhancing the financial and educational status of women.¹⁴⁵ Hence, the ownership of property by women challenges rigid gender norms and failing to address inheritance issues in the MENA region has the potential to undermine progress in promoting female empowerment across various domains, particularly in the economic sphere. The majority of women in MENA countries face challenges when it comes to their rights to inheritance, as they are usually expected and pressured to relinquish their inheritance in favor of preserving the family name.¹⁴⁶ Women generally feel the need to preserve the family ties and hence are reluctant to claim their rights in court so as to avoid damaging the family relationships since it can place them in a vulnerable position.¹⁴⁷ Additionally, in the majority of MENA region countries the general rule in the family law is that female heirs are entitled to only half the share to which men are entitled. These rules were initially imposed given that men were deemed financially responsible to provide for their families, while women were not obliged to do so. Nowadays, this rule no longer holds where women

¹³⁷ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

¹³⁸ Abdel Fattah, A., El-Din, S., & El-Nakla, N. (2021). Women's property rights in the MENA region: An overview. *Journal of International Women's Studies*, 22(1), 1-16.

¹³⁹ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

¹⁴⁰ Abdel Fattah, A., El-Din, S., & El-Nakla, N. (2021). Women's property rights in the MENA region: An overview. *Journal of International Women's Studies*, 22(1), 1-16.

¹⁴¹ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

¹⁴² Ibid.

¹⁴³ Ibid.

¹⁴⁴ Ibid.

¹⁴⁵ Ibid.

¹⁴⁶ Ibid.

¹⁴⁷ Prizzon, A., Zarrouk, M., & El-Haddad, N. (2020). Changing laws and breaking barriers for women's economic empowerment in Egypt, Jordan, Morocco and Tunisia. OECD.



contribute significantly to the family income.¹⁴⁸

2.4.2.5. Unleashing women's entrepreneurial potentials: examining self-perception as an impediment to aspirations, intentions, and business initiation in the region

According to the GEM Report, businesses are divided into three main stages; nascent activity, early-stage businesses and established businesses.¹⁴⁹ The report states that.. “In most countries in this region, women appear to have more difficulty translating high intentions into new businesses”.¹⁵⁰ Evidence in the region suggests that men are more active than women throughout the entrepreneurial process.¹⁵¹ The results display a sharp decline as we move across the three stages, respectively, with a sharper decline for females in comparison to males. This again demonstrates the reinforcing gender divide, where across these stages; one in three women reported startup intentions, followed by one in ten reporting nascent activity, one in twenty reporting early-stage business, and finally 3.2 percent for established businesses.¹⁵² This gender divide is also reflected in the female-male ratio which significantly declines from 0.78 to 0.44 across startup intentions and established businesses.¹⁵³

Entrepreneurial aspirations decline among women in all countries, with the exception of Morocco and Qatar.¹⁵⁴ Additionally, gender disparities in entrepreneurial ambitions increased in all countries except Morocco.¹⁵⁵ Furthermore, women who were in the early stages of entrepreneurship displayed a more positive outlook regarding the effectiveness of government measures in response to the pandemic compared to established women business owners. It is noteworthy that both of these groups of women were approximately one-third less likely than their male counterparts to agree with the

effectiveness of their government's response.¹⁵⁶ Women in the MENA region expressing entrepreneurship intentions does not necessarily translate into them becoming an entrepreneur. According to the 2020/21 GEM report, MENA is characterized by having the highest rate of women's entrepreneurial intentions worldwide. That being said, the number of early-stage entrepreneurs is lower than those expressing entrepreneurship intentions, where the former stands at only 70 percent.¹⁵⁷ While entrepreneurial intention rates for women are dynamic, startup activity rates remained fairly stable on average in MENA marked by a slight decline from 9.8 percent to 9.4 percent between 2019 and 2021. The female-male ratio for startup activity also displays a very slight reduction falling from 0.69 to 0.68.¹⁵⁸

Women in the region have a lower probability of initiating a business compared to men across all countries in the region with Morocco being an exception.¹⁵⁹ This is reflected in a considerable gender gap of 28 points (0.72 female-male ratio) where the rate of start-up activities for women is only 12 percent making it slightly above the global average.¹⁶⁰ Furthermore, women in the region stated different motives for starting a business and even though the reported rates for women varied considerably across different countries, this section conveys responses on the regional level and in the upcoming country analysis section we will delve deeper into country specific responses. The majority of women in the region stated that job scarcity as their motive behind starting a business; three-quarters reported wealth building, and more than half stated making the world a better place.¹⁶¹

In close proximity to men, more than 75 percent of women in the region perceive entrepreneurship as a good career option, one that is characterized by being a high-status occupation with good media coverage.¹⁶² Yet, the process of carrying out a business start-up is perceived to be harder for women, where they are 12 percent less likely than men

¹⁴⁸ OECD and ILO. (2020). Changing Laws and Breaking Barriers for Women's Economic Empowerment in Egypt, Jordan, Morocco and Tunisia

¹⁴⁹ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

¹⁵⁰ Ibid.

¹⁵¹ Ibid.

¹⁵² Ibid.

¹⁵³ Ibid.

¹⁵⁴ Ibid.

¹⁵⁵ Ibid.

¹⁵⁶ Ibid.

¹⁵⁷ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. “Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia.” Report. Wilson Center, 2023.

¹⁵⁸ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

¹⁵⁹ Ibid.

¹⁶⁰ Ibid.

¹⁶¹ Ibid.

¹⁶² Ibid.



to see business startups as easy to do and 11 percent less likely than men on average to report finding new business opportunities in the past six months.¹⁶³ Also, despite women possessing favorable entrepreneurial skills when compared to men, yet they seem to struggle when it comes to recognizing business opportunities.¹⁶⁴ Again this differs considerably across different countries in the region on the regional level however women are almost one-fifth less likely than men to report startup skills. Another area in which the region seems to be lagging behind is networking, representing the largest gender on a global scale when it comes to knowing an entrepreneur.¹⁶⁵

Other factors impacting business startup include connection to other entrepreneurs which serves as an important element for business knowledge.¹⁶⁶ MENA has the largest gender gap globally when with regards to the likelihood of knowing at least one entrepreneur, where this likelihood is 44.3 percent for women compared to 55.5 percent for men.¹⁶⁷ On the one hand, more than half the women in the region reported possessing the skills to commence a business and no fear of failure.¹⁶⁸ On the other hand, they were almost one-fifth less likely than men to report startup skills and generally they are less likely than men to report having the skills to start a business in all countries.¹⁶⁹

2.5. Reflections from other countries

Women's occupational choices seem to be more limited, leading to a female concentration in a smaller number of subsectors. According to Bardasi's (2008) analysis of the Nigeria Enterprise Surveys conducted by the World Bank, more than 85 percent of women entrepreneurs, compared to 54.7 percent of men entrepreneurs, operate within only four sectors: food manufacturing, garment manufacturing, retail, and hotels/restaurants. Nonetheless, these sectors and the specific activities in which women are involved could greatly benefit

¹⁶³ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

¹⁶⁴ Ibid.

¹⁶⁵ Ibid.

¹⁶⁶ Ibid.

¹⁶⁷ Ibid.

¹⁶⁸ Ibid.

¹⁶⁹ Ibid.

from energy services, thus creating opportunities for value addition. Consistent with existing global literature on female entrepreneurship, it becomes evident that women are predominantly engaged in specific energy subsectors, particularly those requiring lower initial capital investment, offering lower profitability, utilizing less advanced technology, and employing business models that are more closely connected to the end consumer. This phenomenon primarily arises from the fact that energy accounting systems often fail to account for their unique needs, concerns, and contributions.¹⁷⁰ Additionally factors such as the lack of access to capital and networks, the Lack of skills and training, in addition to cultural barriers all contribute to women entrepreneurs being restricted to the lower value chains of the RE sector.¹⁷¹

The impact of limited access to capital on labor-intensive business models: The Developing Energy Enterprise Project (DEEP), implemented by the Global Village Energy Partnership (GVEP), provides further evidence to support this observed bias. Initiated in 2008, in East Africa, DEEP collaborated with over 800 micro enterprises- primarily operating in the informal sector- with the primary aim of ensuring gender parity. Within this project, it became apparent that female entrepreneurs displayed a notable inclination towards the cook stove and briquette sectors, whereas male entrepreneurs exhibited a disproportionate preference for solar photovoltaic (PV), battery charging, and biogas ventures. GVEP suggests that these disparities can be attributed to the constrained mobility of women, which limits their ability to access information, source products, and engage in sales activities in distant markets. Additionally, the relatively limited access to capital among women leads them to gravitate towards labor-intensive business models.¹⁷² This case study implied that we need to study the feasibility of having more initiatives while also understanding the consumption patterns of female entrepreneurs given the gender-specific constraints that are prevailing in the MENA region.

Women are predominantly employed at the lower parts of the value chain. When women's involvement in the energy sector is primarily concentrated in the lower value chain segments that require limited financial investments, two significant consequences may arise. Firstly, it can lead to an excessive allocation of donor resources towards these small-scale, capital non-intensive ventures, potentially diverting attention and resources away from other areas where women should also be engaged. Secondly, this focus

¹⁷⁰ ECREEE. (2015). Situation Analysis of Energy and Gender Issues.

¹⁷¹ International Renewable Energy Agency, 2019

¹⁷² ECREEE. (2015). Situation Analysis of Energy and Gender Issues.



may obscure the presence of highly capable women from the perspective of small and medium-sized enterprise (SME) lenders, commercial investors, and private equity firms. In comparison to traditional energy sources, the decentralized nature of smaller-scale, off-grid renewable energy systems presents substantial opportunities for women's entrepreneurship, particularly in rural regions. In many rural communities, the extension of grid electrification typically favors spaces predominantly utilized by men, such as courtyards and agricultural areas, thereby depriving women of equal access and benefits. By gaining access to reliable renewable energy sources at home, women can develop or enhance agricultural production, engage in informal home-based enterprises encompassing food production, processing, catering, sewing, and clothing repairs.

Women's occupational choices seem to be more limited, leading to a concentration in a smaller number of subsectors. According to the Nigeria Enterprise Surveys conducted by the World Bank, more than 85 percent of women entrepreneurs, compared to 54.7 percent of men entrepreneurs, operate within only four sectors: food manufacturing, garment manufacturing, retail, and hotels/restaurants, all of which are characterized by low value added. Nonetheless, these sectors and the specific activities in which women are involved could greatly benefit from energy services, thus creating opportunities for value addition. Consistent with existing global literature on female entrepreneurship, it becomes evident that women are predominantly engaged in specific energy subsectors, particularly those requiring lower initial capital investment, offering lower profitability, utilizing less advanced technology, and employing business models that are more closely connected to the end consumer. This phenomenon primarily arises from the fact that energy accounting systems often fail to account for their unique needs, concerns, and contributions.¹⁷³

According to the 2019 IRENA report on Gender Perspective in the Middle East and North Africa (MENA) region, available estimates indicate a significant gender imbalance in the renewable energy workforce, with men outnumbering women, particularly in technical, managerial, and policy-making positions. In order to foster an inclusive energy transition, it is imperative to gather gender-disaggregated data and information, which can help establish targets, monitor progress, and guide decision-making processes.¹⁷⁴

¹⁷³ ECREEE. (2015). Situation Analysis of Energy and Gender Issues.

¹⁷⁴ IRENA. (2019). A Gender Perspective.

Impact of clean energy entrepreneurship in fostering women's agency: In the context of India, the provision of energy-efficient stoves and solar lanterns has been observed to create enhanced income-generation opportunities for women engaged in various activities such as tailoring, tutoring, catering, and home-based piecework. Similarly, preliminary investigations conducted with rural women farmers in Zambia revealed that the introduction of solar egg incubators resulted in improved hatch rates, increased poultry production, diversified income streams, and overall livelihood improvements. Additionally, research associated with Solar Sister's initiatives in Tanzania indicated that 100 percent of female solar entrepreneurs reported a heightened sense of control over household financial decisions and their children's education. Moreover, they experienced an increased level of respect within their communities, with 96 percent also expressing a greater sense of respect within their households. These findings highlight the potential of clean energy entrepreneurship in empowering women, bolstering their agency, self-confidence, and influence in household decision-making processes.¹⁷⁵

Given their key responsibility for managing household energy, women possess a central role in driving the transition towards clean energy through their influence over consumption patterns. Extensive survey research conducted across Ethiopia, Ghana, Zambia, Kenya, and Tanzania, involving 5,000 households, indicates that while women may not hold primary decision-making authority in purchasing household energy technologies, they wield significant influence in determining which specific products to acquire and the corresponding expenditure. Furthermore, evidence suggests that women exhibit a greater propensity towards utilizing renewable energy compared to men. Notably, research conducted in Nigeria and South Asia has revealed that households headed by women are more likely to adopt renewable energy sources than those led by men.¹⁷⁶

Some argue that the reason behind this is because women's accessibility to modern sources of energy can decrease the burden of their domestic work in terms of collecting firewood and it can enable them to access different types of educational, employment and socio-economic opportunities, thus empowering them while

¹⁷⁵ Mapping the Intersection of Women's Economic Empowerment, Care Work and Clean Energy, Dr. Kate Grantham.

¹⁷⁶ Ibid.



promoting gender equality.¹⁷⁷ With that said, a separate study undertaken in 2015 delves into the opportunities and challenges faced by low-income women in India when it comes to engaging with livelihoods within the renewable energy sector. The study unveils that despite the constraints imposed by insufficient purchasing power and lower social standing, which limits access to technology and energy-related employment, there exists significant potential to generate livelihood opportunities for women across various tiers of the energy supply chain. This potential realization is further dependent on the existence of comprehensive socially progressive policies, including state interventions that establish a resilient social welfare framework and easily accessible, top-notch public services, thus enabling women to fully harness the benefits of employment within the energy sector.¹⁷⁸

In addition, there exist promising prospects for women to engage as entrepreneurs across the clean energy value chain. A notable example can be observed in Nigeria, where Solar Sister's Women's Entrepreneurship Project facilitated the transition of 200 formerly internally displaced women into energy entrepreneurship. Within a span of six months, these women successfully marketed and sold over 4,000 renewable energy products, simultaneously raising awareness within their communities regarding the advantages of adopting renewable energy solutions. Similarly, in India, initiatives spearheaded by The Energy Resources Institute (TERI) and the Self Employed Women's Association (SEWA) have provided avenues for women entrepreneurs to generate income through the sale, rental, and repair of solar lanterns and cook stoves.¹⁷⁹

Impact of renewable energy accessibility on women entrepreneurship and shifting societal norms: A study was conducted to assess the potential of small-scale renewable electricity systems (RES) to foster gender equality in entrepreneurial opportunities within sub-Saharan Africa. It sought to examine how gender, electricity, and entrepreneurship are intertwined. The findings of the study conveyed that an enhancement in entrepreneurial activities with the deployment of renewable electricity systems. Gender-related disparities were identified in the ability to initiate and sustain

new product or service offerings. Furthermore, despite influencing entrepreneurs' perceptions of social status, access to RES also resulted in considerable changes in attitudes towards female business ownership, where many women remain engaged in enterprises with limited growth prospects due to prevailing socio-economic and power disparities. This indicates that RES deployment may have substantial impacts on women entrepreneurship within low-income communities and not only through enhancing accessibility to energy sources but also through shifting societal perceptions.¹⁸⁰

The focus on women's energy entrepreneurship in the informal sector and in MSMEs: Existing research primarily focuses on women's involvement in the clean energy sector within larger private and public organizations or development initiatives. There remains a significant knowledge gap regarding the roles and experiences of women as clean energy employees and entrepreneurs operating in the informal sector and Micro, Small, and Medium Enterprises (MSMEs), as well as the specific barriers they encounter. This information becomes particularly crucial in a Low-and Middle-Income Country (LMIC) context, where the proportion of women engaged in informal work and MSMEs is substantial. Addressing these gender data gaps in the clean energy domain is of utmost importance. Collecting gender-disaggregated data and conducting comprehensive case studies can shed light on women's participation as consumers, producers, and decision-makers in the clean energy sector. Such efforts will contribute to the development of evidence-based interventions and inform policy-making processes. This entails obtaining gender-related data at the national, subnational, sectoral, and household levels, including comprehensive insights within various clean energy initiatives.¹⁸¹ In our analysis of the six selected countries, this issue holds significant relevance in the context of the MENA region, considering the considerable number of women engaged in the informal sector. Hence, we need enough inter-sectoral data in order to understand the share of MSMEs in energy consumption/production across the different informal/economic sectors (i.e. informal businesses in agriculture vs. informal business in manufacturing). Additionally, the availability or lack thereof of data on informal sector employment by gender varies across the different MENA countries. To this end we can attain a bird's eye view of how women-led businesses can support energy transition in MENA.

¹⁷⁷ Ogwumike, F. O., & Ozughalu, U. C. (2016). Analysis of energy poverty and its implications for sustainable development in Nigeria. *Environment and Development Economics*, 21(3), 273-290. <https://doi.org/10.1017/S1355770X15000236>

¹⁷⁸ Baruah, B. (2015). Creating opportunities for women in the renewable energy sector: Findings from India.

¹⁷⁹ Mapping the Intersection of Women's Economic Empowerment, Care Work and Clean Energy, Dr. Kate Grantham.

¹⁸⁰ Osunmuyiwa, O. O., & Ahlborg, H. (n.d.). Stimulating competition, diversification, or reinforcing entrepreneurial barriers? Exploring small-scale electricity systems and gender-inclusive entrepreneurship.

¹⁸¹ Mapping the Intersection of Women's Economic Empowerment, Care Work and Clean Energy, Dr. Kate Grantham.



Currently, there exists a conspicuous void of knowledge pertaining to the convergence of clean energy, climate change mitigation, and gender equality, which serves as a hindrance to the achievement of SDGs (Sustainable Development Goals). These objectives include the mitigation of climate change and the promotion of women's advancement. The deficiency in knowledge is particularly pronounced when examining the energy value chain associated with large-scale or utility-scale production of renewable energy, as well as in the context of national initiatives.¹⁸² The aim of this baseline study is to lay down the initial steps for bridging these gaps. The available scientific knowledge on the intersection of gender and energy is inherently limited, with variations observed across different aspects of this field. Notably, there is a greater abundance of information regarding the impacts of electrification and access to clean cooking compared to productive energy uses. Similarly, more scientific studies have been conducted on the broader effects of energy access, while fewer investigations focus specifically on women's roles as business owners and employees within the energy sector. In cases where scientific literature is lacking, it may be necessary to rely on gray literature as a supplementary source of information. In the absence of country-specific or regional studies, insights can be gleaned from analogous examples from diverse geographical contexts. When exploring the enabling environment for gender and energy, the inclusion of key informant interviews assumes significant value, as desk research alone is often inadequate for comprehensively understanding the governing rules, procedures, and relevant stakeholders throughout the region. In particular, the utilization of structured interviews, where uniform sets of questions are posed to every respondent, facilitates cross-country, cross-province, or cross-department comparisons and permits a limited degree of quantitative analysis.¹⁸³

In the following section, we delve into a context-specific analysis of various countries, examining the interplay between key factors and the renewable energy sector. 1) First, we explore the labor market dynamics in order to be able to understand how it influences the overall energy industry. 2) Second, we assess the potential and market structure of renewable energy in each country as well as the different stakeholders involved. 3) Third, we analyze the role of education, focusing on STEM enrollment and

educational attainment as crucial factors for entry and employment in the energy sector. 4) Fourth, we discuss the importance of digitalization as it is a crucial factor in enhancing the efficiency, reliability, and integration of renewable energy sources into the power grid. 5) Finally, we consider the MSME landscape, emphasizing the need to understand the operating environment for MSMEs in each country under study.

3. Uncovering the role of gender in MMEs and clean energy transition: an in-depth country analysis

3.1 Egypt

Egypt is dedicated to achieving sustainability goals and has formulated the Integrated Sustainable Energy Strategy (2035) to diversify its energy sources and ensure a stable supply. The strategy aims to increase the proportion of renewable energy in the overall energy mix, with targets of 20 percent renewable electricity by 2022 and 42 percent by 2035. Challenges persist in ensuring gender parity and equal access to finance and economic opportunities, particularly for women. Women-owned MSMEs face greater obstacles in accessing formal financial capital, limiting their participation in the renewable energy sector. Efforts are being made to address these challenges, including initiatives by the Central Bank of Egypt to promote entrepreneurship and financial inclusion. It is crucial to accelerate sustainable measures and enhance the legal and regulatory framework to support MSMEs, women entrepreneurs inclusion, in order to meet future challenges and promote economic growth.

3.1.1. Labor market outlook

As of 2022, the labor force participation rate in Egypt exhibits dissimilarity between genders, with 15.1 percent of females and 68.3 percent of males engaging in economic activities. The labor force participation rate denotes the proportion of individuals aged 15 years and above who are actively involved in economic pursuits. An analysis of the trend since 1990 reveals a decline in female labor force participation in Egypt. Furthermore, in comparison to the labor force participation observed in the lower-middle income group, Egypt exhibits a greater disparity between men and women in terms of their engagement in the labor force.¹⁸⁴ In 2019, It has been estimated that the proportion of vulnerable employment among women in Egypt is 27.7 percent while it is 15.4 percent for men. While the rate of

¹⁸² Women's Environment & Development Organization (WEDO). (2014, March 24). Women at the Forefront of the Clean Energy Future.

¹⁸³ Clean Energy Center. (2019). Guide for Creating Gender-sensitive Energy Policies.

¹⁸⁴ <https://genderdata.worldbank.org/countries/egypt-arab-rep>



vulnerable employment is lower for men, yet it is higher for women compared to the average rate in the MENA region.¹⁸⁵

Egypt's progress in achieving gender equality, including aspects related to parenthood, mobility, and ownership of assets, is lagging behind its peer countries. Female participation in the labor force remains low, with a rate of 21.9 percent (16.7 percent in Q2 2021), in comparison to 70.9 percent for men. Women also face limited financial inclusion and encounter difficulties in accessing finance, falling below the regional average.¹⁸⁶ Recent reforms aimed at addressing skills' mismatches, strengthening vocational and higher education, and enhancing the involvement of employers in shaping educational curricula are expected to contribute to the improvement of performance among Egyptian students in standardized assessments.¹⁸⁷ The sections below discuss each of these topics and challenges in further details.

Egypt's Economy is characterized by a large informal sector which is mostly populated by women; this will be discussed in further details in the sections below as one of the barriers facing women in MSMEs.

3.1.2. Renewable energy outlook

Egypt is committed to realizing its sustainability goals by formulating medium and long-term strategies in crucial policy domains. One such strategy is Egypt's Integrated Sustainable Energy Strategy (2035) (Egypt 2018). The objective of this strategy, known as ISES (2035), is to diversify the country's energy sources, ensuring a stable and secure energy supply. It aims to achieve this by enhancing energy efficiency and increasing the proportion of renewable energy in the overall energy mix. By the year 2022, the strategy aims to generate 20 percent of Egypt's electricity from renewable sources, with a further goal of reaching a 42 percent share of renewables in power generation by 2035.¹⁸⁸

It is worth noting that, the 2035 Egypt's Integrated Sustainable Energy Strategy does not have a gender dimension. Despite that, some other, yet limited, initiatives encompass this gender aspect. An example would be The Bioenergy for Sustainable Rural

Development Project (BSRD) which is led by the Egyptian Environmental Affairs Agency (EEAA) and funded by the United Nations Development Program (UNDP) and the Global Environmental Facility. This project was launched in 2009 and sought to stimulate entrepreneurship among young graduates while simultaneously supporting women, particularly those located in rural areas.¹⁸⁹

Looking ahead to the period of 2022-2027, Egypt's strategic priorities include promoting a more inclusive economy that supports Egyptian businesses. There is also a focus on accelerating the transition towards a green economy and strengthening Egypt's competitiveness by supporting private sector growth and improving governance. Despite efforts to address gaps in inclusion, challenges persist in ensuring equal access to finance and economic opportunities, particularly for women, and remote or underdeveloped regions. Egypt's growing population adds further strain on already limited resources and public services, such as water, energy, and transportation, exacerbated by the effects of global climate change. Therefore, it is crucial to accelerate the implementation of sustainable measures in these sectors to meet the upcoming challenges.

When considering employment within the energy sector, Egypt represents a prominent energy hub in the MENA region, where there exists a higher likelihood for women to be employed in technical positions within the renewable energy sector compared to nonrenewable energy industries. Analysis of the existing labor force data in Egypt reveals that 11 percent of women are engaged in technical and related professional roles specifically within the renewable sector, while only 6 percent are employed in similar capacities in other energy sectors.¹⁹⁰ In the renewable energy private sector of Egypt, female participation remains below the global average. According to a 2019 global study conducted by the International Renewable Energy Agency (IRENA) on gender and renewable energy, women account for only 32 percent of full-time employees in surveyed organizations within the renewable energy sector.¹⁹¹

To assess the employment implications of developing five technology pathways, a recent study utilized the Clean Energy Employment Assessment Tool.¹⁹² The findings indicated that, depending on various scenarios, the net job

¹⁸⁵ <https://genderdata.worldbank.org/countries/egypt-arab-rep>

¹⁸⁶ EBRD. Egypt Country Strategy - 2022-2027. European Bank for Reconstruction and Development, 2022.

¹⁸⁷ Ibid.

¹⁸⁸ UN (2021). Sustainable Arab Finance Report.

¹⁸⁹ IRENA (2018). Renewable Energy Outlook: Egypt.

¹⁹⁰ World Bank Group (WBG). "RENEW MENA." 2022.

¹⁹¹ Ibid.

¹⁹² Ibid.



growth in Egypt alone during the period 2020-2050 would range from 1.4 to 3.8 million. These estimations lack a gender perspective. Assuming a scenario where women's participation in these jobs aligns with the latest female labor force participation rate of approximately 15 percent in 2020, it can be estimated that the number of women who could participate in Egypt's clean energy transition would range between 0.21 and 0.57 million. It is worth noting that not only do women struggle to occupy certain positions in specific sectors, according to 2019 data, only 7.1 percent of them are employed in senior and middle management. The female share of employment in senior and middle management for Egypt falls in the lowest quintile of all countries for which data is available.¹⁹³

3.1.3. Nurturing education for a sustainable future

According to the 2019 data, the completion rate of lower secondary education in Egypt reveals that 91.2 percent of girls and 85.8 percent of boys have successfully finished this educational level. Notably, the female rate in Egypt surpasses both the Middle East & North Africa region and the lower-middle income group. It is important to emphasize that the lower secondary education completion rate pertains to the proportion of children who have accomplished the final grade of lower secondary education, irrespective of the age at which they have achieved this milestone.

There are also systemic challenges stemming from a doubling of Egypt's population to over a hundred million within a span of four decades. This population growth has placed additional strain on the quality of education and the ability of the system to produce employable youths, particularly in fields that provide social security and upward mobility. Female share of graduates from STEM programs is only available for the year 2016 where only 36.9 percent of women graduated from STEM programs. This also signals a lack of gender disaggregated data to be able to gain a better understanding of the reasons behind the lack of females joining the either MSMEs / REsectors.¹⁹⁴

3.1.4. The era of digitalization: embracing the digital transformation

Leveraging the potential of the information and communication technology (ICT) industry, particularly in offshoring and outsourcing, holds significant promise

for generating employment opportunities in Egypt.¹⁹⁵ The country boasts a dynamic ICT sector that has the potential to become a major provider of tradable services. Although ICT jobs currently constitute a relatively small portion of total employment in Egypt, their share has been steadily increasing, rising from 1.4 percent in 2009 to 1.9 percent in 2021, with an average annual growth rate of 4.1 percent. Notably, ICT jobs within the private sector have experienced even faster growth, averaging 5.5 percent annually. This overall expansion in ICT employment is primarily driven by the increasing prevalence of ICT roles within non-ICT industries, reflecting the ongoing digital transformation of the economy.¹⁹⁶

Promoting sustainable and inclusive growth in ICT employment involves addressing various factors, including high transaction costs, effective social security systems, and the promotion of skills development. The Egyptian government has recognized the significance of the ICT sector and has taken several initiatives to support its growth.¹⁹⁷ This includes identifying ICT as one of the key sectors contributing to economic growth, employment, and exports in the National Structural Reform Program. The government has implemented various reform measures to enhance the ICT sector's contribution to the GDP, accelerate digital transformation, the private sector's capacity to create jobs, foster the development of future-oriented skills, and provide support to small and medium-sized enterprises (SMEs).¹⁹⁸

A focus of policy efforts should also involve sustaining and expanding women's employment opportunities within the ICT sector, as it presents potential for female employment. Over the period from 2009 to 2021, there has been a notable increase in the number of women working in ICT jobs. By 2021, 2.3 percent of employed women were engaged in ICT roles, a substantial rise from 1.0 percent in 2009, equating to an average annual growth rate of 6.4 percent in female ICT employment. Within the private sector, the expansion of women's employment in ICT has been even more pronounced, with an average annual growth rate of 10 percent. In contrast, women's employment in non-ICT jobs has experienced a decline, with an average annual reduction of 1 percent across both public and private sectors, and 1.4 percent in the private sector. Hence, the growth of ICT jobs presents a significant opportunity to enhance women's employment in a labor market

¹⁹⁵ Selwaness, Irene, Ragui Assaad, and Mona El Sayed. "The Promise of Information and Communication Technology (ICT) Jobs in Egypt." 2023.

¹⁹⁶ Ibid.

¹⁹⁷ Ibid.

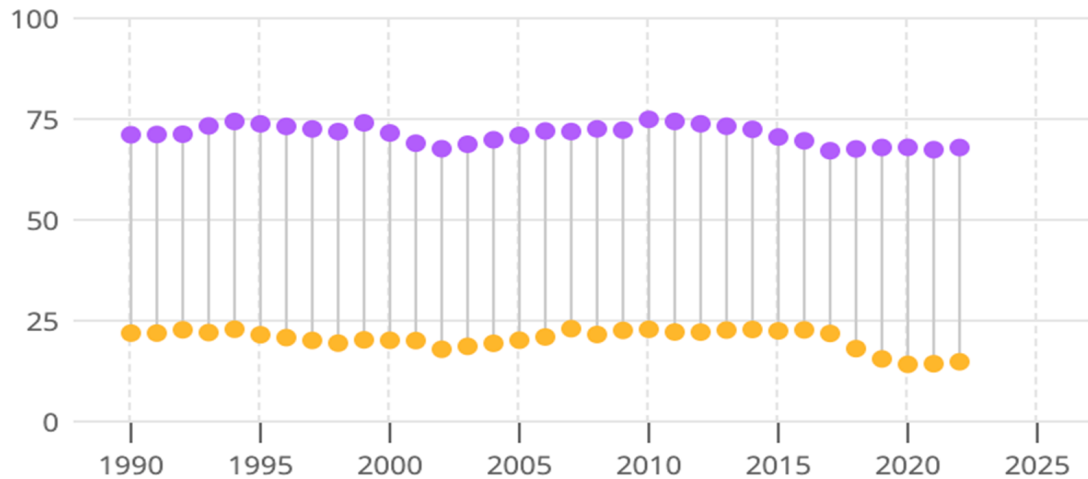
¹⁹⁸ Ibid.

¹⁹³ <https://genderdata.worldbank.org/countries/egypt-arab-rep>

¹⁹⁴ World Bank. (2023). Egypt Gender Landscape.



Figure 2. Labor force participation rate by sex in Egypt



Source: International Labour Organization. "ILO Modeled Estimates and Projections database (ILOEST)" ILOSTAT. Accessed February 21, 2023. <https://ilostat.ilo.org/data/>

that has traditionally presented challenges for their participation.¹⁹⁹ The employment landscape witnessed a notable average annual growth rate, particularly in ICT occupations within non-ICT industries, where the rate stood at 5.0 percent per year. This growth was even more remarkable for women, with an annual growth rate of 7.0 percent, compared to 4.7 percent for men. Similarly, ICT occupations within ICT industries experienced the second highest growth rate, averaging 4.1 percent per year. Women in this sector demonstrated a significantly higher growth rate of 8.3 percent per year, while men experienced a growth rate of 3.1 percent per year.²⁰⁰

ICT jobs in Egypt have experienced growth, outpacing non-ICT jobs by a significant margin and providing an avenue for increased work opportunities for women. According to the data presented in Figure 4, the number of ICT jobs grew at an average annual rate of 4.1 percent, which is three times faster than the average annual growth rate in non-ICT employment, which stood at 1.3 percent. The figure also demonstrates that women's employment in ICT jobs expanded at an average rate of 6.4 percent per year, nearly double the growth rate observed for men's ICT employment, which was 3.6 percent per year. This rapid expansion has resulted in a substantial increase in the likelihood of women working in ICT jobs, with the percentage rising to 2.3 percent of total female employment in 2021, compared to 1.0 percent in 2009. Conversely, women's employment in non-ICT jobs exhibited a steady decline of 1 percent per year on average, highlighting the challenging opportunity landscape for women in the Egyptian labor market.

¹⁹⁹ Ibid.

²⁰⁰ Ibid.

Therefore, ICT jobs could serve as a source of expanding employment opportunities for women in Egypt, offering a more favorable prospect within an otherwise challenging labor market environment.

3.1.5. Exploring MSMEs landscape

In Egypt, the role of MSMEs is vital to the economy, contributing significantly to the Gross Domestic Product (GDP) and employment.²⁰¹ Despite being the backbone of the economy, MSMEs face persistent challenges within the business environment that disproportionately impact women. According to the ILO (2016), Egypt has the lowest percent of women entrepreneurs compared to other countries in the MENA region and Sub-Saharan Africa. The proportion of women at the initial stage of entrepreneurship in Egypt was merely 2 percent. In general, women demonstrate lower entrepreneurial activity compared to men, resulting in Egypt having the highest gender gap among all MENA countries. While governments in the MENA region focus extensively on economic development plans aimed at advancing women's economic integration, there is a lack of thorough research on the synergies, impacts, and ways to enhance these policies to their full potential.

Recently, the Central Bank of Egypt issued a circular on August 16, 2018 defining women-owned businesses. A business is considered women-owned if at least 51 percent of its capital is owned by one or more women, or if 20 percent of its capital is owned by one or more women and a woman holds the position of chief executive officer or

²⁰¹ Noheir Ahmed Khairy. (2019). Women-owned MSMEs and Financial Inclusion in Egypt.



vice president of the chief executive officer.²⁰² According to the, women-owned businesses in Egypt are largely found in the informal sector, often operated individually without any employees. Many of these women establish small-scale businesses, particularly in the agriculture sector, and operate them from home.²⁰³ Women entrepreneurs primarily work in the agriculture sector, accounting for the highest concentration at 58 percent, followed by wholesale and retail trade at 32 percent. The manufacturing sector has the lowest concentration at 3 percent. Women-owned businesses in Egypt are predominantly located in rural areas, representing 82 percent of women business owners. Most women-owned businesses are microenterprises that rely on MFIs as a source of external finance. There are relatively few small-sized women-owned enterprises, and medium-sized women-owned enterprises are scarce.²⁰⁴

According to the World Bank Enterprise Survey in which business owners and top managers in 3075 firms were interviewed from December, 2019 through April, 2020 the percentage of firms with female participation ownership in Egypt is only 5.2 percent compared to a regional average of 17.6 percent. Looking at the percent of firms with majority female ownership, this indicator reveals an even lower percentage with only 2.3 percent of firms compared to female majority, yet the regional average is also quite low marking only 4.1 percent. Surprisingly, Egypt is performing slightly better relative to the percentage of firms with a female top manager with a 6.3 percent almost at par with the regional average (6.2 percent) but still way below the global average of 17.9 percent. Proportion of permanent full-time workers, production, and non-production workers that are female were equivalent to 17.5 percent, 11.3 percent, 13.6 percent, respectively.²⁰⁵

3.1.6. Challenges hindering MSMEs in Egypt: an in-depth analysis

Egypt's informal sector poses challenges for MSMEs, as individuals and households engaged in informal work lack social security coverage, formal contracts, and decent working conditions. Women's economic empowerment is a top priority in Egypt, given that a

²⁰² Noheir Ahmed Khairy. (2019). Women-owned MSMEs and Financial Inclusion in Egypt.

²⁰³ ILO (2016). Egypt Report.

²⁰⁴ Noheir Ahmed Khairy. (2019). Women-owned MSMEs and Financial Inclusion in Egypt.

²⁰⁵ <https://www.enterprisesurveys.org/en/data/exploreeconomies/2020/egypt#gender>

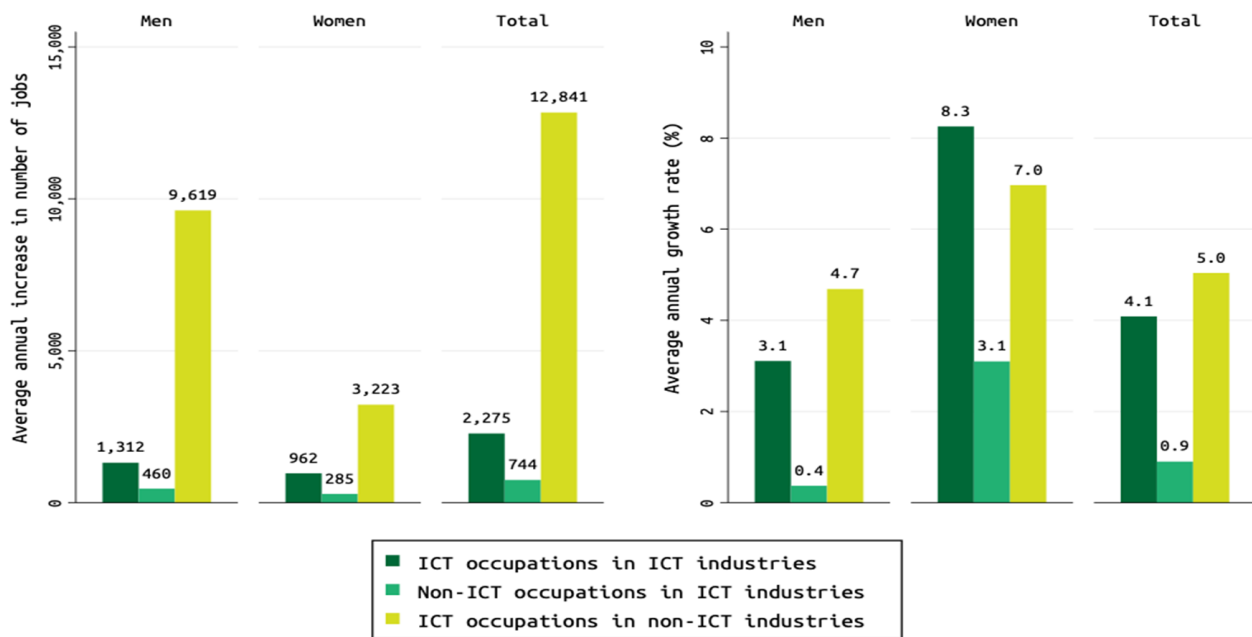
significant percentage of families rely on women for daily expenses, and many women are employed in the informal sector. The integration of the informal sector into the formal economy faces obstacles such as high costs, complex procedures, and tax burdens that drive individuals towards informality. Strict labor market regulations and redundant bureaucratic procedures further hinder formalization. Limited access to formal financial services and the credit gap for women-owned MSMEs exacerbate the challenges faced by businesses in Egypt. Efforts to promote financial inclusion and support MSMEs have been made, but gender-specific issues require greater attention.

3.1.7. The influence of social norms on MSMEs: exploring impacts and implications

The inadequate development of labor market institutions poses a significant obstacle to the economic participation of women. The impact of social networks and economic conditions can surpass these limitations, yielding both positive and negative consequences depending on the specific context. The division of labor based on gender reinforces the belief that certain occupations, such as those involving outdoor labor, heavy lifting, and machinery operation, are more suitable for men, while jobs requiring delicacy and attention to detail are typically populated by women. Empirical evidence supports the notion that certain sectors, particularly the care economy, offer more favorable prospects for women, particularly those who are married. In fact, the care economy employs over one-third of women in the private sector and boasts the highest female representation among all industries. Around half of employed women find themselves in the informal sector, where wages are meager and access to social security is limited or nonexistent. These women often lack formal education, skills, and opportunities for formal employment. Regarding unpaid work, findings from a 2015 Time-Use Survey indicate a significant disparity between genders. Approximately 91 percent of surveyed women reported dedicating time to unpaid household tasks, compared to only 26 percent of men. Furthermore, 27 percent of women reported engaging in unpaid care for family members, while the corresponding figure for men stood at 8 percent. On average, women devote considerably more time than men to such unpaid obligations, estimated to hold a value of EGP 496 billion according to the survey. It is important to note that even when married women enter the labor market, their domestic workload and unpaid care responsibilities do not diminish. This perpetuation of traditional gender roles is influenced by societal norms and entrenched perceptions of masculinity, which continue to assign primary responsibility for child-rearing, housekeeping, and caregiving to women.



Figure 3. The increase in number of jobs (average annual) and growth rate (average annual, percentage) in ICT jobs by type of occupation



Source: Selwaness, Irene, Ragui Assaad, and Mona El Sayed. "The Promise of Information and Communication Technology (ICT) Jobs in Egypt." 2023.

The aforementioned challenges and dynamics in the labor market also extend to the Micro, Small, and Medium Enterprises (MSMEs) sector. Women entrepreneurs operating within the MSME sector often face similar obstacles in terms of limited access to formal employment, gender biases, and the persistence of traditional gender roles. Social and cultural factors that hinder women's economic participation in the broader labor market are often mirrored in the MSME sector, calling for a holistic approach to address these issues, promote gender equality, and empower women entrepreneurs at all levels of economic activity.

3.1.8. Navigating the challenges of informality: implications for MSMEs

Growing attention to the informal sector and women's economic empowerment in Egypt. In Egypt, both local and international organizations, as well as relevant ministries and governmental authorities, have increasingly focused on the role of the "informal sector" in the past two decades.²⁰⁶ Policymakers recognize informality as a significant challenge, given its impact on the Egyptian economy, which is characterized by a substantial and expanding informal sector. Individuals and households engaged in the informal sector face sustainability issues due to the lack of social security

coverage, formal work contracts, and poor working conditions.²⁰⁷ Women's economic empowerment ranks among the top priorities in Egypt. Empowering women does not solely rely on appointing them as governors or ministers; rather, it is achieved by empowering the most vulnerable women who work in the informal sector. By improving their circumstances, the well-being of their families will also improve. Notably, nearly 34 percent of Egyptian families depend on women for their daily living expenses, with this figure rising to 88 percent in impoverished areas and slums, according to the Central Agency for Public Mobilization and Statistics (CAPMAS).²⁰⁸ Furthermore, 46 percent of working women are employed in the informal sector, and within this percent, 60 percent are engaged in unpaid work, such as household chores performed by women without receiving compensation. CAPMAS reports that as of 2017, there are 3.3 million female-headed households, accounting for 14 percent of all families. Additionally, 59.1 percent of women are illiterate and often work in the informal sector.²⁰⁹

Drawing on insights from recipients of microcredit initiatives in Egypt, Drolet (2011) asserts that these programs aid women in addressing their immediate practical requirements. In the broader context, they do not generate lasting empowerment for women due to their

²⁰⁷ Ibid.

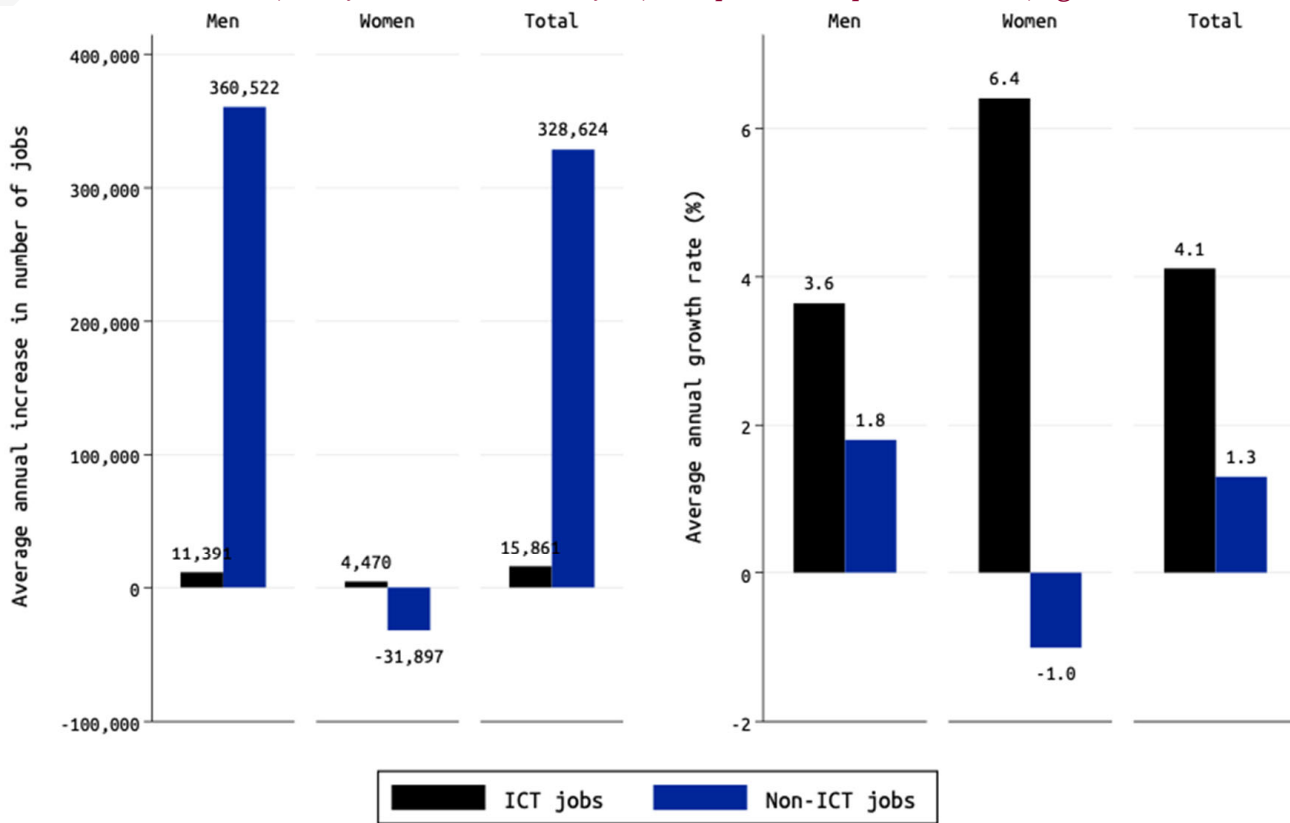
²⁰⁸ Ibid.

²⁰⁹ Ibid.

²⁰⁶ Abo Shady, Radwa Samy, and Ghada Barsoum. "Echoing the Passive Voice: Women in the Informal Small Business Sector: Challenges and Solutions." 2018.



Figure 4. The increase in number of jobs (average annual) and growth rate (average annual, percentage) by sex between 2009 and 2021, ICT jobs versus non-ICT jobs, both public and private sectors, ages 15-64



Source: Selwaness, Irene, Ragui Assaad, and Mona El Sayed. “The Promise of Information and Communication Technology (ICT) Jobs in Egypt.” 2023.

focus on informal economic activities, which cannot serve as a substitute for formal employment. The women observed in Drolet’s research noted that the income generated through these programs did not result in any shifts in their roles or authority within their households. Additionally, they did not receive acknowledgment or support for their unpaid caregiving responsibilities.²¹⁰

Challenges hindering formalization of the informal sector and implications on the economy. The integration of the informal sector into the formal economy faces numerous obstacles, resulting in the expansion of the informal economy. These challenges encompass the high costs and complex procedures associated with establishing businesses, operating effectively, and accessing funding.²¹¹ Tax burden serves as a significant factor driving individuals toward the informal sector, whether due to high income tax rates or elevated rates

of indirect taxes.²¹² There exists a correlation between the tax burden and the proportion of the informal economy to the GDP. In Egypt, for instance, the informal economy contributes approximately 40 percent to the GDP due to a tax burden exceeding 25 percent. This, in addition to a myriad of other factors including; business registration being time consuming, lower cost of informal businesses since employees’ social insurance, no need to apply labor laws on employees, incentivize the prevalence of the informal economy as it makes formalization more desirable in terms of profit and time.²¹³ Governments should also address tax avoidance practices and establish limits on shareholder returns and executive remuneration. Moreover, Egypt’s regulatory and institutional framework within the formal labor market restricts new entrants from finding employment or engaging in formal sector activities.²¹⁴

²¹⁰ Rosalind Ragetlie, Dina Najjar, Bipasha Baruah , “Paying “Lip Service” to Gender Equality: The Hollow Implementation of Gender Mainstreaming in Jordan “. Civil Society Knowledge Center, Lebanon Support, November, 2021.

²¹¹ Abo Shady, Radwa Samy, and Ghada Barsoum. “Echoing the Passive Voice: Women in the Informal Small Business Sector: Challenges and Solutions.” 2018.

²¹² Ibid.

²¹³ Rizk, N., Soliman, A., & Galal, A. (2016). Addressing informality in Egypt. African Development Bank, Working Paper No. 2327.

²¹⁴ Abo Shady, Radwa Samy, and Ghada Barsoum. “Echoing the Passive Voice: Women in the Informal Small Business Sector: Challenges and Solutions.” 2018.



Similarly, stringent labor market regulations contribute to the expansion of the informal economy by reducing labor demand and diminishing workers' take-home pay. Business owners also face challenges related to redundant procedures at various levels, where official documents might be required multiple times from different government agencies. Obtaining approvals often necessitates engaging with multiple government bodies and ministries. According to the Doing Business report of 2018, Egypt is ranked 128th, with a business startup process taking 14 days. While this position is relatively favorable compared to many Middle Eastern countries with an average of 18.6 days, there is still room for improvement in expediting procedures.²¹⁵

The implementation of such laws and regulations is both time-consuming and expensive, ultimately leading to a shift towards informal economic activities. El Mahdi suggests that enterprises may require nearly a year to navigate through these procedures, posing a significant financial burden for small entrepreneurs. On a macroeconomic level, small businesses face challenging conditions, particularly in the aftermath of rising prices and currency devaluation, which have escalated living costs and business expenses. Consequently, many small businesses are compelled to operate informally, lacking the resources and prospects for future growth.²¹⁶

The country's economic situation and the effects of economic liberalization have positively influenced women's inclination to enter the workforce and contribute to family expenses, shifting away from traditional homemaking roles. This phenomenon can also have adverse consequences for women seeking formal employment. With a surplus supply of labor and limited demand for job opportunities, the costs associated with providing women-specific facilities such as nurseries increase. As a result, women may opt to remain in the informal sector. Hence, the time-consuming and costly nature of these laws and regulations, compounded by challenging economic conditions and gender dynamics, fosters a preference for informal economic activities.²¹⁷

Multiple factors contribute to the prevalence of women working in the informal sector, including limited alternatives, inadequate education levels, insufficient skills in areas such as marketing, feasibility studies, financial knowledge, and understanding of market needs, restricted access to raw materials, and cultural

norms.²¹⁸ Furthermore, the flexibility of working from home, attending to family care responsibilities, and finding personal satisfaction through independence and income generation have influenced women's choice to engage in informal sector activities. Additionally, high tax burdens, limited benefits associated with formal employment, and a lack of future prospects may discourage women from pursuing formal employment opportunities. Societal and traditional factors also play a role, as observed in certain governorates such as Damietta, where women are encouraged to assume responsibility while their husbands are abroad. There may also be instances of religious and racial biases within the society, favoring certain groups over others, such as Muslim workers or Egyptian nationals over refugees. Additionally, people often prefer familiar products and established market participants, leading to a lack of support for new entrants. Gender discrimination can further hinder women's access to resources, as men may receive more support from their peers, including assistance with repaying loans, while women may face doubts regarding their ability to sustain employment and repay debts. The World Bank's 2012 report emphasized the importance of creating an enabling environment that balances women's commitments and job responsibilities.²¹⁹ According to Krafft 2022, the findings of the qualitative and quantitative research demonstrate that informal workers sometimes prefer informal work over formal employment due to factors such as flexible working hours and the potential for higher salaries.²²⁰ Moreover, a noteworthy observation is the lack of legal awareness among informal workers regarding their eligibility to participate in the state's social insurance system. Similarly, employers may also favor informal work due to its relatively lower cost compared to formal employment. The impact of the informal economy on women differs, with some women expressing concerns about potential loss of state-provided social insurance programs if they were to accept formal employment. This concern is echoed by employers in the qualitative study, who note that some women opt for precarious employment to safeguard their access to social assistance programs like Takaful and Karama. The research also highlights the unique challenges faced by women in the informal sector and underscores the significance of legal awareness among informal workers regarding their participation in the state's social insurance system. Additionally, poor working conditions pose a substantial obstacle, particularly when compounded by employers' concerns regarding high turnover rates.

²¹⁵ Ibid.

²¹⁶ Ibid.

²¹⁷ Ibid.

²¹⁸ Ibid.

²¹⁹ Ibid.

²²⁰ Krafft, Caroline. "Informality, Irregularity, and The Gig Economy in Egypt." 2022.



3.1.9. Examining the legal and regulatory landscape for MSMEs

Promoting financial inclusion for MSMEs requires a supportive legal and regulatory framework. Regulatory and supervisory authorities play a crucial role in creating an environment that facilitates the growth of SME finance. These authorities are responsible for enacting laws specifically aimed at enhancing and supporting the development of SMEs across all sectors of the economy. Such laws typically classify and define SMEs based on their size, distinguishing them as micro, small, or medium enterprises.

As per the Personal Status Law in Egypt, women are accorded equal property rights as men. They possess the legal entitlement to single-handedly own and exercise control over their properties. Upon reaching the age of 21, women possess the full autonomy to manage their properties on an equitable basis with men, devoid of any gender-based discrimination. Despite this legal framework, the prevalence of female land ownership remains remarkably low. Women encounter disparities concerning land possession in Egypt. Similar to other regions, the distribution of assets underscores that men have greater ownership and supervisory authority over land and housing, while women commonly possess and manage assets like livestock and convertible resources such as gold. Men often underestimate women's inclination towards immovable assets like land and housing. Additionally, even when women do acquire land, they frequently exhibit reluctance or unwillingness to secure equal inheritance rights for their daughters in parallel with their sons.²²¹ In 2000, the Egyptian Government estimated that 96 percent of landowners were men, while the Organization for Economic Co-operation and Development (OECD) documented that only 8.2 percent of agricultural landholders were female in 2006. This gendered imbalance in land ownership places women entrepreneurs at a disadvantage within credit markets, impacting their capacity to use property and assets as collateral for securing loans.²²²

The Central Bank of Egypt is actively promoting entrepreneurship through a range of initiatives. These initiatives include providing preferential loans to MSMEs, directing banks to allocate 20 percent of their lending portfolios to support this sector, and

establishing specialized SME units to cater to the needs of these enterprises. Additionally, specific programs under this initiative focus on empowering women and young entrepreneurs to develop their businesses. In early 2020, the CBE instructed banks to establish financial inclusion departments and submit their three- to five-year financial inclusion strategies. The aim is to expand outreach in various governorates and remote areas, as well as to create new financial services and products tailored to the requirements of the unbanked population, particularly women.²²³

While the Central Bank of Egypt (CBE) and the Financial Regulatory Authority (FRA) have implemented various interventions to address financial inclusion within the MSME sector, most of these initiatives do not adequately consider gender-specific issues. A considerable number of MSMEs in Egypt face issues concerning their access to formal financial services, leading them to rely on the informal market. Moreover, women experience greater exclusion from the formal financial system. Nasr's study in 2011 also acknowledges that while access to finance poses challenges for both men and women in business, women encounter more constraints, particularly in the small and medium enterprise sectors. Women specifically face stricter limitations in terms of cost and access to financial services, prompting their active participation in the informal credit market and seeking loans from friends and family.

Specialized financial institutions in Egypt that are state-owned include the Egyptian National Post Office (ENPO), the Micro, Small and Medium Enterprise Development Agency (MSMEDA), and the Agriculture Bank of Egypt (formerly known as the ex-Principal Bank for Development and Agricultural Credit - PBDAC). The ENPO is relied upon by a significant portion of the low-income population for savings, with over 25 million savings accounts. MSMEDA provides loans to micro, small, and medium enterprises (MSMEs) either directly or indirectly through Microfinance Institutions (MFIs), banks, and NGOs. The Agriculture Bank of Egypt, a public bank specializing in agriculture, primarily focuses on rural areas.²²⁴ For instance, during 2022, MESMEDA provided financial services to empower women where they pumped a total of approximately 2.3 billion EGP for small and micro projects out of a total of 6.8 billion EGP dedicated for MSMEs.²²⁵

²²¹ Dina Najjar, Bipasha Baruah & Aman El Garhi (2020) Gender and Asset Ownership in the Old and New Lands of Egypt, *Feminist Economics*, 26:3, 119-143, DOI: 10.1080/13545701.2020.1743877

²²² International Labour Organization (ILO). (2019). *Women's entrepreneurship development assessment: Egypt*. Geneva: ILO. ISBN 978-92-2-131159-0.

²²³ Noheir Ahmed Khairy. (2019). *Women-owned MSMEs and Financial Inclusion in Egypt*.

²²⁴ Ibid.

²²⁵ MESMEDA. *Women in MSMEs Report*. 2022



3.1.10. Enhancing access to credit for MSMEs: challenges and opportunities

In line with the above section, the 2017 Global Entrepreneurial Monitor (GEM) report stated that women-led businesses globally have a lower likelihood of continuity compared to businesses led by men. One of the contributing factors to this disparity is limited access to funding. A World Bank study conducted in 2018 revealed that in Egypt, women have access to less than 10 percent of the available commercial banking finance. Moreover, a recent report by the International Finance Corporation (IFC) calculated the credit gap specifically for women entrepreneurs in Egypt and found that women-owned MSMEs account for a significant portion of the overall credit gap. The report also highlighted that women-owned MSMEs generally have minimal interaction with financial institutions, with less than 10 percent of them having dedicated business bank accounts.²²⁶

Access to finance for women remains an area requiring government intervention, as women are a primary target group for microfinance but lack support in other aspects of the business environment. One of the primary challenges they encounter is limited access to formal financial capital at affordable interest rates, often leading them to rely on alternative sources such as personal savings and informal financial services. Women-owned MSMEs, in particular, face even greater obstacles in terms of financial accessibility and exclusion from the formal financial market.²²⁷ A study revealed that while women-owned MSMEs face challenges similar to their male-owned counterparts, the severity of these challenges is more pronounced due to their ownership by women. Specific constraints faced by women include banks' risk aversion, a lack of financial services and products tailored to women-owned MSMEs, limited collateral options, and low levels of financial awareness and literacy.²²⁸

Hence, these restrictions in terms of the lack of availability of financial support strongly discourage MSMEs from actively participating in renewable energy initiatives where schemes as commercial interest rates offered to MSMEs, particularly in the renewable energy market, are considerably high at 18 percent.²²⁹ Although

²²⁶ IRENA 2018 Renewable energy outlook: Egypt

²²⁷ Noheir Ahmed Khairy. (2019). Women-owned MSMEs and Financial Inclusion in Egypt.

²²⁸ Ibid.

²²⁹ IRENA 2018 Renewable energy outlook: Egypt

multilateral or bilateral development institutions provide financing schemes with lower interest rates, these are not effectively utilized by commercial banks. Furthermore, these schemes primarily target large-scale renewable energy projects and are vulnerable to fluctuations in international currency exchange rates. The instability of exchange rates poses challenges in securing substantial funding from international financing institutions, as it restricts the Central Bank of Egypt's capacity to meet the required hard-currency reserves. Efforts have been made to promote socio-economic inclusion as well as for remote and rural regions. Steps have also been taken to enhance the operations and governance of state-owned enterprises (SOEs), including the publication of financial statements, and to improve the civil service. Notable progress has been achieved in advancing the green agenda, such as the implementation of Egypt's Integrated Sustainable Energy Strategy until 2035 and the introduction of innovative financing solutions like the issuance of the first green bond in Africa and the Middle East. In spite of recent investments in developing human capital, significant gaps in inclusion persist for women and across different regions in terms of access to finance and services.²³⁰

Despite the Egyptian government's emphasis on MSMEs, gender-related challenges have often been overlooked. The ILO (2016) highlights significant obstacles faced by women in Egypt, including limited access to financial services. In fact, a survey conducted by the MENA Business Women's Network indicates that 99 percent of Egyptian women business owners perceive credit conditions as excessively rigid and costly.²³¹ Supporting women's businesses can yield positive outcomes for the entire country, including gender equality, job creation, economic growth, and poverty reduction. Unfortunately, despite the significant contributions of women-owned businesses, gender gaps persist in entrepreneurial activities and business ownership.

3.1.11. Conclusion

In conclusion, Egypt faces significant gender disparities in labor force participation, with a low rate of female engagement compared to males. Efforts to achieve gender equality and promote inclusivity in the economy are scarce. Additionally, Egypt's transition towards a greener and more sustainable energy sector is underway, but gender considerations are not fully integrated into the country's sustainable energy strategy. The ICT sector shows promise for generating employment opportunities,

²³⁰ EBRD. Egypt Country Strategy - 2022-2027. European Bank for Reconstruction and Development, 2022.

²³¹ Ibid.



especially for women, although systemic challenges and limited access to finance persist. Furthermore, MSMEs play a vital role in Egypt's economy, but they face barriers, including a lack of formalization and limited access to financial services, which disproportionately affect women who are employed in larger shares in the informal economy. Addressing these challenges and promoting gender equality will be crucial for Egypt's sustainable and inclusive growth.

The current state of women's employment in the renewable energy sector in Egypt is marked by a dearth of up-to-date data. Our knowledge is limited to the 2018 IRENA report, which regrettably fails to address women's employment or inclusion in the energy sector, let alone examining their roles as entrepreneurs and their contribution thereof to the RE sector. Similarly, the available education data pertaining to women in Egypt is somewhat outdated, with the latest information on STEM education dating back to 2018. Furthermore, women entrepreneurs predominantly occupy the informal sector, a concerning trend compounded by the lack of recent data, as evidenced by the 2017 CAPMAS report. Furthermore, there is a notable lack of literature addressing financial inclusion in Egypt, particularly regarding the financial inclusion of women-owned MSMEs.²³² These gaps in data underscore the pressing need for comprehensive and current information to inform effective policies and initiatives aimed at empowering women in the renewable energy sector and beyond. Data in Egypt regarding having Borrowed to start, operate, or expand a farm or business (percent 15+) dates back to 2017 and this is an important indicator to be able to evaluate barriers that women encounter in the MSMEs and financial sector.

3.2. Jordan

According to the findings of the Global Entrepreneurship Monitor, there are multiple determinants that shape women's choices regarding entrepreneurship in Jordan. These determinants encompass a range of factors, including increased domestic obligations, lower educational attainment, limited representation of female role models in the business realm, restricted access to business networks within their communities, inadequate financial resources and assets, lower societal standing, and cultural norms that discourage assertiveness among women. Moreover, entrepreneurial perception is subject to various influences, such as the availability of networking prospects, a supportive environment, the

²³² Noheir Ahmed Khairy. (2019). Women-owned MSMEs and Financial Inclusion in Egypt.

possession of requisite skills, and apprehension about the possibility of failure.²³³

Many challenges constrain the Jordanian economy including but not limited to experiencing economic shocks equivalent to around 44 percent of GDP over the past decade, the "Arab Spring," the Syrian conflict, and the emergence of ISIS, along with trade disruption and refugee flows, and a relatively high unemployment rate. All of these factors posed a severe threat to the Jordanian economy, which was reflected in soaring inflation, lower annual growth rate, a growth in the informal sector, an increase in imports and a decrease in exports.²³⁴ All of these outcomes negatively impacted the sustainability of Jordan's energy sector while disproportionately impacting women. Gender discrepancy is an entrenched trait that characterizes the Jordanian economy, an example of this is manifested in the rate of entrepreneurship in Jordan remains the least favorable compared to other countries in the region. Within the National Adaptation Plans (NAP) of Jordan, gender is recognized as a significant and interconnected issue and this is crucial because climate change affects women and men differently, with these differences being largely influenced by socioeconomic factors. In the subsequent sections we seek to understand the interconnectedness between all these contextual factors in Jordan and their effects on women-led MSMEs and the energy sector. We start off by examining the Jordanian labor market outlook, renewable energy landscape, and then the MSMEs landscape including the myriad challenges that affect women in all these sectors.

3.2.1. Labor market outlook

The unemployment rate among women in Jordan reached a significant 24.1 percent in 2016.²³⁵ In 2019, unemployment in Jordan stood at 19 percent, still significantly high, this excludes foreign labor, with much higher unemployment rates for women. And while recent progress has been made in improving the business climate, yet this has not been translated into higher domestic or foreign investment. Along with the large fiscal deficit in 2018–19 and a government debt equivalent to 99 percent of GDP, it has been argued that boosting the private sector's contributions to productivity is perhaps the only

²³³ JEDO. 2017. "Women Entrepreneurship in Jordan."

²³⁴ Yasser Abdih and Carolin Geginat, The Economic Impact of the Syrian Conflict on Jordan September 30, 2014.

²³⁵ JEDO. 2017. "Women Entrepreneurship in Jordan."



sustainable path to growth for Jordan.²³⁶ In 2022, the labor force participation rate among females in Jordan was 14.7 percent, while among males it reached 62.5 percent. Over the past three decades, there has been an upward trajectory in female labor force participation, indicating progress in this realm. When compared to labor force participation rates within the upper-middle income group, the disparity between men and women is more pronounced in Jordan.²³⁷

When we consider the distribution of Jordanian females aged 15 years and above based on economic activity, it is evident that only 13.2 percent of them are engaged in economic activities. The empirical analysis of the labor market participation among Jordanian women aged 15 years and older reveals noteworthy trends in the public and private sectors. From 2005 to 2015, there was a notable rise in female employment within the public sector.

In 2016, this proportion experienced a decline, contracting from 51.5 percent to 47.4 percent due to a reduction in the employment of females. Conversely, the proportion of women engaged in the private sector declined from 44.8 percent in 2005 to 42.6 percent in 2015, only to witness an upturn to 46.6 percent in 2016. This shift may be attributed to the comparatively favorable working conditions offered to female employees within the public sector. Nevertheless, the Jordanian government implemented certain economic restructuring measures during 2016, resulting in reduced employment opportunities within the public sector, thereby causing a decline in its overall employment share and a simultaneous increase in the share of the private sector.²³⁸ The majority of working women in Jordan are married, representing 50.4 percent of the total employed females, while unmarried females and others make up 49.6 percent. The age group of 25-39 years old represents the highest proportion of unemployed women, accounting for 51.1 percent, followed by 46.4 percent in the age group of 15-24, whereas the lowest share is observed among women aged 40 years and above. This suggests that women may be compelled to participate in the labor force due to necessity, but the high unemployment rate among those aged 25-39 indicates unfavorable working conditions for married women and mothers of young children.

²³⁶ IFC (2021). World Bank Group Country Private Sector Diagnostic: Jordan.

²³⁷ <https://genderdata.worldbank.org/countries/jordan>

²³⁸ JEDO. 2017. "Women Entrepreneurship in Jordan."

The Jordanian labor market is characterized by alarmingly high unemployment rates among the educated, with 76 percent of unemployed women having obtained an education. A majority of these women possess a university degree and express their struggle in finding suitable job opportunities and openings. Their primary job search revolves around the educational sector, human health and social work activities, as well as public administration. The majority of job prospects in these fields are concentrated in the capital city of Amman. Hence, despite 87 percent of women being educated and 15 percent holding university degrees, female participation in economic activities remains low. The preference for these particular activities is heavily influenced by the employment benefits they offer, including maternity leave, social insurance, and medical coverage.²³⁹ The majority of female employment is predominantly concentrated in five key economic sectors, namely education, human health and social work activities, public administration and defense, manufacturing, and wholesale and retail trade.²⁴⁰

Findings from the 2016 Employment and Unemployment Survey reveal that 45.1 percent of inactive women perceive a lack of work opportunities, while 15.4 percent believe that suitable jobs are unavailable to them. The distribution of these perceptions varies across governorates, with a majority of women in Amman, Balqa, and Zarqa considering the absence of suitable jobs, while women in other governorates perceive a lack of job opportunities.²⁴¹

3.2.2. Renewable energy outlook

With regards to the renewable energy sector, Jordan adopted the National Plan for Green Growth (NGGP), spanning from 2017 to 2025, which serves as a comprehensive roadmap towards achieving a higher, sustainable, and greener trajectory of economic development.²⁴² Developed in 2017 by the Ministry of Environment in consultation with stakeholders, it acts as a valuable guide for the formulation of environmentally-friendly projects that align with green investment policies, planning, and implementation. Considering Jordan's limited primary energy sources, increasing energy demands, and reliance on imports, efforts are underway to ensure the long-term security of its energy supply by establishing reliable renewable energy sources. The National Energy Strategy sets ambitious targets to raise

²³⁹ Ibid.

²⁴⁰ Ibid.

²⁴¹ Ibid.

²⁴² UN (2021). Sustainable Arab Finance Report.



the proportion of renewable energy in Jordan's overall energy mix to 6 percent by 2017, 8 percent by 2020, and 9 percent by 2025. Additionally, it aims to enhance reliance on domestic energy sources, aiming for a 25 percent share by 2015 and an even more substantial 39 percent by 2020.

The 2021 IRENA Renewables Readiness Assessment Report in Jordan briefly sheds light on the gender aspect as a key challenge for advancing the renewable energy sector. The report stresses the need for building adequate skills, establishing partnerships, and developing curricula and training opportunities that are equally accessible to men and women.²⁴³ As recent as the report is, the gender aspect was not tackled in detail indicating the need for more research and more data to be able to understand the future needs of the sector and the best ways to be able to integrate women to harness their untapped potential. Nonetheless, Jordan has made progress with regards to the integration of gender considerations into national adaptation plans for climate change where it has prioritized mainstreaming gender in national adaptation plans on climate change. The NAP process was coordinated by the Adaptation Working Group, which specifically analyzed the gender dimensions of climate change and provided guidelines for integrating gender considerations into national climate change policies and adaptation planning. The leaders of this process, many of whom were women, made concerted efforts to ensure a gender-sensitive approach throughout the document.²⁴⁴ Notably, the leaders of this process made dedicated efforts to ensure the development of a document that is sensitive to gender-related concerns. The NAP of Jordan emphasizes the cross-cutting nature of gender, recognizing that the differential impacts of climate change on women and men are largely influenced by socioeconomic factors such as limited access to resources, residing in marginalized areas, and low awareness regarding climate change.²⁴⁵

Within the NAP of Jordan, gender is recognized as a significant and interconnected issue. Climate change affects women and men differently, with these differences largely influenced by socioeconomic factors. Such factors include limited access to resources, residing in marginalized geographical areas, and a lack of awareness about climate change. By highlighting these gender-differentiated impacts, the NAP emphasizes the need

to address these challenges and promote gender equality in the context of climate change adaptation. Jordan has become the first Arab country to address climate change in multiple national strategies, allocating a budget of 2,150,000 Jordanian dinars for this purpose.²⁴⁶ The NAP of Jordan identifies two key obstacles in addressing the intersection of gender and climate change: insufficient collection, analysis, and utilization of sex-disaggregated data, and inadequate sustainable funding for addressing these concerns. To address these challenges, the NAP outlines specific actions, including adopting a gender perspective in planning, prioritizing adaptation options, data collection and accessibility, and monitoring.²⁴⁷ The NAP also incorporates a comprehensive financing and evaluation strategy. Moreover, Jordan has issued the second generation of the Jordanian National Action Plan for implementing United Nations Security Council resolution 1325 on Women, Peace and Security (2022–2025). Notably, outcome 2 of this Action Plan, with a dedicated budget of 2,150,000 Jordanian dinars, focuses specifically on climate change. Jordan serves as an example of mainstreaming climate concerns into various aspects of governance.²⁴⁸

3.2.3. Nurturing education for a sustainable future

According to the 2022 Global Gender Gap Report Jordan's rank is 122 among 146 countries, placing it below Lebanon and Tunisia and above Egypt and Morocco. The index comprises 4 sub-indexes. With regards to the educational attainment Index, Jordan ranks 66 which places it relatively high in comparison to other MENA countries where the next highest ranking country (among the countries under study) within this sub-index is Lebanon which ranks in the 90th place. As for economic participation and opportunities it ranks 125, and it ranks 136 in health and survival as well as political environment.²⁴⁹

When considering the educational attainment of employed versus unemployed women, there seems to be a potential discrepancy between the educational system output and the demands of the labor market, which may contribute to the observed mismatch in employment outcomes.²⁵⁰ This is reflected in the fact that for employed women, 60.3 percent of them hold a bachelor's degree, while 18.1 percent have achieved a high school diploma. Surprisingly, with regards

²⁴⁶ Ibid.

²⁴⁷ Ibid.

²⁴⁸ Ibid.

²⁴⁹ Global Gender Gap Report 2022

²⁵⁰ JEDO. 2017. "Women Entrepreneurship in Jordan."

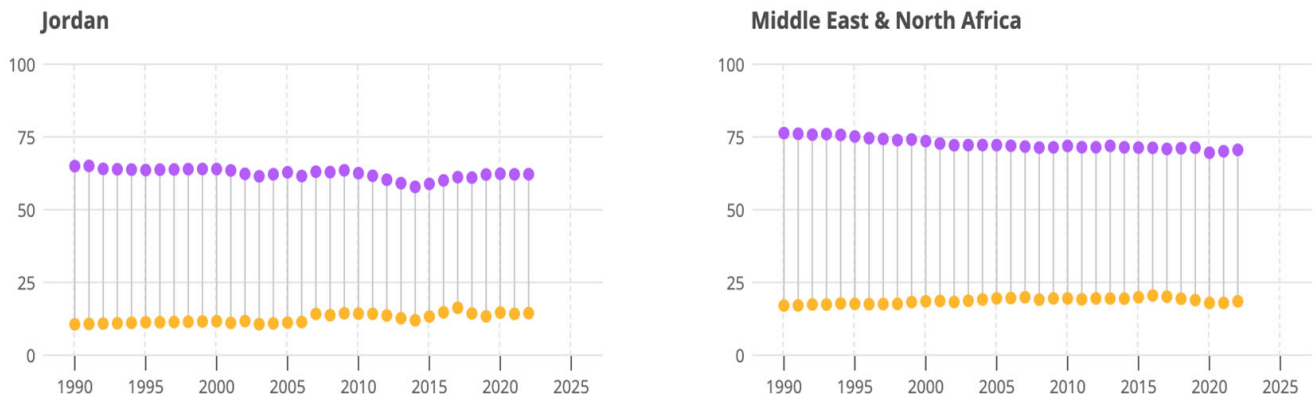
²⁴³ 2021_IRENA_IRENA Renewables Readiness Assessment Report in Jordan

²⁴⁴ ESCWA, "Mainstreaming Gender in Climate Action".

²⁴⁵ Ibid.



Figure 5. Labor force participation rate, by sex (% of population ages 15+) (modeled ILO estimate)



Source: International Labour Organization. "ILO Modeled Estimates and Projections database (ILOEST)" ILOSTAT. Accessed February 21, 2023. <https://ilostat.ilo.org/data/>

Note: the orange line represents the female labor force participation rate while the purple line represents male labor force participation rate.

to unemployed women, a significant proportion is well-educated, with 76 percent possessing a bachelor's degree and 15.4 percent holding a high diploma.

Upon examining the educational backgrounds of female employees in various economic sectors, it was found that approximately 32 percent of women employed in manufacturing possessed a basic educational level, while 24.4 percent hold university degrees. In the wholesale and retail trade sector, 39.7 percent of female workers have a university degree, and 18.8 percent have completed an intermediate diploma. Furthermore, within public administration and defense, 44.1 percent of female employees hold university degrees, and 26.9 percent have intermediate diplomas. In educational activities, a significant 79 percent of females possess university degrees, and 13.9 percent have intermediate diplomas. Lastly, in human health and social activities, 53.3 percent of employed women have university degrees, and 30.8 percent hold intermediate diplomas. Clearly, education plays a vital role in providing women with opportunities to enter the labor force. It is noteworthy that education alone does not appear to be the primary issue, as a majority of unemployed women possess a high level of education. Specifically, 76 percent of unemployed women have a bachelor's degree, while 15.4 percent hold a high diploma.²⁵¹

Furthermore, it is observed that 39.7 percent of women in the 20-24 age group have completed secondary education, while the rate decreases to 12.7 percent for females aged 25-39. This pattern suggests that Jordanian women are less inclined to pursue higher education. Those who do continue their education often prefer paid employment opportunities, either in the public or private

sector, where employment benefits are more attractive. The absence of such opportunities pushes them into the ranks of the unemployed. On the other hand, women who opt not to pursue higher education tend to engage more in entrepreneurial ventures. Therefore, female entrepreneurship in Jordan can be seen as an alternative path for those who do not continue their education. Consequently, it can be concluded that highly talented women tend to secure jobs in the labor market, while those with lesser opportunities turn to self-employment. This provides an explanation for the previously mentioned high discontinuation rate among women entrepreneurs.²⁵²

With regards to STEM education in Jordan, according to the WB, the data available for the female share of graduates from STEM programs in Jordan is limited to 2007, with the share being 40.3 percent. This reflects a gap in data available on female enrollment in STEM programs in the country which means that more gender segregated data for both STEM and TVET education is needed in Jordan since these two fields can have major implications on women joining a lot of the green jobs and they can have major implications on the type and the sector in which they decide to establish their businesses or work in.²⁵³

Education of total early stage entrepreneurs. Upon examining the educational background of Jordanian Total Early-Stage Entrepreneurs (TEA), it becomes evident that 38.4 percent of TEA have completed secondary education, while 24.5 percent hold bachelor's degrees. Interestingly, men with secondary and bachelor's education tend to exhibit higher TEA rates compared to

²⁵¹ Ibid.

²⁵² Ibid.

²⁵³ Jordan Gender Landscape (English). Country Gender Landscape Washington, D.C. : World Bank Group.



Figure 6. Distribution of Jordanian females aged 15 years and above by employment status



Source: Department of Statistics

those with other educational levels. Conversely, women entrepreneurs with secondary and diploma education levels demonstrate higher TEA rates. It is worth noting that the level of female entrepreneurship activity among highly educated women remains relatively low.²⁵⁴ In Jordan, the majority of employed females, specifically 60.3 percent, hold bachelor’s degrees, while an additional 18.1 percent possess high diplomas. Conversely, among the unemployed females, a significant proportion, comprising 76 percent, are educated, with bachelor’s degrees being held by 76 percent and high diplomas by 15.4 percent. When examining the educational attainment of females by age group, it is evident that only 20.2 percent of females aged 20-24 years old have higher educational levels, while a slightly higher percentage, 28.5 percent, of females between the ages of 25 and 39 possess higher education degrees.²⁵⁵

3.2.4. The era of digitalization: embracing the digital transformation

With a total contribution to GDP estimated at 12 percent, the ICT sector in Jordan is already a significant industry with room to grow. This potential has only increased with the COVID-19 pandemic: ICT is a key pillar supporting the acceleration of existing trends towards home-based work, e-commerce, e-health, online education, among many other developments. ICT is an enabler of growth in

sectors that rely on digital infrastructure for aspects of their businesses.²⁵⁶ The ongoing COVID-19 crisis underscores the criticality of bolstering the efficacy of service sectors that heavily depend on Jordan’s comparative abundance of skilled individuals, with a specific emphasis on skilled women. Additionally, it accentuates the significance of nurturing and harnessing emerging Information and Communication Technology (ICT) capabilities within the country.

Unfortunately, digital-gender divide is a common phenomenon in the MENA region, one that also characterizes Jordan’s digital landscape. According to the WB gender portal 2021 data, the percentage of males in Jordan who reported using a mobile phone or the internet to pay bills in the past 12 months in Jordan considerably exceeded that of females signaling a significant digital-gender divide. This gap in Jordan is equivalent to 10.9 making it larger than the gap of the MENA’s aggregate (8.6).

Information technology outsourcing and digital entrepreneurship both have significant potential in Jordan. Companies like Aspire and Cisco are just two of Jordan’s many notable examples of ITO, and the start-up ecosystem there is still expanding. A number of obstacles are making it difficult to realize this potential. The biggest of these are issues with the digital infrastructure.²⁵⁷

As previously highlighted, the affordability of mobile internet and fixed broadband services in Jordan is comparatively lower than that of similar countries, with internet speeds lagging significantly behind global averages. The underlying reasons for these high costs can be attributed to elevated taxes and limited competition within the market. Furthermore, the dynamic and costly business environment poses a substantial obstacle for digital entrepreneurs and the Information Technology Outsourcing (ITO) sector alike. While digital platforms and digital payments are gradually gaining traction in Jordan, the full extent of their potential benefits for the Information and Communication Technology (ICT) sector has yet to be fully realized. It is noteworthy that Jordan stands out for its large pool of ICT graduates who encounter difficulties in securing employment within their field. This predicament is primarily caused by a dearth of job opportunities in the ICT sector, coupled with a mismatch between the skill sets possessed by graduates and the requirements of ICT employers.²⁵⁸

²⁵⁴ JEDO. 2017. “Women Entrepreneurship in Jordan.”

²⁵⁵ Ibid.

²⁵⁶ IFC (2021). World Bank Group Country Private Sector Diagnostic: Jordan.

²⁵⁷ Ibid.

²⁵⁸ Ibid.



3.2.5. Refugees

Despite the emergence of job opportunities, Jordan continues to grapple with a formidable challenge stemming from its remarkably high rate of labor force expansion, ranking among the highest globally. This escalation is primarily attributable to the substantial influx of refugees and migrants, compounded by a rapid population growth rate. Consequently, the newly created employment opportunities remain insufficient in relation to the burgeoning supply of new entrants into the labor force each year. Notably, this predicament persists even in the face of notably low labor force participation rates among Jordanian men and particularly among Jordanian women.²⁵⁹

Contrary to the prevailing belief that Syrian refugees play a significant role in the failure of women's Micro and Small Enterprises (MSEs) in Jordan, this study reveals that their impact on women's MSEs is relatively minimal. A substantial majority of entrepreneurs, comprising 83 percent, reported that their businesses were unaffected by the presence of Syrian refugees. In fact, only approximately 8 percent of entrepreneurs acknowledged a positive influence, attributing increased sales in their businesses to the presence of Syrian refugees. Conversely, 8 percent of MSE owners highlighted the negative consequences arising from the presence of Syrian refugees on business operations within Jordan.²⁶⁰

Women in Jordan face challenges in sustaining their businesses, indicating potential obstacles within the entrepreneurial environment that may not offer sufficient support or enablement for their entrepreneurial endeavors.²⁶¹

3.2.6. Exploring MSMEs landscape

In recent decades, the Jordanian government has actively supported impoverished women in initiating small enterprises by offering microcredit and streamlining financial services. In line with this, the rate of entrepreneurship in Jordan remains the least favorable compared to other countries in the region. In Jordan, merely 3.3 percent of Jordanian women aged 18 to 64 are actively engaged in the process of starting a business or have recently embarked on such a venture. Additionally, between 2005 to 2016, there was a decrease in women's

self-employment and business ownership.²⁶² Between 2009 and 2016, the proportion of female adults expressing entrepreneurial intentions witnessed a decline, with the number of established businesses dropping to 2.7 percent from 5.28 percent in 2009. Furthermore, the distribution of business ownership in 2018 was skewed towards men, with 82 percent of businesses being owned by males and only 18 percent being women-owned businesses. This persistent gender gap is also more evident when looking at the ownership rate of businesses led by women in the same year which was 3.1 percent, in contrast to the 10.0 percent rate for men. These statistics paint a concerning picture of the challenges faced by women entrepreneurs and, more broadly, the gender disparity within the entrepreneurial landscape in Jordan.²⁶³

Globally, women tend to exhibit higher rates of entrepreneurial intentions than men. In Jordan, the entrepreneurial intentions of females are lower compared to their male counterparts. In 2009, female entrepreneurial intentions accounted for 17.7 percent, while male intentions reached 33.9 percent of the total adult population in the same age group. Similarly, this gender divide persisted in 2016 where female entrepreneurial intentions accounted for only 12.3 percent of the total adult population aged 18-64 years, whereas male entrepreneurial intentions stood at 20.8 percent. When comparing the ratio of female to male entrepreneurial intentions with Lebanon, Morocco, Saudi Arabia, and the United Arab Emirates, Jordan had the lowest ratio of 0.5. These findings indicate the need for increased efforts to encourage and support women's entrepreneurship in Jordan.

Total early stage entrepreneurs. It should be noted that Jordan exhibits the lowest rate of female TEA compared to other MENA region countries. In 2004 the female Total Early-stage Entrepreneurial Activity (TEA) rates experienced a decline from 13.7 percent to 4.5 percent in 2009. Consequently, the establishment rate also decreased from 1.3 percent in 2009 to 1 percent in 2016. Eventually, the female TEA rate in 2019 stood at a mere 6.8 percent, which is approximately half of the TEA rate for men at 11.4 percent.

As mentioned before, when examining the overall early stage entrepreneurship activity among women, Jordan records the lowest rate, with only 3.3 percent of females aged 18-64 engaged in entrepreneurial activities. In 2016, a total of 8.2 percent of the Jordanian population aged 18-

²⁵⁹ Ibid.

²⁶⁰ Al-Hadid, M., & Alshami, H. (2021). Factors Affecting Women Micro and Small-Sized Enterprises' Success: A Case Study in Jordan.

²⁶¹ JEDO. 2017. "Women Entrepreneurship in Jordan."

²⁶² Ibid.

²⁶³ Al-Hadid, M., & Alshami, H. (2021). Factors Affecting Women Micro and Small-Sized Enterprises' Success: A Case Study in Jordan.



Table 1. Distribution of Jordanian females aged 15 years and above by education level and economic activity

	Illiterate	Literate	Primary	Preparatory	Basic	Vocational Apprentice- shi	Secondary	Intermediate Diploma	B.A. and higher
Manufacturing	1.7	1.8	4	12	32	0	12.2	11.8	24.4
Wholesale and retail trade; repair of motor vehicles and motorcycles	0.5	0.4	4.3	7.6	18.1	0	10.5	18.8	39.7
Public administration and defense; compulsory social security	0.2	0.2	0.8	5.3	10.1	0	12.5	26.9	44.1
Education	0.1	0.2	1.2	2.2	2.3	0	1.1	13.9	79
Human health and social work activities	0	0.1	1.4	3	5.1	0.1	6.2	30.8	53.3

Source: Department of Statistics

64 were either in the process of starting a business or had recently initiated one and 86.9 percent of employed individuals aged 15 and above in Jordan were categorized as paid employees, in the same year. Specifically, 85 percent of male employees were considered paid employees, while the rate was 96.5 percent for females. These statistics imply that employment benefits have a notable influence on Jordan's TEA rate, subsequently reducing the preference for entrepreneurial pursuits.²⁶⁴ Other factors, such as employment benefits, may contribute to the lower TEA rate in Jordan. In the same year (2016), the entrepreneurial business rate in Jordan was recorded at 2.7 percent, indicating that 2.7 percent of the adult population between the ages of 18 and 64 years were actively engaged as owner-managers of established businesses, having consistently paid salaries, wages, or other remuneration to the owners for a period exceeding 42 months. In the same year, 37 percent of female TEA participants established businesses due to necessity, while a significant 56 percent pursued entrepreneurship driven by the potential opportunities it presented.²⁶⁵

Age and gender breakdown. When examining the distribution of Female TEA by age group, it becomes evident that the highest proportion is found among individuals aged 35 to 44 years old, accounting for 37.9 percent of the total Female TEA. Following closely behind is the age group of 25 to 34 years old, representing 34.5 percent. In contrast, both the age groups of 18 to 24 years old and 55 to 64 years old demonstrate the lowest levels of TEA. The lower TEA among individuals aged 18 to 24 could be attributed to their engagement in education. In 2016, 77.2 percent of females between the ages of 15 to 19 and 41.1 percent of females between the ages of 20 to 24 were involved in educational pursuits.²⁶⁶

²⁶⁴ JEDO. 2017. "Women Entrepreneurship in Jordan."

²⁶⁵ Ibid.

²⁶⁶ Ibid.

Market orientation. Furthermore, among female early-stage entrepreneurs, 77.8 percent mentioned that their product is not new to all customers. Additionally, it is observed that only 36 percent of female early-stage entrepreneurs and 50 percent of female established businesses engage in product exportation.²⁶⁷

Business intentions. The lower percent of female Total Early-stage Entrepreneurial Activity (TEA) among individuals aged 18 to 24 years old can be attributed to their enrollment in educational pursuits. Conversely, the lower TEA among senior females can be explained by their reaching the retirement age and having established sources of sustainable income. These observations further highlight that female entrepreneurship in Jordan is primarily motivated by opportunity rather than necessity.²⁶⁸

According to the GEM 2016 report, Jordan has quite a low entrepreneurial intention rate compared to other Arab countries, with only 16.39 percent of the population falling into this category.

Income. According to the global entrepreneurship monitor, there exists a negative correlation between female TEA and Income per capita. In 2009, with an income per capita of 3800.7 USD, the Female TEA rate stood at 10.24 percent. By 2016, as the income per capita increased to 4940 USD, female TEA rate declined significantly to just 3.3 percent. These figures suggest that a considerable number of female entrepreneurs in Jordan are driven by different motives.²⁶⁹

Levels of unemployment. According to the global entrepreneurship monitor, the level of unemployment is a significant factor influencing TEA rates. When

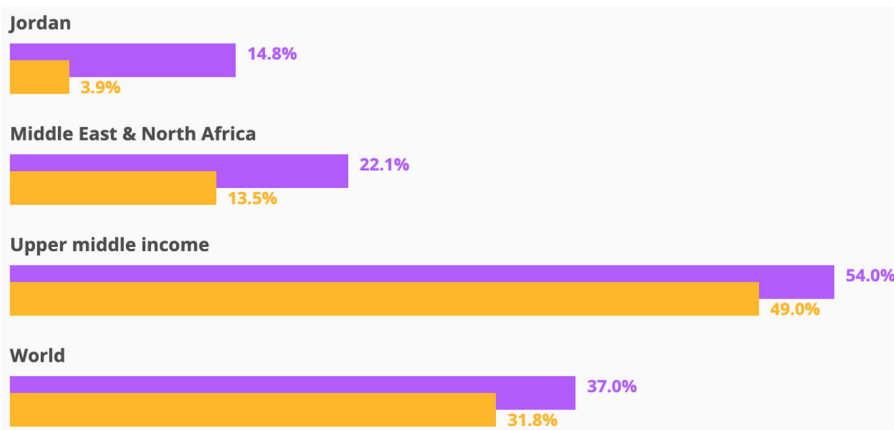
²⁶⁷ Ibid.

²⁶⁸ Ibid.

²⁶⁹ Ibid.



Figure 7. Proportion of Individuals that used a mobile phone or the internet to pay bills in the past year, by sex (% age 15+)



Note: The orange bar represents the proportion of females while the purple bar represents the proportion of males

unemployment rates are high, there is an increase in necessity-based entrepreneurship, where individuals turn to self-employment out of the lack of job opportunities. Conversely, opportunity-based entrepreneurship tends to decrease during periods of high unemployment. This pattern is evident in Jordan's case. From 2009 to 2016, the unemployment rate in Jordan rose from 12.9 percent to 15.3 percent, resulting in a decline in the female TEA rate from 4.5 percent to 3.3 percent during the same period. Furthermore, in 2016, 37 percent of females engaged in TEA pursued entrepreneurship out of necessity, while 56 percent pursued it as an opportunity.²⁷⁰

Networking rate. The networking rate in Jordan is 18.3 percent, which is 15.6 percent points lower than the average rate of the comparison countries. This suggests that only 18.3 percent of Jordanian females aged 18-64 years old have connections with individuals who have initiated businesses in the past two years. As a result, the limited availability of networking opportunities has a detrimental effect on the overall level of TEA among women in Jordan. To encourage more females to pursue their entrepreneurial endeavors, it is crucial to improve networking rates.²⁷¹

Established business and total entrepreneurial activity rates. Established business activity refers to the proportion of adults aged 18 to 64 who currently serve as owner-managers of established businesses. In Jordan, the Total Entrepreneurial Activity (TEA) rate was 18.8 percent of the total adult population in the 18-64 age range in 2004, which decreased to 10.24 percent in 2009. Similarly, the Established Business (EB) rate stood at 5.28 percent of the total adult population in 2009 and declined to 2.7 percent in 2016. These figures suggest

that many individuals engaged in TEA face significant obstacles that hinder their sustainability in the economy. Furthermore, the TEA rate in Jordan has exhibited a decreasing trend since 2004, with a recorded rate of 8.2 percent in 2016, implying a potential decline in future EB rates. Consequently, it becomes essential to investigate the underlying reasons for the lower EB rates.²⁷²

Entrepreneurial intention. In 2004, the rate of entrepreneurial intention in Jordan stood at 33.17 percent among the adult population aged 18-64 years. In the same year, the percent of established business ownership was 5.28 percent of the total adult population in the same age group. However, by 2009, the rate of entrepreneurial intentions had decreased to 24.91 percent, resulting in a decline of established business ownership by 2.58 percentage points in 2016. Therefore, policymakers and service providers aiming to stimulate and support a new generation of entrepreneurs must focus on fostering entrepreneurial intentions, particularly considering the decline in entrepreneurial intentions in Jordan to only 16.39 percent in 2016, compared to 33.17 percent in 2004 and 24.91 percent in 2009.²⁷³

Market orientation. In Jordan, the majority of female established businesses (88.9 percent) are involved in consumer-oriented services, while a smaller portion (11.1 percent) operate in the transforming sector.

3.2.7. Challenges hindering MSMEs in Jordan: an in-depth analysis

Jordan's governance framework is distinctive, impacting its strategies and efforts towards advancing gender parity.

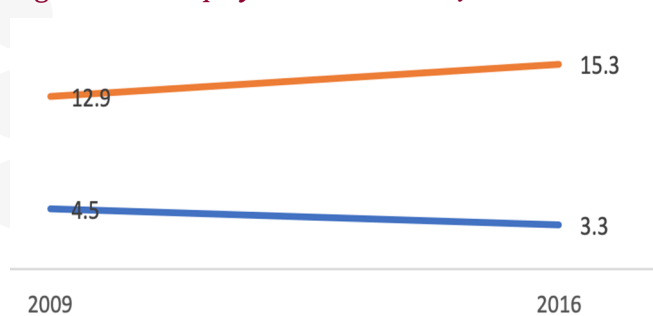
²⁷⁰ Ibid.

²⁷¹ Ibid.

²⁷² Ibid.

²⁷³ Ibid.



Figure 8. Unemployment rate versus female TEA

Source: employment and unemployment survey 2016, GEM 2016/17.

Note: The blue line represents female TEA while the orange line represents unemployment rate

With the inception of the Jordanian National Commission for Women in 1992, gender equality gained prominence within civil society organizations (CSOs). The intricate interplay among the state, civil society, and the monarchy in Jordan establishes an interconnected platform for both gender equality initiatives and advocacy. A study conducted by Ragetlie et al., suggests that the intricate relationship between domestic CSOs, the monarchy, and the state's defensive democratization approach also hampers the ability of CSOs to effectively address the underlying social and political factors contributing to gender inequality.²⁷⁴

The research conducted by Ragetlie and fellow researchers highlights that organizations promoting entrepreneurship in Jordan exhibit a deficiency in adopting a sufficiently refined and contemplative approach that adequately recognizes the empowerment of beneficiaries along with significant structural constraints like poverty and elevated unemployment rates in rural areas. There has been a suggestion that these complexities could be alleviated through productive collaboration between civil society and the state, a function that international organizations are suitably equipped to facilitate. Nonetheless, there is currently no verified information indicating the occurrence of such collaborative efforts in Jordan.²⁷⁵

In Jordan, the entrepreneurship rate is the most unfavorable compared to other countries in the region. Specifically, the female Total Early-stage Entrepreneurial Activity (TEA) rate in 2019 stood at a mere 6.8 percent, which is approximately half of the TEA rate for men,

²⁷⁴ Rosalind Ragetlie, Dina Najjar, and Bipasha Baruah, "Paying "Lip Service" to Gender Equality: The Hollow Implementation of Gender Mainstreaming in Jordan", Civil Society Knowledge Center, Lebanon Support, November, 2021. DOI: 10.28943/CSR.005.002.

²⁷⁵ Ibid.

measuring 11.4 percent. Furthermore, the ownership rate of businesses founded by women in the same year was only 3.1 percent, in stark contrast to the significantly higher rate of 10.0 percent for men. These statistics unmistakably highlight the challenging landscape faced by women entrepreneurs and the persistent gender gap prevalent in the entrepreneurial sphere in Jordan.²⁷⁶

In the context of Jordan, women entrepreneurs face significant challenges in sustaining their businesses, primarily due to four key factors. Firstly, many businesses struggle to generate sufficient profits, making it difficult for women to maintain their ventures. Secondly, family obligations can place additional burdens on women entrepreneurs, limiting their ability to devote adequate time and resources to their businesses. Thirdly, access to finance poses a significant obstacle, as women may encounter difficulties in securing the necessary funding for their entrepreneurial endeavors. Due to limited access to collateral, many women rely on personal funding sources, including savings, support from friends and family, and reinvestment of their earnings, to finance their businesses.²⁷⁷ Insufficient provision of training and consulting support also emerged as a secondary factor associated with microfinance institutions where the findings of this study underscore the significance of educational opportunities as a crucial element influencing the success or failure of women entrepreneurs.²⁷⁸ Finally, government policies can also impact women's ability to sustain their businesses, creating either supportive or hindering environments for female entrepreneurs.²⁷⁹

3.2.7.1. The influence of social norms on MSMEs: exploring impacts and implications

Family and community support play a crucial role in fostering the success of women entrepreneurs. Cultural & Social Norms in this analysis refers to a factor that evaluates the presence of an entrepreneurial focus within the culture and measures the level of encouragement and support from social and cultural norms for new business activities, including the availability of role models and social support for individuals taking risks.²⁸⁰ According to

²⁷⁶ 2021_Factors Affecting Women Micro and Small-Sized Enterprises' Success: A Case Study in Jordan

²⁷⁷ JEDO. 2017. "Women Entrepreneurship in Jordan."

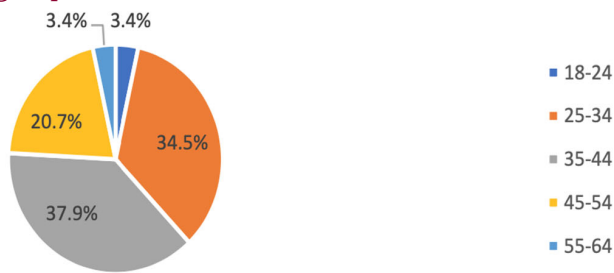
²⁷⁸ 2021_Factors Affecting Women Micro and Small-Sized Enterprises' Success: A Case Study in Jordan

²⁷⁹ JEDO. 2017. "Women Entrepreneurship in Jordan."

²⁸⁰ Global Entrepreneurship Monitor (GEM) Jordan National Report 2019/2020



Figure 9. Distribution of female entrepreneurs by age groups



Source: JEDCO 2017, *Women Entrepreneurship in Jordan*

the 2017 National Expert Survey (NES), Jordan falls below regional and global averages in terms of governmental support, policies, taxes, bureaucracy, governmental programs, cultural and social norms, as well as entrepreneurial education and training.²⁸¹ Literature has revealed a distinct absence of psychological support for women entrepreneurs in Jordan, particularly from their husbands, families, and the wider community.

The analysis identified environmental barriers as the third theme, encompassing social norms and cultural attitudes. In traditional societies, there exists a prevailing belief that men should be employed outside the home while women should fulfill domestic roles, discouraging women entrepreneurs from venturing into their own businesses.²⁸² Another significant barrier affecting the initiation of businesses for Jordanian women is self-perception. The majority of females aged 18 to 64 stated that the Jordanian society does not sufficiently promote or encourage entrepreneurship among women.²⁸³ The challenges faced by married women in balancing work and childcare contribute to a rise in unemployment rates after the age of 25. Without accessible workplace daycare options, it becomes impractical for these women to continue their employment. Consequently, many choose to leave the workforce in search of better job conditions that align with their family responsibilities.²⁸⁴

That being said, there exists some positive enablers for women in the Jordanian context to join the labor force whereas a result of large-scale refugee crises, frameworks for development assistance have promoted women's empowerment, wellbeing, and social inclusion. A recent

²⁸¹ Global Entrepreneurship Monitor (GEM) Jordan National Report 2019/2020

²⁸² 2021_Factors Affecting Women Micro and Small-Sized Enterprises' Success: A Case Study in Jordan

²⁸³ JEDO. 2017. "Women Entrepreneurship in Jordan."

²⁸⁴ Ibid.

study sought to explain how women structure their social ties within refugee and host communities, and whether social networks matter for their sense of empowerment and wellbeing. The study concluded that with the increase in network size the levels of psychological empowerment, motivation to lead and perceived social support also increased.²⁸⁵ In another study by Lassassi and Alhawarin (2018), data from Algeria and Jordan displayed that social networks and ties play an important role in labor market intermediation in Arab countries.²⁸⁶ One interesting aspect is that Jordan was among one of the countries where social networks played an important role in landing jobs for youth, regardless of their gender. Although the significance of social networks in job finding for Jordanian women is substantial and has risen, comparing between youth and adult females, such channels play less important roles than directly contacting employers and applying through public sector agencies.²⁸⁷

In the entrepreneurship assessment conducted in Jordan, several factors were evaluated. The highest score was for the national culture, which encourages creativity and innovativeness, receiving 6.19 points in this year's assessment. Following closely was the assessment for the national culture, emphasizing self-sufficiency, autonomy, and personal initiative, with a score of 6.17 points. The assessment for the national culture being highly supportive of individual success achieved through personal efforts received 5.78 points. Similarly, the assessment for the national culture emphasizing individual responsibility in managing one's own life scored 5.72 points. Lastly, the assessment for the national culture encouraging entrepreneurial risk-taking scored 5.64 points.

Furthermore, cultural factors play a significant role in shaping female entrepreneurship. Family roles and responsibilities can either foster or hinder women's entrepreneurial aspirations. Despite efforts to encourage women's participation in the labor force and their high levels of education, family obligations remain a primary barrier to their sustained engagement in the job market. Income per capita, unemployment rates, employment benefits, and cultural influences all impact the decision of women to pursue entrepreneurship in Jordan.²⁸⁸ This is confirmed by the data provided by the GEM report

²⁸⁵ Al-Ali, A., Ababneh, S., & Alkhateeb, A. (2021). Social networks, empowerment, and wellbeing among Syrian refugee and Jordanian women: Implications for development and social inclusion.

²⁸⁶ Ibid.

²⁸⁷ Lassassi, M., & Alhawarin, I. (2018). The role of social networks and ties in finding a job in economies characterized with high youth unemployment: A case study of Algeria and Jordan.

²⁸⁸ JEDO. 2017. "Women Entrepreneurship in Jordan."



which states that the demands of household chores and family responsibilities can significantly contribute to a higher rate of business closures among women, which can help explain the business discontinuation rate of 15.8 percent. In the MENA region, women business owners face greater challenges in balancing work and family compared to their male counterparts. A study highlighted that in Jordan, women from more affluent backgrounds, who can afford alternatives to fulfill their family obligations, have a better chance of sustaining their work.

3.2.7.2. Examining the legal and regulatory landscape for MSMEs

Over the years, the Jordanian government has made significant efforts in promoting women's empowerment through various technical and legislative measures. Despite these initiatives, the unemployment rate among women remains high, reaching 24.1 percent in 2016. Additionally, there has been a decline in female self-employment from 2.5 percent in 2005 to 1.8 percent, and a decrease in the proportion of female business owners from 1.6 percent in 2005 to 1.3 percent in 2016. Consequently, it is crucial to explore women's participation in the labor market and female entrepreneurship in Jordan.²⁸⁹ Due to the absence of supportive laws for small and medium-sized enterprises, coupled with the lack of training opportunities specifically designed for women entrepreneurs under the guidance of official institutions, contributed to women's challenges in Jordan and exacerbated their limited success in the field of entrepreneurship. A recent study mentioned that none of the owners of MSEs received any form of assistance from the government during their business operations. This assistance could have come in the form of financial support or the provision of essential infrastructure to empower women entrepreneurs. Furthermore, based on the accounts of these business owners, the absence of supportive laws for small and medium-sized enterprises, coupled with the lack of training opportunities specifically designed for women entrepreneurs under the guidance of official institutions, contributed to their limited success in the field of entrepreneurship.

The presence of employment benefits, including healthcare, family leave, pensions, and job protection, exerts a noteworthy influence on the entrepreneurship rate in Jordan. These benefits have the potential to decrease the inclination towards entrepreneurship due to the perceived advantages and security they offer in

²⁸⁹ JEDO. 2017. "Women Entrepreneurship in Jordan."

traditional employment settings. As a result, individuals may be less inclined to pursue entrepreneurial ventures, opting instead for the stability and support provided by formal employment.²⁹⁰ Also, while there are laws that seek to support Jordanian women's labor force participation however these laws do not specifically target MSMEs. For instance, article (72) of the Jordanian Labor Law stipulates that employers with at least twenty women employees should provide childcare facilities supervised by qualified teachers for children under four years of age; this provision does not adequately support women entrepreneurs and MSMEs. As a result, women may be discouraged from choosing entrepreneurship as a career path, leading to an increase in the rate of business discontinuation.²⁹¹ According to the 2022 Women, Business and Law Index Jordan scored 46.9 out of a 100. The indexes comprise 8 sub-indexes; mobility, workplace, pay, marriage, parenthood, entrepreneurship, assets, pension. For each sub-index Jordan scored; 25, 0, 75, 20, 40, 100, 40, 75, respectively.²⁹²

In terms of business discontinuation, the rate as a percent of the total adult population in Jordan is 5.6 percent. Considering the gender distribution, the female business discontinuation rate stands at 4.3 percent. This implies that 4.3 percent of women, who are either nascent entrepreneurs or owner-managers of new businesses, have experienced business discontinuation in the past 12 months among the total female population aged 18-64.²⁹³ Analyzing the reasons behind business discontinuation among Jordanian women, it is evident that market conditions play a significant role. Approximately 60.5 percent of business discontinuations are attributed to non-profitability. Family reasons account for 15.8 percent of women aged 18-46 years discontinuing their businesses, while difficulties in accessing finance contribute to 13.2 percent of cases. Government policies, on the other hand, account for only 2.6 percent of female business closures.²⁹⁴ This might be attributed to the already lacking government policies to begin with.

3.2.7.3. Navigating the challenges of informality: implications for MSMEs

The employment of women in the informal sector, as business owners, self-employed individuals, unpaid family workers, and unpaid workers, witnessed various trends

²⁹⁰ Ibid.

²⁹¹ Ibid.

²⁹² World Bank (2023). Women, Business and the Law Report.

²⁹³ JEDO. 2017. "Women Entrepreneurship in Jordan."

²⁹⁴ Ibid.



between 2005 and 2016. Over this period, there was a consistent increase in informal employment, with the percentage of informal female workers aged 15 years and above rising from 1.4 percent in 2005 to 2.6 percent in 2015. In 2016, this share experienced a slight increase of 0.1 percentage points. Furthermore, the proportion of self-employed women declined from 2.5 percent in 2005 to 1.7 percent in 2015. In 2016, there was a marginal increase of 0.1 percentage points in the share of self-employed women. Similarly, the percent of women owning businesses decreased from 1.6 percent in 2005 to 1.3 percent in 2015.²⁹⁵

According to the 2021 IFC Diagnostic Report, there is a gap between the labor market participation of females and males, with little progress seen in the formal employment of women over the past two decades. Notably, the presence of a sizable public sector, coupled with significantly higher wages within the public domain in comparison to the private sector, has elevated the reservation wage for many Jordanian job seekers. This phenomenon is further compounded by the impact of remittances. Furthermore, the prevalence of segmentation, cumbersome regulatory frameworks, and an immigration policy that has favored the influx of low-skilled workers while placing limitations on the entry of skilled individuals, may have inadvertently contributed to a shift towards sectors reliant on lower skill levels. Consequently, an abundance of low-skilled workers has emerged, inadvertently intensifying the incentives for engaging in informal employment practices.²⁹⁶

3.2.7.4. *Enhancing access to credit for MSMEs: challenges and opportunities*

The gradual decrease in women's engagement in small business management has emerged as a significant concern, particularly in light of the prosecution of over 13,000 Jordanian women for defaulting on their micro-loans.²⁹⁷ In the Jordanian context, the small business sector has experienced a rise in failures over the past decade, yet there is a lack of comprehensive research examining the underlying causes of women's difficulties in managing their businesses. In 2019, a significant development occurred when numerous women entrepreneurs in Jordan were summoned to court due to their inability to repay loans from microfinance

²⁹⁵ Ibid.

²⁹⁶ IFC (2021). World Bank Group Country Private Sector Diagnostic: Jordan.

²⁹⁷ Al-Hadid, M., & Alshami, H. (2021). Factors Affecting Women Micro and Small-Sized Enterprises' Success: A Case Study in Jordan.

institutions (MFIs). Based on government statistics, approximately 13,000 women were unable to fulfill their debt obligations. These figures highlight the gravity of the issue concerning women's failures within the small business sector.²⁹⁸

The research conducted by Al-Hadid & Alshami (2021) revealed that the primary factors contributing to business failure are financial difficulties and the specific practices employed by microfinance institutions (MFIs). Insufficient capital and constrained budgets, along with the stringent measures imposed by micro-institutions, act as barriers to the sustainability and growth of micro and small enterprises (MSEs). Consequently, MSE owners who lack adequate financial support encounter significant challenges in maintaining their ventures. Moreover, the study findings indicate that inadequate monitoring and evaluation processes within MFIs have contributed to the failures experienced by women entrepreneurs.²⁹⁹

Access to finance poses a significant challenge for women entrepreneurs in Jordan, as highlighted by the International Finance Corporation (IFC). Only 34 percent of Jordanian businesswomen have access to bank credit, underscoring the gender disparity in financial opportunities. In 2015, the gender gap for land ownership stood at 35.5 percent, while the gap for owning flats reached 37.9 percent. These statistics demonstrate that women face difficulties in providing collateral due to their limited property ownership. Consequently, many women turn to micro-funds rather than commercial banks when seeking loans. With restricted access to formal financial channels, women predominantly rely on personal sources such as savings, friends and family, and reinvesting business earnings to finance their ventures. To address this issue, it is crucial to implement policies aimed at improving women's access to finance. This could involve the establishment of loan guarantee programs specifically designed to support women entrepreneurs.

3.2.7.5. *Other challenges*

Inadequate market strategies. The 2021 Factors Affecting Women Micro and Small-Sized Enterprises study revealed that the success or failure of women entrepreneurs is influenced by three key factors; the entrepreneurs themselves, the surrounding environment, and the role of micro-finance institutions. The study's findings emphasize the importance of implementing comprehensive strategies that address these three domains in order to enhance the

²⁹⁸ Ibid.

²⁹⁹ Ibid.



sustainability of women's entrepreneurship and reduce the likelihood of business failure.³⁰⁰ One significant factor contributing to the failure of women entrepreneurs is the inadequacy of their marketing strategies. This study uncovered three key marketing challenges that women entrepreneurs encountered throughout their careers, ultimately leading to their downfall. These challenges encompassed unfavorable business locations, ineffective demand forecasting and analysis, and a deficiency in marketing skills. Addressing these issues is crucial for enhancing the prospects of women entrepreneurs and improving their chances of success.³⁰¹ The aforementioned study also reveals that educated women residing in governorates face fewer opportunities compared to those living in Amman. The study highlights the significant influence of job availability in the local area on women's employment choices. Given the average income range of (200-500) JOD and the inadequate public transportation system, it becomes impractical for these women to secure employment in the capital city.³⁰²

Networking rate. In 2016, the networking rate for female entrepreneurs in Jordan was recorded at 18.3 percent, which falls below the average rate of Arab countries by 15.6 percentage points.³⁰³ The skills rate for women entrepreneurs in Jordan falls below the average of Arabian countries by 3.7 percent points. Within Jordan, 42.3 percent of women aged 18-64 reported that the fear of failure would hinder them from starting their own business. According to the Global Entrepreneurship Monitor, Jordan ranks second globally in terms of business discontinuation rate, with India taking the top spot.

Discontinuation rates. When comparing Jordan with other participating Arab countries, Jordan's business discontinuation rate exceeds the average of Arab countries by 5.8 percent points. In 2016, Lebanon had the lowest business discontinuation rate, with only 9.2 percent of TEA, while Jordan had the highest business discontinuation rate, with 21.2 percent of TEA. This high rate of business closures may indicate that few entrepreneurs are launching viable businesses or are unable to sustain their ventures. It also suggests that the entrepreneurship environment may not be conducive. Additionally, it may reflect a situation where many entrepreneurs are competing in producing

similar products, leading to a highly competitive market. Considering the structure of the Jordanian economy, which is small-oriented, many businesses are at risk of failure.³⁰⁴

Self-perceptions. Psychological characteristics emerged as the second influential factor contributing to the challenges faced by women entrepreneurs in Jordan. This comprehensive study delved into the psychological traits of the interviewees, revealing that attributes such as diminished self-confidence, limited endurance, and a lack of persistence and determination were identified as significant factors hindering the ability of women entrepreneurs to establish and sustain their businesses successfully.³⁰⁵ Entrepreneurs are commonly characterized as individuals who embrace risks, and it is widely acknowledged that the fear of failure significantly influences their decision-making processes regarding business ventures and entrepreneurial pursuits. Moreover, this fear has been identified as a formidable barrier that hampers the pursuit of entrepreneurship. In the context of Jordan's comparison with other nations, a noteworthy finding reveals that 42.3 percent of the female population between the ages of 18 and 64 expressed their apprehension that fear of failure would impede their ability to initiate a business. Conversely, countries such as Morocco, Qatar, and Egypt exhibited the lowest rates of fear of failure. It is argued that this aspect is closely linked to both the networking and skills proficiency of an entrepreneur. When an entrepreneur possesses a strong belief in her own knowledge and capabilities, coupled with active engagement in networking with other entrepreneurs, it can effectively diminish her fear of failure.³⁰⁶

Within Jordan, a substantial 73.5 percent of females between the ages of 18 and 64 perceive entrepreneurship as an appealing career path, indicating a positive inclination towards this pursuit. Additionally, an impressive 83.2 percent believe that entrepreneurs are held in high regard within their society, while 79.2 percent assert that entrepreneurship garners significant media attention. These statistics collectively demonstrate that the Jordanian community fosters an environment that encourages entrepreneurial endeavors. It is also worth noting that self-perception stands as a prominent obstacle preventing women from initiating their own businesses. Consequently, implementing targeted programs aimed at enhancing the perceptions of aspiring female entrepreneurs has the potential to stimulate a surge in business startups

³⁰⁰ Al-Hadid, M., & Alshami, H. (2021). Factors Affecting Women Micro and Small-Sized Enterprises' Success: A Case Study in Jordan.

³⁰¹ Ibid.

³⁰² JEDO. 2017. "Women Entrepreneurship in Jordan."

³⁰³ Ibid.

³⁰⁴ Ibid.

³⁰⁵ Al-Hadid, M., & Alshami, H. (2021). Factors Affecting Women Micro and Small-Sized Enterprises' Success: A Case Study in Jordan.

³⁰⁶ JEDO. 2017. "Women Entrepreneurship in Jordan."



and entrepreneurial activity.³⁰⁷ It is worth noting that the majority of female entrepreneurs in Jordan pursue entrepreneurship as an opportunity rather than out of necessity. Also one notable factor that affects women's inclination to initiate a business is their inadequate confidence in their entrepreneurial capabilities.

3.2.8. Conclusion

The availability of recent data and comprehensive research is essential for understanding and addressing the gender challenges in the renewable energy sector. Although the 2021 IRENA Renewables Readiness Assessment Report in Jordan acknowledges the gender aspect as a key challenge, it does not delve into the topic in detail, highlighting the need for further research and data to fully comprehend the sector's future requirements and the most effective strategies for integrating women. Currently, Jordan and Sudan are the only countries in the Arab region that address gender in their National Adaptation Plans (NAPs) on climate change. As more Arab states embark on developing their NAPs, it is crucial to adopt a holistic approach that incorporates gender and other intersectional needs and identities to ensure the full realization of UNFCCC objectives and leave no one behind. Analyzing existing NAPs, particularly in terms of gender-balanced participation, the gender-differentiated impacts of climate change, and gender-responsive planning and resource allocation, can reveal gaps and opportunities for promoting gender-sensitive engagement.

Jordan's NAP includes specific actions such as incorporating a gender perspective in planning, prioritizing adaptation options, enhancing data collection and accessibility, and implementing monitoring mechanisms to address these challenges effectively. Data on female enrollment in STEM dates back to 2018 which is a bit outdated, given the dynamic nature of the gender-energy nexus, the rise of digitalization particularly after COVID-19 pandemic. That being said, so many changes have happened and for data to remain relevant it needs to be updated, given that this is also a particularly important indicator since it is extremely low in Jordan that suggests that there remains a few barriers that women face in accessing the energy sector. The World Bank Firms Survey is quite outdated in Jordan, especially regarding women in the energy sector where indicators such as the share of women in the energy sector goes back to 2016, rendering the data irrelevant to the present state. Other statistics provided by the survey are more up to date (2019) yet not quite recent.

³⁰⁷ JEDO. 2017. "Women Entrepreneurship in Jordan."

3.3. Lebanon

In 2016, Lebanon implemented the National Energy Efficiency Action Plan (NEEAP) with the aim of achieving a 20 percent reduction in energy consumption and increasing the share of renewable energy in the electricity mix to 12 percent by 2020. Although there was no comprehensive strategy for a green economy and no specific national plan for business transformation, the Ministry of Economy started to promote the adoption of energy-saving measures among small businesses prior to 2019.³⁰⁸ Unfortunately, the country's economic downturn has hindered advancements in environmental preservation through sustainable business practices.

Lebanon serves as an example of the challenges faced by countries grappling with a waste crisis, leading to pollution and health issues. Lebanon's energy landscape is also impacted by its political and economic circumstances. Since 2019, the country has faced a severe economic crisis, making it a challenge to import fuel and other energy resources. Consequently, power outages have become widespread, and reliance on private generators has increased. The demographic and geographic factors, coupled with the political and economic situation, collectively shape Lebanon's energy requirements and resources, necessitating the government's ongoing efforts to address these complex challenges.³⁰⁹

In an effort to address this problem, the region has started to shift its focus towards renewable energy projects, seeking alternatives to its traditional reliance on oil and gas resources. As a result, the momentum behind renewable energy initiatives has been steadily increasing.³¹⁰ Despite the prevailing economic and political crises, there are indications of an improvement in the gender gap in Lebanon.

3.3.1. Labor market outlook

Lebanon faces challenges that include sluggish job creation and low female labor force participation (FLFP). The FLFP stood at 25 percent in 2012, significantly lower than the 67 percent FLFP rate for men. The country continues to grapple with a rising unemployment rate, with only 22 percent of women and 66 percent of men employed in the formal economy as of 2022. Lebanon's FLFP remains considerably below the global average of 53

³⁰⁸ SPARK (2023). The GreenWorks Effect/Unlocking Job Opportunities Through Green Transformation in the Middle East.

³⁰⁹ Energy Sector Management Assistance Program (ESMAP). (2020).

³¹⁰ SPARK (2023). The GreenWorks Effect/Unlocking Job Opportunities Through Green Transformation in the Middle East.



percent but aligns with the MENA regional average of 22 percent. Gender segregation is also prevalent in the labor market, with women disproportionately concentrated in sectors such as banking, health, education, and public administration. The economic crisis and the impact of the pandemic have further aggravated the gender gap in the labor force, particularly affecting these sectors. In Lebanon, the representation of women in managerial positions stands at 21 percent.³¹¹

Restrictions on women's employment in certain sectors in Lebanon still persist. These limitations include prohibitions on shift work and employment in occupations deemed hazardous, physically demanding, or detrimental to their health, morals, or social standing. Gender disparities in the energy sector are particularly evident in the job market, and these disparities become more pronounced as one examines higher positions within the workplace.

3.3.2. Renewable energy outlook

Lebanon is characterized by a failing energy sector stemming from deep-rooted political and economic challenges. Decision-making is diffused, with no single entity being politically accountable for the mismanagement of the sector where between 1992 and 2018, transfers to the Electricité du Liban (EDL) accounted for over \$40 billion of the country's public debt.³¹² Although the operations of private diesel generators are conducted outside the legally authorized mechanism, consecutive governments have turned a blind eye to the sector due to their inability to address the issue of power under-supply.³¹³ Despite the Lebanese constitution affirming the objective of abolishing confessionalism in politics as a fundamental national goal, no concrete steps have been taken to dismantle this system, and no specific timeline has been established for its eradication.³¹⁴ Consequently, politicians and individuals with political connections have exploited the electricity sector to advance their political interests, including through the distribution of jobs at EDL as a form of clientelism and by securing lucrative contracts that often come at the expense of the state. Furthermore, they have capitalized on the private

generator market to generate personal profits.³¹⁵ Diesel generators in Lebanon contribute a substantial portion of greenhouse gas emissions, accounting for approximately 39 percent of the total electricity Greenhouse Gases Inventory (GHI) in 2018. These emissions, along with the high levels of fine particulate matter (PM), have detrimental effects on human health. Replacing all diesel generator capacity with the existing EDL mix of generation would only result in a modest 6 percent reduction in emissions, as both private and EDL generation have similar emission factors. Introducing distributed renewables generation can lead to a significant reduction of approximately 1000 tCO₂eq for each MWp added.

Underrepresentation of women in Lebanon's energy sector: cultural norms, hiring practices, and gender roles. The energy sector in Lebanon demonstrates a low percent of women's employment, reflecting the influence of cultural norms, prevailing gender roles, and hiring practices within the industry.³¹⁶ This trend is particularly evident in the male-dominated oil and gas (O&G) sector, which maintains a significant gender disparity even in countries with less pronounced gender discrimination. Traditional views in Lebanon, though gradually shifting, often limit women's societal roles to marriage and family responsibilities, leading to the underestimation of their potential in the labor market.³¹⁷ Studies indicate that women bring valuable perspectives and enhance workplace performance, and organizations with competent female leaders tend to excel. It is worth noting that appointments and employment within the public energy sector are highly politicized. This is due to the confessional political system that prevails in Lebanon which significantly impacts women's employment serving as a barrier to women's participation in the labor market. For instance, the quota system associated with Confessionalism, distributes government jobs to different religious groups according to their population size, this increases the likelihood of women belonging to some religious groups to be employed in the public sector compared to women from other groups.³¹⁸ The confessional structure also contributes to the cultural barrier hindering female employment in Lebanon where religious communities strongly expect women to stay at home and take care of the family.³¹⁹

³¹¹ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

³¹² Human Rights Watch. "Cut Off From Life Itself": Lebanon's Failure on the Right to Electricity. March 9, 2023.

³¹³ ESMAP. (2020). Distributed Power Generation for Lebanon: Market Assessment and Policy Pathways. World Bank, Washington, DC. License/ Creative Commons Attribution CC BY 3.0 IGO.

³¹⁴ Human Rights Watch, 2023

³¹⁵ Ibid.

³¹⁶ Mansour, Atty. Nisrine Elias. "Women's Inclusion in Energy Sector." Policy Brief. Prepared for Publish What You Pay Lebanon & Diaries of the Ocean. 2021.

³¹⁷ Ibid.

³¹⁸ The Impact of the Confessional System on Women's Employment in Lebanon, 2018

³¹⁹ Gender and Employment in Lebanon, 2022



Nevertheless, women working in energy-related careers, particularly those associated with civil society organizations, have demonstrated efficiency and wield influential voices. The principle of meritocracy supports equal employment opportunities for all individuals in the energy sector, regardless of gender. While Article 27 of the Lebanese Labor Law of 1946 prohibits the employment of women and youth in hazardous jobs, including underground mines, it is important to acknowledge that this provision aimed to protect women from unsafe working conditions. Given the harsh working conditions typically associated with the energy sector, such as oil rigs and offshore operations, the representation of women remains limited.³²⁰ This aligns with the concept of benevolent sexism, which ultimately hampers the achievement of gender equality in the workplace. The empathy and benevolent attitudes often exhibited are restricted to Employment Equity policies that encourage the hiring of women in roles that conform to traditional gender norms (such as occupations deemed feminine, like teachers or nurses). Consequently, while benevolent sexism seemingly advocates for gender equality through its endorsement of gender-focused Employment Equity policies, it inadvertently stifles true gender equality by confining women to occupational “gender ghettos.”³²¹

Findings from a survey conducted within governmental organizations revealed a significant presence of full-time female employees in non-energy-related roles, primarily in administrative and managerial positions, rather than specialized energy careers. These respondents reported a female employee of approximately 54 percent. The representation of women in energy-specific roles remains limited. The underlying challenge in formulating effective policies lies in the lack of female participation in energy-related careers. This gap may stem from a limited number of female graduates in the field or a scarcity of employment opportunities. Interestingly, the percent of female students enrolled in energy-related educational programs surpasses that of male graduates. Furthermore, enterprises are encouraged to implement programs promoting work-life balance, such as flexible working hours and telecommuting options, as recommended by the United Nations Economic Commission for Europe (UNECE) in 2022.³²²

³²⁰ Mansour, Atty. Nisrine Elias. “Women’s Inclusion in the Energy Sector.” Policy Brief. Prepared for Publish What You Pay Lebanon & Diaries of the Ocean. 2021.

³²¹ Eagly, A. H., Wood, S. A., & Wood, W. (2016). The compassionate sexist? How benevolent sexism promotes and undermines gender equality in the workplace. *Journal of Social Issues*, 72(4), 807-825. doi:10.1111/josi.12230

³²² Mansour, Atty. Nisrine Elias. “Women’s Inclusion in the Energy Sector.” Policy Brief. Prepared for Publish What You Pay Lebanon & Diaries of the Ocean. 2021.

The recent decree No. 9095/2022, enforcing an 80 percent employment quota for Lebanese nationals (regardless of gender) during petroleum development and production, could significantly incentivize students to pursue energy-related educational programs and retain highly skilled Lebanese professionals in the local energy sector. Moreover, implementing a female quota in accordance with the law is not discriminatory but rather promotes gender diversity and inclusion. Such measures would encourage women to embrace new challenges and opportunities.³²³ Still, hiring practices within the local private sector tend to confine female graduates to sales departments rather than engineering or on-site construction and exploration roles. This limits their ability to demonstrate their capabilities, as they may face concerns about workplace harassment and gender discrimination when working alongside men in skilled positions. It is worth mentioning that the researcher did not inquire about women’s preferences regarding working on platforms versus working in office environments.

The survey focused on the experiences of the four organizations contacted, as the primary objective was not to determine personal preferences. Moreover, social misconceptions regarding the division of family responsibilities and household duties between genders hinder women from pursuing demanding jobs that require frequent mobility and complex work schedules. Consequently, the low percentage of women’s employment in the energy sector can be attributed to entrenched beliefs about gender roles, cultural and social norms, and prevailing hiring practices in the industry. Therefore, comprehensive interventions are necessary at multiple levels to overcome the historical exclusion of women from energy-related careers and workplaces.³²⁴

3.3.3. Nurturing education for a sustainable future

Lebanon has made significant strides in achieving universal basic education by implementing compulsory and free education in public schools. The enrollment rates at the secondary level have shown improvement, with an increase from 51.5 percent for women and 48 percent for men in 2004 to 58 percent for women and 51 percent for men in 2018-19. Similarly, enrollment in tertiary education has witnessed growth, rising from 36 percent for women and 30 percent for men in 2004 to 45 percent for women and 35 percent for men in 2018-19.

Prior to the economic crisis in Lebanon, the gender ratio in education and career aspirations demonstrated a

³²³ Ibid.

³²⁴ Ibid.



higher level of equity compared to the regional average. According to the Program for International Student Assessment (PISA) findings, which is the Organisation of Economic Co-operation and Development (OECD) benchmarking tool that assesses achievement and application of key knowledge and skills of 15 year-olds, girls achieved similar scores to boys in mathematics and science. A difference was observed in career expectations between boys and girls. Less than 50 percent of boys were considering pursuing engineering or science professions, while approximately 25 percent of girls were expected to opt for such careers.³²⁵

In Lebanon, educational institutions provide limited or no support to cater to the specific requirements of students, particularly in terms of childcare facilities or flexible study arrangements. Consequently, it is observed that married female students with children often discontinue their participation in master's programs due to their family responsibilities. This situation also appears to influence the research preferences of female students when selecting their areas of study in school.³²⁶

The number of male graduates in STEM fields, including engineering, is nearly double that of female graduates, with a percentage of 30 percent and 18 percent respectively. This gender gap is also observed specifically in engineering, where 21 percent of male graduates compared to only 6 percent of female graduates enter the field. On the other hand, women outnumber men as graduates in education programs (85 percent), health and welfare programs, and humanities and the arts (72 percent).³²⁷ These fields are often associated with what are commonly referred to as “feminine sectors”, which encompass health, social development, administration, and education. This pattern is consistent with trends observed in other countries in the MENA region.³²⁸

In Lebanon, there is a notable presence of female talent in the energy sector, as evidenced by the fact that 61 percent of female students enrolled in public universities are pursuing Science, Technology, Engineering, and Mathematics (STEM) disciplines. Moreover, degree programs related to renewable energy and the broader

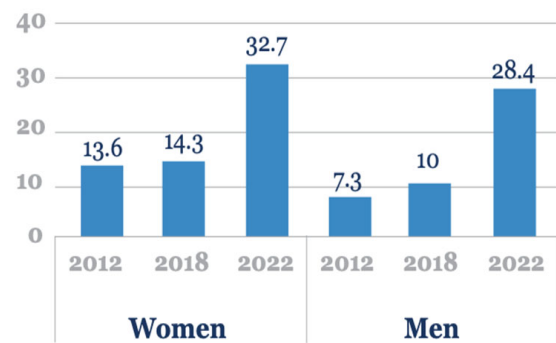
³²⁵ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. “Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia.” Report. Wilson Center, 2023.

³²⁶ World Bank Group (2019). *Shedding Light on Female Talent in Lebanon's Energy Sector*.

³²⁷ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. “Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia.” Report. Wilson Center, 2023.

³²⁸ Ibid.

Figure 10. Ratio of female-to-male unemployment in Lebanon in 2012, 2018, and 2022



■ F/M Unemployment rate in Lebanon

Source: Central Administration of Statistics and ILO

field of energy exhibit significantly higher participation rates among women compared to programs focused on oil and gas. This presents an opportunity for working professionals, including women, to transition their careers and acquire the necessary skills to thrive in the emerging green energy market, both domestically and regionally.³²⁹ Nevertheless, when examining the distribution of women in STEM disciplines, it becomes evident that there are imbalances in terms of their concentration in theoretical sciences as opposed to applied fields like engineering. Furthermore, in regions that are primed for the implementation of renewable energy initiatives, such as rural areas, there is a notable disparity in the equitable availability of tertiary education institutions and knowledge centers. This lack of accessibility particularly affects women impeding their opportunities to acquire the necessary skills and knowledge in the field should they have an interest in pursuing it.³³⁰ Consequently, there exists an untapped potential, especially within the renewable energy sub-sector, which offers ample employment opportunities for highly skilled and moderately skilled female workers throughout the entire value chain of renewable energy.³³¹

In Lebanon, there are currently eight universities offering 15 energy-related degree programs within their four-year university diplomas and graduate programs. The emergence of the renewable energy market and the potential of offshore oil and gas activities in Lebanon have prompted the introduction of new majors at the tertiary education level. These majors encompass various subjects related to renewable energy and oil and gas. Presently, the majority of students (68 percent) are enrolled in petroleum

³²⁹ World Bank Group (2019). *Shedding Light on Female Talent in Lebanon's Energy Sector*.

³³⁰ Ibid.

³³¹ World Bank Group (2019). *Shedding Light on Female Talent in Lebanon's Energy Sector*.



and petrochemical programs, while the remaining students are divided between renewables/energy efficiency (20 percent) and general-energy programs (12 percent). Notably, degree programs in renewable energy and general energy exhibit higher levels of female participation compared to those in oil and gas, with women comprising 47 percent and 46 percent of students, respectively, in contrast to 25 percent in oil and gas programs.³³²

Both public and private universities have experienced a decline in female enrollment figures in STEM majors, in contrast to overall enrollment numbers. In public universities, there is a decrease of approximately 10 percentage points, while private universities observe a larger decrease of 14 percentage points. Interestingly, within public universities, the proportion of females in STEM programs is 61 percent, which is notably high even when compared to developed nations. This phenomenon may appear somewhat counterintuitive as recent global research suggests a paradoxical relationship between gender equality and STEM enrollment rates, with countries exhibiting lower gender equality often exhibiting higher enrollment rates in STEM fields compared to countries considered more gender equal.³³³ The underlying reasons for this paradox can be attributed to the fact that a STEM education can offer women greater opportunities for generating income and achieving financial independence, especially in countries where gender-based restrictions may limit their employment options.³³⁴

Furthermore, upon closer examination of enrollment data in Lebanon, it becomes apparent that the overall figures for STEM education conceal significant disparities between the more theoretical sciences and the field of engineering, which predominantly emphasizes applied disciplines. These imbalances within the STEM field are further substantiated when we analyze the enrollment numbers in sciences and engineering across all universities. On average, approximately 54 percent of female students are enrolled in science programs.

Firstly, while the overall number of women pursuing STEM majors in Lebanon is relatively high, the proportion of women enrolled in engineering programs is only 25 percent.³³⁵

³³² Ibid.

³³³ Ibid.

³³⁴ Ibid.

³³⁵ Ibid.

Secondly, social and cultural norms may hinder females residing in rural areas from accessing tertiary institutions that offer energy-related majors, as these institutions are primarily located in Beirut and Mount Lebanon. The decision to pursue such majors may require women to relocate from their parents' homes. This disparity is most pronounced in rural regions, particularly in the Beqaa, Baalbek and El Hermel areas, where the percent of women in STEM majors drops to 37 percent, compared to 45 percent in Beirut. This discrepancy may arise due to mobility challenges faced by women in rural areas, including limited safe transportation options or family restrictions on travel.³³⁶ Participants in the study identified informational gaps as a significant challenge, with a particular focus on the inadequate communication of available career options in the energy sector to female high school students. This lack of information was seen as a contributing factor to the low representation of women in STEM majors. Furthermore, the socioeconomic backgrounds of the students and their families were recognized as influential factors in shaping their educational and career trajectories.

3.3.4. The era of digitalization: embracing the digital transformation

Inadequate network availability and limited access points to the internet or mobile connections are persistent issues in Lebanon, not solely restricted to rural areas.³³⁷ There is a lack of encouragement for women and girls to pursue STEM education, and insufficient provision of digital skills training for women. Nonetheless, civil society organizations and non-governmental organizations (NGOs) in Lebanon are actively working to bridge these gaps.³³⁸ The International Telecommunication Union (ITU) reported an increase in the gender gap for internet access in Lebanon, reaching 3.7 percent. Additionally, the gap between male and female mobile phone users has widened by 7.8 percent.³³⁹

Lebanon's technology sector has attracted 162 investments between 2013 and 2017, and there has been a rise in programs specifically aimed at supporting women. Within 5 years, the country's start-up sector has accounted for 1.5

³³⁶ Ibid.

³³⁷ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

³³⁸ Ibid.

³³⁹ Ibid.



percent of Lebanon's GDP.³⁴⁰ Female entrepreneurs have played a significant role in this growth, with almost half of the start-ups incubated in recent cohorts and accelerator programs being led by women. Consequently, Lebanon has witnessed an increase in the number of training programs that focus on promoting entrepreneurship and facilitating greater participation of women in the sector.³⁴¹

3.3.5. Exploring MSMEs landscape

Compared to the average in the MENA region, a relatively low proportion of Lebanese firms (10 percent) have women among their owners, while the regional average stands at 19 percent. Out of all the firms in Lebanon, only 5 percent are majority female-owned. Additionally, the percentage of women who are self-employed entrepreneurs is 11 percent, in contrast to 25 percent of men. Over the past few years, Lebanon has experienced a decline in the number of women-owned businesses, dropping from 9.9 percent in 2021 to 5 percent in 2022. These businesses were disproportionately affected by the challenging situation in Lebanon, as they constituted a smaller share of total enterprises. Among the businesses impacted by the Port explosions, one in five were led by women and had to close due to the lack of insurance coverage for repairs and losses. For instance, a survey conducted in Lebanon involving 532 firms revealed that companies led by women employed a larger proportion of female permanent full-time workers (49 percent) compared to firms led by men (22 percent) (World Bank and UN Women 2021, based on Enterprise Survey 2019).³⁴²

There are noticeable gaps in entrepreneurship, with only 17 percent of women engaged in self-employment, which is less than half the rate observed among men at 43 percent. In a survey conducted in 2016, it was found that 39.8 percent of 210 Lebanese women entrepreneurs acknowledged experiencing discrimination in their business environment based on their gender. In a separate study, Lebanese women entrepreneurs highlighted that they identified business opportunities by drawing upon their work experience and utilizing their educational qualifications and industry expertise. Women often turn to entrepreneurship as a means to escape economic and employment conditions that are characterized by discrimination. This is supported by a

³⁴⁰ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

³⁴¹ Ibid.

³⁴² World Bank Group (WBG). "RENEW MENA." 2022.

study conducted on Lebanese women, which indicates that they engage in entrepreneurship with the aim of achieving higher incomes.

3.3.6. Challenges hindering MSMEs in Lebanon: an in-depth analysis

The obstacles impacting MSMEs in Lebanon are influenced by various factors, including limited access to credit, a deficient regulatory environment and legal framework, prevalence of the informal sector, and societal norms. Access to credit has been hindered by the absence of a national strategy for financial inclusion, driven by political instability that has impeded the enactment of enabling legislation. Gender disparities exist in terms of financial services access, with men being favored, although some improvement has been observed over time. The regulatory environment and legal framework present challenges, such as job limitations on women and discriminatory practices. The informal sector is prevalent, particularly in rural areas, leading to unfavorable working conditions and limited access to social security benefits. Lastly, societal norms and perceptions reinforce gender inequalities and discourage women's participation in certain sectors. This section examines these obstacles in detail and their impact on MSMEs in Lebanon.

3.3.6.1. The influence of social norms on MSMEs: exploring impacts and implications

According to the Women, Peace, and Security Index (WPSI), in Lebanon, 20 percent of males disagreed with the notion that women should have paid jobs outside their homes. The Social Institutions and Gender Index (SIGI) revealed that 69 percent of Lebanese individuals believed that children suffer when their mothers work outside the home. A study conducted in 2017 revealed that the majority of household work in Lebanon is predominantly carried out by women, while only 25 percent of men reported participating in such tasks. The unequal distribution of caregiving responsibilities can be attributed to discriminatory social institutions and persistent gender role stereotypes.³⁴³

For instance, a significant percentage of the population holds the belief that a woman's primary responsibility is to care for the family, with 60 percent of men and 45 percent of women endorsing this notion. Such societal beliefs and perceptions regarding women's societal roles can manifest in the educational trajectories of girls and boys, often

³⁴³ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.



leading to gender segregation across fields of study.³⁴⁴ In the specific context of Lebanon, there are additional challenges that contribute to gender gaps, including limited mobility due to inadequate transportation options that are safe and secure, as well as the negative reputation associated with the energy sector.³⁴⁵

Furthermore, the reputation of the energy sector, which is perceived as unstable and plagued by issues of inclusivity, accountability, and governance, also impacts the enrollment of female students in energy majors at Lebanese universities. Women tend to prefer working in more stable environments, such as the banking and education sectors, which may discourage their participation in the energy sector. As previously mentioned, a higher proportion of women opt for majors related to renewable energy (47 percent) and energy science (46 percent), while fewer choose oil and gas-related majors like chemical and petroleum engineering, which have a female representation of only 25 percent. This trend suggests that fewer women choose to enroll in programs that they perceive as having limited prospects for employment in the sector after graduation.

3.3.6.2. Navigating the challenges of informality: implications for MSMEs

The barriers to achieving gender equality in Lebanon are rooted in the interplay between formal institutions, such as those related to the functioning of the state, and markets encompassing labor, credit, goods, and services.³⁴⁶ These systems are deeply entrenched in patriarchal structures that perpetuate discriminatory laws, restrictive norms, and unequal social networks, collectively referred to as informal institutions. The intricate dynamics among these institutions, exacerbated by various crises, significantly shape household decision-making and investment choices, leading to disparate outcomes for women and men.

Informal employment is prevalent among both genders, as the absence of an unemployment insurance scheme leaves individuals with few alternatives, often resulting in the acceptance of low-productivity jobs in the informal sector.³⁴⁷ Additionally, the limited presence of female entrepreneurs in Lebanon increases women's reliance

on wage employment, particularly those opportunities that are readily available to them.³⁴⁸

Based on the Labor Force and Household Living Conditions Survey (LFHLCS) 2018-2019 data, it is evident that a substantial proportion of the employed population in Lebanon is engaged in unregistered businesses, with no significant gender disparity (refer to Figure 17).³⁴⁹ Working in unregistered businesses exposes individuals, particularly women, to unfavorable working conditions and deprives them of social security benefits and maternity privileges. Informal employment prevails throughout Lebanon, with a greater prevalence observed outside the urban centers of Beirut and Mount Lebanon (refer to Figure 18). In regions such as Akkar and Baalbek-Hermel, gender disparities are prominent, further disadvantaging women. Mount Lebanon also experiences gender discrepancies, albeit at lower levels of informality, with higher rates observed among women.³⁵⁰

Upon disaggregating the data by nationality, notable disparities become apparent, particularly with regards to informality rates among non-Lebanese women compared to their Lebanese counterparts and the overall average (refer to Figure 19).³⁵¹ The elevated informality levels among non-Lebanese women can be attributed to a significant presence of Syrian refugees engaged in the agricultural sector, where informality reaches as high as 88 percent according to the International Labour Organization (ILO) in 2020. A substantial proportion of Syrian refugee women in Lebanon, approximately 55 percent, are employed in agriculture, followed by the services sector at 24 percent, with a smaller portion, around 8 percent, involved in professional services, as reported by the World Bank in 2020.³⁵² Moreover, the political instability and uncertainty in Lebanon have contributed to the expansion of the informal sector. More than half of the women in Lebanon are employed in unregistered businesses, exposing them to unfavorable working conditions and lacking access to social security or maternity benefits.³⁵³

³⁴⁴ World Bank Group (2019). *Shedding Light on Female Talent in Lebanon's Energy Sector*.

³⁴⁵ *Ibid.*

³⁴⁶ World Bank and UN Women. *The Status of Women in Lebanon: Assessing Women's Access to Economic Opportunities, Human Capital Accumulation & Agency*. Washington D.C.: World Bank, 2021.

³⁴⁷ *Ibid.*

³⁴⁸ *Ibid.*

³⁴⁹ *Ibid.*

³⁵⁰ *Ibid.*

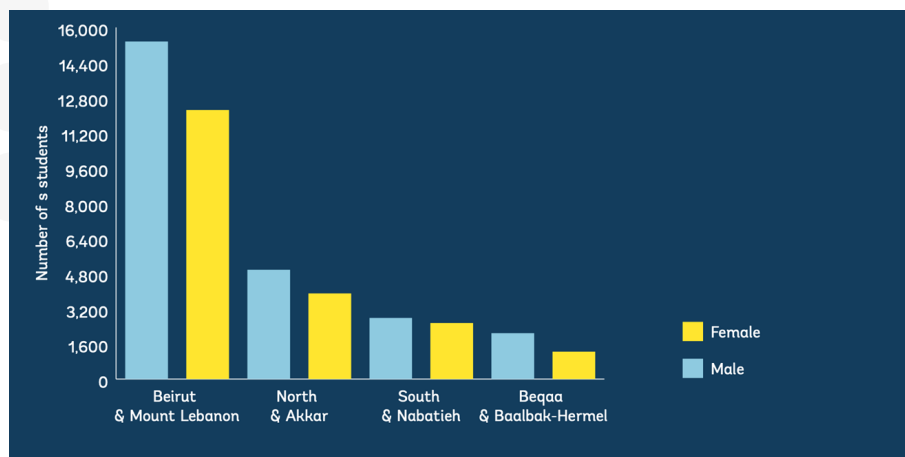
³⁵¹ *Ibid.*

³⁵² *Ibid.*

³⁵³ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.



Figure 11. Regional distribution of male and female students in STEM fields (2018 data)



Source: ESMAP | *Shedding Light On Female Talent in Lebanon's Energy Sector*

3.3.6.3. Examining the legal and regulatory landscape for MSMEs

The gender gap within Lebanon's energy sector is compounded by legal restrictions, such as Ministerial directives that impose job limitations, specifically on women hindering their ability to work on equal terms as men. These constraints are further exacerbated by prevailing gender norms and societal expectations regarding women's roles in the household.³⁵⁴ Lebanon has recently implemented legislation to safeguard women in the workplace, specifically addressing issues related to sexual harassment. In terms of women's freedom of movement and the impact of laws on their decision to work, Lebanon achieved a flawless score in the WBL (Women, Business, and the Law) report. The country has ratified multiple International Labor Organization (ILO) conventions that promote gender equality and has made several amendments to its labor code to eliminate discriminatory provisions.

Significant changes have been made over the years to enhance women's rights in various areas. For instance, in 1987, both men and women became eligible for end-of-service indemnities at the age of 64. In 1994, women were granted the right to engage in commercial activities without requiring prior approval from their husbands. Lebanon also adopted the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) in 1997, although it withheld certain articles pertaining to equality in nationality, inheritance, and other rights.³⁵⁵ Article 26 of the Labor Law explicitly prohibits all forms of

discrimination between men and women in the workplace. It ensures equal rights in employment, remuneration, promotions, salary increases, vocational training, and choice of attire, all protected by the law. Furthermore, a provision that previously prohibited women from working at night in the industrial sector was abolished in 2005.³⁵⁶

The Lebanese civil servant code and labor law are designed to ensure gender equality, particularly in terms of wages and career progression. Additionally, Article 31 of Lebanon's tax law allows women to benefit from a tax deduction on their income for their husband and children. There is still a gender wage gap. When examining data on "Gender gap in monthly wage of employees" at main jobs by age and nationality in 2018-19 in Lebanon, the results conveyed that non-Lebanese workers earned substantially less than Lebanese workers, the majority of the former being men. Furthermore, when disaggregated by nationality, the monthly gender pay gap for Lebanese employees was 6.5 percent, indicating that Lebanese men earn, on average, 6.5 percent more than Lebanese women. In the 2018-2019 period, the percent of women classified as low-paid workers stood at 9.9 percent, while for men, it was 7.7 percent.³⁵⁷ According to the Women, Business, and the Law (WBL) report, women in Lebanon enjoy unrestricted mobility rights. They have the legal freedom to travel both within and outside their homes and the country without requiring permission from a male guardian.³⁵⁸

In Lebanon, the inheritance laws are complex and vary

³⁵⁴ World Bank Group (2019). *Shedding Light on Female Talent in Lebanon's Energy Sector*.

³⁵⁵ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

³⁵⁶ Ibid.

³⁵⁷ UNDP. (2015). *The Life of Women and Men in Lebanon*. Beirut, Lebanon: UNDP.

³⁵⁸ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.



depending on religious affiliation. Non-Muslims are governed by the 1959 Civil Law of Inheritance, which ensures complete equality between men and women in terms of their right to inherit and the portion of the inheritance they are entitled to receive. A survey conducted by Arab Barometer, which interviewed over 25,000 individuals in 12 countries across the Middle East and North Africa (MENA) region, found that 65 percent of Lebanese participants (56 percent of men and 74 percent of women) agreed that women should have an equal share of inheritance as men.

Despite this belief, it does not guarantee that women are actually receiving their full share of inheritance. Muslims in Lebanon adhere to the inheritance rules outlined in Sharia law, which vary based on their respective religious sects. Despite being significant contributors to agricultural production in Lebanon, women face limited access to land ownership in rural areas, with only 9 percent of women owning land, primarily among those over the age of 55. Notably, Lebanon does not have marital property laws, which means that in the event of a divorce, if the marital house is registered under the husband's name, the woman will not retain any share of the property.³⁵⁹

In Lebanon, both women and men possess equal legal rights and secure access to land assets. These rights may not be uniformly applicable to all groups of women, particularly in the context of differences between Muslims and non-Muslims. Furthermore, discriminatory practices and laws based on customs, religion, and tradition disproportionately impact women. In Lebanon, unlike Tunisia, employers bear the full responsibility for covering the salary during maternity leave. This arrangement, where employers are obligated to cover both the direct and indirect costs associated with maternity leave, can potentially contribute to discriminatory attitudes towards hiring women.³⁶⁰ In Lebanon, the availability and affordability of formal childcare services pose challenges, particularly for individuals from certain social classes, as they are often prohibitively expensive and limited in accessibility.³⁶¹

³⁵⁹ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

³⁶⁰ Ibid.

³⁶¹ Ibid.

3.3.6.4. Enhancing access to credit for MSMEs: challenges and opportunities

Lebanon has experienced a consistent absence of a national strategy for promoting financial inclusion, primarily due to political instability, which has hindered the enactment of enabling legislation pertaining to financial literacy, data privacy, and security.³⁶² Data from the Global Findex 2017 showed that in Lebanon, 40 percent of men and 33 percent of women had borrowed money. Men were more likely to borrow from formal financial institutions compared to women, with a percentage of 20 percent and 13 percent, respectively.³⁶³

Significant gender disparities exist in Lebanon concerning access to financial services, with men being favored. Although there has been some improvement over time, the gap remains considerable. In 2011, only 26 percent of women and 50 percent of men had bank accounts, compared to 33 percent of women and 57 percent of men in 2017. The gender gap in account ownership in Lebanon was larger than the regional average for the MENA region in 2017, but this gap has started to narrow since 2021, primarily due to the collapse of Lebanon's banking system.³⁶⁴ In Lebanon, the number of women who do not have bank accounts is more than double that of men, with the main reason cited being the existence of another family member who already possesses an account.³⁶⁵

3.3.7. Conclusion

In summary, Lebanon grapples with obstacles related to the limited participation of women in the workforce and gender disparities within the energy sector, where in many MENA countries, women's average representation rate in the energy sector is below the global average of 22 percent. In line with this, Lebanon's women's representation rate in the energy sector stands at 5 percent.³⁶⁶ With a female labor force participation rate of only 25 percent, well below the global average, women tend to be concentrated

³⁶² Ibid.

³⁶³ Global Findex, 2017

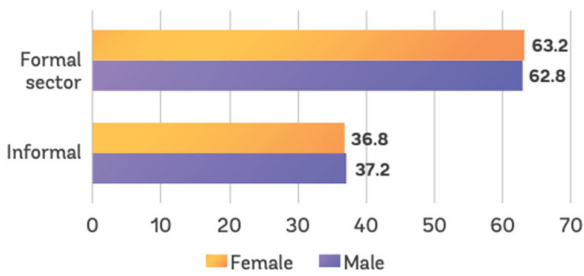
³⁶⁴ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

³⁶⁵ Ibid.

³⁶⁶ Maier, E., Constant, S., & Ahmad, A. (2021). Toward more and better jobs for women in energy: An assessment undertaken to guide the new Regional Network in Energy for Women—RENEW. World Bank.

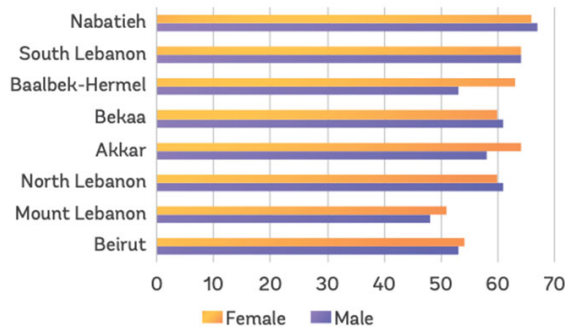


Figure 12. Share of Employment in unregistered businesses by gender (%), 2018-2019



Source: LFHLCS 2018-2019

Figure 13. Employment in the Informal sector by governorate and gender (%), 2018-2019

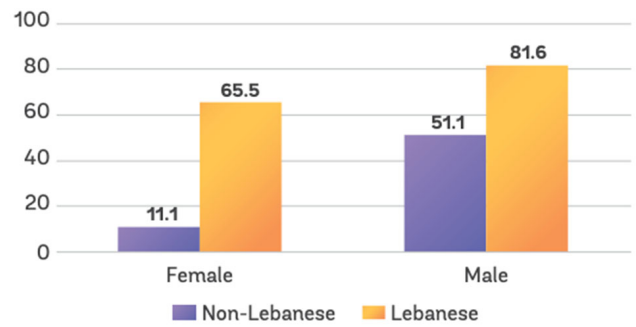


Source: LFHLCS 2018-2019

in sectors such as banking, health, education, and public administration, with minimal representation in leadership roles. Factors such as cultural norms, prevailing gender roles, and hiring practices contribute to the underrepresentation of women in the energy sector, particularly in oil and gas. Moreover, the lack of support for women in education, including inadequate childcare facilities and inflexible study arrangements, obstructs their involvement in STEM fields, specifically engineering. Nonetheless, the renewable energy sector presents untapped potential, as it witnesses greater female enrollment in energy-related programs. To address historical exclusion and foster gender diversity and inclusion in the energy sector, comprehensive interventions are imperative. The post-COVID era and the recent crises in Lebanon call for a thorough reevaluation of the developments that transpired over the past five years.

Lebanon’s STEM data provided in this report cannot be inferred to the national population as it was a micro online survey conducted by the Energy Sector Management Assistance Program (ESMAP) to try and fill in the gender data gap. There is a massive gap when it comes to education in Lebanon, where according to a World Bank report conducted in 2022 the tertiary school enrollment, female (gross, percentage of relevant age group) dates

Figure 14. Formality of the employed by gender and nationality (%), 2018-2019



Source: LFHLCS 2018-2019

back to 1985, and there is no data on the percent of female graduates in STEM fields. Surprisingly, there is to some extent some recent data on female workers in the energy sector and in STEM that date back to 2018 and 2019, respectively. Also the most recent source for labor market data is the Lebanon Labor Force and Household Condition Survey (2018–19), which could be a bit outdated especially given the recent dynamics and crisis that hit Lebanon and affected not only its energy sector but the country as a whole. Hence, we doubt that these statistics are quite representative nowadays.

3.4. Morocco

Morocco is currently coping with the complex problems brought on by the phenomenon of climate change, which have significant implications for its primary sectors. The agricultural sector, in particular, has been severely affected by regional droughts, resulting in a decline in cereal production and a decrease in GDP growth. To tackle these challenges, Morocco introduced the National 2030 Climate Plan, which aims to enhance the resilience of vulnerable sectors and mitigate greenhouse gas emissions. The country has also made substantial investments in renewable energy, with ambitious targets for renewable energy adoption. Despite these efforts, Morocco still faces gender disparities in various aspects, including women’s participation in the workforce, access to education, and entrepreneurship opportunities. The government has implemented programs and initiatives to promote gender equality and empower women in these areas, but more work is needed to address the existing barriers and create a more inclusive and equitable society. In addition, through exploring the entrepreneurial context in the country we hope to gain a better understanding of the role of gender and MSMEs in the energy transition program.



3.4.1. Labor market outlook

The integration of women into the labor force could contribute to reducing gender disparities, empowering women in decision-making within households, promoting investments in education and health, and harnessing a vital resource for economic development. Despite the strides made in education in Morocco, further enhancements are necessary to cultivate a workforce capable of driving employment growth and enabling young individuals to secure high-productivity jobs. There are several critical issues that require thorough analysis and examination of international experiences to formulate tangible policy options, including the need to address high drop-out rates among the youth, expand and enhance vocational training opportunities for 18-to-24-year-olds with limited formal education, facilitate the transition of highly educated youth from postsecondary institutions to the workforce, and improve the overall quality of education to align with international benchmarks and standards.

The labor market in Morocco has exhibited significant exclusionary tendencies toward two crucial demographic groups: youth and women.³⁶⁷ A considerable proportion of Morocco's young population remains disconnected from employment opportunities and receive limited investment funds to enhance their employability. Approximately 29 percent of individuals aged 15 to 24 falls under the Not in Education, Employment, or Training (NEET) category, denoting their disengagement from education, employment, or training. The prevalence of NEETs signifies a substantial presence of inactive and discouraged young people, which can impede their long-term capacity to acquire skills and contribute to the country's economic and social progress. Simultaneously, the female labor force participation (FLFP) rate has been declining and currently stands below 30 percent, even lower compared to other countries characterized by low FLFP rates.³⁶⁸

This rising rate of inactivity, along with the persistently low FLFP, has persisted despite advances in education and increased educational opportunities for women. Many discouraged young individuals and women have encountered difficulties in securing decent employment and have subsequently discontinued their job search, raising concerns about the quality and relevance of

education and the country's ability to realize returns on its substantial investments in education.³⁶⁹

According to the World Bank's assessment of the female labor force participation rate in Morocco, the country ranks in the bottom 20 percent globally, and little progress has been made in the past two decades. Women in Morocco earn 30-50 percent less than men for the same positions, depending on the sector. In the 2018 Global Gender Gap Report by the World Economic Forum, Morocco ranked 137th out of 149 countries in terms of economic participation and opportunities indicator and its rank deteriorated where according to the same report in 2022 its ranking fell to 139.³⁷⁰ This is not surprising, considering that the labor force participation rate of women in Morocco has been declining since 1990. Between 1990 and 2010, the rate dropped from 30 percent to 26 percent, and it currently stands at 24.9 percent. It should be noted that this data does not include the informal sector, where many women are employed as unskilled, non-unionized workers without social security contributions or labor entitlements.³⁷¹ The participation of women in the workforce was limited to 4 percent due to their insufficient qualifications. The female workforce participation rate in Morocco remains low at only 4 percent, largely due to inadequate qualifications. Women predominantly work in traditional sectors such as cleaning, catering, and administration, while in technical fields, they are mainly found in quality control and health and safety units. Some women occupy highly skilled positions like topographers and welders. The Moroccan government's gender-specific energy provision initiative under the Morocco Global Electrification program aims to achieve 99.7 percent rural electrification through solar power in 2,970 villages between 2006 and 2016, benefiting women and children in various sectors. The wood energy program also seeks to improve rural women's livelihoods by providing more efficient cook stoves that reduce wood consumption from 20kg to 5kg. However, these gender equality initiatives in the renewable energy sector lack specific programs supporting female entrepreneurship or enhancing women's participation in decision-making within the sector.³⁷²

Vulnerable employment refers to a type of work that lacks formal arrangements, social protection, and safety nets, leaving individuals more susceptible to economic

³⁶⁷ Lopez-Acevedo, Gladys, Gordon Betcherman, Ayache Khellaf, and Vasco Molini. Morocco's Jobs Landscape: Identifying Constraints to an Inclusive Labor Market. International Development in Focus. Washington, DC: World Bank, 2021.

³⁶⁸ Ibid.

³⁶⁹ Ibid.

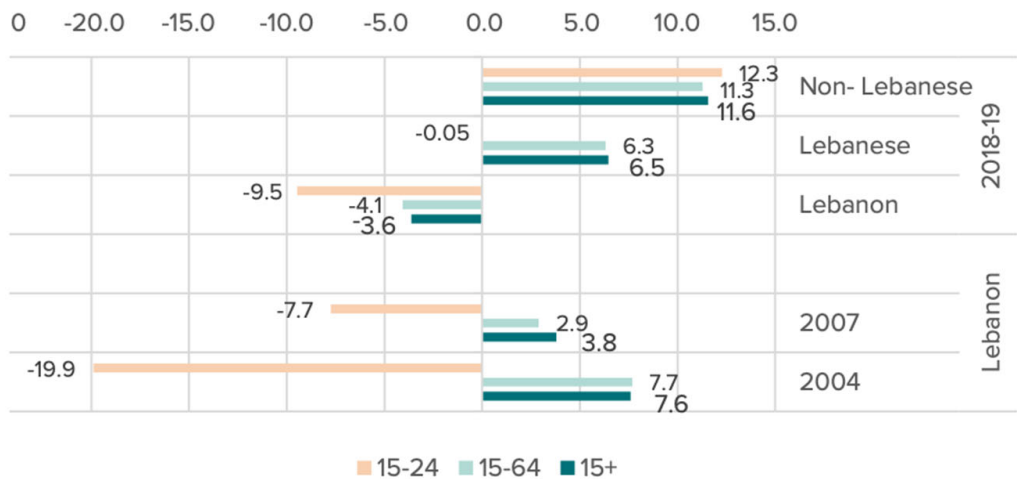
³⁷⁰ 2022, WEF, Global Gender Gap report

³⁷¹ UN Sustainable. 2021. "Arab Finance Report."

³⁷² Ibid.



Figure 15. Gender gap in monthly wage of employees at main job, by age and nationality, 2004, 2007 & 2018-19



Source: CAS, LCS 2004, 2007, 2012 and LFHLCs 2018-19

downturns and poverty. In 2019, the percentage of women engaged in vulnerable employment was 56.3 percent, while for men it was 42.9 percent in Morocco. The rate of vulnerable employment in Morocco, both for men and women, is higher compared to the average rate observed in the MENA region.³⁷³

In Morocco, there is a significant disparity in the amount of time spent by women and men on unpaid domestic and care work. Women, on average, spend approximately seven times more time on such activities compared to men. This is reflected in the data, which measures the proportion of time individuals dedicate to providing household services for their own consumption. In 2012, women in Morocco allocated 20.8 percent of their daily time to unpaid work, whereas men devoted only 3 percent of their day to similar activities.³⁷⁴ The data used for this comparison is derived from the most recent available data point between 2010 and 2019 from the World Bank.

3.4.2. Renewable energy outlook

The Moroccan economy faces a development challenge as it grapples with the detrimental impacts of climate change, which render its primary sectors more susceptible to environmental factors such as rising temperatures, sea level rise, and reduced rainfall.³⁷⁵ The agricultural sector, accounting for 15 percent of GDP, was severely affected by regional droughts in 2016, leading to a significant decline in cereal production and

a consequent decrease in GDP growth to 1.1 percent.³⁷⁶ To address these challenges, Morocco introduced its National 2030 Climate Plan in 2019. Still, this was not the first initiative that the country has undertaken to transition to renewable energy sources, where in 2009 Morocco adopted its National Energy Strategy as a roadmap for transitioning to a low-carbon energy system. This strategy aligns economic development with social and environmental objectives through focusing on several strategic priorities, including diversifying and optimizing the energy mix, strengthening energy supply security, fostering the development of renewable energy and energy efficiency industries, promoting the utilization of domestic energy resources, and integrating with regional and international energy markets, particularly in Africa and Europe. Nowadays, promoting energy efficiency is a key priority in Morocco’s national policies. Initially targeting energy savings of 12 percent by 2020 and 15 percent by 2030, the country has now set a more ambitious goal of achieving 20 percent energy savings by 2030.³⁷⁷

In 2009, Morocco adopted its National Energy Strategy as a roadmap for transitioning to a low-carbon energy system that aligns economic development with social and environmental objectives. The strategy focuses on several strategic priorities, including diversifying and optimizing the energy mix, strengthening energy supply security, fostering the development of renewable energy and energy efficiency industries, promoting the utilization of domestic energy resources, and integrating with regional and international energy markets, particularly in Africa and Europe. The strategy set a goal of attaining 42 percent renewable energy capacity out of the total installed

³⁷³ <https://genderdata.worldbank.org/countries/morocco/>

³⁷⁴ Ibid.

³⁷⁵ UN Sustainable. 2021. “Arab Finance Report.”

³⁷⁶ Ibid.

³⁷⁷ Ibid.



power capacity by 2020. In 2015, this target was raised to 52 percent by 2030, with a distribution of resources among solar, wind, and hydropower. To achieve this 2030 renewable energy target, Morocco is projected to require a significant investment of approximately USD 30 billion.³⁷⁸

Despite the predominant use of fossil fuels, Morocco has been actively investing in renewable energy sources. Key projects such as the Tarfaya wind farm, the largest on the continent, inaugurated in 2014, and the Noor Ouarzazate Solar Complex, one of the world's largest concentrating solar power facilities, switched on in 2016, are instrumental in Morocco's pursuit of energy self-sufficiency. In 2016, King Mohammed VI expressed the possibility of increasing Morocco's renewable energy share to 52 percent by 2030, contingent upon securing appropriate financing. These efforts signify Morocco's commitment to transitioning to a more sustainable and renewable energy landscape.³⁷⁹ Morocco's efforts in promoting renewable energy sources have strongly superseded other countries in the MENA region and these efforts are even more prominent as Morocco is the only MENA country to join the IEA's Association initiative.³⁸⁰

Morocco has made several endeavors in its attempt to integrate the gender dimension in its development initiatives. For instance, the Noor Ouarzazate project implemented a gender equality and social responsibility compensation approach to ensure equitable benefits for all stakeholders. Rather than adopting an individual compensation scheme, a community-based model was employed. As an illustration, instead of providing monetary compensation solely to male landowners for the land acquisition, the project focused on investing in essential infrastructure and social services that benefited the entire community. This included initiatives such as the development of drainage and irrigation channels, access to clean drinking water, and mobile health caravans. Additionally, specific projects aimed at empowering women were implemented, such as the construction of a dormitory for female students and the provision of sports and camp programs exclusively for women. These measures aimed at promoting inclusivity and addressing the diverse needs of different groups within the community.³⁸¹

³⁷⁸ UN Sustainable. 2021. "Arab Finance Report."

³⁷⁹ Ibid.

³⁸⁰ <https://www.iea.org/news/morocco-becomes-iea-association-country-a-first-for-the-middle-east-and-africa>

³⁸¹ UN Sustainable. 2021. "Arab Finance Report."

The Gender-specific Energy Provision of the Morocco Global Electrification program, implemented by the Government of Morocco (GoM), aimed to achieve 99.7 percent rural electrification between 2006 and 2016, focusing on solar power in 2,970 villages. The primary beneficiaries of this initiative will be women and children in various settings such as households, schools, health centers, and agriculture. The provision of gender-specific energy initiatives within the Morocco Global Electrification program has aimed to address the specific needs and challenges faced by women in the renewable energy sector, particularly in the context of rural electrification and improved access to efficient cooking technologies. In addition, to improve the situation for rural women, the wood energy program was designed to provide enhanced cook stoves that require only 5kg of wood instead of the inefficient old types that consume 20 kg of wood. Still, both programs to promote gender equality in the renewable energy sub-sector lack initiatives that support female entrepreneurship or enable women's participation in decision-making processes within the sector.³⁸²

3.4.3. Nurturing education for a sustainable future

The country has witnessed an overall increase in access to education at all levels. Still, the country faces significant challenges due to low learning outcomes and high dropout rates, which hinder its development.³⁸³ In terms of primary school enrollment, there was almost equal participation between boys and girls in 2016, reflecting improved equity. However, disparities between genders started emerging towards the end of primary education. Additionally, while the gender difference in the category of out-of-school children is minimal, it becomes more evident among adolescents.³⁸⁴ Regarding secondary education, there was an increase in female net enrollment from 43.37 percent in 2010 to 53.6 percent in 2012, while for males; it rose from 53.41 percent to 59.59 percent during the same period.³⁸⁵

Educational conditions are worse for girls in rural areas where they face a higher likelihood of dropping out after completing primary school. Consequently, it is not surprising that the net enrollment rate in lower secondary school was 33.7 percent in 2014, significantly lower than the rate of 83.2 percent in urban areas. Several factors contribute to this disparity, including inadequate

³⁸² Ibid.

³⁸³ Ibid.

³⁸⁴ Ibid.

³⁸⁵ World Bank (2019). Morocco Country Gender Profile. Retrieved from: <https://genderdata.worldbank.org/countries/morocco/>



sanitation and transportation facilities, limited access to transportation, and sociocultural barriers that hinder girls' education in rural regions. Still, the most significant obstacle preventing girls from pursuing further education is the distance to secondary schools. Despite having lower enrollment rates at the secondary school level, girls excel in their graduating exams. They represent 49.4 percent of those who pass the general examination, 58.4 percent of those who graduate with a technical and commercial specialization, and 29.5 percent of those with a technical industrial specialization.

In 2019, the trends indicated an increasingly educated labor force, with secondary and tertiary education rates steadily rising for both males and females aged 15-24. The percentage of younger males and females with secondary education has reached around 30 percent over the past two decades. Learning outcomes still remain relatively low, early dropouts continue to pose a significant challenge, and disparities between urban and rural areas persist. For instance, in 2019, while 50 percent of male students and 42 percent of female students aged 19-24 were enrolled in tertiary education in urban areas, the coverage in rural areas stood at only 22 percent for males and 10 percent for females.

According to the World Bank "Morocco Gender Landscape" document, there has been an increase in the female share of graduates from STEM programs, where in 2010 there were only 38.6 percent of female STEM graduates compared to 45.3 percent in 2017.³⁸⁶ There is no more data on STEM graduates for females in Morocco past this period indicating a data gap that requires updating. Between 2001 and 2013, youth enrollment in vocational training (VT) and higher education (HE) showed substantial growth. VT enrollment increased from 132,000 to over 350,000, while HE enrollment rose from 300,000 to 622,000. Morocco has made substantial efforts with regards to the VT sector, where The Ministry of Handicrafts, Social and Solidarity Economy reinforced vocational and continuing education endeavors through the construction of new facilities and the enhancement of existing ones. This initiative led to a rise in the number of graduates to 29,198, with females comprising 53 percent of the total, while accounting and management training was extended to 19,000 craftspeople, of which 28 percent were women. Furthermore, by the conclusion of 2016, a total of 68 "craft houses" had been established to enhance the living conditions and product quality of craftswomen. In 2013, the sector witnessed a turnover of Dh 202 billion (€ 2.2 billion), achieving an annual growth rate of 12 percent and surpassing its value-added target

³⁸⁶ World Bank. (2023). Morocco Gender Landscape

by 40 percent. Moreover, the sector generated 53,000 new job opportunities, reflecting a 2.2 percent increase.³⁸⁷ This conveys the crucial role of integrating women into different sectors and industries.

Skills development in Morocco has been primarily driven by informal apprenticeships within the informal sector. Although there have been advancements in technical and vocational education and training (TVET) recently, the proportion of individuals equipped with formal professional training remains relatively low, as indicated by Figure 3.5. In 2019, around 15.8 percent of unemployed men and 10.5 percent of unemployed women, totaling 26 percent, possessed a TVET degree. Moreover, approximately 10.3 percent of the employed population, comprising 7.6 percent of men and 2.7 percent of women, equivalent to roughly 1 million workers, had successfully completed TVET programs.

3.4.4. The era of digitalization: embracing the digital transformation

According to the 2021 Global Findex database by the World Bank, in Morocco the number of males that use a mobile phone or the internet considerably exceeds that of females. Only 4.8 percent of females in the 15 and above age group used mobile phones or used the internet to pay bills in the past year compared to 9.8 percent of males, denoting that females have less than half of the access to technology compared to males.³⁸⁸ The rate of females is also lower in Morocco than in both; the MENA region and the lower-middle income countries' group. This digital discrepancy should flag that the country needs to direct more efforts towards creating a more conducive environment for its female entrepreneurs where it has been argued that digital access is a key element in facilitating women.

3.4.5. Exploring MSMEs landscape

In 2018, there was a notable gender disparity in business ownership, with a higher proportion of men owning businesses compared to women.³⁸⁹ Specifically, the share of female business owners in Morocco ranks within the second quintile when compared to other countries with available data. The share of business ownership is determined by calculating the proportion of newly registered limited liability company owners who are either female or male, relative to the total number of newly

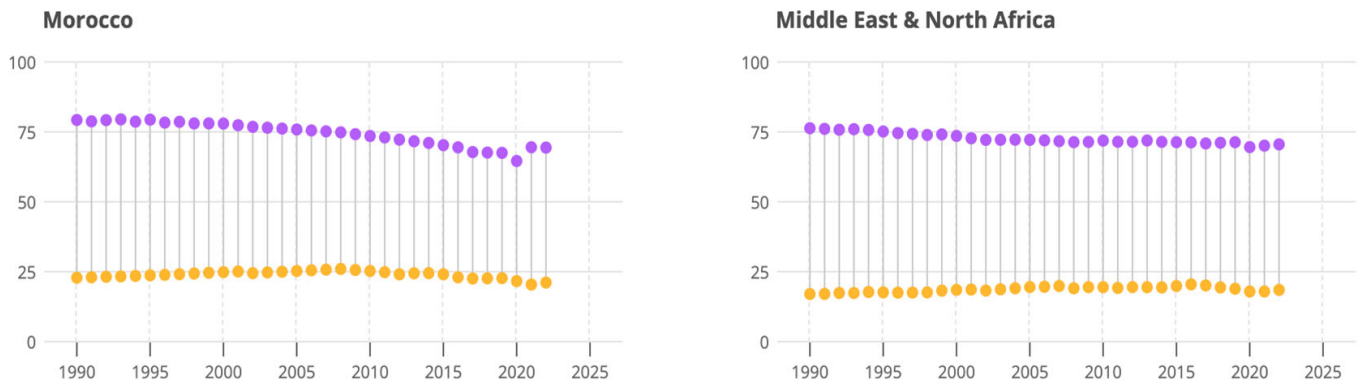
³⁸⁷ World Bank (2019). Morocco Country Gender Profile. Retrieved from: <https://genderdata.worldbank.org/countries/morocco/>

³⁸⁸ <https://genderdata.worldbank.org/indicators/fin14a-a/>

³⁸⁹ <https://genderdata.worldbank.org/countries/morocco/>



Figure 16. Labor force participation rate, by sex (% of population ages 15+) (modeled ILO estimate)



Source: International Labour Organization. "ILO Modeled Estimates and Projections database (ILOEST)" ILOSTAT. Accessed February 21, 2023. <https://ilostat.ilo.org/data/>

Note: the orange dotted line represents female labor force participation rate while the purple dotted line represents male labor force participation rate

registered limited liability company owners within the national economy during the specified calendar year.³⁹⁰ Accordingly, the share of business owners, among females as a percent of total business owners in Morocco in 2018 stood short at 17 percent compared to 83 percent for males. This strongly suggests that more efforts need to be made within the context of integrating women into the entrepreneurial sector.

3.4.6. Challenges hindering MSMEs in Morocco: an in-depth analysis

In general, the entrepreneurship sector in Morocco is characterized by an unfavorable business environment, which includes challenges such as inadequate financing options and limited growth opportunities in both domestic and international markets.³⁹¹ This is clearly reflected in the 2018 Global entrepreneurship Index, where Morocco ranked the 65th relative to 137 countries and in the MENA region it ranked the 10th among 14 countries.³⁹² The majority of female-owned enterprises fall under the category of small and medium-sized businesses, primarily operating in the service sector (37 percent), followed by trade (31 percent), and manufacturing (21 percent). In addition, to the aforementioned challenges there are bureaucratic and legal obstacles that hinder entrepreneurial endeavors. Women entrepreneurs face additional barriers such as socio-cultural discriminatory practices and limited access to crucial resources like information, networks, markets, inputs, and supportive

³⁹⁰ <https://genderdata.worldbank.org/countries/morocco/>

³⁹¹ World Bank (2019). Morocco Country Gender Profile. Retrieved from: <https://genderdata.worldbank.org/countries/morocco/>

³⁹² Ács, Zoltán J., László Szerb, and Ainsley L. 2018. «GEDI_Global Entrepreneurship Index.»

programs. Moreover, they lack mentors who can provide guidance in developing their ideas.

3.4.6.1. The influence of social norms on MSMEs: exploring impacts and implications

A majority of women of working age, exceeding 70 percent, are neither employed nor actively looking for employment. Despite advancements in school enrollment, the inclination of women to participate in the workforce has been steadily declining. This trend seems to be influenced by responsibilities related to domestic work and childcare, traditional societal expectations based on gender, and a disparity between the skills women possess and those sought by employers. The experiences of women living in urban areas differ significantly from those in rural regions. Urban women face challenges in securing high-productivity jobs, despite having higher levels of education. On the other hand, rural women predominantly engage in low-productivity, unpaid agricultural labor without access to medical or social security benefits.³⁹³

The stereotypes prevalent in Moroccan society significantly influence the entrepreneurial aspirations of younger generations and can help explain the lack of self-confidence among women regarding their ability to initiate a business. These stereotypes also contribute to the enduring cultural norms that perpetuate a low level of gender equality.³⁹⁴

The prevailing masculine culture is responsible for various socio-cultural challenges faced by women entrepreneurs.

³⁹³ Lopez-Acevedo, Gladys, Gordon Betcherman, Ayache Khellaf, and Vasco Molini. Morocco's Jobs Landscape: Identifying Constraints to an Inclusive Labor Market. International Development in Focus. Washington, DC: World Bank, 2021.

³⁹⁴ Global Entrepreneurship Monitor GEM, 2009.



Moroccan society has long exhibited hostility towards women working outside the home, posing a significant barrier to female entrepreneurship.³⁹⁵ The preference for men in positions of authority or entrepreneurship in specific fields discourages women from pursuing such endeavors. Certain professions are deemed suitable only for men, perpetuating gender biases. From an early age, girls are more likely to be conditioned for domestic roles as homemakers rather than being encouraged to become entrepreneurs or managers. They are confined to the role of a mother dedicated to her household, sacrificing her own aspirations for the sake of her family and the education of her children. The socialization of girls fails to foster their self-confidence, autonomy, risk-taking abilities, and inclination towards innovation—essential skills for anyone aspiring to develop and manage their own business. Furthermore, Morocco’s historical background, particularly the colonial era and subsequent underdevelopment phase, has contributed to the proliferation of poverty, ignorance, and backwardness, which have adversely affected Moroccan society as a whole, with women being particularly impacted.

3.4.6.2. Navigating the challenges of informality: implications for MSMEs

Over time, there has been a rise in labor force inactivity, particularly among women and young people. This suggests that these individuals face significant barriers when attempting to enter the job market, leading to discouragement and a cessation of job-seeking activities. Conversely, there has been a gradual but consistent decline in labor market informality over the past two decades, although informal employment remains prevalent in the country. While there has been some improvement in formalization, the overall quality of jobs remains inadequate. Insufficient progress in transitioning the economy toward higher-value-added sectors has hindered the necessary structural transformation to generate demand for skilled labor. The agricultural sector continues to dominate the Moroccan economy, encompassing predominantly low-productivity jobs, often in the form of unpaid family work without social security or medical coverage. While formalization among wage workers has increased between 2007 and 2019, primarily driven by the private sector, approximately 55 percent of wage workers still operate in the informal sector.

Morocco’s economic transition has resulted in a shift away from agriculture towards informal, low-value-added services, rather than towards labor-intensive industrial jobs or high-value-added service jobs. This heavy

reliance on the informal sector has negative implications for labor productivity, diminishes the tax base, and leaves many workers and their families without adequate health and social insurance.

To address this issue, a comprehensive understanding of the obstacles to formalization is necessary, requiring the analysis of firm-level data and wage data at both the individual and firm levels. The limited number of available jobs, coupled with a growing labor force and persistent informality, has contributed to increased inactivity and ongoing unemployment.

While Morocco has made progress in formalizing its workforce, there is still significant room for improvement. The proportion of formal waged workers has steadily increased from 33 percent in 2000 to 45 percent in 2019, indicating that more than half of wage workers continue to operate in the informal sector. Social protection deficiencies are strongly linked to informal employment, as workers in this sector lack even basic income security and access to essential health care. Consequently, these individuals find themselves trapped in a continuous cycle of poverty and vulnerability, negatively impacting their well-being and presenting a significant obstacle to a country’s economic and social progress.³⁹⁶

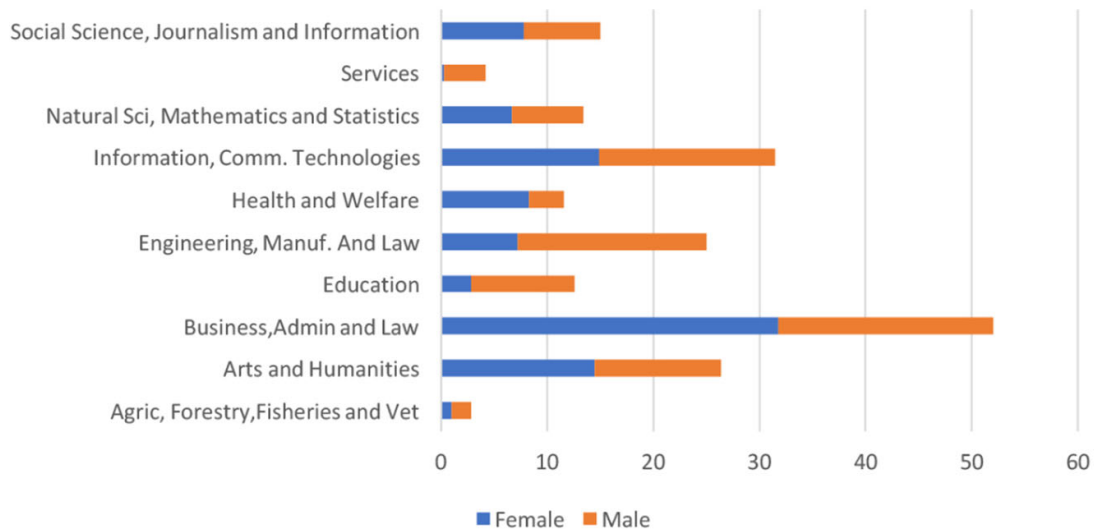
In case there are barriers to formalization, there are ways to extend benefits and social security provisions to informal sector workers. Extending social protection to informal workers is one way to support the transition from the informal to the formal economy as highlighted in ILO Recommendation 204. In response to the challenges posed by informal employment, governments can take several key measures to extend social protection coverage for informal workers. Firstly, implementing universal social assistance programs, such as cash transfers or fully subsidized insurance schemes, can provide essential support to informal workers and their households without requiring them to contribute financially. Secondly, expanding social insurance schemes to include informal workers, particularly those with some capacity to contribute, can offer a pathway to comprehensive coverage. Thirdly, enhancing access to and the quality of public services, such as healthcare and child care, plays a vital role in effective social protection policies, especially for women informal workers who often bear disproportionate responsibilities for caregiving. Fourthly, ensuring fair financing mechanisms for informal workers, considering their higher risk of poverty, can contribute to equitable and sustainable social protection. Moreover, adapting services to meet the specific needs of informal workers, including health, child care, and

³⁹⁵ Asli, Amina, and Nour, Habiba Bensassi. “Female Entrepreneurship in Morocco: Obstacles and Ways to Overcome Them.” (2018).

³⁹⁶ International Labour Organization 2019. How to extend social protection to workers in informal employment in the ASEAN region.



Figure 17. Graduates by degree types



Source: WEF-Global Gender Gap Report, 2017

sanitation, is critical to avoid imposing additional risks and costs on vulnerable workers and undermining their income security. By implementing these measures, governments can create more inclusive and supportive social protection policies that address the unique challenges faced by informal workers, fostering greater social and economic development.³⁹⁷

Within formal wage work, men dominate both the public and private sectors. In the public sector, highly educated men residing in urban areas account for approximately 57.7 percent of the workforce, while women with similar qualifications fall short of representing even half of their male counterparts. This gender disparity is similarly observed in the private sector, where women comprise less than 30 percent of the total wage workforce. The public sector tends to attract a higher concentration of highly educated individuals, likely due to its favorable working conditions for those with advanced education.

Formal workers are predominantly educated men living in urban areas, whereas informal workers generally possess lower levels of education and are more prevalent in rural regions. As anticipated, individuals with higher education levels residing in urban areas constitute the majority of formal waged workers. When combining men (48.5 percent) and women (19.9 percent), this group accounts for 68.4 percent of all formal waged workers. On the other hand, informal wage workers tend to have lower education levels and are more commonly found in rural areas. Low-educated men (27.2 percent) and women (12.6 percent) residing in rural regions comprise

approximately 40 percent of the informal workforce. Their distribution closely aligns with that of self-employed individuals, as the majority of self-employed workers operate informally and often experience volatile incomes, similar to informal waged workers.

Approximately 34 percent of self-employed individuals with limited education reside in rural areas, while roughly 25 percent engage in small-scale entrepreneurial activities in urban regions. A smaller yet noteworthy segment, comprising around 800,000 individuals, consists of educated male entrepreneurs residing in urban areas. This group, alongside educated women, is expected to contribute to entrepreneurial leadership, fostering innovation and business advancement. The representation of women among the self-employed is notably low. Only a specific category, encompassing approximately 250,000 women involved in agricultural activities, exhibits some prominence. These self-employed women predominantly concentrate in regions characterized by high levels of inequality and poverty, such as Draâ-Tafilalet and Souss-Massa. Conversely, highly educated self-employed men are particularly prevalent in the two most vibrant regions, Casablanca-Settat and Rabat-Salé-Kenitra.

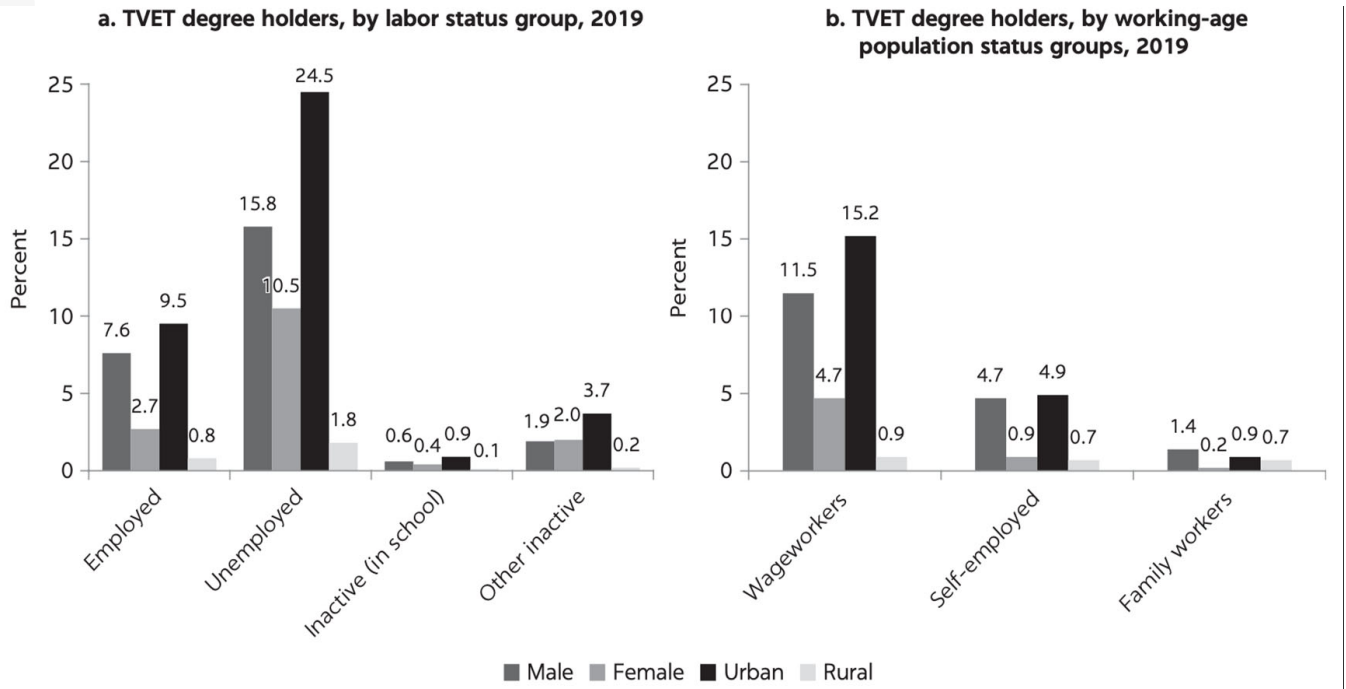
3.4.6.3. Examining the legal and regulatory landscape for MSMEs

The primary objective of Morocco's National Financial Inclusion Strategy is to enhance financial access, with a particular focus on youth, women, and the rural population, while also promoting environmentally-friendly financing options. This strategy aims to foster the development of alternative financial mechanisms, including mobile payments, microfinance, and inclusive insurance. As an illustration, a public credit guarantee institution is providing incentives to facilitate the provision of green

³⁹⁷ ILO. 2018. Women and men in the informal economy: A statistical picture. Third edition. Geneva: ILO. Available at: https://www.ilo.org/global/publications/books/WCMS_626831/lang-en/index.htm



Figure 18. Technical and vocational education and training still low



Source: Estimates based on the Enquête Nationale sur l'Emploi
 Note: TVET = technical and vocational education and training

loans to MSMEs. Additionally, the Solidarity Fund, an insurance scheme, has been implemented to cover losses experienced by small farmers due to climate-related incidents. The strategy also endeavors to narrow the gender gap in accessing formal financial services by encouraging financial service providers to incorporate the gender perspective into the design of their offerings, catering to the specific needs of women. The availability of green financing solutions remains limited in scope and requires further strengthening in Morocco.

In 2006, the National Strategy for Gender Equity and Equality was adopted as the first comprehensive framework dedicated to promoting gender equality. This strategy aims to address gender disparities across various sectors of society, with a particular focus on civil rights, representation, participation in decision-making processes, social and economic rights, social and individual behaviors, and institutional and political consolidation. The Ministry of Solidarity, Women, Family, and Social Development, which was established in 2012, holds the responsibility of promoting and safeguarding women's rights within the country. One of the Ministry's key priorities is to create a platform for fostering gender equality among ministerial departments, non-governmental organizations (NGOs), and other organizations.³⁹⁸

Recognizing the limited access to credit for women and their underrepresentation in entrepreneurship, the Government of Morocco (GoM) acknowledges that fostering women's entrepreneurship is crucial for their integration into economic and social development. In collaboration with various development partners, the GoM has implemented specific programs aimed at promoting female entrepreneurship. One such program is the Security Fund known as 'Ilayji' or 'For You,' which was introduced in March 2013 to incentivize banks to extend loans to women entrepreneurs. From the program's launch in 2013 until September 2015, it had granted a total of 81.5 million Dirham in loans to 236 enterprises, leading to the creation of 762 job opportunities.

In the context of the institutional environment for women entrepreneurs in Morocco, there are certain challenges related to the lack of information and insufficient support programs. While there are various bodies and programs in place to assist in the establishment and growth of SMEs, such as "Maroc PME," regional investment centers, and entrepreneurship promotion associations (such as the Bank Foundation for Business Creation, Young Leaders Center, Association of Women Entrepreneurs of Morocco, Saham Foundation, Cherifian Phosphate Office, etc.), the awareness and knowledge of these resources among entrepreneurs, especially women, remains limited.³⁹⁹

³⁹⁸ UN Sustainable. 2021. "Arab Finance Report."

³⁹⁹ Asli, Amina; Nour, Habiba Bensassi (2018) : Female Entrepreneurship in Morocco, Obstacles and Ways to Overcome Them



Although gender-neutral programs do not enforce gender quotas, women's participation rate in these initiatives ranges from 10 percent to 50 percent. For instance, the Association of Women Enterprises in Morocco (AFEM) was established in 2006 to provide technical support, mentorship, and capacity-building resources to empower aspiring female entrepreneurs. According to the AFEM, 2015, these associations have the potential to play a crucial role in encouraging, supporting, and guiding women in starting and managing their businesses. They provide vital information, supervision, and assistance in business management, as well as offer training programs to develop managerial skills. Moreover, they form a network capable of advocating for women entrepreneurs to both public authorities and international institutions.⁴⁰⁰ According to the Women, Business and Law report's index, Morocco scores 75.6 out of 100 across 190 countries, while the regional average across MENA is 54.⁴⁰¹ This index comprises eight different sub-indexes; mobility, workplace, pay, marriage, parent-hood, entrepreneurship, assets and pension. Across these eight sub-indexes Morocco scored 100, 50, 60, 80, 100, 40, and 75, respectively. Based on these numbers it is evident that Moroccan women mostly struggle with equal pay and asset ownership, while surprisingly doing well in terms of the entrepreneurship sub-index.⁴⁰² Gender disparities, gender-based violence, and unfavorable social norms continue to affect women and girls, contributing to the full potential of women's human capital remaining untapped. To realize economic benefits from investments in human capital, it is crucial to address and include women's perspectives and empower them to overcome the various barriers hindering their economic empowerment.⁴⁰³

Presently, women play a significant role in Moroccan cooperatives across various sectors, including crafts, agriculture, food supply, aromatic and medicinal plants, and Argan production. Approximately 29 percent of all cooperators in the country are women, with nearly 14 percent of cooperatives being exclusively composed of women members. These women's cooperatives are diverse, with 43 percent involved in crafts, 33 percent in agriculture, 12 percent in argan production, and other sectors like aromatic and medicinal plants. The legal framework governing cooperatives in Morocco, Law No. 112.12, applies uniformly to all cooperatives, including those formed by women, without any distinct provisions

for women's cooperatives.⁴⁰⁴ Despite the Moroccan government's commitment to promoting gender equality, empowerment, and social inclusion, rural female cooperatives continue to face significant challenges. These difficulties pose a critical gap in addressing the issues concerning these cooperatives effectively. Urgent and comprehensive action is required from all segments of society to address and overcome these challenges and ensure the meaningful development and success of rural female cooperatives in Morocco.⁴⁰⁵

It is worth noting that there are only a few programs specifically designed for women entrepreneurs in Morocco. Examples include Moroccan Pioneers and Min Ajliki (For You). The latter initiative, initiated in 2013 by the Association for the Promotion of Education and Training Abroad, aims to enhance female entrepreneurship in the Greater Casablanca, Tangier-Tetouan, and Meknès-Tafilalet regions by establishing business incubators. This program provides entrepreneurship training, awareness-raising activities, pre-creation support, and partner staff training. It emphasizes the importance of training resources in order to ensure effective project monitoring throughout Morocco. To facilitate this, a dedicated computer platform has been developed in collaboration with the National Agency for the Promotion of Employment and Skills. The program has been allocated a total of 8.7 million USD, with plans to secure an additional 15.4 million USD by 2021. Furthermore, new incubation projects are being planned in collaboration with the Association of Women Entrepreneurs of Morocco in other cities, including Marrakech and Agadir. These initiatives demonstrate efforts to address the lack of information and support programs for women entrepreneurs in Morocco, with the aim of fostering their empowerment and success in the business sector.⁴⁰⁶

3.4.6.4. *Enhancing access to credit for MSMEs: challenges and opportunities*

There is a clear ownership disparity between genders in Morocco, with 16.8 percent of women and 41.5 percent of men possessing accounts in 2017, surpassing the corresponding gender gap of 18.8 percent observed in the MENA region as a whole.⁴⁰⁷ Additionally, a mere 5

⁴⁰⁰ Ibid.

⁴⁰¹ World Bank (2023). Women, Business and the Law Report.

⁴⁰² Ibid.

⁴⁰³ World Bank. (2023). Morocco Gender Landscape

⁴⁰⁴ Tribak Wafae, Rguig Sara, 2021. Women's Rural Cooperatives in Morocco: Challenges and Collapses

⁴⁰⁵ Ibid.

⁴⁰⁶ Asli, Amina; Nour, Habiba Bensassi (2018):Female Entrepreneurship in Morocco, Obstacles and Ways to Overcome Them

⁴⁰⁷ <https://genderdata.worldbank.org/countries/morocco/>



percent of female account holders utilize their accounts for business purposes, in contrast to 23 percent of men. The percentage of women entrepreneurs decreased from 12.5 percent in 1999 to 10.5 percent in 2014. It's worth noting that over 65 percent of these enterprises are managed directly by their owners and exhibit a higher likelihood of exporting products and accessing foreign investments compared to male-owned businesses. Furthermore, only 40 percent of women have access to financial resources, while 92.5 percent of men do, mainly due to the lack of tangible assets to provide as collateral for loans.

3.4.7. Conclusion

In conclusion, Morocco is actively addressing the challenges of climate change and prioritizing the resilience of vulnerable sectors like agriculture through initiatives such as the National 2030 Climate Plan. The country has also made substantial investments in renewable energy with the goal of achieving 52 percent renewable energy capacity by 2030. Gender disparities persist in various areas, including women's workforce participation, access to education, and entrepreneurship opportunities. While the government has implemented programs to promote gender equality and empower women, additional targeted efforts are necessary to overcome barriers and foster a more inclusive and sustainable society.

Addressing issues such as unpaid domestic work, financial inclusion, and educational access will contribute to narrowing the gender gap and advancing women's empowerment in Morocco. Furthermore, the limited availability of data on the number of female STEM graduates in Morocco beyond the specified period (2018). The lack of up to date information underscores the need for further data collection and analysis in this area. Still, there is no more recent data available on female STEM graduates in Morocco, emphasizing the necessity of collecting and updating this information to gain a comprehensive understanding of the current landscape.

The share of women in the energy sector in Morocco, as well as the share of female workers in science and engineering, is not available. Most of the World Bank firm data goes back to 2019 and most of Morocco's indicators in general which reflects the need to collect more recent data so as to be able to understand how to better integrate women in the energy sector and then based off of that

policies can utilize those data to evaluate how to integrate women-led businesses. Also since Morocco is famous for its large export market which is an important aspect for women-led MSMEs, data on exports/import by women MSMEs need to be made available.

3.5. Sudan

In Sudan, the government is grappling with significant economic stagnation and unemployment challenges.⁴⁰⁸ In this context, entrepreneurship is viewed as a crucial driver of economic progress, offering opportunities for job creation, efficient resource utilization, and enhanced production through innovation, value generation, and wealth accumulation.⁴⁰⁹

The availability and accessibility of high-quality job opportunities play a vital role in promoting inclusive growth and achieving more favorable development outcomes, particularly for women. Studies indicate that if female labor force participation reaches parity with male levels, the global Gross Domestic Product (GDP) could see a significant 26 percent increase by 2025, compared to a scenario where things remain unchanged. Moreover, in Sub-Saharan Africa, approximately 40 to 45 percent of the potential output growth could be attributed to the transition of women into higher productivity sectors.⁴¹⁰ In Sudan, women encounter a range of impediments that hinder their participation in the labor market and prevent them from fully capitalizing on economic opportunities.⁴¹¹

It is important to note that Sudan needs to update various socio-economic surveys and censuses. The most recent population census conducted in Sudan took place in 2008, after which Sudan encountered multiple significant political and social changes, including the secession of South Sudan in 2011. Essential social and economic indicators collected through surveys like the Multiple Indicator Cluster Surveys or Labor Force surveys have not been collected since 2014 and 2011, respectively. Furthermore, there has not been an agriculture survey or census in over 20 years, and the

⁴⁰⁸ A/Rahman W., Ahmed, A., Ragab, M., and Alsaheed, M. (2022). Global Entrepreneurship Monitor: Sudan National Report 2021/2022.

⁴⁰⁹ Ibid.

⁴¹⁰ World Bank Group. (2021). Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities.

⁴¹¹ Ibid.



latest Industrial Establishments' Survey was fielded in 2003. Accordingly, there has barely been any significant statistical data gathering since 2015, leaving the country with serious data gaps across multiple sectors.⁴¹²

The following sections related to Sudan's study rely heavily on data from the last household survey (National Household Budget and Poverty Survey - NHBPS 2014/15), the Sudan 2009 National Baseline Household Survey (NBHS), the Multiple Indicator Cluster Survey (MICS 2014); Business and the Law (WBL) database (2021); the Enterprise Survey (2014); Global Financial Inclusion (Global Findex 2011–2014); the Afrobarometer (2018); and the Arab Barometer (2018).

3.5.1. Labor market outlook

The labor market in Sudan exhibits a significant issue of low overall labor force participation, with women being disproportionately affected by this challenge. Unemployment emerges as a prominent factor contributing to poverty in the country, necessitating focused attention as an integral component of the Interim Poverty Reduction Strategy Paper (I-PRSP).⁴¹³ Drawing upon the existing national initiatives of the Government of Sudan, the I-PRSP emphasizes the advancement of economic growth and the generation of employment as one of its key focal points. The proportion of the working-age population (15-64 years) engaged in the labor force witnessed an increase from 48.3 percent in 2009 to approximately 53.5 percent in 2014, accompanied by a slight decline in the unemployment rate from 12.5 percent in 2009 to 11.3 percent in 2014. Notably, there exists a considerable disparity in labor force participation between genders, with men comprising 76 percent and women's participation rate of 33 percent. Within Sudan, agriculture and services stand as the primary sectors for employment, with a higher prevalence of women engaged in agricultural activities. Moreover, the unemployment rate for women exceeds that of men by more than twofold (19 percent and 8 percent, respectively), with young women facing even more pronounced challenges, as 27 percent of them are unemployed compared to 20 percent of young men.⁴¹⁴

⁴¹² World Bank, 2021, Project Information Document/ Identification/Concept Stage (PID) <https://smartdatafinance.org/storage/2021-10-19/pQBbq7Dk7oJctDI.pdf>

⁴¹³ World Bank Group. (2021). Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities.

⁴¹⁴ Ibid.

Despite witnessing substantial growth in employment opportunities within Sudan, the proportion of individuals actively participating in the labor force stands at 53 percent of the working-age population. This rate is notably lower compared to the average rates observed in Sub-Saharan Africa, as well as among low-income and lower-middle-income countries.⁴¹⁵ Between the years 2009 and 2014, the Sudanese economy witnessed the creation of 2.5 million new jobs, which corresponded to an increase in the working-age population by approximately 2.8 million individuals and the active population by 2.6 million individuals.

This period exhibited notable advancements for the working-age population. Despite these positive developments, Sudan still falls behind many neighboring African countries and post-conflict nations in terms of its labor force participation rate.⁴¹⁶ Gaining insight into the unique challenges faced by women in Sudan can provide valuable insights into how to create more employment opportunities and contribute to the overall growth and long-term viability of the country.⁴¹⁷

In several regions of Sudan, the female labor force participation rates remained below 20 percent, specifically in the Northern, Eastern, and Central regions despite experiencing an overall increase. A contrast was observed in Darfur and Kordofan, where more than half of the working-age women were actively engaged in economic activities in 2014. In these regions, women exhibited a higher likelihood of labor force participation compared to men, particularly in Kordofan and Darfur, when compared to those residing in Khartoum. The rural setting further contributed to increased odds for women's labor market engagement, with a 42 percent and 87 percent higher likelihood of participating in the labor force and being employed, respectively. Surprisingly, despite the relatively lower participation rates, working-age women displayed a similar likelihood of experiencing unemployment as men.

Unemployment distribution by gender. A considerable number of women, especially young women, are excluded from the labor force, representing a significant proportion of the population who are not actively engaged in economic activities. Unlike men, who are more likely to exit the labor force before the age of 24, women tend to experience labor force exclusion across all age groups. The majority of young women, approximately 75 percent, are not participating

⁴¹⁵ Ibid.

⁴¹⁶ Ibid.

⁴¹⁷ Ibid.



in the labor market, while the corresponding figure for young men is just over half, at 54 percent. The disparity in labor force participation between men and women is evident across different age cohorts, with men aged 25 to 64 experiencing labor force exclusion rates ranging from 3 to 13 percent, compared to women in the range of 58 to 66 percent.⁴¹⁸

Sudanese women have long been affected by the repercussions of the country's heavy reliance on its oil industry. The agricultural sector has consistently been a more prevalent source of employment for Sudanese women, especially following the privatization efforts of the 1990s and the subsequent transition to a resource-based economy. As of 2014, the agricultural sector accounted for 47 percent of Sudan's total employment, encompassing 60 percent of employed women and 80 percent of employed rural women. Households in Sudan relying primarily on agricultural income, as opposed to other segments of the economy, generally exhibit higher levels of poverty, vulnerability, and lower resilience.⁴¹⁹

Unemployment distribution by income. Between 2009 and 2014, there was a notable decrease in the overall unemployment rate in the studied region, declining from 13 percent to 11 percent. This decline varied depending on gender and geographical location. The reduction in unemployment was particularly significant among the poorest quintile of the population and in rural areas, contributing substantially to the overall improvement. Among the bottom 20 percent of the population, the unemployment rate decreased from 18 percent in 2009 to a mere 10 percent in 2014. In rural areas, the unemployment rate experienced a decline from 14 percent in 2009 to 8 percent in 2014, surpassing the rate in urban areas, which stood at 17 percent in 2014. It is worth noting that the decrease in the unemployment rate was more pronounced for women, with a 4 percentage-point reduction, compared to only a one-percentage-point decrease among men, during the period from 2009 to 2014.⁴²⁰

Unemployment distribution by region. In comparison to the situation in 2009, unemployment rates exhibited divergent trends across different regions of Sudan. Khartoum, the Northern, and Central regions experienced an increase in unemployment, while

significant decreases were observed in the Kordofan and Darfur regions. Nearly all states with the lowest poverty rates in 2014, including Al-Gezira, River Nile, Khartoum, and Northern, reported unemployment rates above the national average. Conversely, states with the lowest unemployment rates were Blue Nile, South Kordofan, Sennar, Kassala, and North Kordofan, each ranging from 5 percent to 7 percent. Women, particularly in the wealthier states, faced higher levels of unemployment. Specifically, Al-Gezira, River Nile, Northern, Khartoum, Kassala, and Sinnar exhibited relatively higher percent of unemployed women, reaching as high as 58 percent in Al-Gezira. It is important to note that in poorer states, where rural areas are predominant, unemployment rates for women were comparatively lower. This discrepancy can be attributed to the fact that the majority of women in these states are engaged in agricultural activities, which offer relatively more employment opportunities when compared to other sectors. Overall, individuals in poorer states demonstrated a higher likelihood of being employed in contrast to those in wealthier states, which are primarily concentrated in urban areas that offer limited avenues for agricultural employment.⁴²¹

In several regions of Sudan, the female labor force participation rates remained below 20 percent, specifically in the Northern, Eastern, and Central regions, despite experiencing an overall increase. A noteworthy contrast was observed in Darfur and Kordofan, where more than half of the working-age women were actively engaged in economic activities in 2014. In these regions, women exhibited a higher likelihood of labor force participation compared to men, particularly in Kordofan and Darfur, when compared to those residing in Khartoum. The rural setting further contributed to increased odds for women's labor market engagement, with a 42 percent and 87 percent higher likelihood of participating in the labor force and being employed, respectively. Surprisingly, despite the relatively lower participation rates, working-age women displayed a similar likelihood of experiencing unemployment as men.

Unemployment distribution across the youth population. Regarding age demographics, young individuals account for approximately 45 percent of the labor force engaged in skilled agriculture and fishing, with female youth constituting 60 percent of this cohort. In contrast, male youth are more inclined towards elementary occupations. Although Sudan's economy has been predominantly driven by oil since the late 1990s, agriculture has remained the principal economic foundation for a significant portion of the population. The overrepresentation of women in

⁴¹⁸ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities.*

⁴¹⁹ Ibid.

⁴²⁰ Ibid.

⁴²¹ Ibid.



low productivity jobs, particularly within the agricultural sector, contributes to the existence of a gender wage gap.⁴²²

The secession of South Sudan in 2011 gave rise to several economic and social challenges for the country. With the separation from South Sudan, Sudan lost three-quarters of its oil reserves. Domestic oil production was insufficient and could not meet domestic demand. This has resulted in a shortage of fuel, a loss of government revenues, and larger deficits in the balance of payments. The latter has been exacerbated by the presence of parallel markets for foreign currencies, which are in need of unification. Furthermore, soaring inflation and high external debt ratios further aggravated Sudan's structural imbalances. The COVID-19 pandemic, alongside the aforementioned factors, further contributed to social unrest and protests continue to mount.⁴²³

During the period from 2009 to 2014, there was a noticeable rise in youth unemployment rates, particularly in urban areas. Unemployment among individuals aged 15 to 24 increased by 2 percentage points, reaching 22 percent in 2014 compared to 20 percent in 2009. In urban areas, the surge in youth unemployment was even more striking, with rates nearly reaching 40 percent in 2014. Although there was a slight decrease of 2 percent in female youth unemployment during the same period, it remained higher than the unemployment rate among male youth. This gender disparity is also evident in numerous states with lower poverty rates, reflecting a pattern similar to that observed among the overall working-age adult population, as discussed earlier.⁴²⁴

Distribution of women across sectors. The distribution of employment by sector and type of work reveals a gender disparity, wherein women tend to be disproportionately represented in non-remunerative roles, while men predominantly occupy positions as employers, paid workers, and self-employed individuals. Within the category of unpaid work, approximately 64 percent are women. In contrast, women constitute only 21 percent of paid employees and an even smaller proportion of employers representing only 18 percent. Notably, unpaid work within familial contexts emerges as the prevailing

form of employment for women, particularly among younger women residing in rural areas.⁴²⁵

The Sudanese labor market exhibits a significant concentration, with nearly 70 percent of occupations primarily centered on elementary roles and skilled agricultural activities. Notably, the agricultural sector serves as a dominant source of employment, comprising 60 percent of women's occupations, while among men; this figure stands at 39 percent. Furthermore, this sector experiences greater prevalence among individuals living in poverty, with a substantial share of 58 percent among the bottom 40 percent, compared to a share of 27 percent among the top 20 percent. Industries, on the other hand, display a notable gender disparity, predominantly favoring male employment. Conversely, women's participation in the workforce is largely confined to the agricultural sector in rural areas and the services' sector in urban regions. Services or market sales occupations engage less than 4 percent of women, and even fewer women occupy positions as technicians or senior officials, both of which typically necessitate a higher level of educational attainment.⁴²⁶

Notably, pronounced gender disparities are evident in the labor force, particularly with regard to educational attainment. A significant number of women who are not engaged in the labor force are found to have no formal education, accounting for 41 percent of this demographic. In contrast, the corresponding figure for men is a mere 4 percent. However, irrespective of educational background, women consistently exhibit higher rates of labor force disengagement compared to men, although the gender gap is relatively narrower among individuals with post-secondary education. Conversely, regardless of educational attainment, the percent of women employed remains consistently lower than that of men. This disparity may be partially explained by the fact that some women choose to exit the labor force in order to assume the role of a full-time homemaker.⁴²⁷

The restricted participation of women in the labor market can also be partially attributed to the limited accessibility of training centers, thereby leading to a mismatch between their desired areas of employment and the skilled labor demanded by the prevailing job market. For instance, a study conducted by the International Labor Organization in White Nile State in 2018 revealed a high level of interest among women in engaging in vocational and skills development programs that could enhance

⁴²² Ibid.

⁴²³ World Bank, 2021, Project Information Document/ Identification/Concept Stage (PID) <https://smartdatafinance.org/storage/2021-10-19/pQBbq7Dk7oJctDI.pdf>

⁴²⁴ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities.*

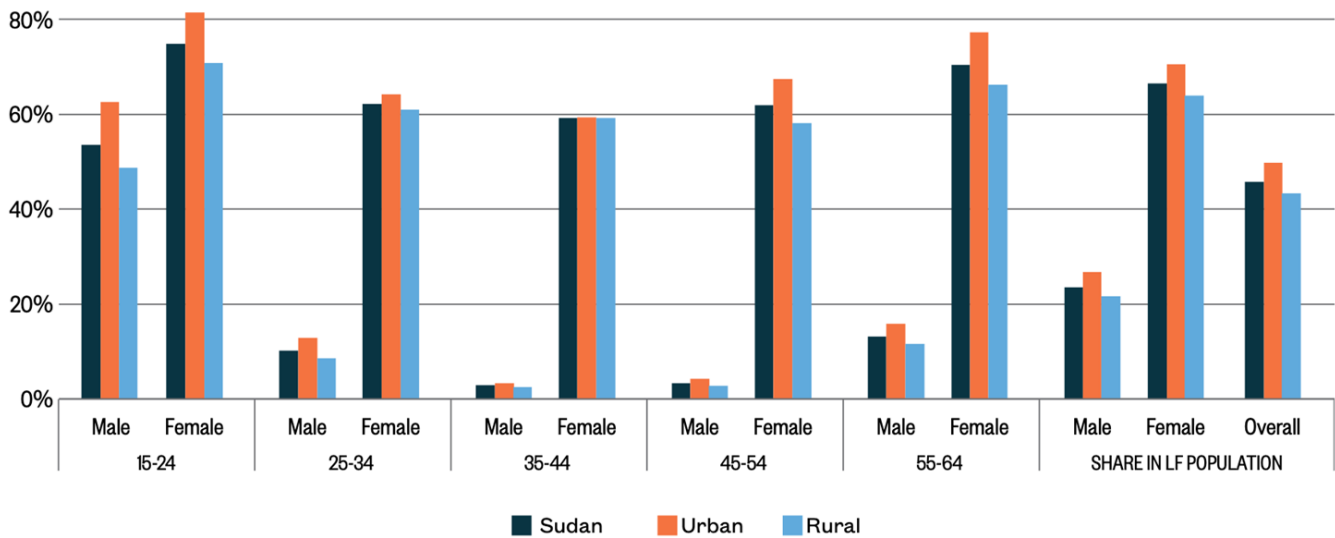
⁴²⁵ Ibid.

⁴²⁶ Ibid.

⁴²⁷ Ibid.



Figure 19. Population out of the labor force, by gender, age, and locality



Source: World Bank staff calculations based on NHBPS 2014/15
 Note: LF means "Labor Force"

their employment prospects. The absence of training centers in their local communities necessitated journeys exceeding two hours to access such facilities, resulting in significant temporal and financial burdens that many individuals could not afford.⁴²⁸

A labor market transformation. The transformation of Sudan's labor market has led to significant changes in the employment landscape for women, as outlined in the 1991 MPSL (discussed in previous sections). Khalfalla and Ahmed (2015, 119-120) highlight four key characteristics that define Sudanese women's employment: (a) an increased likelihood of rural employment, particularly in the agricultural sector; (b) concentration in gender-specific occupations; (c) concentration in lower-skilled and lower-paying jobs; and (d) a higher propensity for vulnerable women to seek employment in the informal sector. Remarkably, these characteristics continue to persist in present times, as discussed further in this section.

3.5.2. Renewable energy outlook

With its vast geographical area, abundant sunshine, and regions characterized by high wind speeds, Sudan possesses significant potential for sustainable geothermal, solar, and wind renewable energy production. Recognizing this opportunity, the Ministry of Energy and Petroleum has expressed the government's interest in harnessing additional renewable energy

resources to augment the existing hydropower capacity. New plans have been devised to address the expansion of renewable energy projects and overcome previous challenges. Certain obstacles, such as financial constraints and environmental concerns, have hindered the progress of initiatives aimed at increasing hydroelectric production capacity, including the Kajbar, Roseires, and Setit Dams. Despite the immense solar energy potential in Sudan, solar power currently contributes less than 0.1 percent to the country's energy supply. This stands in contrast to the average daily sunshine duration of 8.5 to 11 hours.⁴²⁹

In the 1980s and early 1990s, there was a significant interest in utilizing wind energy to meet the growing electricity demand in rural areas of Sudan. The discovery of oil disrupted the progress in wind energy development. Certain regions in Sudan, such as the Red Sea State, have favorable wind conditions, with north trade winds blowing at speeds of up to 6 m/s, making them ideal for wind energy production.⁴³⁰

The rise of the oil industry has indirectly contributed to the economic marginalization of Sudanese women. Previous studies also acknowledge the existing data indicating a lower female workforce participation rate in the MENA compared to other regions, but challenges the common perception that this discrepancy is solely due to religious factors such as Islam. Instead, it is suggested that the predominance of the oil industry, which is a male-

⁴²⁸ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities.*

⁴²⁹ Monged Abdalla & Tamer Qarmout (2023): An analysis of Sudan's energy sector and its renewable energy potential in a comparative African perspective.

⁴³⁰ Ibid.



dominated industry, plays a significant role. Another study that supports this perspective argues that it is not only the gendered nature of oil industry positions but also the higher wages associated with them that reinforce a patriarchal family structure. This perpetuates a “male breadwinner-female caregiver” model, as discussed in previous sections of this report.⁴³¹

Sudan has untapped potential in wind, geothermal, and solar energy, but further research, investment, and planning are necessary to fully exploit these resources and integrate them into the energy mix effectively. Sudan possesses significant potential for geothermal energy production, which involves harnessing heat from underground to generate electricity by driving turbines with steam. Promising indications of geothermal heat have been identified in various regions, including the Tagbo and Beidob hills, Jebel Marra volcano in the Darfur region, and Bayud volcano in the Red Sea State. These geothermal resources have an estimated capacity to generate around 400 MW of electricity., investing in geothermal energy carries inherent risks that necessitate detailed planning and information. Solar energy, while requiring substantial upfront investment costs, boasts low operating expenditures due to minimal maintenance requirements and the absence of fuel requirements for operation. The cost of wind energy installation depends on factors such as the elevation of the wind plant and the turbine technology.

By promoting the development of solar and wind projects, Sudan aims to enhance its energy diversification, reduce dependence on fossil fuels, and contribute to a more sustainable and resilient energy sector. Still, there is little to no research about women and their role in Sudan’s transition to renewable energy sources, this hinders Sudan from exploiting the potentials of half of its population.

3.5.3. Nurturing education for a sustainable future

A recent study provides evidence of persistently significant educational disparities between boys and girls in Sudan, exacerbating gender inequality. This discrepancy in educational access and attainment perpetuates societal imbalances, while the prevalence of child labor further compounds the challenge of ensuring educational opportunities for future generations.⁴³² In

⁴³¹ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities.*

⁴³² Ibid.

Sudan, where educational attainment levels are generally low, disparities emerge between young women and men in their choices of academic fields at the tertiary level. These patterns of occupational segregation have direct implications for the gender wage gap, as they are closely linked to the specific areas of study pursued.

Notably, gender imbalances in graduate programs across various fields of study are not significant in Sudan. Nevertheless, a few noteworthy observations emerge. Firstly, women not only constitute a disproportionately high representation in the agricultural sector within the labor force, but they also form the majority of graduates from agriculture programs at the tertiary level. This suggests that women’s involvement in this sector extends beyond low-skilled labor and signifies their potential to contribute significantly to its development.

Secondly, although women account for less than a third (28 percent) of graduates from Science, Technology, Engineering, and Mathematics (STEM) programs, they dominate the share of graduates in the field of information and communication technology (ICT). The qualitative insights from focus group participants for this report indicate that certain academic disciplines are perceived as more or less suitable for women.⁴³³

The prevailing educational landscape in Sudan manifests itself in the composition of the labor force, wherein nearly half (45 percent) of those who are not actively participating in employment possess no formal education. Intriguingly, this demographic comprises the majority (52 percent) of the employed segment. Such a trend potentially elucidates the prominent presence of uneducated individuals within the agricultural sector. Considering that individuals with secondary education or higher merely constitute 26 percent of the labor force, of which 45 percent experience unemployment while a meager 23 percent secure employment, it implies that market demand predominantly revolves around low-skilled and low-wage occupations.⁴³⁴

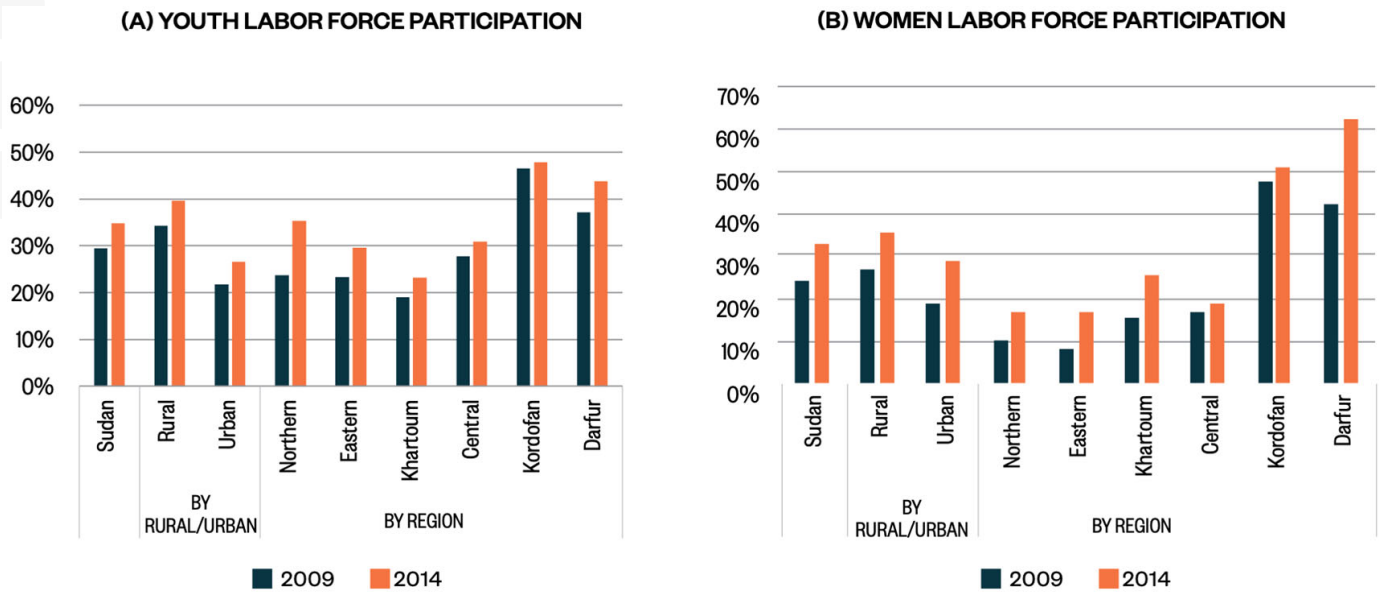
A mere 3 percent of the working-age population has had the opportunity to undergo vocational training, with women disproportionately disadvantaged in this regard. Given the deterioration of the educational system in recent decades, a discernible disparity emerges between the skills acquired within educational institutions and those sought by employers. Vocational training emerges as a potential remedy for bridging these skills gaps and consequently improving employment prospects. Presently, women account for only 36 percent of vocational training attendees,

⁴³³ Ibid.

⁴³⁴ Ibid.



Figure 20. Labor force participation rate by locality and region



Source: World Bank staff calculations based on NHBPS 2014/15

with men constituting the remaining 64 percent, with adults comprising 73 percent of participants.⁴³⁵

The prevailing labor market exhibits a notable inclination towards low-skilled employment, wherein individuals lacking formal education often encounter better job prospects than those possessing any level of educational attainment. Specifically, women with some or completed primary education face a substantial 38 percent reduced likelihood of participating in the labor force, as well as securing employment when compared to their counterparts with no education. Similarly, men with some or completed primary education experience a pronounced 58 percent and 52 percent diminished probability, respectively, of labor force participation and employment, in contrast to men without formal education. Conversely, women and adults with higher educational achievements (post-secondary and beyond) fare comparatively better, enjoying enhanced prospects of employment and labor force engagement.

Sudan exhibited a notable prevalence of women entrepreneurs who possessed limited educational backgrounds, where around 40 percent of female entrepreneurs reported having less than a secondary education.⁴³⁶ The findings of the Global Entrepreneurship Monitor (GEM) Sudan 2021 Adult Population Survey (APS) survey reveals the impact of education on entrepreneurial engagement. The data indicates that

the highest proportion (42.2 percent) of Total Early-stage Entrepreneurial Activity (TEA) entrepreneurs have completed some level of secondary education. Following this, individuals with a post-secondary level of education represent the second highest rate at (34.9 percent). Conversely, those with a secondary degree have the lowest representation among TEA entrepreneurs, while individuals with graduate experience exhibit an extremely low rate at (3.9 percent). A similar trend is observed when examining the levels of education among Established Business Owners (EBO).⁴³⁷ In the analysis of the educational attainment of established business owners (EBO), it was found that individuals with at least some level of secondary education had the highest rates, reaching 37.5 percent and 29.6 percent respectively. Surprisingly, those with no educational background obtained a rate of 17.8 percent, which was higher than those with a secondary degree (1.2 percent) or graduate experience (3.9 percent). These results indicate that while a significant proportion of EBOs have acquired some secondary education, there is also a noteworthy presence of successful entrepreneurs who have achieved their status without formal educational qualifications.⁴³⁸

When examining the educational background, individuals with post-secondary qualifications, such as graduates, generally exhibit a higher likelihood of starting new businesses compared to non-graduates. The majority of entrepreneurs involved in TEA in Sudan belong to the non-graduate category. Additionally, a significant portion

⁴³⁵ Ibid.

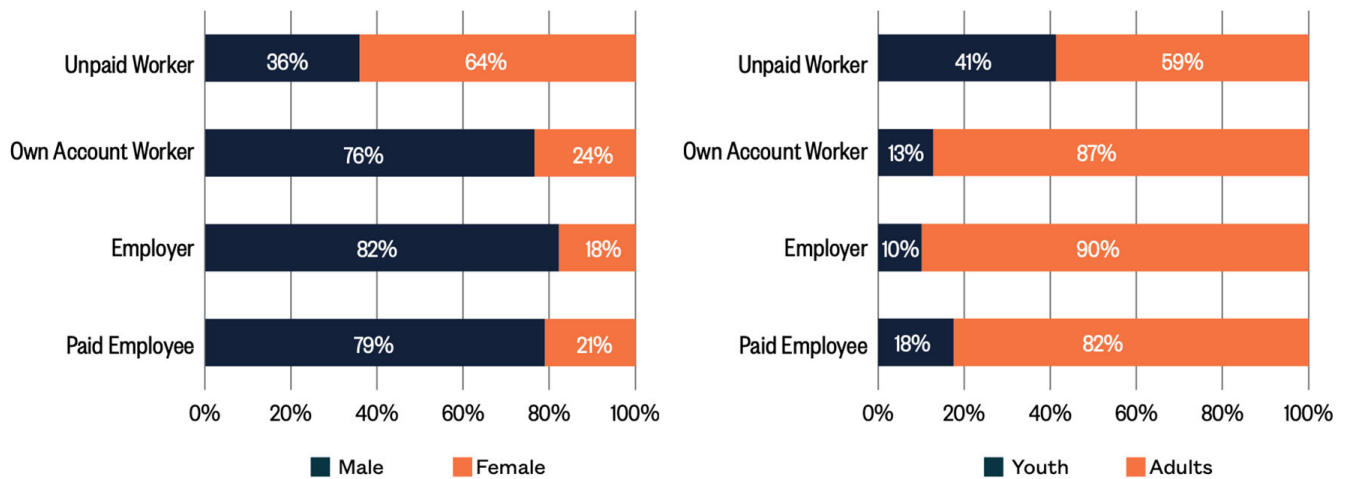
⁴³⁶ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women’s Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

⁴³⁷ A/Rahman W., Ahmed, A., Ragab, M., and Alsaeed, M. (2022). Global Entrepreneurship Monitor: Sudan National Report 2021/2022.

⁴³⁸ Ibid.



Figure 21. Work category by gender and by age cohort



Source: World Bank staff calculations based on NHBPS 2014/15

of entrepreneurs (84.8 percent) reported working full or part-time jobs, including self-employment.⁴³⁹

3.5.4. The era of digitalization: embracing the digital transformation

The proliferation of digital technologies and the advent of social media platforms have the potential to significantly enhance economic prospects for women. Possessing essential assets such as computers and phones within households has been demonstrated to positively impact labor force participation. Specifically, women residing in households with computer access experience a notable 33 percent increase in their likelihood of joining the labor force, while their chances of obtaining employment rise by an impressive 77 percent. The findings from focus group discussions conducted indicate that a considerable number of Sudanese individuals already heavily rely on social media platforms, sometimes exclusively, as a means of discovering job opportunities.⁴⁴⁰

Sudan exhibits a significant gender-based disparity concerning access to and utilization of digital technologies, thus giving rise to a gender digital divide. According to the International Telecommunications Union (2016), internet usage stands at 17 percent among men and 11 percent among women. Furthermore, the adoption of the internet as a means for conducting economic transactions remains low in Sudan, with only 1.3 percent of men and 0.7 percent of women having utilized the internet for bill payments or online purchases

⁴³⁹ Ibid.

⁴⁴⁰ World Bank Group. (2021). Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities.

in the past year, as reported by the Global Findex in 2014. Additionally, the gender gap extends to digital payment activities, with men being twice as likely as women to engage in such transactions. Specifically, 16 percent of men and 8 percent of women participated in digital payments within the past year, as per the Global Findex in 2014.⁴⁴¹

3.5.5. Refugees

Sudanese women have experienced socioeconomic repercussions as a result of forced displacement and internal migration. Sudan serves as a significant host to a substantial population of internally displaced persons (IDPs), ranking among the highest worldwide. The majority of Sudan's 1.9 million IDPs are concentrated within the Darfur region.⁴⁴² Moreover, Sudan accommodates approximately 1.1 million refugees and individuals seeking asylum, primarily originating from South Sudan.⁴⁴³ A considerable influx of Ethiopians from the Tigray Region of Ethiopia has been observed as the escalated conflict in that area since November 2020 has driven them to seek refuge in Sudan.

The employment rates among Sudan's internally displaced persons (IDPs) in the Darfur region are comparable to those of non-IDPs. A greater proportion of female IDPs are employed compared to their non-IDP counterparts. This is primarily attributed to the prevalence of female-

⁴⁴¹ World Bank. (2014). Global Findex

⁴⁴² World Bank Group. (2021). Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities.

⁴⁴³ (UNHCR 2020)



headed households within the IDP community.⁴⁴⁴ The inadequate remuneration offered within the agricultural industry has compelled a portion of the Sudanese population to embark on migration to the capital city of Khartoum in pursuit of employment opportunities. Due to deficiencies in education, skills, financial resources, and social connections, the majority of these young individuals find themselves confined to positions within the informal sector. Regrettably, the wages prevalent in the informal sector can be equally as meager as those observed in the agricultural realm.⁴⁴⁵

3.5.6. Exploring MSMEs landscape

Sudan exhibited the highest rates of business startups in the region, with over a quarter of adult women reporting engagement in entrepreneurial activities.⁴⁴⁶ In Sudan, a significant percent of adult women (over 25 percent) reported engaging in business startup activity, indicating the highest rates in the region. Meanwhile, there remains a notable gender gap, as women reported startup activity approximately one-third less frequently compared to men.⁴⁴⁷ Regarding ownership of established businesses, women in Sudan were the closest to achieving parity with men, although they still reported owning businesses about one-third less often (6.5 percent women vs. 9.8 percent men).⁴⁴⁸ The findings of the Adult Population Survey (APS) reveal a decline in the perception of the adult population regarding the “Easiness of Starting a New Business”.⁴⁴⁹ The indicator shows a decrease from 53.6 percent in the GEM 2018 survey to 42.8 percent in the current study 2022. This decline suggests a diminished perception of the ease associated with initiating a new business among the surveyed population.⁴⁵⁰

Despite the existence of a gender-based wage disparity, where women typically earn less than men, public sector employment consistently attracted female individuals

due to the perceived advantages of working hours and benefits in comparison to the private sector. Nonetheless, when presented with the option between public and private sector employment, a considerable number of women, as well as younger individuals, express a preference for private sector jobs, largely driven by the prospect of higher wages. It is important to note, however, that elevated remuneration alone does not serve as the sole motivating factor in selecting private sector employment. Additional factors, such as labor rights, prospects for professional growth, opportunities for travel, and networking possibilities, also exert influence in the decision-making process.⁴⁵¹

In Sudan, the majority of entrepreneurs are males, comprising 40 percent of those engaged in Total early-stage Entrepreneurial Activity (TEA), while females make up 26 percent of TEA participants. The average age of entrepreneurs in Sudan is 33 years. Regrettably, Sudan’s performance in the year 2021 indicated a disappointing outcome as it ranked the lowest among the surveyed countries, achieving a mere 3.2 points on the National Entrepreneurship Context Index (NECI) scale. This score falls below the overall average of 4.7 points observed in the Global Entrepreneurship Monitor (GEM) study. Furthermore, there has been a substantial decline from the 4.3 score recorded in 2018. The 3.2 score places Sudan in the category of “Bad State” on the NECI index, reflecting a challenging environment for entrepreneurship within the country.⁴⁵²

In general, the experts’ responses indicate lower scores across most of the Entrepreneurial Framework Conditions (EFC) in Sudan. These scores reflect the challenges posed by an unstable economy, which makes it difficult to establish favorable conditions for entrepreneurship. Factors such as political instability and the economic crisis, further compounded by the consequences of the COVID-19 pandemic, have hindered the progress of the EFC. A comparison of the scores with those of the GEM highlights these differences.⁴⁵³

Gender and age significantly influence labor market dynamics, with women facing substantial disparities in economic activity compared to men, despite their pivotal role in driving overall increases in Sudan’s labor force participation. The period between 2009 and 2014 witnessed a notable rise in the country’s labor force participation rate,

⁴⁴⁴ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities*.

⁴⁴⁵ Ibid.

⁴⁴⁶ GEM (Global Entrepreneurship Monitor) (2022). *Global Entrepreneurship Monitor 2021/22 Women’s Entrepreneurship Report: From Crisis to Opportunity*. London: GEM.

⁴⁴⁷ Ibid.

⁴⁴⁸ Ibid.

⁴⁴⁹ A/Rahman W., Ahmed, A., Ragab, M., and Alsaeed, M. (2022). *Global Entrepreneurship Monitor: Sudan National Report 2021/2022*.

⁴⁵⁰ Ibid.

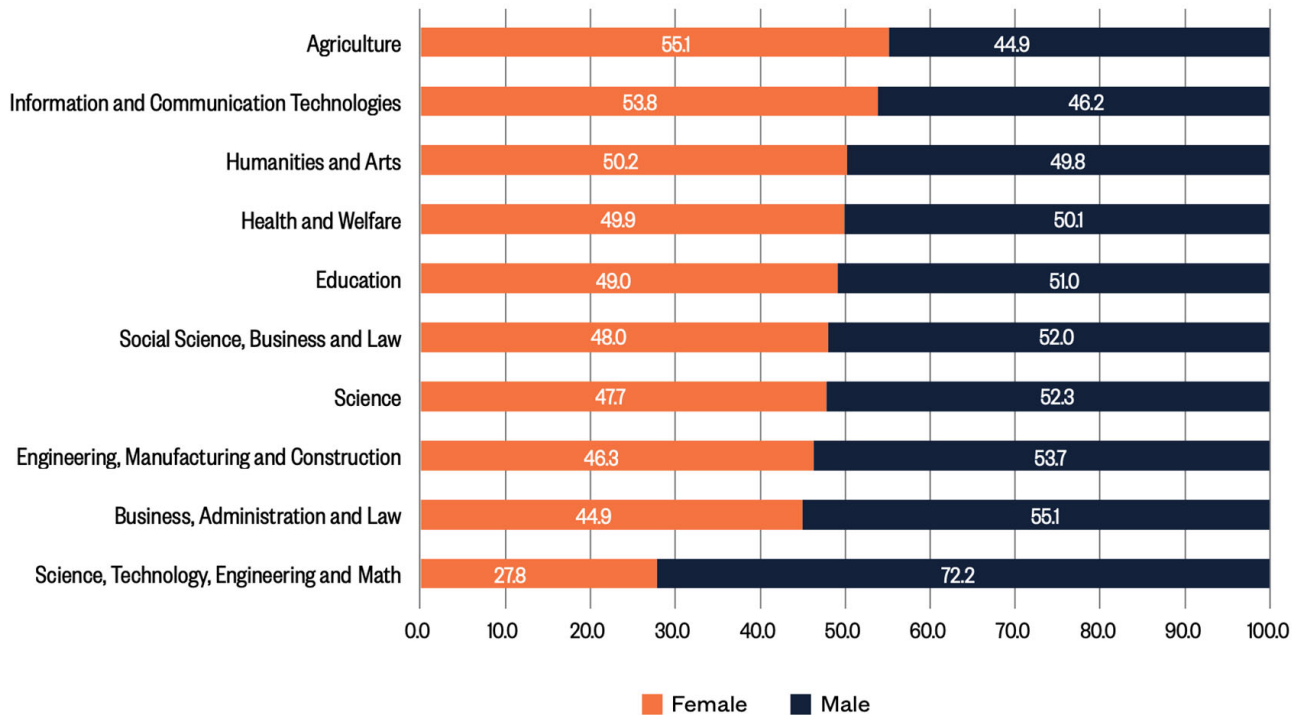
⁴⁵¹ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities*.

⁴⁵² A/Rahman W., Ahmed, A., Ragab, M., and Alsaeed, M. (2022). *Global Entrepreneurship Monitor: Sudan National Report 2021/2022*.

⁴⁵³ Ibid.



Figure 22. Graduates in tertiary education fields of study, by gender, %



Source: WDI data retrieved May 2020. All data for 2015, except 'Engineering, Manufacturing and Construction and Education', both data points for 2012.

ascending from 48 percent to 53 percent. This growth was predominantly propelled by a significant increase in the female participation rate, surging from 24 percent in 2009 to 33 percent in 2014, observed across both urban and rural regions. Nevertheless, while the female labor force participation rate observed a remarkable surge of nearly 10 percentage points (in contrast to a mere 2 percentage points among men), it still remains less than half the rate observed among their male counterparts. Specifically, the male labor force participation rate stands at 76 percent, whereas the corresponding rate among women lingers at 33 percent.

Moreover, among the one-third of women who actively participate in economic endeavors, the proportion actually engaged in work is disconcertingly low. Women are more than twice as likely as men to encounter unemployment, with rates of 19 percent and 8 percent, respectively. These findings highlight the persistence of gender-based inequities within the labor market, signaling the need for targeted interventions to address the underrepresentation and unemployment challenges faced by women.⁴⁵⁴

Demographics (age, income, gender). The composition and dynamics of the Sudanese population have a direct impact on the country's labor force. Sudan experiences a

rate of population growth, surpassing that of its neighboring nations. As of 2019, the estimated total population of Sudan stood at 42.5 million individuals, as reported by the World Development Indicators (WDI). The Sudanese population is predominantly youthful, attributable to relatively high fertility rates (4.4 in 2018) coupled with lower-than-anticipated life expectancy, which falls below 62 years. Consequently, over 43 percent of Sudan's population is under the age of 15, while a mere 4 percent is aged 64 or above.⁴⁵⁵

Despite a projected decline in fertility rates from 5.3 in 2005 to 3.4 in 2030, the Sudanese population is expected to undergo a significant expansion, effectively doubling within this timeframe. This population growth is notable for its profound implications on the age structure of the country. By the year 2035, the number of children below the age of 15 is expected to rise to approximately 21.4 million, a substantial increase from the 13.8 million recorded in 2005.⁴⁵⁶ By 2035, the working-age population, encompassing individuals between the ages of 20 and 64, is projected to surge to 32 million, representing a significant rise from the recorded figure of 13.9 million in 2005. Strikingly, half of the workforce will be youth, as indicated by the findings of the Republic of Sudan's

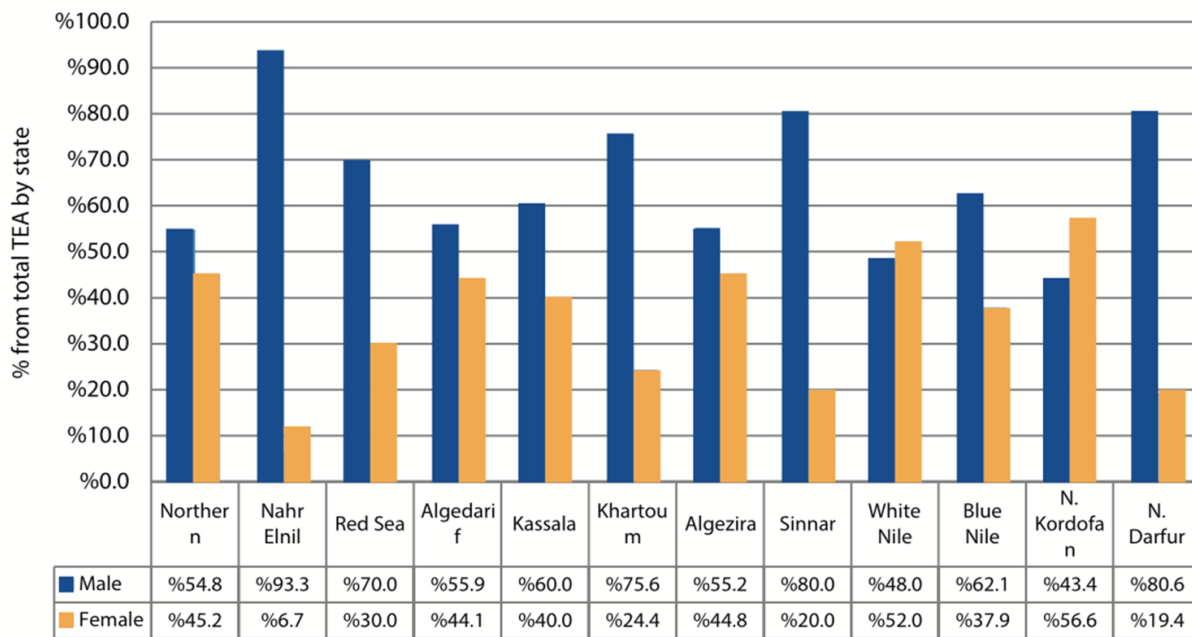
⁴⁵⁴ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities*.

⁴⁵⁵ Ibid.

⁴⁵⁶ Ibid.



Figure 23. Gender representation of entrepreneurs engaged in TEA (as % adult population aged 18-64) by state in Sudan in 2021



Source: GEM Sudan Adult Population Survey (APS) 2021

National Population Council in 2018.⁴⁵⁷ In both urban and rural areas of the country, the gender distribution exhibits approximate parity with comparable numbers of males and females residing in these regions.⁴⁵⁸

Age plays a significant role in determining the level of engagement in entrepreneurial activity, and Sudan is recognized as a predominantly young nation. Approximately 41 percent of Sudan’s total population consists of individuals under the age of 15, while 20 percent fall within the 15 to 24 age group. The age range of 25 to 54 accounts for 31 percent of the population; whereas individuals aged 55 to 64 represent less than 4 percent. The population over 65 years old comprises only 3.3 percent. Given this demographic context, it is expected that a majority of those involved in entrepreneurial activity would be young, reflecting the higher proportion of young people in the population.⁴⁵⁹

The mean age of individuals involved in Total Early-stage Entrepreneurial Activity (TEA) is 33.1 years, indicating the participation of relatively young individuals. On the other hand, the age group with the highest

representation of entrepreneurs, specifically Established Business Owners (EBO), is 38.8 years. This can be attributed to the fact that a significant number of these older individuals have had sufficient time to accumulate resources, access capital and networks, and develop the necessary skills and experience to successfully operate a business.⁴⁶⁰ The findings from the GEM APS survey highlight the disparity in Total Early-stage Entrepreneurial Activity (TEA) between two age groups: 18-34 and 35-64. Notably, the younger population (18-34) exhibits a higher TEA rate at 57.4 percent, whereas the older group displays a more modest rate at 42.3 percent. These results suggest that younger individuals may possess a greater motivation and inclination towards initiating new business ventures.⁴⁶¹ Among established business owners, there is a notable trend indicating that individuals in the older age groups (35-64) are more inclined to transition their early entrepreneurial activity into an established business. Approximately 64.6 percent of the surveyed participants in these age groups have demonstrated a higher likelihood of progressing from early-stage entrepreneurship to establishing a sustainable business.⁴⁶²

According to the GEM findings, the average age of entrepreneurs in Sudan is 33 years old, encompassing various levels of entrepreneurial activity. Among these,

⁴⁵⁷ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities*.

⁴⁵⁸ Ibid.

⁴⁵⁹ A/Rahman W., Ahmed, A., Ragab, M., and Alsaeed, M. (2022). *Global Entrepreneurship Monitor: Sudan National Report 2021/2022*.

⁴⁶⁰ Ibid.

⁴⁶¹ Ibid.

⁴⁶² Ibid.



Established Business owners (EBO) exhibit the highest age group representation, with an average age of 38.8 years.⁴⁶³ Gender plays a significant role in entrepreneurial activity, as indicated by the results comparing the levels of engagement between men and women. The data reveals a notable disparity, with a higher level of male involvement in both Total Early-stage Entrepreneurial Activity (TEA) and Established Business Ownership (EBO). Specifically, the TEA rate for males is recorded at 40.8 percent, while it is 26.4 percent for females. Similarly, male participation in EBO is reported at 9.8 percent, surpassing the 6.5 percent reported by females.⁴⁶⁴

In terms of income levels, most entrepreneurs involved in TEA and Established Business Ownership (EBO) in Sudan fall within the medium and low-income brackets. Many of these entrepreneurs are driven by necessity, with only a modest proportion (31.2 percent) operating at the upper income level.⁴⁶⁵ In terms of income levels, most entrepreneurs involved in TEA and Established Business Ownership (EBO) in Sudan fall within the medium and low-income brackets. Many of these entrepreneurs are driven by necessity, with only a modest proportion (31.2 percent) operating at the upper income level.⁴⁶⁶ The majority of women entrepreneurs in Sudan (63.2 percent) reported having household income falling within the middle-third bracket.⁴⁶⁷

Looking at gender disparities, notably, women in Sudan were five times more active than men in the Government, Health, Education and Social Services sector and in terms of recognizing opportunities to start a business, women in Sudan were close to achieving parity with men.⁴⁶⁸ Nonetheless, the results from the GEM Sudan 2018 report substantiate the gender disparity in entrepreneurial engagement, indicating that male participation in Total Early-stage Entrepreneurial Activity (TEA) constituted (13.1 percent) of the total population, whereas female participation accounted for only (9.3 percent) of the total population (GEM Sudan Report, 2018/2019). These findings reaffirm the

presence of a gender gap in the level of engagement.⁴⁶⁹ The GEM 2021 results reaffirm the persisting gender gap in TEA engagement among the population aged 18-64, with males scoring (40.8 percent) and females achieving a significantly lower percent of (26.4 percent). These results serve as further evidence of the prevailing gender disparity in entrepreneurial engagement, with males exhibiting a higher level of involvement compared to females.⁴⁷⁰

The GEM 2021 APS findings illustrate a gender-based comparison of entrepreneurial activity levels. The data clearly indicates a significant disparity between male and female involvement. In terms of Total Early-stage Entrepreneurial Activity (TEA), the rate of male participation is notably higher at 40.8 percent compared to the 26.4 percent reported for women. Similarly, in Established Business Ownership (EBO), male involvement stands at 9.8 percent, surpassing the 6.5 percent reported by females. These figures highlight a distinct gender gap in entrepreneurial engagement. The findings concerning the gender representation of entrepreneurs involved in Total Early-stage Entrepreneurial Activity (TEA) across various states in Sudan reveal a significant gender gap present in all states. This gender disparity is evident through the disparities observed in the rates of male and female participation in entrepreneurship (TEA). These results highlight a substantial gender gap that is also prominent in Khartoum State, which serves as the central and most urbanized state in Sudan.⁴⁷¹

When compared globally, Sudan demonstrates the second highest Total Early-stage Entrepreneurial Activity (TEA) engagement level among low-income countries, surpassing the majority of medium and high-income countries. A closer look at the gender breakdown reveals a significant gender gap, with men scoring 40 percent compared to women's 30 percent, indicating a disparity within Sudan on a national level. In terms of Established Business Ownership (EBO), Sudan's scores are considerably lower than those of TEA but still highlight a noticeable gender disparity, favoring men.⁴⁷²

Women entrepreneurs in Sudan displayed the highest level of optimism, with two in five acknowledging that the

⁴⁶³ Ibid.

⁴⁶⁴ Ibid.

⁴⁶⁵ Ibid.

⁴⁶⁶ Ibid.

⁴⁶⁷ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

⁴⁶⁸ Ibid.

⁴⁶⁹ A/Rahman W., Ahmed, A., Ragab, M., and Alsaheed, M. (2022). Global Entrepreneurship Monitor: Sudan National Report 2021/2022.

⁴⁷⁰ Ibid.

⁴⁷¹ Ibid.

⁴⁷² Ibid.



pandemic has presented new opportunities for them.⁴⁷³ When comparing Sudan to the GEM average in terms of the state of the COVID-19 pandemic and support for women entrepreneurship, Sudan shows lower scores across all dimensions of the entrepreneurial framework. These findings highlight the evident lack of infrastructure in Sudan to cater to the needs of entrepreneurs during a crisis like a pandemic. Furthermore, government support for women entrepreneurs in seizing market opportunities falls significantly below the GEM average. In summary, Sudan's performance in all NEFC pillars is notably distant from the GEM averages at all levels.

3.5.7. Challenges hindering MSMEs in Sudan: an in-depth analysis

Numerous studies consistently highlight the existence of a gender gap in women's participation in business, as women encounter greater challenges compared to their male counterparts when initiating or operating businesses. These challenges encompass various factors, including higher domestic responsibilities, lower levels of education, limited presence of female role models in the business sector, fewer business-oriented networks within their communities, inadequate access to capital and assets, lower societal status, and culturally-induced lack of assertiveness and confidence in their entrepreneurial abilities.

These factors can hinder women from recognizing and pursuing entrepreneurial opportunities. Moreover, Sudan's performance in the context of the COVID-19 pandemic and support for women entrepreneurship falls below the global average. Access to credit, prevalence of the informal sector, and social norms are identified as obstacles impacting MSMEs in Sudan. Overall, gender disparities, cultural norms, and economic challenges shape the entrepreneurial landscape in Sudan. Accordingly, recent attention has been given to the development of women's entrepreneurial activities through programs and initiatives aimed at promoting women's economic empowerment. These initiatives involve various stakeholders, including government programs, UN agencies, NGOs, CBOs, and youth centers, among others.⁴⁷⁴

3.5.6.1. Examining the legal and regulatory landscape for MSMEs

Based on the findings of the World Bank's Women,

⁴⁷³ GEM (Global Entrepreneurship Monitor) (2022). Global Entrepreneurship Monitor 2021/22 Women's Entrepreneurship Report: From Crisis to Opportunity. London: GEM.

⁴⁷⁴ A/Rahman W., Ahmed, A., Ragab, M., and Alsaeed, M. (2022). Global Entrepreneurship Monitor: Sudan National Report 2021/2022.

Business, and the Law (WBL) 2021 report, women in Sudan face a substantial disparity compared to men in terms of economic opportunities. The report examines the legal disparities between men and women across multiple dimensions, including mobility, workplace environment, remuneration, marital rights, parental responsibilities, entrepreneurial endeavors, asset ownership, and pension entitlements. Sudan's overall score in the WBL index is 29.4, signifying that women enjoy less than one-third of the economic rights that men do. Notably, Sudan ranks among the countries with the lowest scores, with only Kuwait, Yemen, and the West Bank and Gaza scoring lower, with an overall score of 26.3.⁴⁷⁵

In Sudan, the National Adaptation Plan (NAP) seeks to strengthen the resilience of the most marginalized communities, with a specific focus on promoting the involvement of women in sustainable development and environmental preservation, particularly in Kordofan.⁴⁷⁶ At the community level, the NAP recognizes the effects of climate change on pregnant women and mothers in Khartoum.⁴⁷⁷ Gender is identified as one of the key factors to be considered in data collection for vulnerability hotspot maps, alongside other intersecting factors like age and income, in order to facilitate comprehensive analysis.⁴⁷⁸

The National Adaptation Plan (NAP) of Sudan includes gender-responsive adaptation measures, encompassing policy objectives and actions aimed at capacity-building and women's empowerment, primarily in the Eastern and Central states.⁴⁷⁹ Some of these measures may require significant resources, but their allocation enhances the implementation and effectiveness of the NAP going forward.⁴⁸⁰ The plan also puts forth specific adaptation measures, such as the establishment of a rural women's development program in North Darfur, initiatives to raise women's awareness of hygiene, environmental health, and harmful social practices in South Kordofan, support for agriculture home gardens for women, and the organization of women's cooperatives to provide relevant services in the Blue Nile state.⁴⁸¹

⁴⁷⁵ World Bank Group. (2021). Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities.

⁴⁷⁶ ESCWA. (2022). Mainstreaming Gender in Climate Action.

⁴⁷⁷ Ibid.

⁴⁷⁸ Ibid.

⁴⁷⁹ Ibid.

⁴⁸⁰ ESCWA. (2022). Mainstreaming Gender in Climate Action.

⁴⁸¹ Ibid.



Sudan stands as an exceptional case among nations, as it has not acceded to the United Nations Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). Recognized as a comprehensive framework for achieving gender equality, CEDAW serves as the international charter of rights for women. Furthermore, Sudan has not formulated a comprehensive National Action Plan for effectively implementing the mandates of United Nations Security Council Resolution 1325, which underscores the imperative of enhancing women's participation across all peace and security endeavors.⁴⁸²

Throughout the past ten years, Sudan has experienced a stagnant state in terms of the measured dimensions related to gender equality. Particularly concerning are the scores of 0 attained in the areas of mobility, workplace, pay, and marriage. An illustrative instance lies in the 1997 Labor Code, whereby legal constraints disproportionately impact men and women, directly influencing the score assigned to the pay dimension. This dimension gauges the presence of legislation and regulations that address job limitations and the gender-based wage disparity.⁴⁸³

In Sudan, the legal framework surrounding marriage entails that married women are obliged to submit to their husbands' authority. Despite this provision, married women possess the same ability as married men to acquire a national identification card. Absent from the legal system are specific provisions that prohibit or invalidate child or early marriages, nor are there legal safeguards in place to protect married women from domestic violence or marital rape. The interplay between a society's formal legal structure and its cultural norms and customs exhibits a mutually reinforcing dynamic. Among the multitude of legislations enacted in the 1990s, two in particular—the 1991 MPSL and the 1997 Labor Code—have arguably exerted a more substantial impact on the economic prospects of Sudanese women, and to a lesser extent, Sudanese youth, than any other legislative measures. Additionally, the 2008 National Elections Act introduced a quota system aimed at enhancing women's representation in the Parliament.⁴⁸⁴

Within the framework of Muslim personal status laws, guidelines are established to regulate familial conduct in various aspects, including marriage and divorce. In

accordance with the 1991 MPSL, it is stipulated that a wife is obligated to comply with her husband's wishes, thereby granting the husband the authority to, among other things, prohibit his wife from pursuing employment beyond the confines of their home. In the event that a wife contravenes her husband's directive by seeking employment outside the home, the husband reserves the right to withhold his marital obligation of providing for his wife. Consequently, this situation may leave the wife in a state of destitution if she lacks alternative means of sustenance. While Sudanese women are legally entitled to inherit from their fathers, empirical evidence from a study conducted by the United Nations Development Program (UNDP) confirms a prevailing practice of daughters generally receiving half the inheritance portion compared to sons. It is evident that public sentiment aligns with differentiated inheritance rights based on gender. According to the Arab Barometer, an overwhelming majority of respondents, 87 percent, do not support the notion of women having an equal share of inheritance rights as men.⁴⁸⁵ The enduring significance of the 1991 MPSL lies in its transfer of jurisdiction over familial affairs from Islamic religious leaders to the political leaders of Sudan. This pivotal shift, as highlighted by Nada Mustafa Ali, provided a platform for the country's political figures to exploit the interpretation of the 1991 MPSL. This strategic maneuver enabled them to conveniently exclude women from their professional roles and responsibilities.⁴⁸⁶

In a broader context, the 1997 Labor Code in Sudan predominantly comprises regulations that impose limitations on women's employment opportunities, rather than providing comprehensive safeguards. Nevertheless, within this legal framework, certain provisions do exist to safeguard the rights of women. Part One of Paragraph 46 of the code delineates provisions for paid maternity leave, which is contingent upon factors such as the duration of a woman's employment and any specific medical instructions provided by her doctor. It is important to acknowledge that the 1997 Labor Code contains a higher proportion of restrictions compared to protective measures. For instance, Paragraph 19 explicitly prohibits the employment of women in occupations that are categorized as "hazardous, arduous, or detrimental to their well-being." Additionally, the code imposes time limitations on women's working hours, generally between 6 a.m. and 10 p.m., unless they are engaged in specific job roles.⁴⁸⁷

The implementation of a quota system, as mandated by the 2008 National Elections Act, aimed to address gender

⁴⁸² World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities*.

⁴⁸³ Ibid.

⁴⁸⁴ Ibid.

⁴⁸⁵ Ibid.

⁴⁸⁶ Ibid.

⁴⁸⁷ Ibid.



disparities in political representation within Sudan's State and National Parliamentary Assemblies. Under this system, a requirement was established whereby 25 percent of the seats in both assemblies should be occupied by women. This legislative measure has yielded significant changes in the composition of Parliament over time. In 1980, a mere 5 percent of parliamentary seats were held by women, but by 2010, this proportion had increased to 28 percent, as reported by the United Nations Development Programme (UNDP) in 2018. Currently, out of the total 426 seats in Sudan's parliament, 133 seats are occupied by women, indicating a tangible impact of the quota system on enhancing women's representation in the political sphere.⁴⁸⁸

Land and property rights. According to the Gender and Land Rights Database of the UN Food and Agriculture Organization (FAO), Sudan operates with two distinct property rights systems: a statutory legal system and a customary system. Under the statutory legal system, individuals possess land titles, while under the customary system; land ownership is not accompanied by formal titles. In cases where a woman is married to a man who holds land title and her husband passes away, it becomes challenging for the widow to obtain legal ownership of her late husband's land in her own name. This situation particularly affects female heads of households who are internally displaced persons (IDPs). Conversely, even communal land governed by the customary system poses obstacles for women seeking access. Typically, such land is managed by a male member of high status within the community, and women can generally only obtain rights to it through a male relative. As previously discussed in this report, findings from the Arab Barometer survey in 2018 indicate limited support for gender equality in inheritance rights. A significant majority of respondents, amounting to 87 percent, expressed disagreement with the statement advocating for equal inheritance shares between men and women.⁴⁸⁹

Possessing a formal land title entails various benefits, such as utilizing it as collateral to secure financial resources. Imposing restrictions on women's acquisition of land titles hinders their access to financing opportunities, which could otherwise facilitate business ventures or support other productive endeavors. This limitation not only affects the well-being of their families but also hampers the potential economic contributions that women can make. Further discussion on the relationship

between women, agriculture, and land can be found in the subsequent section.⁴⁹⁰

3.5.6.2. Navigating the challenges of informality: implications for MSMEs

For several decades, the informal sector has played a significant role not only in Sudan's economy but also in the broader African context. During the mid-1990s, it was estimated that the informal sector employed approximately 60 to 70 percent of Africa's workforce, contributing more than 20 percent to the continent's GDP. Drawing upon the aforementioned studies, it becomes apparent that the informal sector in Sudan is both substantial and expanding, particularly among marginalized segments of the population.⁴⁹¹

Importance of *wasta* for access to economic opportunities. *Wasta*, a significant informal institution, holds considerable influence over the labor market access of women in Sudan. Originating from the Arabic language, *wasta* denotes the possession of connections with individuals capable of facilitating desired outcomes. While patriarchal traditions predominantly impede the acquisition of human capital, *wasta* imposes limitations on the acquisition of social capital, thereby hindering individuals' ability to access networks for economic and other advantageous purposes. The utilization of *wasta* exhibits gender disparities contingent upon the specific country context. In the Sudanese labor market, *wasta* retains its pivotal role in both job attainment and career advancement, as affirmed by 56 percent of respondents in the Arab Barometer survey conducted in 2018. Research conducted by Mann in Sudan indicates that *wasta* plays a more prominent role in the current generation compared to preceding generations.⁴⁹²

The role of intermediaries, or "*wasta*," holds both similarities and differences across gender divisions, with a potentially greater significance for women in securing employment. The consensus among participants in male and female focus groups indicates that both genders require *wasta* to obtain jobs. According to a working man from Nyala, "*Wasta* is number one in work," while a working woman from Madani noted that "if you are illiterate and have *wasta*, you'll get a job." Some participants suggested that *wasta* is either more commonly invoked by or more crucial for females in their pursuit and attainment of employment opportunities. For instance, an unemployed woman from Khartoum shared, "For example, I can easily ask one of my friends to find work for me, and if she

⁴⁸⁸ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities*.

⁴⁸⁹ Ibid.

⁴⁹⁰ Ibid.

⁴⁹¹ Ibid.

⁴⁹² Ibid.



recommended a job, I can easily negotiate to have this job, but for men, they have an ego to ask anybody to get them a job.” She further explained that men, irrespective of their qualifications, are reluctant to seek assistance in job placement. In contrast, among females, the practice of recommending suitable job opportunities to friends is more prevalent, particularly when they are familiar with the job owner and the working conditions. A female youth from Khartoum, who was unemployed, expressed that *wasta* benefits girls more, as even without formal credentials, they can secure employment in places like banks. Similarly, a female youth from Nyala, who was employed, emphasized the greater importance of *wasta* for women.⁴⁹³

Gender disparities in entrepreneurship are influenced by various factors such as gender norms, attitudes, expectations, cultural influences, and the overall entrepreneurial ecosystem. In Sudan, gender inequalities are pervasive across multiple aspects of people’s lives, including employment and business endeavors. According to UNDP (2012), there is a significant gender gap in the “formal” labor force, with (76.9 percent) of men actively participating compared to only (30.9 percent) of women. This disparity not only highlights the gender gap in employment but also suggests that it extends to entrepreneurial activities.⁴⁹⁴

3.5.6.3. Enhancing access to credit for MSMEs: challenges and opportunities

There is a shift among the younger generation in Sudan, as they display a strong inclination towards taking on the responsibility of sustaining family businesses. The results reveal a gender disparity, with males being more motivated by financial considerations. This aligns with the traditional gender perspective that assigns men the role of the primary earners, where generating and increasing income are expected to hold greater importance for men compared to women.

Restricted access to banking services and financial resources hampers the potential for entrepreneurial endeavors. A significant challenge hindering the advancement of Sudanese women’s economic empowerment lies in the limited availability of assets and credit accessible to them. This concern was highlighted in the Women Empowerment Policy document of 2007, which identified six key areas of focus, including “economic empowerment.” Within this context, the document specifically recognized the

⁴⁹³ Ibid.

⁴⁹⁴ A/Rahman W., Ahmed, A., Ragab, M., and Alsaeed, M. (2022). Global Entrepreneurship Monitor: Sudan National Report 2021/2022.

prevailing investment policies that tend to favor large-scale projects, often neglecting the potential of medium- and small-scale initiatives in which women are more inclined to participate.⁴⁹⁵

Sudan exhibits a dual framework of property rights that effectively restricts women’s involvement. In contrast, the banking system itself does not impose legal barriers to women’s participation. As observed by Kevane and Stiansen (2006), exclusion mechanisms manifest subtly or implicitly, rather than stemming from explicit legislation. Cultural norms and practices play a significant role in impeding women’s access to formal financial institutions, with factors such as the dominant position of males within households, inheritance customs that favor male relatives and the gendered division of economic spheres serving as examples of such hindrances.⁴⁹⁶

These trends are evident in the available data. Despite an increase in the proportion of women possessing bank accounts between 2011 and 2014, men still maintain twice the likelihood of having an account in comparison to women. The share of women with accounts in banks, financial institutions, or mobile money services experienced a 6 percent point increase during this period. Still, it is noteworthy that men, adults, individuals actively participating in the labor force, and those in higher socio-economic strata exhibited significantly higher increases compared to other demographic categories. A finding is that nearly half of the individuals who reported having an account utilized it for borrowing purposes related to agricultural or business activities, such as initiating, operating, or expanding a farm or business venture. The proportion of women who borrowed to start a business stood at only one-third, in contrast to half of the men who engaged in similar borrowing activities. Approximately 47 percent of account holders borrowed funds for business expansion or initiation among adults.⁴⁹⁷

Women in Sudan rely more heavily on informal financial institutions for accessing money and finance compared to men. Global Findex 2014 data reveals that women face greater challenges in obtaining emergency funds, with 48 percent of women surveyed reporting difficulties compared to 39 percent of men. Moreover, there is a noticeable discrepancy in the sources of emergency funds, with 64 percent of women relying on support from family

⁴⁹⁵ World Bank Group. (2021). Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities.

⁴⁹⁶ Ibid.

⁴⁹⁷ Ibid.



and friends, while only 42 percent of men do the same. Within Sudan, various informal financial institutions exist, but Sandug appears to be the primary credit option available to most women. Microfinance also serves as an alternative for some Sudanese women, as highlighted in a study on its role in supporting urban women entrepreneurs.

The limited access to financial resources contributes to a low level of entrepreneurial activity among women. Data from the 2014 Enterprise Survey conducted in Sudan indicates that only 3 percent of firms have a female top manager, in contrast to the Sub-Saharan Africa average of 15 percent. Additionally, female participation in firm ownership stands at 8 percent, significantly lower than the regional average of 36 percent. Access to finance emerges as the primary obstacle to firm growth for 10 percent of female-led firms, compared to 6 percent of male-led firms.⁴⁹⁸

A comprehensive study involving 142 female business owners in Sudan, representing diverse geographical locations, industries, and business sizes, reaffirms that the lack of access to credit from banks poses a significant barrier to initiating or expanding their enterprises (Musa 2012). The businesswomen encountered challenges in obtaining loans as they were often required to provide collateral in the form of real estate or other assets, which many of them did not possess. Furthermore, the interest rates charged on loans frequently exceeded 10 percent of the loan amount. As previously mentioned, owning a land title could potentially facilitate access to bank credit since it could serve as collateral. Women face difficulties in acquiring land titles. Additionally, some businesswomen reported that banks displayed reluctance to lend to individuals without personal connections or “wasta”.⁴⁹⁹

Presently, the Sudanese government has established two dedicated ministries to address the specific needs and interests of women and youth: the Ministry of Social Development and the Ministry of Youth and Sports. Notably, both ministries are led by women under the transitional government. As part of their mandate, these ministries are actively involved in the process of drafting a new Constitution and other legislative measures, which hold the potential to shape new or revised national strategies. For instance, following the enactment of the 2005 Interim Constitution, the Ministry of Social Welfare for Women and Child Affairs at that time formulated a Women Empowerment Policy document

⁴⁹⁸ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities*.

⁴⁹⁹ Ibid.

in 2007. This policy document outlined six key “areas of concern” and proposed various “institutional mechanisms” to operationalize the policy and promote women’s empowerment. These mechanisms encompassed a range of institutions, spanning from the national level’s General Directorate for Women and Family to the General Union of Sudanese Women, the largest grassroots organization in Sudan focusing on women’s issues.⁵⁰⁰

The future trajectory of laws and policies pertaining to women under the transitional government remains uncertain. A notable trend has emerged within urban Sudanese society, characterized by the active engagement of educated and driven women. Through their involvement with local and international non-governmental organizations (NGOs), they have exerted pressure on the government, seeking to effect change and advocate for the interests of their respective constituencies.⁵⁰¹

Women engage with non-governmental organizations (NGOs) in Sudan for different purposes, including both watchdog functions and social service-oriented endeavors. Some individuals collaborate with NGOs to monitor and hold accountable various entities, while others seek to address social welfare gaps that the government fails to fulfill. Regardless of the specific motivations of these individuals, post-2011 research conducted by Kadoda and Hale demonstrates that women-oriented NGOs play a highly active role and constitute a significant portion of the civil society landscape in Sudan. Obtaining precise figures regarding the number of active NGOs remains challenging. Kadoda and Hale indicate awareness of numerous NGOs officially registered with the government and actively operating in and around the capital city of Khartoum. It is estimated that there are “thousands of NGOs in Sudan and hundreds in Greater Khartoum”.⁵⁰²

3.5.6.4. The influence of social norms on MSMEs: exploring impacts and implications

Women face significant disadvantages resulting from a discriminatory gender ideology that generates and sustains gender inequalities across various aspects of women’s lives, including the realm of business. Consequently, when women choose to pursue entrepreneurship, they are more prone to experiencing obstacles in accessing different forms of entrepreneurial capital and are frequently driven by necessity-based motivations.⁵⁰³ Hence, it is probable that

⁵⁰⁰ Ibid.

⁵⁰¹ Ibid.

⁵⁰² Ibid.

⁵⁰³ A/Rahman W., Ahmed, A., Ragab, M., and Alsaheed, M. (2022). *Global Entrepreneurship Monitor: Sudan National Report 2021/2022*.



businesses are predominantly led by men who perceive a responsibility to safeguard these businesses as family privileges, for which males are traditionally accountable.

In Sudan, women face subordination to men due to the influence of patriarchal customs, prevailing norms, and existing legal provisions. The 1991 Muslim Personal Status Law (MPSL) contains provisions that reinforce male dominance, particularly through the concept of male guardianship. Scholars specializing in Sudanese studies argue that women's subordination is not solely attributed to Sharia law but is rather influenced by a combination of factors. A governmental task force composed of Sudanese women's studies scholars emphasizes the role of customs and traditions, rather than religion, in constraining women's agency. This perspective highlights how societal norms, rather than religious doctrine, primarily emphasize women's reproductive capacity and subject them to multidimensional constraints. Two decades later, academic Liv Tonnessen (2019) reaffirms the significance of customs and traditions in subordinating Sudanese women to men. Specifically, she explores how the "male breadwinner-female caregiver" model, which reinforces the notion of the male domain in the public sphere and the female domain in the private sphere, upholds three key areas of Sudanese law: Muslim family law (such as the 1991 MPSL), labor law, and public order laws.⁵⁰⁴

In a paradoxical finding from the 2018 Afrobarometer survey, a higher percent of female respondents (48 percent) expressed the belief that men should have greater priority in accessing scarce job opportunities compared to their male counterparts (32 percent). This highlights an intriguing disparity in perspectives on gender and employment. Adding to this, the 1991 Muslim Personal Status Law (MPSL) imposes a requirement whereby women desiring to engage in work outside their homes must first obtain permission from their husbands. This legal provision introduces an additional layer of constraint for women seeking economic independence and active participation in the labor force.⁵⁰⁵

The practice of early marriage plays a significant role in shaping the societal roles and status of women. Particularly in patriarchal societies, the act of marriage entails the relocation of a girl to her husband's residence, often in the company of his family members. This transition marks a pivotal moment in a woman's life, influencing her social position and responsibilities within

⁵⁰⁴ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities*.

⁵⁰⁵ Ibid.

the community.⁵⁰⁶ Child marriage is motivated by various factors, and while poverty is often identified as a primary driver of early unions, cultural traditions play a more significant role in Sudan. The deeply ingrained patriarchal customs and societal norms in Sudan are internalized by both women and men. These customs present significant barriers for girls and women in accessing educational opportunities, acquiring the necessary knowledge and skills to enter the labor market, and progressing within it. Consequently, Sudan's patriarchal customs hinder the prospects of many girls and women, irrespective of the availability and quality of educational institutions in their vicinity. It is important to note that not all girls and women are equally affected by these constraints.⁵⁰⁷

The willingness to embrace the inherent risks of initiating a business venture is influenced by cultural elements, perceptions, attitudes, and individual socialization. Different cultures may exhibit varying levels of support for risk-taking behavior, potentially leading to differing rates of entrepreneurship. In terms of gender, there is a relatively minor gender gap observed in this regard. Male participants recorded a percent of 55.3 percent, while females scored slightly lower at 50.6 percent. Still, it is important to approach this finding with some caution and further investigation.⁵⁰⁸

The primary factors contributing to the absence of women from the labor force is identified as household responsibilities. A significant majority of women (70 percent) reported their non-participation in the labor force due to their roles as housewives or homemakers, while this figure was only 2 percent for men. It is worth noting that nearly half of the household heads were engaged in the labor force; however, only 52 percent of them were employed.⁵⁰⁹

According to the data presented, it is evident that a higher percent of men (35.1 percent) compared to women (18.3 percent) are acquainted with a greater number (5 or more) of individuals who have initiated business ventures within the past two years. Conversely, a significant majority of women (40.9 percent) reported not knowing anyone who started a business in the same period, whereas the corresponding figure for men was 25.5 percent. This discrepancy can be attributed to the influence of cultural

⁵⁰⁶ Ibid.

⁵⁰⁷ Ibid.

⁵⁰⁸ A/Rahman W., Ahmed, A., Ragab, M., and Alsaheed, M. (2022). *Global Entrepreneurship Monitor: Sudan National Report 2021/2022*.

⁵⁰⁹ World Bank Group. (2021). *Towards A More Inclusive Economy: Understanding the Barriers Sudanese Women and Youth Face in Accessing Employment Opportunities*.



gender norms, which tend to limit women's access to information (such as through media) and restrict their participation in entrepreneurial networks. Additionally, it reflects the broader constraints on women's mobility and opportunities for open interaction.⁵¹⁰

In terms of the motive to continue a family tradition, a higher proportion of male entrepreneurs (22.9 percent) agree with this motivation, whereas only (14.6 percent) of female participants share the same sentiment. This observation can be attributed to gender expectations and assigned roles, as the business domain has historically been perceived as "masculine," with men predominantly occupying various types and sectors of activities.⁵¹¹

Motivations for engaging in entrepreneurial activity exhibit notable variations based on age and gender.⁵¹² The findings uncover intriguing differences across generations, with younger entrepreneurs displaying a greater inclination towards the motive of "making a difference in the world" compared to older counterparts.⁵¹³ The GEM 2021 results reaffirm the existence of a gender gap in the level of participation in Total early-stage Entrepreneurial Activity (TEA) among individuals aged 18-64. Males achieved a higher score of 40.8 percent in TEA, while females scored significantly lower at 26.4 percent.⁵¹⁴ Consequently, it is reasonable to assert that gender norms and attitudes exert a significant influence on the motivations that drive female engagement in entrepreneurial endeavors. The gender gap observed in favor of male TEA entrepreneurs underscores the role of societal norms and expectations.⁵¹⁵

Hence, it is reasonable to infer that gender gaps observed in employment are reflected in the context of business operations and engagement in entrepreneurial pursuits. These disparities are a result of the prevailing gender norms, societal expectations, and structural barriers that hinder women's participation and advancement in the entrepreneurial sphere.⁵¹⁶

Self perceptions. To analyze potential variations in

⁵¹⁰ A/Rahman W., Ahmed, A., Ragab, M., and Alsaeed, M. (2022). Global Entrepreneurship Monitor: Sudan National Report 2021/2022.

⁵¹¹ Ibid.

⁵¹² Ibid.

⁵¹³ Ibid.

⁵¹⁴ Ibid.

⁵¹⁵ Ibid.

⁵¹⁶ Ibid.

motivation based on gender, the proportion of women engaged in entrepreneurship (TEA) compared to men in agreeing with four specific motives is examined (as a percent of adults aged 18-64). Regarding the first motive, "To make a difference in the world," a slightly higher percent of men (15.8 percent) involved in TEA agree with this motive compared to women (14.5 percent), indicating a slight gender gap favoring men. This disparity aligns with gender norms where men tend to have broader external interactions and engagements, while women's activities are often confined to narrower spheres around them.⁵¹⁷

A considerable number of participants, accounting for 41.5 percent, expressed that fear of failure acts as a deterrent to their involvement in entrepreneurial activity and business startup, despite possessing the necessary skills, knowledge, and experience to undertake entrepreneurial endeavors. In such cases, the intensity of this perception becomes a crucial factor in shaping an individual's intentions and their propensity to take risks. Fear of failure serves as an indicator of significant risk aversion. In simpler terms, the higher the level of fear of failure, the lower the inclination to embrace entrepreneurial risks.⁵¹⁸

The presence of entrepreneurial role models significantly impacts adults' inclination to initiate a business venture and alleviates their apprehension towards failure. The findings reveal that 66.8 percent of the participants have personal connections with individuals who commenced entrepreneurial endeavors within the last two years.⁵¹⁹ Notably, a higher proportion of men (35.1 percent) compared to women (18.3 percent) are acquainted with a greater number of such individuals, with men knowing five or more. Interestingly, a majority of female respondents (40.9 percent) do not have any knowledge of individuals who embarked on entrepreneurial ventures in the past two years, whereas this is true for a lower percent of men (25.5 percent).⁵²⁰

3.5.8. Conclusion

In conclusion, the available literature on the role of women in the renewable energy (RE) sector in Sudan remains limited where the country remains at the heart of political upheavals and instabilities affecting the quality and availability of data. While studies such as "Implications of Renewable Energy for Women in Sudan: Challenges and Opportunities" conducted in 2003 by Omer and Abdeen

⁵¹⁷ Ibid.

⁵¹⁸ Ibid.

⁵¹⁹ Ibid.

⁵²⁰ Ibid.



explored the topic, but the information is outdated.⁵²¹ The Global Entrepreneurship Monitor (GEM) reports have provided valuable insights into entrepreneurship in Sudan, including data from the 2021 GEM 23rd round of study and the second GEM National Report for Sudan. These reports lack a specific focus on the renewable energy sector as a subset of the energy sector and do not provide a gender-sectoral breakdown of enterprises. Furthermore, the recent UNDP report titled “Empowering Sudan Renewable Energy: Addressing Poverty and Development” acknowledges the scarcity of literature and data on women in the energy sector, including women-led enterprises in the renewable energy field.⁵²² The cited data in the report predominantly dates back to 2017, with limited references to women’s involvement in the energy sector. An interesting observation regarding women in STEM in Sudan is that although they represent less than one-third of all graduates, they make up the majority of graduates in the information and communication technology (ICT) field. However, this finding is based on data from 2012 and 2015, which limits its relevance to the present. There is a pressing need for updated, gender-disaggregated data on women in STEM to accurately assess and address underlying barriers and identify potential opportunities.

Moreover, there is an urgent need for thorough and current research on women’s roles in Sudan’s renewable energy sector to guide policy and advance gender equality in this vital economic field. Although data availability remains a significant challenge, the recently published 2022 Sudan Labor Market Panel Survey (SLMPS) provides some gender-disaggregated insights. Nevertheless, there remains a lack of data specifically related to the broader energy sector and the renewable energy segment.

3.6. Tunisia

The labor market outlook in Tunisia showcases a mix of achievements and obstacles in achieving gender equality and fostering entrepreneurship. Tunisia has made significant strides in women’s rights, particularly in education, resulting in equitable enrollment rates for higher education. Despite smaller gender gaps compared to neighboring countries, substantial disparities persist. Female labor force participation remains relatively low, with women often facing insecure

⁵²¹ Omer, Abdeen. (2003). Implications of renewable energy for women in Sudan: Challenges and opportunities. *International Journal of Sustainable Development*.

⁵²² United Nations Development Programme (UNDP). (2021). *Empowering Sudan: Renewable energy addressing poverty and development*. UNDP Sudan.

work conditions and limited opportunities for savings and skill development. Gender segregation is apparent, with women predominantly occupying salaried positions in the public sector and encountering challenges in the contracting private sector.

While gender gaps in certain sectors are relatively minor, women still face underrepresentation in leadership roles and the parliament. Tunisia ranks low in gender equality indexes, indicating the need for improvement. Beyond gender inequality, the labor market faces challenges such as high youth unemployment, inadequate education, skills mismatch, discrimination in recruitment, limited access to credit, and prevalence of the informal sector. Tunisia has witnessed a rise in entrepreneurship, including support for female entrepreneurs. While progress has been made, barriers to formal entrepreneurship persist, and women primarily operate in the informal sector, largely due to childcare responsibilities. Addressing these challenges requires comprehensive efforts to promote gender equality, enhance access to credit, formalize the labor market, and support small and medium-sized enterprises, thereby creating a more inclusive and sustainable market economy in Tunisia.

3.6.1. Labor market outlook

Tunisia is widely recognized as a frontrunner in the advancement of women’s rights within the region.⁵²³ Since as early as 1900, Tunisia has prioritized providing women with accessible education, a progressive step that laid the foundation for subsequent developments. Over time, Tunisia has achieved commendable stability in enrollment rates for higher education, ensuring equitable access for both men and women.⁵²⁴ Notably, the percentage of women enrolled in tertiary educational institutions in Tunisia exceeds that of men, with 43 percent of women and 23.20 percent of men enrolled in such programs in 2020.⁵²⁵ Although Tunisia exhibits smaller gender gaps compared to other countries in the SEMED region, significant disparities still persist.⁵²⁶ In terms of gender inequality, Tunisia ranks 58th out of 188 countries in the United Nations Development Programme’s 2015 Gender Inequality Index, indicating room for improvement.

⁵²³ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. “Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia.” Report. Wilson Center, 2023.

⁵²⁴ Ibid.

⁵²⁵ Ibid.

⁵²⁶ Salim, M., & Anis, J. (2021). Has female entrepreneurship been a formidable engine of economic and Social Development in Tunisia?



Furthermore, in the World Economic Forum's 2017 Global Gender Gap Report, Tunisia is positioned at 117th out of 144 countries, highlighting the existence of substantial gender disparities within the nation.⁵²⁷ The female workforce participation rate in Tunisia stands at approximately 27 percent, but there is a notable underrepresentation of women in senior positions. For instance, women have secured only 12 percent of parliamentary seats in the most recent two elections.

In 2019, the female labor force participation (FLFP) rate stood at 24.9 percent in Tunisia, significantly lower than the rate of 68.9 percent for men. This proportion has experienced minimal change since 2010 when women accounted for 24.5 percent of the labor force. While Tunisian law stipulates decent working conditions for employed women, they often find themselves compelled to engage in contractual or informal employment arrangements devoid of social insurance coverage. These arrangements commonly entail prolonged working hours of 10 to 12 per day, absence of paid maternity leave, absence of job security, and continued vulnerability to exploitation. Such insecure work conditions severely constrain women's ability to accumulate savings or acquire the necessary skills to embark on entrepreneurial ventures.⁵²⁸

Differences in benefits and wages between the public and private sectors serve as a significant determinant in driving Tunisian women to seek employment in the public sector. The allure of more generous remuneration and perks in the public sector contributes to the phenomenon of queues observed among women vying for public-sector positions. Salaried occupations occupied by Tunisian women predominantly lie within the public sector, with notable concentrations in fields such as education and healthcare. Conversely, within the private sector, women are primarily clustered in industries such as textiles and clothing, which often operate informally and are experiencing contraction, leading to workforce reductions.⁵²⁹ Notably, the gender gaps in sectors such as health services and labor policy are relatively minor. The female workforce participation rate in Tunisia stands at approximately 27 percent, but there is a notable underrepresentation of women in senior positions. For instance, women have secured only 12 percent of

⁵²⁷ Salim, M., & Anis, J. (2021). Has female entrepreneurship been a formidable engine of economic and Social Development in Tunisia?

⁵²⁸ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵²⁹ Ibid.

parliamentary seats in the most recent two elections.⁵³⁰

Nevertheless, the overall low rates of female participation in employment obscure the disparities in employment levels among different income groups. While the average female employment participation stands at 27 percent, it is notably higher at 42 percent for individuals belonging to low- and middle-income groups.⁵³¹ This implies that women with higher socioeconomic status are less likely to be engaged in formal employment and are likely to have lower representation in entrepreneurial activities as well.⁵³²

Tunisia faces significant challenges in addressing youth unemployment and inactivity, with the youth unemployment rate standing at a notable 31.8 percent, indicating a significant proportion of the younger population, specifically one in four individuals, are not actively engaged in employment, education, or training (NEET). Within the SEMED region, Tunisia also grapples with one of the highest rates of youth not engaged in education, employment, or training (NEET), estimated at approximately 33 percent. This issue is particularly pronounced in rural areas of Tunisia, where NEET status encompasses 58 percent of young men, aged 15-24 years old, and a staggering 85 percent of young women.⁵³³ Moreover, while educated youth still experience exclusion, they exhibit a lower propensity to become NEET in comparison to their less-educated counterparts.⁵³⁴

In terms of economic activity, men exhibit a considerably higher rate of participation at 70 percent, whereas only 26 percent of women are economically active.⁵³⁵ Furthermore, approximately 29 percent of firms identify the inadequately educated workforce as a major constraint impeding their business operations, surpassing the regional average of 20 percent within the MENA region.⁵³⁶

Unemployed youth who have discontinued their education or training programs face prolonged job search periods, with an average duration exceeding three years.⁵³⁷

⁵³⁰ Salim, M., & Anis, J. (2021). Has female entrepreneurship been a formidable engine of economic and Social Development in Tunisia?

⁵³¹ Ibid.

⁵³² Ibid.

⁵³³ Ibid.

⁵³⁴ Ibid.

⁵³⁵ Ibid.

⁵³⁶ Ibid.

⁵³⁷ Ibid.



For those fortunate enough to secure employment, approximately half of them find themselves working in the informal sector or in low-skilled positions with minimal employment stability. Additionally, the limited availability of financial services tailored to the needs of young individuals further contributes to the youth gap.⁵³⁸

The labor market exhibits significant horizontal and vertical segregation, with women concentrated in services and agriculture, while less than 9 percent of Tunisian firms employ women in top managerial positions. The existence of a substantial pool of qualified women who do not participate in the labor market signifies an inefficient utilization of resources for both the private sector and the overall economy.⁵³⁹ Gender discrimination is prevalent in recruitment and employment practices across sectors, along with discrimination against ethnic minorities and undocumented migrants.⁵⁴⁰

3.6.2. Renewable energy outlook

The energy sector plays a significant role in Tunisia's economy across various sectors. Over the past two decades, the country has experienced a growing deficit in its energy balance, primarily due to reliance on fossil fuels such as oil and natural gas to meet the increasing energy demand. Declining domestic hydrocarbon resources have resulted in a heightened dependence on fossil fuel imports, reaching record levels in 2019, where the primary energy balance deficit stood at 5,672 thousand tons of oil equivalent (ktoe), as depicted in Figure 2. This indicates that 49 percent of the total energy consumed in Tunisia is imported. In response, Tunisia has initiated efforts to tap into its abundant renewable energy sources as a means to diversify its energy mix. Additionally, the country has implemented energy efficiency programs aimed at addressing the energy balance deficit.

Since 2000, Tunisia has experienced an energy balance deficit, which reached one third of the country's overall trade deficit in 2018.⁵⁴¹ To address this, Tunisia has adopted a solar plan with the goal of achieving 30 percent renewable energy (RE) in its electricity mix by 2030.

⁵³⁸ Ibid.

⁵³⁹ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵⁴⁰ Ibid.

⁵⁴¹ ESCWA. "ESCWA Regional Initiative for Promoting Small-scale Renewable Energy Applications in Rural Areas of the Arab Region." 2020. ESCWA.

Alongside energy reforms, Tunisia has made efforts to enhance gender equality since 2011, including women's political participation, combating violence against women, and removing reservations to the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW). Despite Tunisia's improved ranking in the Global Gender Gap index compared to other Arab countries, such as Algeria and Jordan, progress in the economic sector remains limited.⁵⁴²

Within this context, ESCWA has launched the Regional Initiative for Promoting Small-scale Renewable Energy Applications in Rural Areas of the Arab region (REGEND). The primary objective of REGEND is to improve the livelihoods and energy access of rural communities in the Arab region, particularly marginalized groups, while promoting gender equality and social inclusion. REGEND takes an integrated rural development approach, empowering rural women and emphasizing the importance of entrepreneurship and local knowledge in sustainable development, addressing gender inequality, economic disempowerment, political exclusion, and natural resource challenges.⁵⁴³

This report, based on a human rights-based approach and aligned with the 2030 Agenda for Sustainable Development, focuses on Sustainable Development Goal (SDG) 7 on affordable and clean energy, SDG 5 on gender equality, and SDG 10 on reducing inequality. It analyzes gender conditions in Tunisia and explores gender mainstreaming mechanisms in national energy policies, with a particular emphasis on promoting women's entrepreneurship in rural areas. The report aims to provide practical recommendations for gender-based social inclusion in energy access programs, specifically those promoting the use of small-scale RE technologies, within the framework of local entrepreneurial development and income-generating activities in rural areas. Despite Tunisia's commitment to gender equality through policies that promote rights, freedoms, and public participation, there is a lack of programs targeting women's economic equality, particularly in rural areas.⁵⁴⁴

3.6.3. Nurturing education for a sustainable future

In Tunisia, there is a remarkable gender distribution among graduates of higher-level technical programs, with 61

⁵⁴² Ibid.

⁵⁴³ Ibid.

⁵⁴⁴ Ibid.



percent being women and 39 percent being men.⁵⁴⁵ This pattern extends to other STEM programs, where women in Tunisia consistently graduate at high rates.⁵⁴⁶ Despite these impressive educational achievements, there is a significant disparity when it comes to the representation of women in the workforce and entrepreneurship.⁵⁴⁷ Women's high graduation rates in STEM fields have yet to be fully reflected in their presence and involvement in these sectors professionally and as entrepreneurs.⁵⁴⁸

An encouraging shift is taking place in societal norms, particularly in relation to women's increasing participation in STEM fields.⁵⁴⁹ Tunisia, in particular, has witnessed a growing trend of women opting to pursue careers in STEM disciplines.⁵⁵⁰ This shift represents a significant departure from traditional gender roles and reflects the evolving landscape of opportunities for women in Tunisia, setting a positive example for the region as a whole.⁵⁵¹

To address the issue of entrepreneurship, Tunisia has implemented entrepreneurial education programs within its educational system for over a decade. These initiatives, including specific courses at universities, have effectively generated interest among students in starting their own businesses. As a result, the percentage of formally registered small and medium-sized enterprises (SMEs) owned by women in Tunisia surpasses the MENA region's average, ranging from 18 to 23 percent compared to the average of 12 to 15 percent.⁵⁵²

⁵⁴⁵ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁵⁴⁶ Ibid.

⁵⁴⁷ Ibid.

⁵⁴⁸ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵⁴⁹ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁵⁵⁰ Ibid.

⁵⁵¹ Ibid.

⁵⁵² Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

3.6.4. The era of digitalization: embracing the digital transformation

Despite having strong connectivity and an early embrace of digital technologies, Tunisia's global ranking of 66th and its position as the third lowest among the 12 countries in the MENA region indicate that it has not fully capitalized on the advantages offered by digital technologies. This is evident from the fact that certain essential sectors were unable to transition online during the COVID-19 lockdown. Substantial disparities in digital inclusion continue to persist, particularly in terms of gender. The gender gap in internet access stands at 11.5 percent, while the gap in mobile phone usage is 6.2 percent.⁵⁵³

According to the International Telecommunication Union (ITU), Tunisia witnessed a rise in the gender gap for internet access, reaching 7.1 percent. There was a positive development in terms of the gap between male and female mobile phone users, which decreased by 3 percent in Tunisia.⁵⁵⁴

3.6.5. Exploring MSMEs landscape

Tunisia exhibits a notable inclination toward entrepreneurship, as evidenced by the implementation of entrepreneurial education programs in universities over a decade ago, which have effectively stimulated students' enthusiasm for initiating their own ventures. Moreover, the country demonstrates significant support for female entrepreneurship, with various entities such as civil society organizations, non-governmental organizations, and societal norms actively promoting and encouraging women's involvement.⁵⁵⁵ Tunisia faces significant challenges of unemployment and poverty, with young women being particularly affected, especially considering the country's relatively young population.⁵⁵⁶ To address these issues, the Tunisian government has implemented various programs and reforms aimed at promoting practical entrepreneurship at both the local and national levels.⁵⁵⁷ Unfortunately, specific data regarding entrepreneurial participation rates is currently unavailable.⁵⁵⁸

In Tunisia, women are driven by the prospects presented

⁵⁵³ Ibid.

⁵⁵⁴ Ibid.

⁵⁵⁵ Ibid.

⁵⁵⁶ Salim, M., & Anis, J. (2021). Has female entrepreneurship been a formidable engine of economic and Social Development in Tunisia?

⁵⁵⁷ Ibid.

⁵⁵⁸ Ibid.



through entrepreneurship, including factors such as personal accomplishment and economic self-sufficiency.⁵⁵⁹ In 2006, the proportion of small-to-midsize enterprises in Tunisia that were owned by women stood at 13 percent. By 2020, this figure had significantly increased, with women owning or sharing ownership of approximately 40 percent of businesses. It is important to note that only 8 percent of firms had majority female ownership. Additionally, a majority of these enterprises, exceeding half, operate within the informal sector. This situation highlights the existence of notable barriers that impede women's participation in formal entrepreneurship. As informal business owners, their activities primarily revolve around domestic services, such as cooking and cleaning.⁵⁶⁰ In Tunisia, the finance and technology sector accounts for a modest 9 percent of women-owned businesses.⁵⁶¹

Tunisia has witnessed a growth in the establishment of start-ups, marked by the introduction of a national program aimed at establishing business incubators within higher education institutions. This initiative took root in 2011, and since then, a network of 26 incubators has been established across the country. To further promote entrepreneurial culture and digital transformation, Tunisia implemented the Start-Up Act, which not only developed a regulatory framework but also prioritized these aspects. As a result, Tunisia has become home to at least 41 technology hubs. The Start-Up Act has played a crucial role in reducing barriers faced by young entrepreneurs, particularly those of bureaucratic, administrative, and legal nature. The emergence of business accelerators, such as Intilaq, has also contributed to the entrepreneurial ecosystem in Tunisia. Additionally, recognizing the importance of supporting women entrepreneurs, the Ministry for Women, Family Affairs, and Children has established investment credit lines specifically tailored to their needs. Furthermore, in 2016, the ministry launched the Raidat program, an investment platform that adopts a gender-sensitive approach to support women's medium- and large-scale projects.⁵⁶²

Despite the considerable transformations in politics, economics, society, and demographics witnessed in

⁵⁵⁹ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵⁶⁰ Ibid.

⁵⁶¹ Ibid.

⁵⁶² Ibid.

Tunisia during the past five decades, women continue to bear the primary burden of childcare and domestic responsibilities. In 2019, the ratio of unpaid care and domestic work performed by women compared to men in Tunisia stood at seven to one, highlighting the significant gender disparity in this domain.⁵⁶³

When entering the workforce, women in Tunisia are typically expected to bear the majority of household care responsibilities. The rate of women entrepreneurship is also relatively low, with only 10 percent of women being own-account workers in 2012, which is lower than Egypt and Morocco. For men, the percent of own-account workers in Tunisia was higher than Egypt and lower than Morocco.⁵⁶⁴

The relationship between income and labor force participation is expected to have similar implications for entrepreneurship.⁵⁶⁵ According to the GEM study (2006), both globally and in highly developed countries, a significant portion of female entrepreneurs are driven by necessity rather than perceiving entrepreneurship as an opportunity. In these cases, women may have been compelled to start their own businesses as a means to escape unemployment rather than being motivated by entrepreneurial prospects.⁵⁶⁶

Despite the considerable transformations in politics, economics, society, and demographics witnessed in Tunisia during the past five decades, women continue to bear the primary burden of childcare and domestic responsibilities. In 2019, the ratio of unpaid care and domestic work performed by women compared to men in Tunisia stood at seven to one, highlighting the significant gender disparity in this domain.⁵⁶⁷

Despite the numerous challenges and limitations faced by women entrepreneurs, particularly in relation to familial and societal factors, Tunisian women entrepreneurs have achieved remarkable levels of success in their professional endeavors.⁵⁶⁸ Presently, women entrepreneurs exhibit even

⁵⁶³ Ibid.

⁵⁶⁴ Ibid.

⁵⁶⁵ Salim, M., & Anis, J. (2021). Has female entrepreneurship been a formidable engine of economic and Social Development in Tunisia?

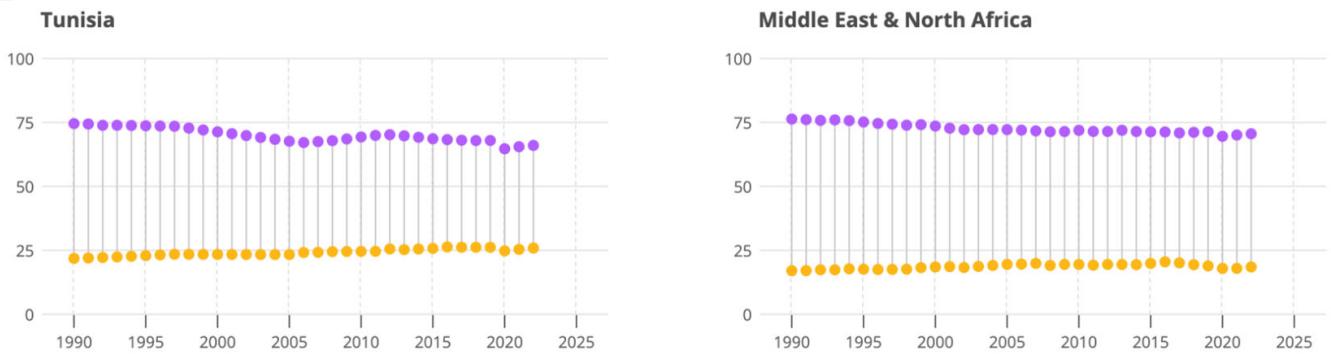
⁵⁶⁶ Ibid.

⁵⁶⁷ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵⁶⁸ Salim, M., & Anis, J. (2021). Has female entrepreneurship been a formidable engine of economic and Social Development in Tunisia?



Figure 24. Labor force participation rate, by sex (% of population ages 15+) (modeled ILO estimate)



Source: Source: International Labour Organization. "ILO Modeled Estimates and Projections database (ILOEST)" ILOSTAT. Accessed February 21, 2023. <https://ilostat.ilo.org/data/>

Note: the orange dotted line represents female labor force participation rate while the purple dotted line represents male labor force participation rate.

greater optimism and confidence in the future, displaying a sense of comfort in navigating administrative formalities and establishing beneficial relationships within their business networks.⁵⁶⁹

3.6.6. Challenges hindering MSMEs in Tunisia: an in-depth analysis

Despite the advancements in education, healthcare, employment, and political engagement for women, there are still significant vulnerabilities, particularly in rural areas of Tunisia. According to the 2014 general population census, women faced challenges such as a higher unemployment rate of 21 percent compared to 12 percent for men. Their participation in economic activities stood at only 28 percent, while men's participation was at 72 percent. Additionally, women comprised over 67 percent of the illiterate population, indicating a significant disparity in literacy rates. In terms of wages, women experienced a gender pay gap of approximately 35 percent in 2012.⁵⁷⁰

The situation for women in rural areas, where they constitute 32 percent of the female population in Tunisia, is even more problematic. Ownership of land and livestock among women is very low, with only 4 percent owning land and 6 percent owning livestock. Access to financial resources is extremely limited and decision-making regarding finance and commerce within households remains predominantly controlled by men. These challenges are further exacerbated by the prevalence of unpaid productive activities for women, where they work as low-wage laborers under poor conditions that pose threats to their well-being. Tragically, there have been

⁵⁶⁹ Ibid.

⁵⁷⁰ ESCWA. "ESCWA Regional Initiative for Promoting Small-scale Renewable Energy Applications in Rural Areas of the Arab Region." 2020. ESCWA.

reports of fatal accidents involving women workers from rural areas during transportation.⁵⁷¹

3.6.6.1. The influence of social norms on MSMEs: exploring impacts and implications

Social norms and societal perceptions regarding the role of women persistently impede women's engagement in the labor force. Despite possessing high qualifications, women in Tunisia face a notable disparity in economic participation, with substantial gender gaps persisting in the labor market. Similar to other countries in the Southern and Eastern Mediterranean region, female labor force participation in Tunisia ranks among the lowest within the EBRD countries of operations. Although 43 percent of women pursue tertiary education (compared to 26 percent of men), only 25 percent of women manage to enter the labor market (in contrast to 71 percent of men).⁵⁷² Instances of sexual harassment in public spaces are alarmingly high, with a large-scale survey revealing that 91 percent of women reported being physically assaulted by men in public transportation.⁵⁷³ Policies aimed at improving care infrastructure and fostering a supportive environment for female entrepreneurship would contribute to a more competitive and inclusive economy.⁵⁷⁴

In a conducted survey, approximately 12.78 percent of the 202 Tunisian women who participated expressed that they perceive a discriminatory environment towards women. This perception can be attributed to the inclusive policies that Tunisia has implemented over the past six

⁵⁷¹ Ibid.

⁵⁷² Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵⁷³ Ibid.

⁵⁷⁴ Ibid.



decades.⁵⁷⁵ According to the Women, Peace, and Security Index (WPSI), which utilizes data to assess women's inclusion, justice, and security, 26 percent of males in Tunisia disagreed with the notion that women having paid jobs outside their homes are acceptable.⁵⁷⁶ The Social Institutions and Gender Index (SIGI) revealed that 77 percent of Tunisians believed that children experience negative consequences when their mothers engage in employment outside the household.⁵⁷⁷

Despite previous endeavors by the Tunisian government to promote women's participation in the labor force, their initiatives have encountered a slowdown since 2021 due to the emergence of a pressing issue: high male unemployment.⁵⁷⁸ Faced with limited resources and competing demands, the government has been compelled to prioritize addressing the unemployment crisis among men.⁵⁷⁹ Consequently, the prevailing perspective that men bear the primary responsibility as breadwinners, with women being economically dependent on them, has gained prominence once again, overshadowing the efforts to integrate women into the workforce.⁵⁸⁰

3.6.6.2. Navigating the challenges of informality: implications for MSMEs

The intensifying political instability and uncertainty in Tunisia and Lebanon has resulted in the growth of the informal sector. It is estimated that a significant proportion, ranging from 35 to 42 percent, of the labor force in Tunisia is engaged in informal economic activities.⁵⁸¹

The issue is aggravated by the prevalence of informal economic activities and insufficient support for small and medium-sized enterprises (SMEs). Informal businesses and employment play a significant role in Tunisia's labor market and impede the effective alignment of skills supply and demand. Statistical assessments reveal that

only half of Tunisia's young population is engaged in formal employment, and even among those with formal jobs, only half have secure, permanent contracts. This situation is partly attributed to sectoral collective agreements in Tunisia, where initial wage rates are set notably higher than the statutory minimum wage.⁵⁸²

Informal businesses and employment play a significant role in Tunisia's labor market, creating challenges in aligning skills supply and demand. Statistics indicate that only around half of Tunisia's young population is engaged in formal employment, and among those who are formally employed, only half have secure and permanent contracts.⁵⁸³ This situation is partly attributed to sectoral collective agreements in Tunisia, which establish initial wage rates higher than the minimum wage mandated by law.⁵⁸⁴ The issue is compounded by the prevalence of informal economic activities and the inadequate support for small and medium enterprises (SMEs).⁵⁸⁵

3.6.6.3. Examining the legal and regulatory landscape for MSMEs

In terms of women's rights and freedoms, Tunisia ranks highest in MENA according to Freedom House rankings.⁵⁸⁶ The country's family law, established in 1956, was notably progressive in the MENA region, granting women greater legal and political rights compared to other nations. Furthermore, subsequent amendments in the 1990s further strengthened these rights.⁵⁸⁷ As indicated in the WBL report, women in Tunisia enjoy unrestricted mobility rights, allowing them to travel independently outside their residence and beyond national borders without the need for male authorization.⁵⁸⁸

Despite having one of the most progressive legislations in the region, the Tunisian Code du Statut Personnel designates men as the primary providers, and provisions within the labor code still prohibit women from accessing certain tasks and occupations across different sectors.

⁵⁷⁵ Ibid.

⁵⁷⁶ Ibid.

⁵⁷⁷ Ibid.

⁵⁷⁸ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁵⁷⁹ Ibid.

⁵⁸⁰ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵⁸¹ Ibid.

⁵⁸² Ibid.

⁵⁸³ EBRD (Esraa) (n.d.). Tunisia Country Diagnostic.

⁵⁸⁴ Ibid.

⁵⁸⁵ EBRD (Esraa) (n.d.). Tunisia Country Diagnostic.

⁵⁸⁶ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁵⁸⁷ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵⁸⁸ Ibid.



According to the World Values Survey, 71 percent of respondents agreed that when job opportunities are scarce, men should have a greater entitlement to employment than women in Tunisia. In general, women bear a significant burden of caregiving responsibilities in Tunisia.⁵⁸⁹ Tunisia has established a legal framework that fosters an inclusive environment for women's economic participation.⁵⁹⁰ The Constitution and labor code include provisions for equal opportunities and non-discrimination between men and women. Article 21 of the 2014 Constitution explicitly asserts that all citizens, regardless of gender, possess equal rights, responsibilities, and legal standing.⁵⁹¹

Women face significant challenges in both the competitive labor market and in establishing their own businesses. Tunisia, since gaining independence, has taken steps to promote gender equality by ratifying several international conventions. Notable conventions include International Labor Organization (ILO) Conventions such as 111, which addresses employment and occupation discrimination, 118, focusing on equal treatment and social security, 122, concerning employment policy, and 19, addressing equal treatment and work-related accidents.⁵⁹²

In 2017, Tunisia implemented a quota system aimed at enhancing the representation of women on executive boards; however, the outcomes of this initiative have been less than satisfactory.⁵⁹³ In 2020, Tunisia initiated reforms with the objective of harmonizing the nation's laws with its Constitution.⁵⁹⁴ These reforms were driven by a combination of political determination and the active engagement of civil society in advocating for women's rights. As a result, Tunisia has made significant progress in areas such as family law and women's rights. Despite these advancements, there continues to be a persistent

gender gap in the field of entrepreneurship.⁵⁹⁵ Women face significant challenges in both the competitive labor market and in establishing their own businesses. Tunisia, since gaining independence, has taken steps to promote gender equality by ratifying several international conventions. Notable conventions include International Labour Organization (ILO) Conventions such as 111, which addresses employment and occupation discrimination, 118, focusing on equal treatment and social security, 122, concerning employment policy, and 19, addressing equal treatment and work-related accidents.⁵⁹⁶

In 1985, Tunisia ratified the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) with reservations, having initially signed it in July 1980. These reservations were withdrawn in 2014, making Tunisia the first country in the MENA region to fully adopt the treaty without limitations. It is important to note that Tunisia still imposes restrictions on women's night work, prohibiting them from working between 10pm and 7am as a "preventive measure."⁵⁹⁷

Tunisia stands out among five countries in the MENA region for its provision of paid maternity leave through the social security or insurance system. This legal provision extends to women working in various sectors, including agriculture, domestic work, and self-employment.⁵⁹⁸ It is important to note that the level of income replacement varies across different sectors. In the public sector, women are entitled to receive full salary benefits during their maternity leave. Conversely, in the private sector, women receive 66.7 percent of the average daily wage for those covered by the labor code.⁵⁹⁹

In Tunisia, the principle of equal pay for equal work between women and men is enshrined in the Tunisian labor code.⁶⁰⁰ Additionally, Tunisia has ratified various conventions that emphasize gender equality, including the

⁵⁸⁹ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵⁹⁰ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁵⁹¹ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵⁹² Ibid.

⁵⁹³ Ibid.

⁵⁹⁴ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁵⁹⁵ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁵⁹⁶ Ibid.

⁵⁹⁷ Ibid.

⁵⁹⁸ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁵⁹⁹ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁶⁰⁰ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.



convention specifically addressing equal remuneration for work of equal value.⁶⁰¹ Despite these legal provisions, data from the Tunisian National Institute of Statistics reveals a significant disparity in average wages between women and men.⁶⁰² On average, women in Tunisia earn between 20 and 30 percent less than their male counterparts.⁶⁰³

Moreover, the tax regulations in Tunisia exhibit a bias in favor of men. Article 23 of the Personal Status Law designates the husband as the head of the household, granting him the privilege of claiming tax deductions for each child within the family. Conversely, women are not afforded the same rights and consequently face higher tax burdens. Such gender disparities in the realm of personal income tax legislation serve as deterrents for women's labor force participation.

3.6.6.4. *Enhancing access to credit for MSMEs: challenges and opportunities*

Young entrepreneurs encounter significant obstacles in accessing external sources of financing, and the absence of adequate (start-up) funding mechanisms, such as private equity and venture capital, within the broader ecosystem hampers their ability to foster business growth.⁶⁰⁴ Access to finance poses a significant constraint on the private sector, particularly for specific demographic groups. The credit-to-GDP ratio, averaging at 67 percent over the past decade, falls short of the levels observed in OECD countries, where it reaches 143 percent of GDP. In 2014, the percent of individuals holding bank accounts at financial institutions was 34 percent for men and 21 percent for women. Access to finance was reported as a significant obstacle by 23.9 percent of Tunisian firms, which is in line with the MENA average of 35.1 percent. The extent of this challenge differs based on factors such as regional location, gender, age of the firm, and size of the firm.⁶⁰⁵

The 2021 Findex Database by the World Bank reveals

⁶⁰¹ Ibid.

⁶⁰² Ibid.

⁶⁰³ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁶⁰⁴ Salim, M., & Anis, J. (2021). Has female entrepreneurship been a formidable engine of economic and Social Development in Tunisia?

⁶⁰⁵ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

that a mere 37 percent of adults and 29 percent of women in Tunisia possess bank accounts. Accessing financial services in Tunisia remains challenging, primarily due to geographical constraints, as the country had 18.2 commercial bank branches per 100,000 adults in 2013. Tunisia's performance in terms of access to credit, bank accounts, and cards in the financial services sector is lower than the regional average. According to data from USAID, Tunisia's financial services score was 1.95, whereas the regional average stood at 2.12 (on a scale of 0 to 5, where higher scores indicate better performance). The ownership of credit cards among women increased from 4 percent in 2018 to 5 percent in 2020, while among men, it decreased from 10 percent in 2018 to 9 percent in 2020. In Tunisia, only 5 percent of women borrowed from financial institutions, in contrast to 12.1 percent of men.⁶⁰⁶

Despite women in Tunisia having ownership stakes in 18 to 23 percent of formally registered businesses, their financial requirements remain largely unaddressed. Financial institutions within the country do not categorize women-owned small and medium enterprises (SMEs) as a distinct segment deserving specific attention and support. Consequently, Tunisian women entrepreneurs often rely on personal funds sourced from their families to meet their financial needs.⁶⁰⁷ Although women have equal access to microcredit opportunities, there is a perception that there is a lack of specialized programs addressing their specific needs. This has a particular impact on female entrepreneurs and women-led businesses, as they often face challenges in accessing collateral. In rural areas of Tunisia, women represent only 26 percent of microcredit recipients. Additionally, young and innovative small and medium-sized enterprises (SMEs) and individuals frequently encounter difficulties in obtaining bank capital and are often unable to access external sources of financing, despite having a viable business model.⁶⁰⁸

3.6.6.5. *Narrowing the gap: addressing the skills mismatch challenge*

Gender disparities and a mismatch in skills pose significant obstacles to the development of the private sector. These challenges contribute to elevated unemployment rates, particularly among women and graduates. The presence of such disparities also increases the demand for public sector employment. These issues, combined, hinder the growth and progress of the private sector, which is crucial for economic development. The limited involvement of women in the workforce remains a significant obstacle to

⁶⁰⁶ Ibid.

⁶⁰⁷ Ibid.

⁶⁰⁸ Ibid.



achieving inclusivity in the Tunisian economy, while the presence of a skills mismatch poses a major hindrance for the private sector. Various factors contribute to this skills mismatch, including deficiencies in the quality of public education, inflexible pathways from vocational training to employment, wage rigidity, prevalence of informal employment, discriminatory practices, inadequate competencies among university graduates, insufficient capacity within the private sector to drive demand for skills, and underutilization of women's talents and abilities.

Addressing these factors is essential to address the skills gap, promote gender equality, and enhance the overall economic landscape.⁶⁰⁹ The valuable role of Tunisian women engaged in entrepreneurial development is gaining greater recognition as significant, yet unutilized, contributors to the country's economic and social advancement.⁶¹⁰ Consequently, there is a substantial underutilization of human capital potential among Tunisian women, resulting in significant economic loss, limited inclusivity, and a considerable misallocation of resources.⁶¹¹

In addition, there is a skills mismatch issue that impedes private sector development, leading to high unemployment rates, particularly among women and graduates. In 2016, the unemployment rate among women was nearly ten percentage points higher than among men, with an even greater disparity observed among university graduates, where 41 percent of women were unemployed compared to only 21 percent of men.⁶¹² The private sector has struggled to create an adequate number of jobs at the graduate level to meet the demands of the highly educated workforce of approximately 4 million individuals.⁶¹³ Additionally, there is a discrepancy between the skills possessed by graduates and the needs of the labor market in terms of quality and technical focus.⁶¹⁴

3.6.7. Conclusion

⁶⁰⁹ Tunisia Diagnostic paper: Assessing Progress and Challenges in Unlocking the Private Sector's Potential and Developing a Sustainable Market Economy By Hanan Morsy, Bassem Kamar and Rafik Selim 2018

⁶¹⁰ Ibid.

⁶¹¹ Ibid.

⁶¹² Ibid.

⁶¹³ Ibid.

⁶¹⁴ Ibid.

Tunisia's labor market faces persistent challenges and disparities in gender equality, employment, and entrepreneurship. While the country has made significant progress in women's education and rights, there remains a considerable skills mismatch, with women underrepresented in the labor force and entrepreneurship. Gender gaps in labor force participation, wages, and representation in senior positions persist, along with social and cultural norms that hinder women's economic engagement. The informal sector and limited support for small and medium-sized enterprises further exacerbate the challenges. Addressing these issues and promoting economic inclusivity, particularly for women and young people, will be crucial for Tunisia's sustainable economic growth and development.

According to a 2020 report by ESCWA, it is crucial to develop gender-disaggregated data and indicators to effectively evaluate the impact of energy policies, particularly in rural areas where renewable energy (RE) is being utilized.⁶¹⁵ This data should undergo continuous monitoring and regular publication, including in the annual national gender report. By incorporating gender-specific information, policymakers and stakeholders can better assess the effectiveness of energy initiatives and ensure that they are promoting gender equality and inclusivity in rural communities. The report also highlights a few indicators and data points that are missing and that would be crucial to collect and monitor to ensure gender in MSMEs integration into the RE sector. These data points include the following: percent of women with access to RE by governorate, delegation and environment; percent of women with access to RE for productive activities by governorate, delegation and field of activity; percent of women with access to bank finance for productive activities using RE; Impact of RE use on women's income by median annual salary and field of activity; percent of women with access to technical training in RE; percent of women at vocational training centers providing training in RE; percent of women engaged in activities related to RE; Number of actions for women to increase RE awareness; percent of women who have benefited from training/advocacy in RE; percent of females heading companies using RE; Number of organizations/institutions adopting strategies and plans promoting the use of RE technology for improving women's working Environment; Number of strategies, plans and policies adopted by line ministries supporting women's empowerment in rural areas.

Furthermore, according to the WB gender data portal some

⁶¹⁵ ESCWA. "ESCWA Regional Initiative for Promoting Small-scale Renewable Energy Applications in Rural Areas of the Arab Region." 2020. ESCWA.



gender disaggregated data is not available for Tunisia for the share of business owners, by sex (percent of total business owners), and Tunisia for House ownership status, by sex (percent of population age 15-49).⁶¹⁶ These are all important to be able to determine the status of women in the MSMEs sector, as well as the financial/asset fallback that they have where owning a house serves as a collateral and can enable women financial inclusion in the MSMEs sector.

4. Conclusion

The energy sector is encountering a significant setback in its pursuit of a sustainable energy transition by not fully harnessing the experiences, skills, and talents of a substantial segment of the global population. Gender disparities persist within the energy sector on a global scale, with women being underrepresented in key domains such as policymaking, corporate leadership, governance, entrepreneurship, venture capitalism, and the labor workforce. In terms of workforce diversity, the energy sector stands out as one of the least inclusive.

Nevertheless, it is crucial to acknowledge that opportunities for women to contribute and thrive exist across all these areas, despite the sector's historical association with male dominance.⁶¹⁷ This gender analysis has yielded valuable insights into the complex and potentially impactful disparities in gender equality in the MENA region's six countries: Morocco, Jordan, Egypt, Tunisia, Lebanon, Sudan, with a particular emphasis on engaging and empowering the youth.

While some advancements have been made in tackling gender discrimination, promoting female labor force participation, implementing inclusive policies, establishing gender sensitive regulatory frameworks, and fostering gender-equitable development, it is instructive to acknowledge the existing gaps in the literature that require further investigation. One area deserving attention is the role of women in MSMEs in the energy sector.

Encouraging the active involvement of women in these sectors has good potential for driving socio-economic progress and sustainable development. Their participation can contribute to innovation, enhance

diversity, and cultivate resilience, thus facilitating a more inclusive and fair transition. Furthermore, the implications of integrating women into this transformative process extend beyond mere economic outcomes. Such inclusion can empower individuals, challenge traditional gender norms, and foster a broader social transformation. Recognizing and prioritizing the active participation and leadership of women are necessary steps in realizing the full potential of the MENA region and fostering an inclusive, prosperous, and sustainable future for all stakeholders.⁶¹⁸

In an attempt to highlight some of those gaps, this baseline analysis sought to illustrate the potential of gender equality as a catalyst for clean energy transition in the six selected countries. It also aimed to emphasize that adopting a gender perspective is pertinent across all stages of the energy value chain, especially within MSMEs. Through a detailed and thorough analysis of the current energy transition landscape, this study identified gaps in knowledge, sought to generate awareness regarding the subject, and offered avenues for future investigation. These endeavors aimed at facilitating the integration of gender-responsive approaches into initiatives pertaining to clean energy and climate change mitigation.

4.1. Key messages: nurturing transition: the vital role of women and the impact of clean energy transition on their empowerment

A number of messages have been distilled from the review and analysis of the current situation and likely developments in the six countries and these are summarized and presented below:

Key Messages 1: according to literature, womens' roles across society influence production, consumption, and the market for sustainable solutions as they are important agents of change in achieving equitable and sustainable development.⁶¹⁹

Studies that review and evaluate the roles of women in the private sector and in different leadership roles need to be conducted in the MENA context. For example, companies with higher representation of women on their board of directors faced considerably fewer environmental lawsuits. Likewise, organizations led by a female CEO exhibited a significant association with reduced instances of environmental litigation. Moreover, when a male

⁶¹⁶ <https://genderdata.worldbank.org/countries/tunisia/>

⁶¹⁷ United Nations Economic Commission for Europe (UNECE). Energy Transition and the Post-Covid-19 Socioeconomic Recovery: Role of Women and Impact on Them.

⁶¹⁸ Women's Environment & Development Organization (WEDO). (2014, March 24). Women at the Forefront of the Clean Energy Future.

⁶¹⁹ International Labour Organization (ILO). (2022). Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice.



CEO was accompanied by a gender-diverse board, the occurrence of environmental misconduct cases was also notably lower. The advantages derived from enhancing gender diversity transcend the corporate sphere and extend into the realm of politics. Evidence suggests that the participation of women in political processes enhances the effectiveness of decision-making, as women demonstrate an increased ability to collaborate across party lines.⁶²⁰

Furthermore, notable environmental benefits have emerged within the realm of government, as countries with higher levels of female representation in parliamentary bodies are more inclined to reduce carbon dioxide emissions and designate protected land areas. Environmental sociologists have also uncovered distinct gender disparities in the involvement of individuals in environmental matters. Notably, in industrialized nations, women tend to exhibit a higher likelihood than men to express concerns for the environment and support initiatives aimed at environmental protection.⁶²¹

Other studies also emphasize the importance and advantages of including women as agents of change in the development and implementation of just transition policies. For instance, a study focusing on companies in industrialized economies has highlighted the significant impact of gender diversity within organizations in addressing climate change.⁶²² By analyzing firm-corporate governance characteristics and firm-level carbon dioxide (CO₂) emissions over a ten-year period, the study revealed that an increase in the proportion of women managers was associated with a reduction in firms' CO₂ emissions.⁶²³ Moreover, the study found that gender diversity at the managerial level had even stronger mitigating effects on climate change when women were well-represented in political institutions and civil society organizations.⁶²⁴

Still, the role of women as crucial stakeholders in

⁶²⁰ United Nations Economic Commission for Europe (UNECE). *Energy Transition and the Post-Covid-19 Socioeconomic Recovery: Role of Women and Impact on Them*.

⁶²¹ Martinez, S., & Stephens, J. C. (2016). *Toward a Gender Diverse Workforce in the Renewable Energy Transition*.

⁶²² International Labour Organization (ILO). (2022). *Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice*.

⁶²³ Ibid.

⁶²⁴ Ibid.

climate action is not sufficiently recognized.⁶²⁵ While it is recognized that enterprises alone cannot dismantle the gender bias prevalent in society, they can contribute to challenging it by acknowledging its existence and addressing it within their workplace culture. Initiatives such as mentoring programs, awareness campaigns, and transparency policies have proven effective in addressing broader gender bias issues.⁶²⁶

These studies are lacking within the MENA context representing a huge gap that requires further exploration. While global literature highlights the role of women in the RE sector and how they can catalyze the transition process, little to no literature exists in the context of MENA. Further investigations need to be conducted so as to explore the role of women as energy consumers, producers, and decision-makers within MENA and the implications of integrating them into the renewable energy sector.

Key Messages 2: integrating the gender aspect within national strategies and public policies is not possible due to the lack of data.

To fully leverage the potential of women as agents of change in the transition to a just and sustainable future within organizations, there is a need to have gender-inclusive policies.⁶²⁷ These policies should aim to achieve gender balance at all levels of the enterprise, including strategic senior management positions responsible for developing and implementing green policies and practices. By implementing active equal opportunity and gender-inclusive policies such as flexible working hours, maternity, paternity, and parental leave, return-to-work programs, and measures to promote a more balanced sharing of family responsibilities within households, organizations can ensure that women are not disadvantaged at work due to their responsibilities at home.⁶²⁸

When it comes to recognizing the gender dimension in green job opportunities and incorporating gender-specific policies into just transition plans and strategies, there remains a widespread implementation gap.⁶²⁹ This gap can be eliminated by explicit commitments and language

⁶²⁵ Ibid.

⁶²⁶ Ibid.

⁶²⁷ Ibid.

⁶²⁸ Ibid.

⁶²⁹ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.



that emphasize the transformative impact of gender within just transition plans, policies, and programs in a more systematic manner across various initiatives such as Nationally Determined Contributions (NDCs), National Adaptation Plans (NAPs), and pledges for achieving Net Zero.⁶³⁰ It is recommended that national strategies incorporate gender-sensitive approaches in their efforts to promote entrepreneurship and small and medium enterprises (SMEs), with a particular focus on increasing the participation of women and supporting women-led businesses, especially in technology-related fields.⁶³¹

This is not possible without sufficient data. By aligning interventions within the entrepreneurship ecosystem with national strategies and the support of public authorities, who bear the responsibility of fostering a gender-balanced entrepreneurship environment, the effectiveness of these initiatives can be enhanced.⁶³² It is evident that MENA countries still have a long way ahead of them to integrate women into their energy transition schemes.

Only Jordan and Sudan have applied a gender dimension with regards to their NAPs. More specifically, the National Adaptation Plan (NAP) of Jordan highlights two primary challenges in addressing the convergence of gender and climate change. These challenges include a scarcity of comprehensive collection, analysis, and effective utilization of sex-disaggregated data, as well as insufficient sustainable funding mechanisms to address the associated concerns.

Under the umbrella of renewable energy, preliminary research is emerging on gender in the context of the renewable energy workforce. In addition, several earlier studies called for more attention to gender in all aspects of energy policy and recent studies in Europe have addressed energy-consumption patterns and the different ways in which men and women use energy.

Key Messages 3: sex disaggregated data is needed to be able to measure and analyze the degree of which each barrier encountering women can hinder her participation in SMEs and in the transition.

This report highlights the significant gap in achieving gender equality in access to energy, primarily due to the absence of gender-disaggregated statistical data.

⁶³⁰ Ibid.

⁶³¹ World Bank Group (WBG). "RENEW MENA." 2022.

⁶³² Ibid.

Without such data, it is challenging to comprehend the extent of unequal access. These data are not available yet at the national level. According to the report conducted by ECOWAS, it is important and necessary to examine the roles of women in business and as business owners, including the barriers that hinder their participation in the workforce. Women's contributions to scaling up the supply of clean energy have been recognized as essential across various stages of the value chain.

For policymakers aiming to promote female-led energy businesses, it is important to consider the key strengths of female entrepreneurship in Sub-Saharan Africa, including its widespread presence, vibrancy, and optimistic outlook. There are; however, significant challenges to overcome stemming from an unfavorable policy environment that perpetuates discriminatory practices and gender biases. Addressing these challenges requires expanding the sectors in which women operate, providing better support for businesses to pursue long-term sustainable growth, and tackling gender-specific obstacles in entrepreneurial activities, particularly within the energy sector. By addressing these bottlenecks, policymakers can foster an enabling environment that empowers women and promotes their active engagement in the energy sector.⁶³³ While this situational analysis is specific to ECOWAS, yet this also applies to the MENA region.

Key Messages 4: there is a pressing need for a collaborative and inclusive community that promotes women's engagement in the energy sector across MENA countries.⁶³⁴

While several organizations and networks in the region support women's empowerment and leadership, there is a scarcity of region-wide professional networks that specifically facilitate women's entry into the energy and power workforce and their advancement throughout the value chain.⁶³⁵ An example of an initiative aiming to promote women in leadership within the sector is Women in Clean Energy, which operates under the MENA Clean Energy Business Council. The level of activity and impact of this initiative, since its launch in 2020, remains as of yet uncertain.⁶³⁶ Additionally, there is often a lack of collective engagement among key stakeholders in the energy sector, including power utilities, energy companies, private employers, academia, and non-governmental organizations.

⁶³³ ECREEE. (2015). Situation Analysis of Energy and Gender Issues.

⁶³⁴ World Bank Group (WBG). "RENEW MENA." 2022.

⁶³⁵ Ibid.

⁶³⁶ Ibid.



Efforts to support women's participation in the labor force and involvement in the sector are often fragmented, confined to specific countries or companies, and primarily driven by leadership without broad-based support.⁶³⁷ It is evident that through addressing the literature and data gaps in gender analysis and policy, the role of SMEs in fostering an inclusive energy transition can be enhanced and invigorated. So will also help in this process is our comprehension of women's diverse roles and involvement in the energy transition including their transition from educational institutions to professional employment.⁶³⁸

According to the World Bank RENEW MENA report, there is a pressing need to contribute to the generation of empirical data that sheds light on the current status of women's employment within the energy sector as well as offering a comprehensive overview of the prevailing limitations and emerging prospects encountered by women regarding their career choices, skill enhancement prospects, access to employment in the energy sector, and professional growth within the work environment across the region.⁶³⁹ The section below highlights the gaps in data and literature identified throughout our research.

4.2. Untapped Opportunities: identifying potential research gaps in data and literature

Lack of gender disaggregated data. At present, there is a recognizable absence of comprehensive gender-disaggregated data within the energy sector as a whole, as well as within its various subsectors, such as oil and gas, nuclear, and renewables. The exclusion of gender as a data point in the collection of industry information can result in incomplete or misleading sector analyses, hindering the integration of gender considerations in sector-specific initiatives. The absence of gender-disaggregated employment data further perpetuates the prevalent practice of justifying the hiring of specific employees under the guise of "cultural fit," thereby allowing unacknowledged gender biases to persist and limit opportunities for women.⁶⁴⁰ Although research demonstrates that diversity enhances innovation and

creativity, there is minimal attention to considering and promoting diversity within the energy workforce.

Despite a robust literature on gender and environmental issues, gender-related information and research in the energy sector is more limited. This phenomenon has been attributed to low awareness of the significance of gender in energy planning and energy-system development. To date, research on gender and energy has focused primarily on gendered uses of energy, particularly household-energy use in developing countries, rather than women's jobs and decision making within the energy industry.

Under the umbrella of renewable energy, preliminary research is emerging on gender in the context of the renewable energy workforce.⁶⁴¹ Based on a comprehensive situation analysis conducted in West Africa, it has been underscored that gender-disaggregated data holds significant importance across all dimensions of the energy sector in the region. The analysis strongly recommended the incorporation of gender-disaggregated data in impact studies pertaining to grid and off-grid electrification, as well as the adoption of clean cooking solutions. Furthermore, it emphasized the need to deepen the current scientific understanding of energy utilization for productive purposes, taking into account potential gender disparities. Exploring the factors influencing women's decision-making processes regarding schooling and entry into the workforce was deemed essential, as many of these factors remain concealed and overlooked in surveys focusing solely on energy workers or entrepreneurs. A thorough examination of the effectiveness of various measures aimed at addressing gender imbalances in schools, government, workforce, and business leadership, particularly within the Economic Community of West African States (ECOWAS), was also identified as a crucial research endeavor.

Additionally, there are various knowledge gaps that need to be addressed in order to drive substantial change. A study conducted by the United Nations Industrial Development Organization (UNIDO) in 2016 on gender mainstreaming in solar energy also confirmed the lack of gender-disaggregated studies and statistics in the renewable energy sector, which acts as a barrier to effect real change.⁶⁴² Significant data gaps still persist in informing just transition policies.⁶⁴³ In line with this, it is worth noting that there are

⁶³⁷ World Bank Group (WBG). "RENEW MENA." 2022.

⁶³⁸ Ibid.

⁶³⁹ Ibid.

⁶⁴⁰ Martinez, S., & Stephens, J. C. (2016). *Toward a Gender Diverse Workforce in the Renewable Energy Transition*.

⁶⁴¹ Ibid.

⁶⁴² Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁶⁴³ International Labour Organization (ILO). (2022). *Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice*.



significant data gaps in the MENA region when it comes to women and entrepreneurship. Although there is evidence suggesting that women may have greater accessibility to future positions in the energy sector, particularly in renewables, it is important to conduct further research and investigation due to the diverse trends within the renewable energy industry.⁶⁴⁴ This is important because in the absence of gender-transformative measures, women will not fully benefit from the job opportunities created, and gender inequalities in the workplace are likely to persist.⁶⁴⁵

Furthermore, there is a risk that gender inequalities will be exacerbated due to the disproportionate impacts of climate change. Therefore, the world of work plays a significant role in minimizing these risks and ensuring that the transition to a low-carbon economy empowers women and acknowledges their contributions.⁶⁴⁶

To ensure gender equitable outcomes, both women and men need to be involved in the design, implementation, monitoring, and evaluation of energy policies and programs.⁶⁴⁷ These aforementioned gaps can be remedied by conducting more comprehensive research in this area.⁶⁴⁸ Based on the above analysis, there is a need to substantially strengthen gender data to provide a comprehensive understanding of the direct and indirect impacts of climate change on women and men in the labor market.⁶⁴⁹ Indirect effects of climate events, which can reveal gender inequalities such as shifts to informality, may offer a more comprehensive perspective compared to direct effects.⁶⁵⁰

To address these data gaps, it is necessary to analyze existing data through a gender lens.⁶⁵¹ By employing a gendered approach, existing data can be utilized to explore the often overlooked contribution of unpaid work

to climate change mitigation and adaptation, as well as the ramifications of climate change on unpaid work.⁶⁵² This requires not only examining environment statistics from an aggregate macro-level perspective but also encouraging individual-level analysis.⁶⁵³

Data Gap 1: obtaining gender-disaggregated employment data presents a considerable challenge.

There are currently limited or outdated accessible national data sets offering precise or approximate figures on women employed in informal positions or engaged in activities associated with the clean energy sector. This lack of information represents a crucial gap in our understanding of women's involvement in clean energy, particularly in low- and middle-income countries where the informal sector constitutes a significant portion, up to 85 percent, of total employment. Addressing this data deficiency is paramount in order to comprehensively grasp and promote women's contributions to the clean energy domain.⁶⁵⁴

Data Gap 2: a significant conclusion drawn from this review, as well as other studies, underscores the imperative of enhancing the quality and availability of data pertaining to women's engagement in the clean energy sector.

Such data is essential for guiding evidence-based interventions and informing policy-making efforts. Unfortunately, there is a notable scarcity of household-level data concerning women's access to and control over clean energy resources. This scarcity can be attributed, in part, to inadequate data collection by governments regarding household energy usage, income-generating energy needs, and even intra-household resource allocations. Additionally, obtaining information on women's employment within the clean energy sector poses serious challenges. This is primarily due to the dispersed nature of clean energy jobs, spanning various sectors such as manufacturing, construction, sales, installation, operations, and maintenance, which often go unaccounted for in national statistical records.⁶⁵⁵

⁶⁴⁴ World Bank Group (WBG). "RENEW MENA." 2022.

⁶⁴⁵ International Labour Organization (ILO). (2022). Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice.

⁶⁴⁶ Ibid.

⁶⁴⁷ Energia. (2019). Gender in the Transition to Sustainable Energy for All.

⁶⁴⁸ Khurma, Merissa, Lynn Mounzer, Brooke Sherman, and Alex Farley. "Women Entrepreneurship in MENA: The Cases of Bahrain, Lebanon, and Tunisia." Report. Wilson Center, 2023.

⁶⁴⁹ International Labour Organization (ILO). (2022). Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice.

⁶⁵⁰ Ibid.

⁶⁵¹ Ibid.

⁶⁵² Ibid.

⁶⁵³ Ibid.

⁶⁵⁴ Mapping the Intersection of Women's Economic Empowerment, Care Work and Clean Energy, Dr. Kate Grantham

⁶⁵⁵ Mapping the Intersection of Women's Economic Empowerment, Care Work and Clean Energy, Dr. Kate Grantham



Data Gap 3: lack of detailed data on factors that affect women within MSEMs/RE sector in those countries.

The IEA acknowledges that gender diversity in entrepreneurship can contribute significantly to economic growth, income equality, and social inclusion. It has been estimated that closing the gender gap in entrepreneurship could increase global GDP by as much as 2 percent, or USD 1.5 trillion.⁶⁵⁶ With regards to gender diversity in the energy sector, only about 11 percent of start-up founders are female compared with 20 percent across all sectors, excluding consumer goods, according to IEA data. Although all entrepreneurs face challenges in starting and running a business, some obstacles are more likely to be faced by women, such as accessing financial resources, business networks and skills. Leveling the playing field for male and female entrepreneurs specifically in the energy sector is an important step to boosting innovative solutions to the climate crisis. By examining elements such as the gender wage gaps we are able to grasp the differences in pay between men and women with similar skills within firms, for instance the IEA found out that the between-firm component of gender-wage gap in the energy sector is markedly greater than it is in the non-energy sector due to the concentration of women in low-wage energy firms.

Hence, the IEA invested rigorous efforts to ensure the availability of gender disaggregated data including; the share of start-ups with gender diverse founders (founding year) for the selected sectors (Energy, Non-energy), Gender wage gap decomposition by sorting, dispersion and allocation for the energy and non-energy sectors, gender wage gap by skills in the non-energy sector, Gender wage gap decomposition by tasks and responsibilities, bargaining and discrimination, and sorting for the energy and non-energy sectors, Average share of firm stayers by age and sex in the energy and non-energy sectors, Average share of between sector firm change by age and sex in the energy and non-energy sectors, Average share of within sector firm change by age and sex in the energy and non-energy sectors, Gender wage gap conditional on skills for the selected sectors (Energy, Non-energy), Evolution over time of the gender wage gap conditional on skills for the selected sectors (Energy, Non-energy).⁶⁵⁷

⁶⁵⁶<https://www.iea.org/articles/understanding-gender-gaps-in-wages-employment-and-career-trajectories-in-the-energy-sector>

⁶⁵⁷<https://www.iea.org/articles/understanding-gender-gaps-in-wages-employment-and-career-trajectories-in-the-energy-sector>

Data Gap 4: lack of intersectional data between Gender, Informality, Urban vs. Rural.

The data obtained from the World Bank enterprise survey, unfortunately, does not provide breakdowns by gender for enterprises' informal sector, and it does not display a breakdown by urban versus rural areas which is a crucial factor across which aspects of female entrepreneurship varies widely. It also does not tackle questions specific to renewable energy. This absence of gender-disaggregated data limits our ability to gain a comprehensive understanding of the specific challenges faced by women in these areas. It also hinders our ability to assess the gender dynamics within different sectors and the level of informality, which are crucial for formulating targeted interventions and policies that promote gender equality and inclusivity. Hence, it is imperative to obtain comprehensive data that goes beyond women's participation in Micro, Small, and Medium Enterprises (MSMEs) and the Renewable Energy (RE) sectors. It is equally essential to break down this data based on the distinction between urban and rural areas. The disparities and limitations experienced by women in these sectors can significantly differ depending on the specific context and constraints prevalent in urban and rural settings. Therefore, acquiring gender-disaggregated data specific to urban and rural areas is crucial for a comprehensive understanding of the challenges and opportunities faced by women in MSMEs and the RE sectors.

Data Gap 5: in addition to this, integrating inclusive and just growth is contingent upon integrating gender in education and training.

A comprehensive lifelong learning approach is essential for providing education and training for green jobs. National policies on skills' development and employment, integrated within broader development plans, should incorporate environmental awareness education and coherent skills strategies to equip both men and women workers with the necessary skills for a more sustainable future of work. Gender mainstreaming in skills development is important to empower women and enable them to move from low-skill and entry-level positions to higher-skilled jobs, thereby supporting the growth of sustainable enterprises led by women. The lack of gender-segregated education data makes it difficult to try and integrate women into the energy sector, where data on women's enrollment in STEM and TVET is quite lacking or outdated for most countries in the MENA region, and these are quite crucial data points to examine given they reflect quite strong barriers in women accessing the energy field and they might reflect societal constraints that need to be shifted. We have emphasized the significance of promoting women's participation in STEM



(Science, Technology, Engineering, and Mathematics) and TVET (Technical and Vocational Education and Training) as a means of integrating them into energy transition initiatives. It is noteworthy that up-to-date comprehensive data on women's representation in STEM enrollment and as a proportion of STEM graduates is lacking in various countries, including Egypt and Jordan. As indicated in the World Bank's 2023 Morocco Gender Landscape, a significant disparity exists in relation to gender-disaggregated data. Notably, there is a lack of available data on the enrollment of individuals in Science, Technology, Engineering, and Mathematics (STEM) fields categorized by gender beyond the year 2017.

Data Gap 6: the role of SMEs in energy transition has seldom been discussed, especially in the MENA region.

As stated in the above sections women and their role in the energy sector has been rarely discussed on the global scale, let alone discussing the role of women-led enterprises within this transition in MENA. Nonetheless, there have been some discussions regarding women's role, in general, in the energy transition and mostly within the renewable energy sector. Yet, the role of SMEs and women led SMEs, within and outside the renewable energy sector, has not been identified or discussed. To the best of our knowledge only one report produced by ESCWA in 2020 called "Regional Initiative for Promoting Small-scale Renewable Energy Applications in Rural Areas of the Arab Region Study on Gender Mainstreaming, Social Inclusion, Human Rights Processes and Outcomes of Access to Energy in Targeted Local Communities in Tunisia" adopts this intersectional approach to examining women-led MSMEs in the energy sector. But even then the report highlights the fact that the availability of information for in-depth gender equality analyses in relation to energy continues to be relatively low, particularly in rural areas. According to the report, several indicators associated with productive functions are not yet available; these indicators include the impact of enterprises on climate change through energy consumption and production.

Data Gap 7: there is a dearth of data and literature on MSMEs and women's financial inclusion.

Despite the extensive body of literature on financial inclusion, MSME finance, and women's financial inclusion, there remains a noticeable gap in addressing the government's role in promoting financial inclusion

for women-owned MSMEs.⁶⁵⁸ The majority of literature focusing on women's financial inclusion primarily examines it from a household perspective rather than considering its implications for businesses.⁶⁵⁹

Additionally, most of the literature primarily focuses on access to finance and overlooks other crucial dimensions of financial inclusion such as usage and quality.⁶⁶⁰ The existing literature fails to provide sufficient insights into how the financial inclusion of women-owned MSMEs can be expanded, leaving a significant knowledge gap in this area.⁶⁶¹ Moreover, data on ownership of environmental assets, such as land ownership, is limited, and addressing these gaps is crucial to comprehending existing disparities in women's enterprise development and their ability to cope with natural hazards and crises.⁶⁶²

Data Gap 8: a comprehensive inter-sectoral analysis needs to be conducted with an intersectional gender approach.

This analysis should entail quantifying the renewable energy consumption and production within each sector, enabling the identification of the contribution of individual enterprises towards climate change. Furthermore, breaking down this analysis by gender will provide additional insights into the gender-specific dimensions of energy consumption and production of enterprises, thereby facilitating a more nuanced understanding of the overall impact. The predominant emphasis on gender considerations within the realm of renewable energy has predominantly centered on initiatives aimed at the household and community levels. This involves endeavors such as enhancing women's access to renewable energy resources and clean cook stoves, as well as fostering women's economic empowerment and entrepreneurial endeavors. Conversely, when examining the realm of large-scale renewable energy, there has been a relative dearth of attention from a gender perspective compared to the focus dedicated to small-scale, off-grid renewable energy solutions. Consequently, a notable knowledge gap

⁶⁵⁸ Noheir Ahmed Khairy. (2019). Women-owned MSMEs and Financial Inclusion in Egypt.

⁶⁵⁹ Ibid.

⁶⁶⁰ Ibid.

⁶⁶¹ Ibid.

⁶⁶² International Labour Organization (ILO). (2022). Just Transition: An Essential Pathway to Achieving Gender Equality and Social Justice.



remains concerning the gender dimensions within the domain of large-scale renewable energy.

Data Gap 9: literature has seldom investigated the role of women as energy consumers or producers in the MENA context.

Despite this, research on gender and energy has focused primarily on gendered uses of energy, particularly household-energy use in developing countries rather than women's jobs and decision making within the energy industry.⁶⁶³ Through our analysis of the MENA region and the in depth analysis of the 6 countries understudy, we have arrived at the conclusion that literature has seldom investigated the role of women as energy consumers or producers. For instance, literature has been highlighting the disproportionate impact of energy poverty on women in the terms of collecting wood for fuel and using kerosene for cooking, however this is not quite context specific to the MENA region, at least not to urban areas. More context specific analysis on women's consumption and use of energy sources need to be conducted with the region's context. Only following that, will we be able to understand how women can contribute to energy transition through being energy producers or through their enrollment in the entrepreneurship sector. To elaborate, more gender specific data need to be collected on women as energy consumers, producers, entrepreneurs to be able to assess their role in the clean energy transition.

⁶⁶³ 2016_Martinez& Stephens_Toward a gender diverse workforce in the renewable energy transition



About the Authors

Sara Ragab has joined the PhD program at Humphrey. Prior to that, Sara worked as a researcher at the Economic Research Forum. Previously, she served as a Research Associate at J-Pal MENA where she contributed to the research and led the implementation of a Women's Empowerment project in Upper Egypt. Prior to that, she held the position of Senior Data Coordinator in the Monitoring and Evaluation (M&E) unit at Save the Children, US. Sara completed her Master's in Development Practice at the Humphrey School of Public Affairs, University of Minnesota, in 2021. She holds a BSc in Economics and Statistics from Cairo University, including a year of study in economics and social science at the University of Chicago. Her research interests span economics and its applications in the field of Public health.

Esraa Medhat is a public policy researcher focused on social equity, gender policy, and sustainable development. She is pursuing a Ph.D. in Public Affairs at the University of Minnesota, where she also earned a Master's in Development Practice with a specialization in Gender and Public Policy. Esraa has worked with organizations like the Economic Research Forum, GIZ, and Chemonics Consultants, contributing to gender equality in renewable energy and green policy analysis. Fluent in English and Arabic, she is skilled in STATA and R, bringing both technical expertise and a commitment to impactful development projects across diverse regions.



ERF at a Glance: *The Economic Research Forum (ERF) is a regional network dedicated to promoting high-quality economic research for sustainable development in the Arab countries, Iran and Turkey. Established in 1993, ERF's core objectives are to build a strong research capacity in the region; to encourage the production of independent, high-quality research; and to disseminate research output to a wide and diverse audience. To achieve these objectives, ERF's portfolio of activities includes managing carefully selected regional research initiatives; providing training and mentoring to junior researchers; and disseminating the research findings through seminars, conferences and a variety of publications. The network is headquartered in Egypt but its affiliates come primarily from different countries in the region.*

Contact Information

ERF Office

Address: 21 Al-Sad Al-Aaly St. Dokki, Giza, Egypt

PO Box 12311

Tel: +202 333 18 600 - 603

Fax: +202 333 18 604

Email: erf@erf.org.eg

Website: <http://www.erf.org.eg>

Follow us



[economic-research-forum](https://www.linkedin.com/company/economic-research-forum)



[ERFLatest](https://twitter.com/ERFLatest)



[TheERFLatest](https://www.youtube.com/channel/UCqWz8v8v8v8v8v8v8v8v8v8)



www.erf.org.eg

