

See discussions, stats, and author profiles for this publication at:
<https://www.researchgate.net/publication/317348915>

Achieving Gender Equality in the Arab Region amidst the Changing World of Work

Conference Paper · April 2017

CITATIONS

0

READS

105

1 author:



[Mona Farid Badran](#)

Cairo University

9 PUBLICATIONS 17 CITATIONS

[SEE PROFILE](#)

Tripartite Arab Meeting on the Future of Work
Beirut – Lebanon
3 April 2017

Prepared by:

Dr. Mona Farid Badran

Associate Professor, Department of Economics, Faculty of Economics and Political Science,
Cairo University
ICT Economist, Telecom Development Consultant

**Achieving Gender Equality in the Arab Region amidst the
Changing World of Work**

Introduction

Gender equality and women's economic empowerment are critical ingredients to the realization of economic growth and sustainable development. On the global level, overcoming gender disparity would result in additional USD12 trillion in annual 2025 Gross Domestic Product (GDP), equivalent in size to the current GDP of Japan, Germany, and the United Kingdom combined (McKinsey, 2015). On a regional level, the share of regional output generated by women is only 18 per cent in the Middle East and North Africa (MENA) region while women constitute approximately 50 per cent of the population. In the MENA region, boosting female labour-force participation would contribute 85 per cent of the total additional economic opportunity (i.e. GDP and Job opportunities). Studies suggest that the potential boost could be as high as 47 per cent of the region's GDP (McKinsey, 2015). Nevertheless, as in other parts of the world, gender gaps at work around the Arab world still persist, whether paid or unpaid, formal or informal, public or private, agricultural or entrepreneurial.

Economic indicators reveal that among top ten countries with the largest employment gender gap, there exist six Arab countries (Qatar, Egypt, Iraq, UAE, Morocco, and Saudi Arabia), with Saudi Arabia ranked first in the largest employment gender gap (WEF, 2017c). Four primary factors inhibit gender equality in all forms of work and at all levels of development, including adverse social norms, discriminatory laws and insufficient legal protections, gender gaps in unpaid household and care work, and unequal access to digital, financial and property assets (WEF, 2017a).

Social norms determine economic outcomes for women in several ways, especially in the Arab region, where they shape women's decisions regarding which occupational and educational opportunities to pursue. They affect the distribution of unpaid work within households and wages in paid care activities, such as nursing and teaching, which employ a high proportion of women. They, also, reflect and reinforce discriminatory gender stereotypes and implicit biases, which limit women's pay and promotion prospects. Adverse social norms are also codified in laws that limit women's professional choices and their ability to obtain passports, travel outside their homes, start businesses and own or inherit property. A recent analysis conducted by the International Monetary Fund suggests that this kind of legal discrimination is

associated with lower levels of educational attainment for women, wider gender pay gaps and fewer women-owned businesses.

Information Communication and Technology (ICT) provides a great opportunity to level the laying field in order to reach gender equality. Greater gender equality and equal opportunities translates into a country that is associated with better education and health, higher per capita income, faster and more inclusive economic growth, and greater international competitiveness.

The future of work, regardless of gender, entails a dominant role of ICT, embodied by the Fourth Industrial Revolution; thus access and use of ICT and digital skills have greater importance. Research reveals that women around the globe are still underrepresented in the ICT sector as a user and as an attractive sector for women employment. ICTs have the potential to reduce some of the barriers faced by women, including illiteracy, poverty, lack of mobility and/or other cultural and social norms, and limits participation in the decision-making processes. In some Arab countries, cultural norms can include restrictions on access to ICTs or lack of availability of relevant content. Globally, the pervasive presence of inappropriate content and aggressive behavior of the online community, can act as a deterrent or as barriers to women access to ICTs.

To achieve equality and combat these restraints, it is vital to find ways to empower girls and women to participate in designing, building and leading our shared digital future, including awareness raising and professional training. The barriers to get there —as reported by the WEF (2017a,b)— are substantial and require the skills of policy-makers, the understanding of societies, and the commitment of leaders and managers to address them. It also requires building a long-term pool of talents by encouraging and motivating more girls into Science Technology Engineering and Math (STEM) fields; bringing the proportion of female leaders in every organization in line with the proportion of women in the workforce. Policy makers should opt to create an enabling business environment to women entrepreneurs in terms of reducing cost and time to register a business, and develop policies that would encourage greater access to ICT as business enabler. Thus, gender equality in access to ICTs is essential for empowering women and girls through access to information, learning, improved decision-making, better education, new digital skills and potentially higher incomes. Bearing in mind that the majority of winners from technological change will have and use new economy skills and gain employment in non-routine cognitive occupations.

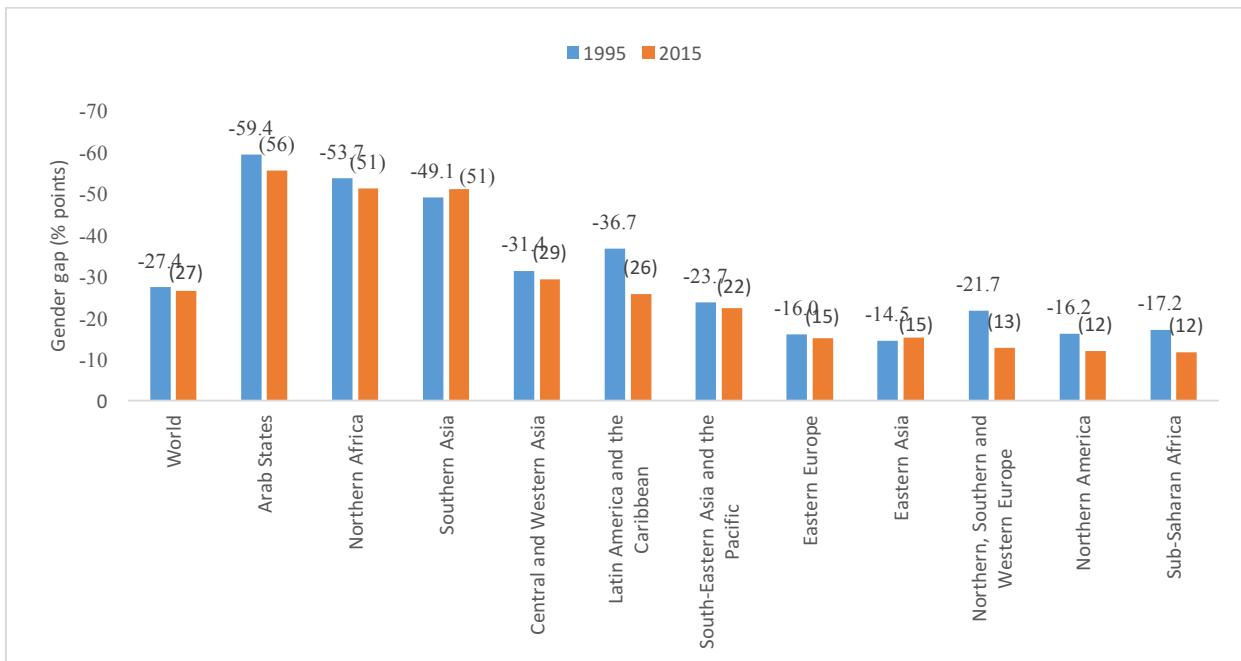
Finally, women business organizations should provide information and training on new technologies for business development. Promoting relevant content for Arab women is important, in acquiring digital skills and literacy, learning about and exercising their rights, participating in public processes and accessing more skilled jobs, which generally tend to be better paid labour. Enhancing ICT skills is a critical prerequisite for the new era of 4th Industrial Revolution. ICT skills refer to the effective application of ICT systems and devices, and professions range from ICT specialists who can develop, operate, and maintain ICT systems, to basic ICT users, who are competent users of the mainstream tools needed in their working life.

Arab women at work: current situation

Gender Gaps in Labour Force Participation and Employment Rates Declined only Marginally in Arab Region Compared to Global Levels

Between 1995 and 2015, the global female labour force participation rate decreased from 52.4 to 49.6 per cent. The corresponding figures for men are 79.9 and 76.1 per cent, respectively. Worldwide, the chances for women to participate in the labour market remain almost 27 percentage points lower than those for men (figure 1). Shadowing the global trends, in the Arab States, gender gap declined in 2015 to about 58 per cent compared to 60 per cent in 1995. However, the gender gap in the labour force is the highest in the Arab countries and it stands out at much higher levels compared to the rest of the regions in the same period (ILO, 2016b).

Figure 1: Gender Gaps in Labor Force Participation Rates by Region, 1995 and 2015



Note: The gender gap is measured as the difference between women's and men's labour force participation rates. The data cover 178 countries and the same countries are covered in figures II and IV.

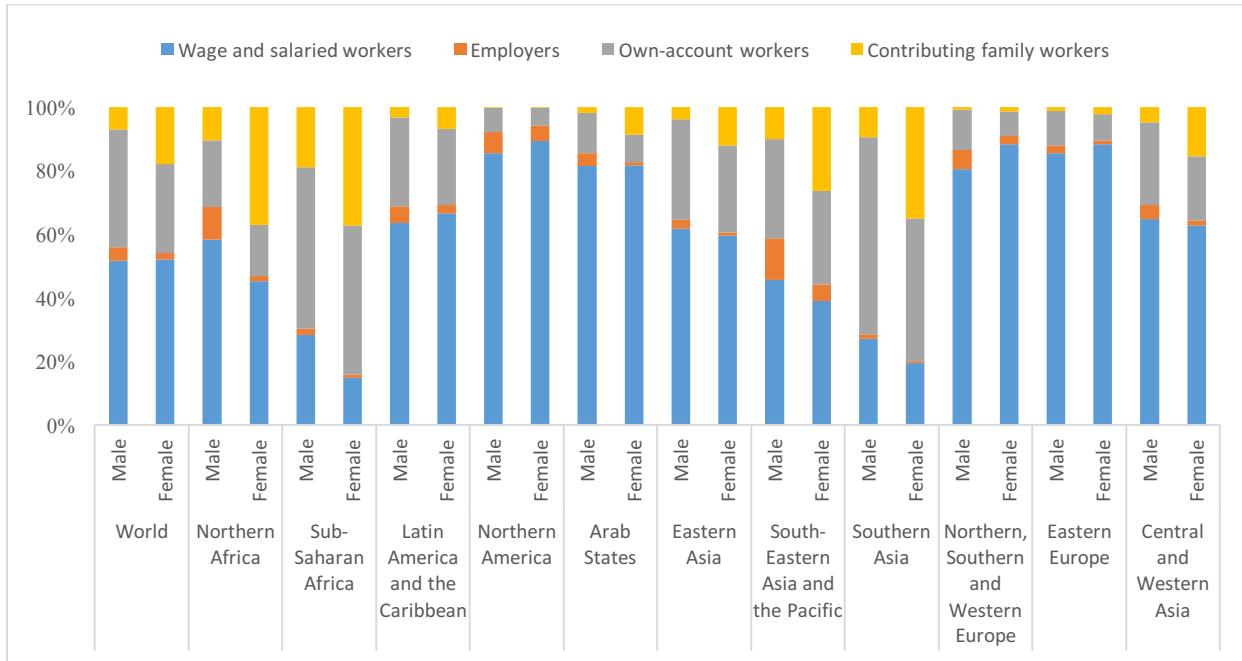
Source: ILO calculations based on ILO, Trends Econometric Models, November 2015.

Status in Formal and Informal Employment

Globally, in 2015, a total of 586 million women were own-account or contributing family workers. Women remain over represented as contributing family workers. Some progress has been made, however, in closing the gender gap in this regard. The share of contributing family workers has decreased significantly among women (by 17 percentage points over the last 20 years) and to a lesser extent among men (by 8.1 percentage points over the same period), resulting in a decrease in the gender gap from 19.5 percentage points in 1995 to 10.6 percentage points in 2015 (figure 2). In the Arab region, male and female Arab workers follow the global trend in decreasing their share in family work. The share of self-employed workers/own account workers is almost the same level regardless of gender, however, male wage salaried

workers outnumber female wage salaried workers in the Arab region (ILO, 2016b). It even recorded at higher levels than the global trends.

Figure 2: Employment status by gender, 2015



Note: The term “wage and salaried workers” refers to persons who work and receive a wage or salary. Employers, own-account workers and contributing family workers are considered self-employed. Contributing family workers are those who work in a family enterprise.

Source: ILO calculations based on ILO, Trends Econometric Models, November 2015.

Gender Inequalities at Work Result in Gender Gaps in Access to Social Protection, in Particular Maternity and Old-Age Benefits

The gender social protection coverage gap is evident globally and more profoundly in the Arab region. There are universal reasons for the gender social protection gap, including the gender gap in employment and job quality, lower rates of formal wage and salaried employment, fewer hours and fewer years in insured employment for women. As a result of gender gaps at work, coverage (both legal and effective) by contributory compulsory social protection schemes is lower for women than for men (ILO, 2016b).

Globally, the proportion of women above retirement age receiving a pension is on average 10.6 percentage points lower than that of men. Nearly 65 per cent of people above retirement age without any regular pension are women. This means that 200 million women in old age live without any regular income from social protection (old age or survivors pension), compared to 115 million men. Low female labour participation rates, together with the limited development of non-contributory pensions, weigh significantly on women’s effective pension coverage in the Arab States among other regions, where the proportions of older women in receipt of a pension are around a meager level of 3 per cent. The gender disparity amounts to approximately 30 per cent, among the highest levels in the world (ILO, 2016b).

A Recent Upward Trend in Arab Women Entrepreneurs

Female entrepreneurship rates are relatively low in the MENA regions as they contain predominantly factor-driven economies. Female-owned enterprises in Arab countries tend to choose the service business sector. Mostly, the services sector can provide better working conditions than agriculture, and more chances for women to be promoted professionally. The size of their business is relatively small, and they are prone to employ fewer employees. According to the Global Entrepreneurship Monitor Report 2012, in the MENA region, males have demonstrated four times the likelihood of starting a business compared to females. Women entrepreneurs in this region have large families, with an average of five people per household, and they operate primarily as one-woman businesses with no employees (Badran, 2015). However, recently Arab female entrepreneurs are founding companies at an ever increasing rate across the world and the MENA region is no exception. However, there's still a long way to go. Female-led businesses in the region still lag behind the global growth rate in female entrepreneurship. One of the success stories in this area is UAE. It has some of the region's most ambitious women with 8 out of 10 planning to expand their operations. Moreover, 60 per cent of female entrepreneurs expect growth in their national economy to support their growth¹.

Recent Trends in Arab Female Empowerment and Gender Gap

In 2016, the MENA region, managed for the first time, to close more than 60 per cent of the overall gender gap. In the Gender Gap Report (WEF, 2016a), the gap is characterized by the Economic Participation and Opportunity sub-index, the Educational Attainment sub-index, the Health and Survival sub-index, and the Political Participation sub-index. Nevertheless, it still has a long way to go. The region is suffering from the largest gender gap among all other regions (under 40 per cent). All things held equal, with current trends, the overall global gender gap can be closed in 129 years in the MENA region. As to the performance regarding the sub-indexes, on educational attainment, it ranks ahead of Sub-Saharan Africa and South Asia, and on Health and Survival, it surpasses East Asia. Out of the 18 countries covered by the Index in the region in 2016, 10 countries have improved their overall score compared to last year, while eight have regressed². In terms of female access to job opportunities, limiting women's access to labour markets is costly, as poor female labour force participation hampers economic growth. Restrictions on female employment in the Arab region have been estimated to inflict sizable costs throughout the MENA region. The outlook predicts that in ten years from now, the MENA region should see its education gender gap narrow to a close. More importantly, the economic gender gap rates that are most concerning remain those in the Middle East and North Africa with predictions of 356 years needed to close this gap.

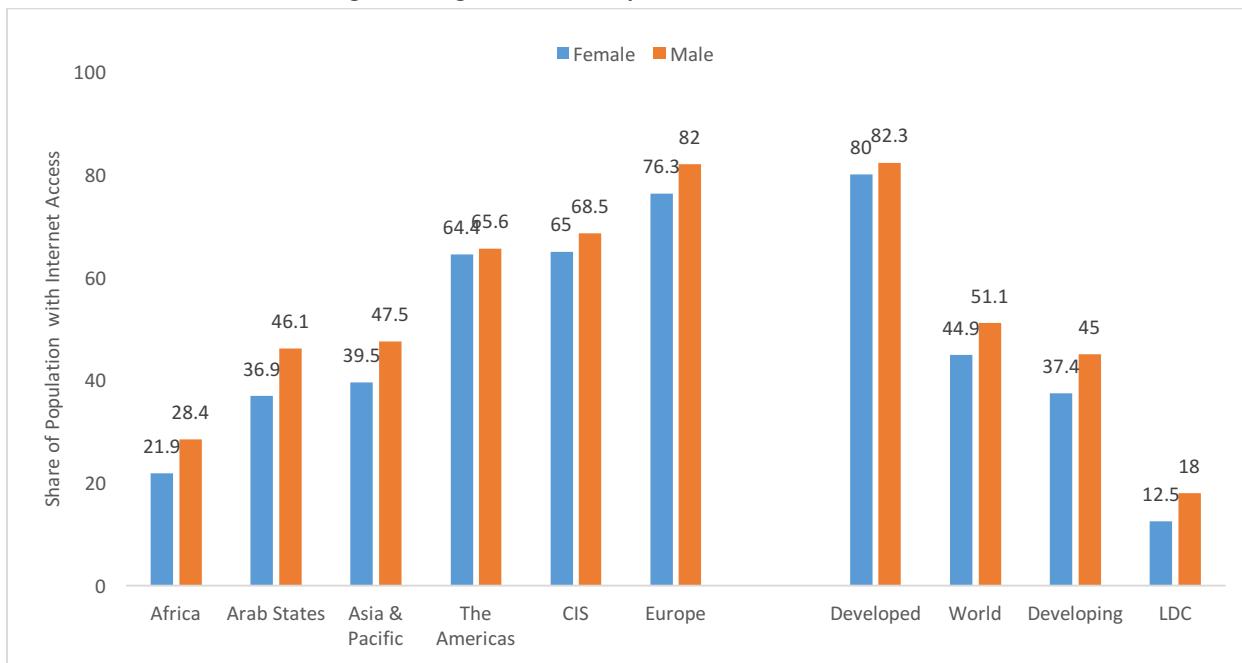
Status of Arab Female Users of ICTs

¹ <http://www.payfort.com/blog/2017/01/24/female-entrepreneurs-in-the-middle-east/>

² Arab Countries that improved their Global Gender Gap between 2006 and 2016 include: Qatar, Saudi Arabia, Tunisia, UAE, Oman, Morocco, Mauritania, Egypt, Bahrain and Yemen.

Access & Connectivity as well as participation in tech jobs, designing and creating future technologies are all important for generating job opportunities for Arab females in the future. The ITU estimates that the overall global Internet user gender gap grew from 11 per cent in 2013 to 12 per cent in 2016 (ITU, 2016). Internet user penetration rates are higher for men than for women in all regions of the world with the largest gaps found in Africa (23 per cent) and Arab States (20 per cent). As depicted in the figure 5, the ITU reports that there exists a big digital gender gap in the Arab region. The percentage of Arab female who access and use the Internet is just 36.9 per cent compared to 46.2 per cent of Arab males. Thus, if women and girls are less able to access relevant content, they will find themselves at a serious disadvantage in acquiring digital skills and literacy, learning about and exercising their rights, participating in public processes and accessing more skilled jobs, which generally tend to be better paid.

Figure 3: Digital Gender Gap in Internet Access in 2016



Note: ITU, UNESCO, 2016.

New Forms of Work Can Ensure Equitable Future Jobs to Men and Women

Advances in Artificial Intelligence (AI), low-cost ICT prices, and increased internet penetration rates, render the potential for automation to be inevitable. These developments would result in change in the demand for labour and thus the structure of the labour market in terms of needing more time to create new jobs. In addition, the need to update skills is challenging (WDR, 2016). New jobs are also likely to surface in the digital economy—in the analysis of data such as data scientists, in the development and maintenance of apps and other software, and in support services. New opportunities will also arise in ICT-enabled services, such as the on-demand economy. However, creating new jobs will not be an easy task, not to mention female job opportunities. The potential for decent employment creation lies in the rest of the economy, where digital technologies allow businesses to expand. Among the low-skilled, some services that must be delivered face-to-face or require awareness and situational adaptability

(housekeepers, hairdressers) are likely to grow. Among the high-skilled, occupations will rely on modern skills involving creativity and social interactions. Some observers call this the polarization in the new labour market “High-Tech, High-Touch” economy (WDR, 2016; ILO, 2016a).

On the other hand, jobs are expected to be shifted to machines that substitute humans, thus the structure and dynamics of the labour market globally as well as in the Arab countries could be adversely affected. This could eventually lead to exacerbating the gender imbalance in the labour market.

This is in addition to the jobs that are characterized by traditional gender gap, such as manufacturing and production. From a net employment outlook perspective, the expected absolute job gains and losses over the 2015–2020 period shows that the burden of expected job losses due to disruptive change falls almost equally on women and men, where 2.45 million (48 per cent) of the expected total net job loss of 5.1 million falls on women, 2.65 million (52 per cent) of it on men. These predictions reveal an increase in the gender gaps in the labour market, where women make up a smaller share of the overall labour force (WEF, 2017b). In absolute terms, men will face nearly 4 million job losses and 1.4 million gains, approximately one job gained for every three jobs lost, whereas women will face 3 million job losses and only 0.55 million gains, more than five jobs lost for every job gained (WEF, 2017a).

Global Public Policy Responses Addressing Current Gender Distribution of Employment and Education Enrolment by Field

The advent of digital technologies should be regarded as a catalyst to reduce the gender gap in the labour market and increase welfare and overall economic growth. Thus, ICTs should be considered as an enabler of women empowerment and gender equality in the labour market. Furthermore, ICTs should be used to motivate female entrepreneurs in the region, enhance innovation, and create job opportunities. Thus, enhancing human capital, increasing capacity building and attaining new skills should be all emphasized by Arab countries’ policy makers.

The most crucial element is skills development. A modern economy requires workers with modern skills. For better-paying jobs, it is necessary and important to upgrade skills. Current and future workers need to develop the lifelong cognitive, technical, and socio-emotional skills, required of a well-educated worker in the 21st century. Workers also need to be capable of processing the ever-increasing information available on the internet.

Building these skills requires actions affecting all relevant environments for learning: families, schools, universities, training systems, and firms. Due to the speed of technological changes, these skills will also require constant updating throughout the life cycle as workers prepare for careers that last more than one job. Complementary reforms are also needed in tax policy, social protection, and labour market institutions to facilitate the transition of workers from old economy jobs to new economy jobs, and address the distributional consequences of the digital revolution. Over years, technological change disrupted labour markets and hurt individuals whose skills are substituted by technology, because they

often did not have the skills required in many of the new jobs. Even for those who stayed within the same occupations, jobs were transformed with updated skills (WDR, 2016).

The digital gender divide is a critical impediment to realizing all the advantages of technological change for the economies of the Arab Region. Barriers to access can be particularly salient in the case of the Internet, especially in poor and remote localities where access is predominantly outside the home, and where social norms for socializing or safety concerns can be a barrier. Moreover, lack of control over the use of the technology can be an additional barrier for women. In the Arab Republic of Egypt, for example, 12 per cent of women (WDR, 2016) stated that they did not access the internet more often because they did not think it was appropriate or because family or friends would disapprove, bearing in mind that this percentage is much higher in more conservative Arab countries. In the labour market, women are also much less likely to work in the ICT sector or in ICT occupations, which are well paid. This is due to many reasons such as lack of the necessary educational background (STEM), long working hours, demanding job responsibilities, and the lack of Digital ICT training. These latter gaps partly reflect women's low participation in STEM education, as a product of early gender-based biases in formal and informal education.

Therefore, the Fourth Industrial Revolution is bound to have a significant impact or disruption on the structure of the labour market globally. In addition, given that digital technologies have different applicability to different kinds of work, the extent of disruption across countries will reflect differences in economic and occupational structures. Numerical clerks or secretaries, often users of digital technologies, also perform many tasks that can be easily automated. Managers or software developers, by contrast, while intensively using digital technologies, also complement them well, and will not be easily substituted by machines. For occupations that use little technology, some are hard to automate, such as hairdressers, artisans etc., while others could be automated, such as assemblers.

As the Arab region is lagging behind, the pace of technological change and its impact will materialize after quite some time. However, major disruptions, are expected to take place due to their rapid technological adoption and large number of workers in routine occupations. Their low skill base suggests important challenges ahead, however, the magnitude of the disruptions is probably smaller, and this allows the countries in the region to adjust properly to these labour market disruptions. In countries where the digital economy is still emerging such as the Arab countries, and internet use is low, the priority is to lay the foundation that eliminate barriers to internet adoption such as high duties on ICT capital imports; develop the business climate, including physical infrastructure that is critical for online businesses with an offline footprint; promote digital literacy and basic cognitive and socio-emotional skills; and finally use the internet to provide information and monitor service providers (WEF, 2017a).

All these have implications for policy makers in the region. Policy makers need to draft policies that promote modern skills among children and youth, and also to find ways to develop skills and retrain youth in terms of lifelong learning of the current older workers. Policy makers need to prepare for these digital disruptions. Skill systems vary widely across countries; however, there is urgency in starting very early in life of the young generation especially females. Priorities for Arab countries include building foundational

cognitive and socio-emotional skills (i.e. including the child's experience, expression, and management of emotions and the ability to establish positive and rewarding relationships with others (Cohen et al., 2005), and ensuring basic ICT literacy. Access to the Internet, laptops, tablets, mobile phones, digital whiteboards, and video-based instruction is increasingly common in primary and secondary education (WEF, 2017c).

Recommendations for Arab Policy Makers to Empower Arab Women in the Era of 4th Industrial Revolution

It is self-evident that the Fourth Industrial Revolution will lead to major shifts in the demand and supply of skills, especially digital skills. In addition, it could exacerbate earnings and income inequality. Furthermore, trends reveal the low attraction of women to computer science domain. If the current course continues, women could face 3 million job losses and only half a million gains. That's more than five jobs lost for every job gained, thus heading towards an even bigger gender gap (WEF, 2017a). Enhancing ICT skills is a critical pre-requisite for the new era of 4th Industrial Revolution. ICT skills refer to the effective application of ICT systems and devices, and professions range from ICT specialists who can develop, operate, and maintain ICT systems, to basic ICT users, who are competent users of the mainstream tools needed in their working life (e-mail; Microsoft Excel, Outlook, PowerPoint, and Word).

Arab women should be exposed to ways to strengthen and develop non-routine interpersonal and socio-emotional skills. These include grit or the perseverance to complete tasks, achieve a long-term goal, work in teams, punctuality, organization, commitment, creativity, and honesty. Furthermore, they should policy makers in the region are urged to address problems such as poor digital literacy that limits the productive use of digital technologies. These are considered impediments to use the internet when, even among youth, more than half have a level of functional literacy below, bearing in mind the obvious fact that lack of ICT skills is often a constraint to employment.

Women are outnumbering male university graduates in 95 of 144 countries globally. This should give incentive to policy makers to invest in employees' skills to increase the relevance and resilience of people and organizations, regardless of gender or social background. Women should be focusing on fostering this responsiveness to take advantage of shifts in industries and jobs so they are not left behind. Pragmatic approaches can be taken today to ensure that Arab females are not left behind in the skills revolution, including encouraging employers (public and private sectors) to hire, promote and encourage women to take on responsibilities. Arab women should be given the chance to acquire the skills and experience to manage and drive the business in technical and operational roles. This will help mitigate job losses for women in staff roles that are under threat from automation.

Then, mentoring and guiding Arab women for the necessity to actively upskill them to fit into the sustainable industries and jobs that are being created in this new Fourth Industrial Revolution. Finally, adopting and fostering the new approach in hiring for learnability i.e. being ready for new jobs and new skills. Learnability should be regarded as number one consideration when hiring. Encouraging and purposely increasing human capital investment for workers in mid-career, especially in those scarce ICT

skills identified above, is of paramount importance. This means focusing on those aged 30-55 with low skills. It is harder to motivate older workers and their employers to invest in skill upgrading, though that may change as older workers remain in the work force for a longer (IZA, 2017; WEF, 2017 a&b).

Policies to foster adult learning and ICT skills include expanding access and usage of ICT, where governments can play a leading role in this process by pushing full steam ahead with e-government initiatives; developing user-friendly websites for those many adults who either lack basic ICT skills or the opportunities to develop these skills; activating Active Labor Market Policies to enable workers to adjust better to technology and/or trade shocks; and also compensating the losers in order to reduce the loss resulting from technology displacement. This is in addition to policies that can help displaced workers acquire new skills, especially digital skills, and move quickly to provide new job opportunities that look like a win-win investment. Job search counselling and monitoring of job-search behavior is very often cost-effective, in that they encourage a rapid return to work.

In principle, training programs should help foster career progression for displaced workers. This is in addition to offering Individual learning/training accounts, where workers get a voucher which they can cash in at an eligible training provider of their choice. There are certain initiatives in the Arab region, such as in Jordan, “Jordan New Work Opportunities for Women (Jordan NOW)” pilot program that aims to increase female labour force participation amongst the 2010 cohort of the public community college female graduates. The aim of this initiative is to enhance their employability skills, where the curricula are specifically designed to meet the needs of these young graduates, based on consultation with many private sector firms who highlighted such deficiencies amongst new job seekers (Groh et al., 2012).

Policy makers in the region are urged to consider the following recommendations: they should seek an approach of increasing capacity building that promotes complementarity with technology. Workers in jobs that use and complement technology are likely to see both an increase in employment and an increase in earnings because of higher productivity. This is the case for workers who use non-routine cognitive skills and ICT skills.

Demand for certain products is a key factor in the labour market as the demand for labour is derived demand. If workers produce goods or services that consumers keep buying as they get richer or as the price declines, increases in production and/or productivity can translate into increases in wages. This is often the case for workers with non-routine skills producing; say, knowledge, management expertise, or medical services. If not, increases in productivity can lead to lower employment and earnings in that sector because fewer workers can satisfy demand, as for many agricultural goods. The type of labour supply that is engaged in non-routine cognitive occupations are likely to see their higher productivity rewarded as higher earnings because entry barriers are high. In other words, the majority of winners from technological change will have and use new skills and gain employment in non-routine cognitive occupations (WDR, 2016).

Recommendations to enhance Female Entrepreneurship in the Arab Region

Being a woman entrepreneur in the Arab Region entails many hurdles, one of them that is related to future of jobs includes the lack of access to ICT for women-owned Small and Medium Sized Enterprises (SMEs). Furthermore, female Arab entrepreneurs fall into the trap of the weakness in recognizing the benefits from upgrading and updating their skills according to recent technological advances, such as new technologies in Internet access, mobile communication, usage of smart phones and social media to promote their businesses. Thus, Arab female owners of SMEs could help themselves if they invest more in human capital, updating their skills and using new technologies to improve their business performance.

As entrepreneurship is a very vital venue for female employment in the region, policy makers in Arab countries face the critical responsibility of addressing some policy relevant issues, such as incorporating the women's entrepreneurial dimension in the formation of all SMEs-related policies. This can be done by ensuring that the impact on women's entrepreneurship is considered in the design stage of SMEs-related policies. It is thus recommended that ICT policies drafted by the designated governmental entities should support the women entrepreneurship in the Arab countries. The awareness of gender issues is significant when considering strategies to improve the business environment and promote private-sector development. Thus, the conclusion is that the socio-cultural context as well as the institutional context play a major role in the success of female entrepreneurs. To support this success, a number of elements should be taken into consideration, including encouraging women to join the labour force; enhancing technical training for girls and training for female workers; eliminating digital illiteracy among women; and raising awareness of the merits of incorporating ICTs in the management of SMEs. This is in addition to giving incentives to women entrepreneurs who already adopt new technologies in their businesses, such as tax reductions or cash loans to upgrade their businesses; and providing role models in the STEM education as well in the ICT industry.

Conclusion

With the advent of the Machine Age or Fourth Industrial Revolution, the need to develop new policies to meet the changing structure of the local labor markets is crucial. Since the Arab region is lagging behind, the pace of technological change and its impact will materialize after quite some time. However, major disruptions are expected to occur due to the rapid technological adoption and large number of workers in routine occupations. Their low skill base suggests important challenges ahead, but the magnitude of the disruptions is probably smaller, which allows the countries in the region to adjust properly to these labor market disruptions. Mainstreaming gender in the Middle East and North Africa region, and creating greater economic opportunities for Arab women were due to compelling economic reasons, to the extent that inequalities impose development costs on the society. Arab women should be given the chance to acquire the skills and experience needed to manage and drive the business in technical and operational roles. Mentoring and guiding Arab women is essential for their upskilling to fit into the larger sustainability industries and for creating jobs in this new Machine Age. Finally, adopting and fostering the new approach in hiring serves learnability (being ready for new jobs and new skills). Learnability should be regarded as number one consideration when hiring. Encouraging and intentionally increasing human capital investment for Arab female workers in mid-career, especially in those scarce ICT skills identified above, is

of paramount importance. In conclusion, evidence-based research underscores the significance of gender equality in society which is highly correlated with gender equality in work. Gender equality in society is a necessary condition to reach gender equality at work (McKinsey, 2015; Badran, 2015).

References

- Badran M.F., "Empowering Female-Owned SMEs with ICT in A Group of Selected Arab Countries and Brazil". In: Tiropanis T., Vakali A., Sartori L., Burnap P. (eds) Internet Science. INSCI 2015.
- Cohen, S., Pressman, S.D., Miller, G.E., Barkin, A., Rabin, B.S. and Treanor, J.J., 2005. Loneliness, social network size, and immune response to influenza vaccination in college freshmen. *Health Psychol* 24, 297-306.
- Global Entrepreneurship Monitor Report, Global Report (2012)
- Groh, M., Krishnan, N., McKenzie, D., Vishwanath, T., "Soft skills or hard cash? The impact of training and wage subsidy programs on female youth employment in Jordan", World Bank Policy Research Working Paper 6141, 2012.
- ITU, "Measuring the Information Society Report", 2016.
- ITU, UNESCO, "The State of Broadband: Broadband Catalyzing Sustainable Development", 2016.
- Martin, J.P. "Policies to Expand Digital Skills for the Fourth Industrial Revolution", IZA Policy Paper No. 123, 2017.
- McKinsey & Company, "The Power of Parity: How Advancing Women's Equality Can Add USD 12 Trillion to Global Growth", executive summary, 2015.
- ILO, "The Future of Work Centenary Initiative", Report of the Director General Geneva, International Labour Conference, 104th Session 2015.
- ILO, "Issue Note on Technological Changes and Work in the Future", Geneva, 2016a.
- ILO, "Women at Work: Trends 2016", Geneva, 2016b.
- PAYFORT Blog, "Female Entrepreneurs in the Middle East", Infographic, 2016.
- World Bank Development Report (WDR), "World development report: Digital Dividends Overview", World Development Report, 2016.
- World Economic Forum, "The Global Gender Gap Report", 2016a.
- World Economic Forum, "The Fourth Industrial Revolution: what it means, how to respond", 2016b.
- World Economic Forum, "The Future of Jobs: Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution", 2016c.
- World Economic Forum, "Future of Education: Gender and Work", 2017a.
- World Economic Forum, "Is the Future of Work a Man's World? 3 Ways Women Can Win", 2017b.
- World Economic Forum, "Women's economic empowerment is the smart thing to do. What's stopping us?", 2017c.

The designations employed in this International Labour Organization (ILO) publication, which are in conformity with United Nations practice, and the presentation of material therein do not imply the expression of any opinion whatsoever on the part of the ILO concerning the legal status of any country, area or territory or of its authorities, or concerning the delimitation of its frontiers.

The responsibility for opinions expressed in signed articles, studies and other contributions rests solely with their authors, and the publication does not constitute an endorsement by the ILO of the opinions expressed in them.

Reference to names of firms and commercial products and processes does not imply their endorsement by the ILO, and any failure to mention a particular firm, commercial product or process is not a sign of disapproval.

For more information, contact:

International Labour Organization
Regional Office for the Arab States
Aresco Center, Justinien Street, Kantari
P.O.Box 11-4088 Riad El Solh 1107-2150

Beirut – Lebanon

Tel: +961-1-752400

Fax: +961-1-752405

Email: beirut@ilo.org

Website: www.ilo.org/arabstates

Follow ILO in Arab States on Twitter: @iloarabstates