



IOE Position Paper: Harnessing female talent for the digital economy

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Abbreviations

GDP	Gross Domestic Product
ICT	Information and Communications Technology
IOE	International Organisation of Employers
ILO	International Labour Organization
IMF	International Monetary Fund
MGI	McKinsey Global Institute
MOOC	Massive Open Online Course
OECD	Organisation for Economic and Cooperation Development
SDG	Sustainable Development Goal
STEM	Science Technology Engineering Mathematics
WEF	World Economic Forum



Executive Summary

Although gender disparity in labour market participation has narrowed over the past 30 years female labour participation in some areas still lags significantly behind that of men. Considering that women represent at least half of the world's potential human resource, this means a large slice of the population is absent from wage-earning activity and economies are deprived of a valuable resource. Ensuring the appropriate use of the female talent pool has a significant bearing on a country's growth and development.

Digital transformation – the effects on economies and societies of digitalisation and the use of interconnected digital technologies and data – offers new opportunities across the globe and holds promises for enhanced productivity growth and improved well-being of all. The digital economy provides new opportunities for all. Some of these opportunities, however, have the potential of having a greater impact on women as it offers them:

1. **An avenue to display their competences;**
2. **The possibility to increase their employment opportunities; and**
3. **Removes traditional barriers to entry to the labour market and allows for upskilling.**

Around the world, women are outnumbering men in terms of participation in higher education and they are – due to their socialisation – more likely to have highly developed soft skills, much demanded to function in the digital economy.

Digital technologies are enhancing livelihoods in a variety of ways. By providing direct access to information and consumers, the digital economy can create formal employment opportunities for all. This is especially prominent during the Covid-19 pandemic which has, and will continue, to change the world – in the way we socialise with each other, how we address health issues, and how diverse work arrangements have helped many during the crisis.

Unlocking the potential in the labour market requires addressing, for instance, in some regional circumstances, constrained employment prospects for women. Digital technologies offer flexibility in working arrangements that can overcome mobility constraints and combat restrictive gender norms.

This paper aims to provides employers and their representative organisations with an international perspective on the implications of the digital economy for women in the labour force.

Introduction

For the last 30 years, female labour market participation has been on the rise, partially closing gender disparity¹. This trend has been accompanied by economic development and growth in most places. Recent ILO research considering 186 economies over the period of 1990-2017 confirmed a positive relationship between female employment growth and economic development. Notably, the analysis found that every 1% of female employment growth is associated with an annual GDP growth of 0.16%².

In Europe, it is predicted that closing the gender disparity will create 3.5 to 6 million jobs in 2050 as a result of additional women entering the labour force³. Booz & Company estimated that raising the female labour force participation rate to the level for males would boost GDP by 5% in the United States, 9% in Japan, 12% in the United Arab Emirates and 34% in Egypt⁴.

In contrast, a widening gender employment disparity results in lower productivity and lower economic growth. The losses to an economy from the economic disempowerment of women were estimated by the International Monetary Fund to range from 10% of GDP in advanced economies to more than 30% in South Asia, the Middle East and North Africa⁵.

Despite such widely reported concrete evidence on the positive relationship between female labour market participation and GDP rates, female labour market participation partly still lags significantly behind that of men, keeping a large slice of the population from wage-earning activity and depriving the economy of a potentially valuable resource.

This paper, part of IOE's ongoing work on gender, aims to provide IOE Gender Network members, employers and their representative organisations with an international perspective on the impact of the digital economy on women in the labour force.

More research and data will be needed to see the impact of Covid-19 on gender issues. At the time of writing (end April 2020), authorities are focused on containing the spread of infections and navigating through ways to ensure economic and business continuity.

Digital transformation – the effects on economies and societies of digitalization and the use of interconnected digital technologies and data – offers new opportunities across the globe and holds promises for enhanced productivity growth and improved well-being of all. The digital economy is particularly attractive to women, as it offers them:

1. An avenue to display their competences;
2. The possibility to increase their employment opportunities; and

¹ International Labour Organisation (ILO), 2018, "World Employment Social Outlook: Trends for Women 2018".

² International Labour Organisation (ILO), 2019, "Women in business and management: the business case for change".

³ European Institute for Gender Equality (EIGE), 2017, "Gender equality boosts economic growth", News article.

⁴ Booz & Company, 2012, "Empowering the third billion: Women and the world of work in 2012".

⁵ International Monetary Fund (IMF), 2019, "Closing the Gender disparity: Finance & Development".

3. Removes traditional barriers to entry to the labour market and allows for upskilling.

Around the world, women are outnumbering men in terms of participation in higher education and they are – due to socialisation – more likely to have highly developed soft skills, much demanded to function in the digital economy.

Digital technologies are also enhancing livelihoods in a variety of ways. By providing access to information and directly to consumers, the digital economy can create formal employment opportunities for women.

Unlocking potential in the labour market requires addressing, for instance, in some regional circumstances, constrained employment prospects for women. Digital technologies offer flexibility in working arrangements to overcome mobility constraints and combat restrictive gender norms.

The digital economy offers immense opportunities for economies and societies. It should be kept in mind that design, access, use and ownership of digital tools might not always be gender-neutral. Some root causes of a digital gender divide include hurdles to access, affordability, education and the lack of technological literacy, as well as inherent biases and socio-cultural norms.

Why is the digital economy attractive to women?

Digital technology is transforming economies and societies in profound ways. Improvements in communications have revolutionised the global organisation of the production of goods and services. Technology has extended global value chains to link various stages of manufacturing across multiple countries. The ability to buy and sell goods and services online has transformed and further globalised marketplaces. Digital technologies, including the Internet, are also changing the way citizens interact with governments and how people learn in general.

The digital economy offers multiple pathways for economic development and social progress. In particular, the digital economy offers an excellent opportunity to harness female talent in three meaningful ways:

- 1. Women can display their competences;**
- 2. Women have the possibility to increase their employment opportunities; and**
- 3. Women have fewer traditional barriers for accessing the labour market and allows them to upskill.**

However, for this potential to be fully realised, countries must overcome economic, social, cultural and institutional barriers, where they exist, to provide equal access to technology, education and business opportunities to all, thereby harnessing female talent.

1. The digital economy offers women an avenue to display their competences

Evidence from the OECD⁶ shows that the increasing use of digital technologies at work is raising the demand for sound foundation skills, digital literacy and higher order thinking competencies as well as social and emotional skills.

Around the world, women in higher education are outnumbering men. The 2018 UNESCO's Global Education Monitoring Report affirms that there are more females than males in tertiary education in almost all regions. While South Asia is moving towards closing the gap, sub-Saharan Africa is the only region where women still do not enrol in or graduate from tertiary education⁷. In the Asia-Pacific region, the gender parity index for tertiary education exceeds 1 (meaning positive parity where more women access higher education than men) in the Pacific Islands, Malaysia, the People's Republic of China, the Islamic Republic of Iran, Thailand and the Philippines⁸.

This increase in female enrolment is consistent with an increasing demand for “brain” rather than “brawn” jobs in a globalising world. As women become more educated than men, it is all the more wasteful not to use their human capital and knowledge to improve the economy's output, productivity and knowledge base.

While women may be well-equipped to flourish in the digital economy, they tend to find themselves in ‘routine’ jobs, which are in danger of automation. Despite outnumbering men as graduates in many countries, women still lag behind men in completing science, technology, engineering and mathematics (STEM) degrees, which are offered as prerequisites to ICT fields (OECD, 2015). In Chile, Ghana and Switzerland, women account for less than one-quarter of all STEM degrees. By contrast, women in Albania, Algeria and Tunisia are more likely than men to earn a STEM degree. Only seven countries in Latin America and the Caribbean showed gender parity in science and technology research. Half showed a male dominance in STEM fields, and in Chile and Honduras, 70% or more researchers were male⁹.

Encouraging more women to take up STEM fields at an early age and offering equal access to STEM fields at universities and in recruiting companies can go a long way in ensuring that female talent is duly optimized. This has a lot to do with changing cultural norms and gender stereotyping that typically assign specific fields and roles to women, which are often found in non-ICT fields.

⁶ Organisation for Economic Cooperation and Development (OECD), 2016, “Skills for a digital world”, OECD Digital Economy Papers, No. 250.

⁷ UNESCO, 2018, “Global Education Monitoring Report 2018”.

⁸ UNESCO, 2010, “Gender Issues in Higher Education”, Advocacy Brief.

⁹ XII Regional Conference on Women in Latin America and the Caribbean, 2013, “Women in the Digital Economy”.

2. The digital economy offers women the possibility to increase their employment opportunities

Digital technologies help to foster economic growth and social well-being by means of connecting people and ideas, thus helping to spur innovation and the sharing of relevant knowledge, including relevant technologies and business methods. Internet access, in particular, provides various opportunities including increased access to knowledge and education and to new customers and markets, allowing for more flexibility with respect to the time and locus of work. For instance, a recent study shows that the roll-out of Australia's National Broadband Network led to an increase in female entrepreneurship in Australia¹⁰. Fast broadband connection at home has encouraged more people to work from home, access education, have smart devices in their homes and to start their own business. The effects were found to be particularly strong in rural areas and for women. Such findings are confirmed in analysis focusing on the Indo-Pacific region that shows that, on average, growth in internet use was associated with four-fifths of the increase in female labour force participation between 2000 and 2016¹¹. Another study similarly estimates high-speed broadband to increase married women's workforce participation by 4.1 percentage points¹².

Fostering women's financial inclusion is extremely important as it would empower women and make them (better) able to manage risk, to start or invest in businesses, or to fund expenditures related to education, health or home improvements. The digital economy enables women to access and use financial products and services, as a means of making them more financially independent. For instance, the 2016 FinAccess Household Survey Report on Kenya's gender disparity in financial inclusion, showed that formal financial inclusion generally increased among women between 2009 and 2013, especially driven by the spread of mobile financial services such as the M-Pesa – an initiative using simple text messaging to transfer money which can be used even on the most basic mobile handset¹³.

While the "gig economy" currently accounts for a relatively small share of workers, platform-based or enabled jobs have been empowering women to a large extent. They create new options for women wanting to participate in labour markets, both locally and globally, and provide them with the opportunity to transition from the informal to the formal sector. For instance, the UK Royal Society for the encouragement of Arts, Manufactures and Commerce estimates that there are 1.1 million of self-employed in Britain and that female part-time self-employment increased from 439 000 to 812 000 between 2001 and 2016¹⁴. A recent study has also shown that two million women are expected to become their own boss by the start of 2019, driven by job characteristics like freedom over working

¹⁰ NBN, 2018, "Connecting Australia", National Broadband Network Australia.

¹¹ Watson, T., Corliss, M. and Le, M., 2017, "Digitalisation and the labour force gender participation gap in the Indo-Pacific", paper for the "Women and the Future of Work in the Asia Pacific" conference, Bangkok.

¹² Dettling, L., 2016, "Broadband in the labour market: The impact of residential high-speed internet on married women's labour force participation", *ILR Review*, Vol 70, Issue 2, pg 451-482.

¹³ FinAccess, 2016, "2016 FinAccess Household".

¹⁴ RSA, 2017, "Good Gigs: A Fairer Future for the UK's Gig Economy", Royal Society for the encouragement of Arts, Manufactures and Commerce.

hours and greater control over earnings¹⁵. Another study by Etsy finds that women in the United States were found to be more likely to participate in online capital platforms that connect customers with individuals who rent assets or sell goods peer-to-peer, as Airbnb and Ebay than in online labour platforms, highlighting the potential of the digital economy to tap into the entrepreneurial spirit of females¹⁶.

The rise in flexible forms of work often provides an opportunity to remove many barriers that prevent women with children or other family responsibilities from entering and remaining in work. In many cases they make it easier to get into work and offer new employment prospects. The ability to work part-time and/or remotely is particularly important among working mothers and those returning from maternity leave and has often resulted in an increase in the number of women in the workforce. For instance, a survey performed by Elance¹⁷ finds that 60% of women working as independent freelancers are young and are parents with dependents at home. Another survey by MGI shows that around 42% of US women and 48% of European women who participate in the digital economy are caregivers¹⁸.

Despite the widespread opportunities that the digital economy offers to women, their global Internet penetration rate is about 45%, as compared to 51% for men¹⁹. Worldwide, roughly 327 million fewer women than men have a smartphone and can access mobile Internet. Women, on average, are 26% less likely to own a smartphone than their male counterparts. In South Asia and Africa, these proportions stand at 70 and 34%, respectively²⁰.

There are a number of reasons for this disparity ranging from hurdles to access, affordability, education and lack of technological literacy, as well as inherent biases and socio-cultural norms that lead to gender-based digital exclusion²¹. In particular, affordability is a challenge for all but disproportionately affects more women and girls than men and boys²². The World Economic Forum (WEF)²³ shows that mobile phone penetration is broadly aligned with income. Through a survey of Latin American countries, WEF showed that the richer the countries the lower the gender disparity in mobile phone penetration, highlighting the correlation between affordability and penetration of the digital economy. Not only does affordability exclude potential Internet users from accessing the Internet, it further prevents Internet users from using the World Wide Web to its full extent. It is thus essential for governments to offer affordable Internet in order to eliminate this obstacle and especially allow for female talent to harness their potential in the digital economy. This is particularly true for women in developing parts of the world.

¹⁵ Denham, A., 2018, "The gig economy is the future and women can lead the charge", The Telegraph, 11 April 2018.

¹⁶ Etsy, 2015, "Building an Etsy economy: The new face of creative entrepreneurship".

¹⁷ Elance, 2013, "Women in technology – a detailed look inside freelancers' views on women in technology", April 2013 webpage.

¹⁸ McKinsey Global Institute, 2016, "Independent Work: Choice, Necessity and the Gig Economy".

¹⁹ ITU, 2017, "Facts and Figures 2017" <https://www.itu.int/en/ITU-D/Statistics/Documents/facts/ICTFactsFigures2017.pdf>.

²⁰ OECD, 2018, "Bridging the Digital Gender Divide".

²¹ OECD, 2018, "Bridging the Digital Gender Divide".

²² Intel and Dalberg, 2012, "Women and the Web. Bridging the Internet and Creating New Global Opportunities in Low and Middle Income Countries", Intel Corporation and Dalberg Global Development Advisors.

²³ WEF, 2018, "We don't have enough data to draw conclusions about the digital divide", blog.

3. The digital economy removes the traditional barriers for women to enter the labour market and allows them to upskill

The digital economy can reduce certain traditional barriers for women to enter the labour market. Data suggests that more than half of women working for labour platforms find it easier to be hired for a job online while working for multiple clients than to compete for a full-time job in a traditional fashion (Elance, 2013). Women in the ride-sharing economy confirm that low barriers to entry via the app make it relatively easy for women to enter this traditionally male-dominated industry, albeit the proportion of female drivers remains lower²⁴.

In developing and emerging economies, online job platforms can offer “leapfrogging” opportunities to women, as their international outreach allows them to find a paid job, even remotely, thus helping them exit the informal economy. This could be especially beneficial when cultural barriers or regulations make it difficult to work in the formal economy (OECD, 2017). The sharing economy may also allow women to enter or to better participate in typically male-dominated professions. Hall and Krueger (2015) find that in the United States women make up 14% of Uber’s driver-partners, a share exceeding that of taxi drivers and chauffeurs who are women in those markets (8%)²⁵. Even in developing countries, the sharing economy has opened up opportunities for women in this sector. For instance in Bangladesh, Lily, a motorbike ride-sharing app is designed for female riders targeting female commuters.

The digital economy has also proven to invert the differences in earnings between men and women. For instance, according to Work Genius, women earn 26% more through its platform economy than men²⁶. Even physical traditional barriers such as men accompanying women to work, or requiring men’s presence to access financial services can be removed through the digital economy, allowing women to access the labour market freely. The Internet improves information flow and removes hurdles in accessing both general and specific knowledge, including education and training opportunities such as Massive Open Online Courses (MOOCs), webinars and diverse informative websites. While this is beneficial to all, it may prove to be particularly useful for girls with little education. They may be able to access free online courses and acquire general information through mobile phones, without physically going to schools (which can be a challenge in many least developed countries)²⁷.

The ability of women to access and use digital technologies is directly and indirectly affected by market related factors including investment dynamics, regulations, and competition, especially in rural areas. In rural areas, which are often scarcely populated, the investment and installation of infrastructures,

²⁴ International Finance Corporation (IFC) and Accenture, 2018, “Driving Toward Equality – Women, Ride-Hailing and the Sharing Economy”.

²⁵ Hall, J. and Krueger, A., 2015, “An analysis of the labour market for Uber’s drive partners in the United States”, Working Papers, Princeton University, Industrial Relations Section, No.587.

²⁶ Work Genius, 2018, “Women earn 26 % more – Platform economy turns gender disparity upside down”, Future of Work blog.

²⁷ <https://edition.cnn.com/2016/01/19/africa/africa-afrobarometer-infrastructure-report/index.html>

such as broadband infrastructures and cell phone towers, is less economically profitable. This can affect disproportionately more women in developing countries as they seem to be more often located in rural areas, whereas working age men tend to be mainly in urban areas²⁸. Women and girls in rural areas of developing countries further face persistent structural constraints, including their higher probability to be out of school than boys – their likelihood is twice as high as girls in urban areas. Furthermore, women and girls in rural areas generally work in agriculture, and their work is often unpaid/low paid or considered as a contribution to the family. When employed, women in rural areas tend to have shorter term and more insecure jobs than men in rural areas or people living in urban areas²⁹. This ultimately translates to being confined in technology-poor environments where it is difficult if not impossible to use digital technologies, or have any financial resources to go online.

Conclusions

The above suggests that the digital economy is important to all, especially women in developing countries as it helps them to leapfrog and contribute to the welfare and well-being of their families, and, more generally, to economic development. However, for the digital economy to become the empowerment tool for women, it is important that policies help remove the many root causes of the digital gender divide. Notably, this paper suggests the following recommendations:

- 1. Promote the uptake of STEM fields and occupations to all, especially women;**
- 2. Encourage more women to take up jobs in the digital economy; and**
- 3. Ensure Internet is accessible and affordable to all especially in rural areas where women are most populated.**

This will require the joint efforts of governments, companies, employers and workers to remove the cultural, economic and social barriers hindering women's participation in the digital economy. There are various women's organisations which support women in business. Governments may also provide support in creating organisations such as these, for instance, in state companies. National employers' organisations, in particular, can help ensure that national policymaking on gender issues cover the digital economy and that the right policy framework is in place to encourage the uptake of the digital economy by women. The IOE and its member organisations thus have an important role to play in contributing to the constructing effective policies and programs to ensure the inclusion of women's talent, skills, experience and energies in the economy in line with SDG 5.

²⁸ UN Statistics, 2016, "Table 7: Population by age, sex and urban/rural residence: latest available year, 2007-2016", Demographic Yearbook – 2016 (database), United Nations Statistics Division.

²⁹ UN Women Watch, 2018, "Facts & Figures: Rural women and the millennium development goals", webpage.



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International Organisation of Employers | Organisation Internationale des Employeurs | Organización Internacional de Empleadores
Avenue Louis-Casaï 71 – CH-1216 Geneva • T +41 22 929 00 00 F +41 22 929 00 01 • ioe@ioe-emp.com ioe-emp.org