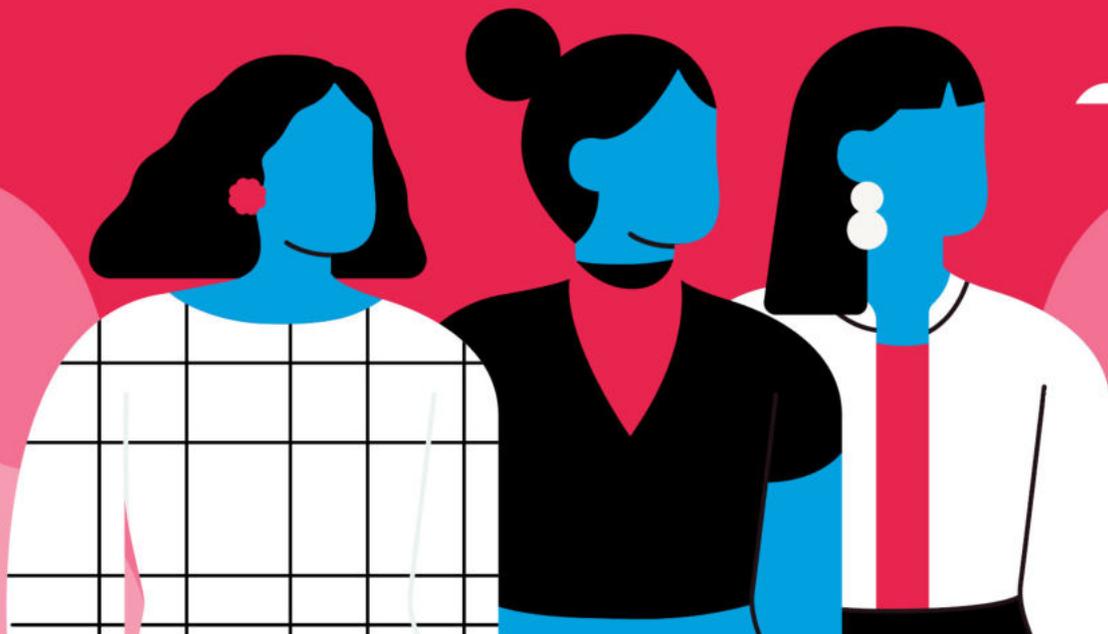




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WOMEN'S ECONOMIC EMPOWERMENT IN ARMENIA AND THEIR GREATER INTEGRATION INTO MARKETS AND THE DIGITAL ECONOMY

CHALLENGES AND OPPORTUNITIES AMID COVID-19



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ACRONYMS AND ABBREVIATIONS

CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
COVID-19	Coronavirus disease
EU	European Union
GDP	Gross Domestic Product
ICT	Information and Communication Technology
ILO	International Labour Organization
MSMEs	Micro, Small, and Medium-sized Enterprises
SDG	Sustainable Development Goals
STEM	Science, Technology, Engineering and Mathematics
STEP	Skills Towards Employability and Productivity
UN Women	United Nations Entity for Gender Equality and the Empowerment of Women
UNESCO	United Nations Educational, Science and Cultural Organization
WEE	Women's Economic Empowerment
WEPs	Women's Empowerment Principles

1. INTRODUCTION

Empowering women is key to reducing poverty, growing economies and building healthy and safe communities. Women's economic empowerment (WEE) is recognized as an important right, as a critical driver of economic growth and business success and as a precondition for poverty alleviation. "Women's economic empowerment includes women's ability to participate equally in existing markets; their access to and control over productive resources, access to decent work, control over their own time, lives and bodies; and increased voice, agency and meaningful participation in economic decision-making at all levels from the household to international institutions."¹

WEE is about ensuring that women can achieve their full potential - that they have the knowledge, tools and power to make decisions for themselves. This is only possible if women and girls have the necessary education, if women's work is consistently and appropriately valued and if women have the power to autonomously make and act on economic decisions.



The digital economy is becoming increasingly important to the economy as a whole. Sustainable Development Goal (SDG) 5 on gender equality and the empowerment of women encompasses the links between technology and women's rights. SDG 5 includes a specific target on utilizing technology and information and communication technology (ICT) to realize women's and girls' empowerment.²

Digital technology is an integral part of modern life, shaping every aspect from education to employment. The

'Fourth Industrial Revolution'³ is bringing advanced robotics, autonomous transport, artificial intelligence and machine learning, all of which will have major impacts on future labour markets. By 2050, half of currently existing jobs exist will likely disappear.⁴ Moreover, 90 per cent of future jobs will require some degree of ICT skills.⁵

Although digital technology has the potential to enhance social and economic outcomes, there is a significant gender divide. The digital gender divide is reflected in the lower numbers of women who have access to or who are using ICT compared with men, indeed, women are estimated to be 12 per cent less likely than men to be online, this gender digital divide being particularly more marked in least developed countries.⁶ The digital gender divide is also reflected in women's unequal access to science, technology, engineering and mathematics (STEM) education, the labour market and the digital economy.⁷ A 2019 Report of the Secretary-General identifies a number of root causes of the digital gender divide, including hurdles to education (e.g. access and affordability), the lack of technological literacy and inherent biases and sociocultural norms.⁸

In order to compete in the rapidly changing world of work, women and girls need access to education in STEM fields, particularly vital ICT skills. ICT provides opportunities to boost small business growth as the Internet creates opportunities for female entrepreneurs to enter global markets. Further, ICT can give women access to basic needs such as health care and education.

Digital technology has never been more integral to people's lives than today, a development accelerated by the coronavirus disease (COVID-19) crisis. Digital technologies have become an unavoidable means and a crucial tool for coping with the pandemic in terms of education,

1 UN Women: Facts and Figures: Economic Empowerment. Benefits of economic empowerment. <https://www.unwomen.org/en/what-we-do/economic-empowerment/facts-and-figures>

2 Target 5.b: Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.

3 "The Fourth industrial revolution is a term coined in 2016 by Klaus Schwab, founder and Executive Chairman of the World Economic Forum. It is characterized by the convergence and complementarity of emerging technology domains, including nanotechnology, biotechnology, new materials and advanced digital production technologies. The latter includes 3D printing, human-machine interfaces and artificial intelligence, and is already transforming the global industrial landscape." UNIDO. 'What is the Fourth Industrial Revolution?'. <https://iap.unido.org/articles/what-fourth-industrial-revolution>

4 <https://bigthink.com/philip-perry/47-of-jobs-in-the-next-25-years-will-disappear-according-to-oxford-university>

5 <https://www.weforum.org/agenda/2020/01/future-of-work/>

6 General Assembly Economic and Social Council, 'Progress Made in the Implementation of and Follow-Up to the Outcomes of the World Summit on the Information Society at the Regional and International Levels': https://unctad.org/en/publicationslibrary/a74d62_en.pdf

7 World Economic Forum, The gender gap in science and technology, in numbers: <https://www.weforum.org/agenda/2021/07/science-technology-gender-gap/>

8 General Assembly Economic and Social Council, 'Progress Made in the Implementation of and Follow-Up to the Outcomes of the World Summit on the Information Society at the Regional and International Levels': https://unctad.org/en/publicationslibrary/a74d62_en.pdf

work, banking, health care and the procurement of other “essential services”.⁹

In this context, it is essential to examine women’s and girls’ situation in relation to studying, working and using digital technology. Sociocultural stereotypes about gender roles, including stereotypes about gender and STEM, often results in self-selection bias which is one of the main reasons for girls opting out of STEM education and professions.¹⁰ Less exposure to STEM correlates with diminished technological literacy overall, which constitutes a major reason for women’s under-representation in the ICT employment sector.¹¹

The digital technology industry is growing much faster than other sectors. Worldwide, over 90 per cent of jobs already have some digital component; many more will soon require sophisticated digital skills. The European Institute for Gender Equality study found that narrowing the gender gap in STEM education could create up to 1.2 million more jobs and increase long-term gross domestic product (GDP) by up to USD 960 billion by 2050.¹²

The pandemic exposed the gender digital divide and showed that women and men are differently affected by large-scale disruptions to the global economy and trade. The World Trade Organization reports that because women constitute a larger share of employees in the sectors that have been affected by the pandemic, they are more likely to be negatively affected by pandemic-related trade disruptions than men (particularly in less developed and developing countries).¹³

While the COVID-19 pandemic constitutes a dual health and economic crisis, it also represents an opportunity to accelerate the digital revolution. In many sectors, digital transformation will remain a long-term or even permanent cost-reduction and time-saving development. Digital technology is a transformative force to global trade and commerce; its impacts on women differ due to the gender-specific needs and unique barriers that women

face as entrepreneurs, workers, traders and consumers. Leveraging digital technology to empower women can support women’s education, entrepreneurship and job creation, which will ultimately foster economic growth.

Studies have analysed how technology impacts women as entrepreneurs, workers and consumers.¹⁴ According to the International Finance Corporation globally, one-third of formal small and medium-sized enterprises are women-owned;¹⁵ this represents a significant economic contribution to GDP growth and job creation.

Female entrepreneurs face challenges related to accessing the support services they need to grow, such as accessing networks, training, financing and markets.¹⁶ Digital technologies can support female entrepreneurs in capacity-building and information sharing; e-commerce platforms can bring them closer to markets and can facilitate meeting their financing needs.

Technology also affects women as workers. For example, it will eradicate many jobs in lower-skilled sectors, where women make a higher share of the labour force (e.g., jobs in manufacturing and administrative support). In contrast, many jobs will be transformed to require technological skills, thus creating new opportunities for women. Empowering women with the necessary knowledge and skills to benefit from the digital transformation will enable them to seize these opportunities.

Technology can also benefit women as consumers by saving them time, reducing transaction costs, providing access to information, facilitating service delivery and enhancing communication.

In conclusion, COVID-19 has accelerated the digital transformation of the economy, which can potentially create new opportunities. Policies need to be in place to ensure that women benefit from the digital economy.

9 ILO definition: “essential services” means services, by whomsoever rendered, and whether rendered to the Government or to any other person, the interruption of which would endanger the life, health or personal safety of the whole or part of the population;” <https://www.ilo.org/legacy/english/dialogue/ifpdial/llg/ch5/ex4.htm>

10 UNESCO, Cracking the code: Girls’ and Women’s Education in Science, Technology, Engineering and Mathematics (STEM), 2017. <https://unesdoc.unesco.org/ark:/48223/pf0000253479>

11 World Economic Forum, The Gender Gap in Science and Technology in Numbers, 2021: <https://www.weforum.org/agenda/2021/07/science-technology-gender-gap/>

12 European Institute for Gender Equality, Economic benefits of gender equality in the EU: how gender equality in STEM education leads to economic growth, <https://eige.europa.eu/gender-mainstreaming/policy-areas/economic-and-financial-affairs/economic-benefits-gender-equality/stem>

13 World Trade Organization, The economic impact of Covid-19 on women in vulnerable sectors and economies, 2020: https://www.wto.org/english/news_e/news20_e/info_note_covid_05aug20_e.pdf

14 ILO, Skills and entrepreneurship bridging the technology and gender divide: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---gender/documents/publication/wcms_100840.pdf; Women Managers and Entrepreneurs and Digitalization: On the Verge of a New Era or a Nervous Breakdown? 2019: <https://timreview.ca/article/1246>; How Technology Is Helping Women-Owned Businesses Around the Globe Grow, 2019: <https://community.connection.com/how-technology-is-helping-women-owned-businesses-around-the-globe-grow/>

15 <https://www.ifc.org/wps/wcm/connect/44b004b2-ed46-48fc-8ade-aa0f485069a1/WomenOwnedSMes+Report-Final.pdf?MOD=AJPERES&CVID=kiiZDZ>

16 International Trade Center, Women Entrepreneurs: An Action Plan to ‘Build Back Better’, 2020. https://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/W20%20Policy%20brief_Beijing25_20201021_web.pdf

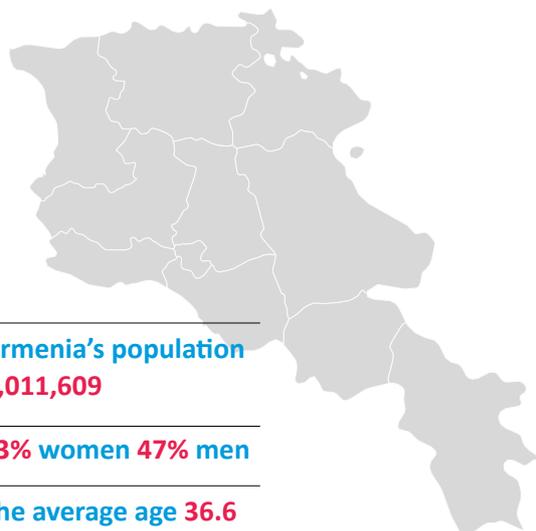
2. PURPOSE AND SCOPE OF THE HANDBOOK



This Handbook examines the importance of the digital economy, WEE, and emergent challenges and opportunities amid the COVID-19 crisis. It offers approaches to empowering women and girls in their education, career and entrepreneurial choices. It explores the relationship between the digital economy/ICT sector and WEE in Armenia, reviews gender challenges in the digital economy and labour market and identifies trends in women and girls' digital participation (with a special focus on COVID-19). It provides guidance on how STEM, business and digital skills can be utilized to empower women and girls for their greater participation in labour markets and the digital economy. This Handbook also discusses key gender bottlenecks in WEE that are related to the digital economy and explores four main topics from a gender equality and women's empowerment perspective: digital literacy, employment in the ICT sector, e-commerce opportunities and digital entrepreneurship.

The Handbook concludes with concrete recommendations for policymakers, development partners, public and private-sector entities and for educational/vocational institutions. Recommendations are presented under three priority areas: digital skills development, women's entrepreneurship in the digital economy, and integrating the Women's Empowerment Principles (WEPS) in private companies in the digital sector. The recommendations include policy and programme measures to break through the equality threshold and empower a greater number of women and girls in STEM, digitalization and entrepreneurship.

3. COUNTRY CONTEXT



Armenia's population is 3,011,609 people; 53 per cent are women and 47 per cent are men. The average age is 36.6 years. The biggest age group is 25 to 54 years old, which represents 43 per cent of the population. The 15 to 24 years age group represents 12 per cent of the population. The urban population represents 63 per cent of the country's population, with more than a third of the total population living in the capital city. Armenia has a high literacy rate: 99.7 per cent of the total population, with almost no gender differences.¹⁷

Armenia ranks 114th out of 156 countries in the Global Gender Gap Index 2021,¹⁸ and reveals gaps in the economic, social and political spheres. Except for Tajikistan and Turkey, the country's overall Global Gender Gap Index¹⁹ ranking is lower than all other countries in Eastern Europe and Central Asia. In the World Bank's 2021 Women, Business and the Law Index, which rates countries' outcomes in terms of achieving WEE and how their legislation influences women's equality of opportunity, Armenia has a relatively good score of 82.5 out of 100 points, which is close to the average of high-income countries (85.9). However, the Index reveals challenges in Armenia related to women's entry into the labour force, the level of occupational segregation and the gender wage gap.

3.1 LEGISLATION AND POLICIES ON WEE

The Constitution of the Republic of Armenia²⁰ guarantees equal rights to women and men. The Law Providing Equal Rights and Equal Opportunities for Women and Men (2013) supports equality of opportunity and equal treatment before the law, with an emphasis on the public sector, labour, employment, health, education and voting rights (Articles 1 and 2) and prohibits unequal pay and working conditions as a form of direct discrimination (Article 6).²¹ Armenia's Labour Code guarantees women certain rights, such as equal remuneration for work of equal value (Article 178).²² However, the Labour Code does not include a clear rule against discrimination in recruitment and employment conditions.

Notwithstanding existing legislative provisions, the CEDAW Committee, in its 'Concluding Observations on the Combined Fifth and Sixth Periodic Reports of Armenia',²³ noted that the government had not yet put in place comprehensive legal provisions that prohibit discrimination against women. In addition, the Committee expressed concern that Armenia's "preference for gender-neutral policies and programmes ... may lead to inadequate protection for women against direct, as well as indirect discrimination, hinder the achievement of formal and substantive equality between women and men, and result in a fragmented approach to the recognition and enforcement of women's human rights."²⁴

On WEE and women's employment, the Committee "is concerned about the persistent vertical and horizontal gender segregation in the labour market, the high unemployment rate among women, and their concentration in part-time work and in low-paid jobs in the informal sector. The low representation of women in management positions and the persistent gender wage gap. It is also concerned by the existence of a list of professions declared dangerous for women, which reinforces discriminatory stereotypes and occupational segregation. Moreover, the absence of legislation on sexual harassment and therefore of disaggregated data on sexual harassment in the workplace is also an important source of concern for the Committee."²⁵

17 Data as of July 2021. Armenia Demographics Profile: https://www.indexmundi.com/armenia/demographics_profile.html

18 http://www3.weforum.org/docs/WEF_GGGR_2021.pdf

19 <https://openknowledge.worldbank.org/bitstream/handle/10986/35094/9781464816529.pdf?sequence=7&isAllowed=y>

20 <https://www.president.am/en/constitution-2015/>

21 <https://www.arlis.am/documentview.aspx?docID=83841>

22 <http://www.irtek.am/views/act.aspx?aid=150003>

23 <https://www.refworld.org/docid/583863b34.html>

24 *Ibid.*

25 <https://www.refworld.org/docid/583863b34.html>

Box 1: Key International Frameworks Promoting STEM Education, WEE and the Digital Economy

Legal instrument	Related Principles
Convention on the Elimination of All Forms of Discrimination against Women (CEDAW)²⁶	<ul style="list-style-type: none"> • Article 10: Rights of girls and women to non-discrimination in education • Article 11: Rights of girls and women to non-discrimination in employment • CEDAW General Recommendation No. 36: Rights of girls and women to have equal access to education
The Beijing Platform and Declaration for Action²⁷	<ul style="list-style-type: none"> • Strategic Objective B: Education and training of women • Strategic Objective F: Women and the economy • Strategic Objective K: Women and the environment
International Labour Organization (ILO) Conventions²⁸	<ul style="list-style-type: none"> • Equal Remuneration Convention (No. 100) • Discrimination (Employment and Occupation) Convention (No. 111) • Workers with Family Responsibilities Convention (No. 156) • Maternity Protection Convention (no 183)
Sustainable Development Goals²⁹	<ul style="list-style-type: none"> • Goal 4: Ensure inclusive and equitable quality education and promote lifelong opportunities for all • Goal 5: Achieve gender equality and empower all women and girls • Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all • Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and promote innovation

In 2019, Armenia adopted the ‘Gender Equality Strategy and Action Plan for 2019–2023’.³⁰ One of the priorities of the strategy is WEE, including the elimination of gender discrimination in the socio-economic sphere and the enhancement of economic opportunities for women

(including addressing work/family balance and promoting women’s entrepreneurship); and the full and effective participation and expansion of equal opportunities for women and men in education and science, and balanced gender representation in all the levels of education.

The Government of Armenia planned activities for the elimination of gender discrimination in the socio-economic sphere and to support WEE. Planned activities include:

	Implementing a vocational training programme for young mothers who are not competitive in the labour market and have no profession;		Initiating awareness-raising campaigns to address the stereotypes existing in society with regards to work and family responsibilities;
	Strengthening childcare services;		Supporting childcare by including families with preschool children within the social case management system;
	Developing and implementing local social programmes to address economic problems (based on the analyses to be carried out);		Supporting micro, small, and medium-sized enterprises (MSMEs) and start-ups by providing business training and consulting;
	Implementing state programmes that support job creation for women in industrial sectors; and		Providing capacity-building and consulting services to women farmers.

26 CEDAW: <https://www.ohchr.org/en/professionalinterest/pages/cedaw.aspx>; CEDAW Gr. No.36: https://tbinternet.ohchr.org/Treaties/CEDAW/Shared%20Documents/1_Global/CEDAW_C_GC_36_8422_E.pdf

27 Beijing Platform for Action: https://www.un.org/en/events/pastevents/pdfs/Beijing_Declaration_and_Platform_for_Action.pdf

28 International Labour Organization Conventions <https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12000:0::NO>

29 SDG Metadata: <https://unstats.un.org/sdgs/metadata/>

30 <http://www.irtek.am/views/act.aspx?aid=151906>

The Government of Armenia planned activities to ensure the full and effective participation of women in specifically education and science. Planned activities include:



Including a gender component in the curriculum of the state standards of general education;



Strengthening the civic education component in schools, including human rights, democracy and gender equality;



Providing trainings and discussions on gender equality to the administrative and pedagogical staff of primary, secondary and vocational educational institutions; and



Developing and providing informal trainings to professional and general educational institutions on thematises related to the elimination of gender stereotypes in the choice of professions and women's leadership.

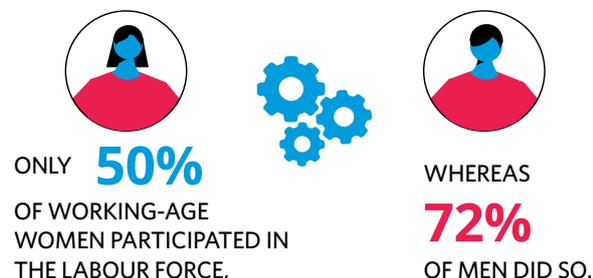
Armenia's 'Development Strategy for 2014-2025'³¹ is based on four priorities aimed at increasing welfare in society: high-quality job creation; development of human capital; improvements to the social protection system; and modernization of public administration and governance. In May of 2018, new priorities were added in order to ensure inclusive economic development, including the promotion of science, technology and innovation.

Despite implementing state programmes that target women's employment and labour market inclusion over the past several years, gender inequalities persist in relation to labour market participation, horizontal and vertical segregation in the labour market, gender discrimination in labour relations and gender disparities in education (especially in the STEM fields). The COVID-19 pandemic has exacerbated these inequalities.³²

3.2 WOMEN IN THE LABOUR MARKET

Legislation in Armenia provides formal guarantees of women's right to equality. Women's right to equality is becoming more accepted as a social norm.³³ However, prevailing gender stereotypes limit women and men to defined social, domestic and economic roles.³⁴ Women's roles are associated with domestic and childcare tasks. In contrast, men are perceived as the primary income earner; their parenting role is less valued.

Women's labour force participation in Armenia remains lower than that of men; this difference has remained relatively consistent since 2000. According to 2020 data,



In 2019, 50 per cent of women aged 15-74 had no job and did not look for a job, mainly being engaged in unpaid household and care activities (this applied to 45 per cent of women in 2011).³⁵ Women's long-term unemployment rate is as high as men's reaching 50 per cent in 2020.³⁶



Access to higher education is insufficient to close the gender gap in economic activity. Although the inactivity rate falls, as educational attainment level raises, gender gap doesn't close. The gender gap is narrowest for those with tertiary education (17.3), compared to the

31 https://eeas.europa.eu/sites/default/files/armenia_development_strategy_for_2014-2025.pdf

32 Review of the Implementation of the Beijing Declaration and Platform for Action Beijing+25 by Armenia: <https://www.am.undp.org/content/armenia/en/home/library/review-of-the-implementation-of-the-beijing-declaration-and-pla.html>

33 <https://www.strategieast.org/womens-right-to-equality-becoming-more-accepted-as-a-social-norm-in-armenia/>

34 CEDAW Committee, Concluding observations on the combined fifth and sixth periodic reports of Armenia, 2016: <https://www.refworld.org/docid/583863b34.html>

35 Women and Men in Armenia, Armstat, 2020;

36 Women and Men in Armenia, Armstat 2021

gender gap for those with secondary education (20.2), however even women with higher education do not join the labour force at the same rate as men. Although the share of the Armenian population with tertiary education is higher for women than for men, higher education does not significantly correlate with an increased chance of being in employment.³⁷

In addition to existing stereotypes that attribute childcare and domestic work to women, there is a lack of childcare services. For example,

 ONLY **30%** OF PRESCHOOL-AGED CHILDREN ARE ENROLLED IN SCHOOL

(the percentage is as low as 17 per cent in rural areas).³⁸ The most common of non-admission is absence of enrolment spaces in kindergartens, as number of centers for pre-school education is insufficient in Armenia, especially in rural areas.³⁹ As a result, among the 25 to 29-year-old age bracket, almost five times more women are out of the labour force and economically inactive compared to men (83 per cent compared to 17 per cent). **Lack of childcare services disproportionately affects women; women spend most of their time on household chores and childcare, often more than twice the amount of time that men spend.** Overall,

WOMEN SPEND **59 HOURS** WEEKLY ON DOMESTIC WORK,  WHILE MEN ONLY SPEND **28 HOURS**.⁴⁰

Indeed, women are much more likely than men to state that childcare and family responsibilities prevent them from being active in the labour force.⁴¹

There is also a gender difference in youth's 'not in education and not in employment' rates. In the 15 to 29-year-old age bracket, almost 42 per cent of women and 21 per cent of men are neither in education nor in employment.⁴² This significant disparity can be partially attributed to women's disproportionately heavy burden of unpaid care work compared to men.

There is a gender gap in women's participation in entrepreneurial activities. The development of MSMEs is an important area for advancing WEE. The absolute majority of Armenian firms are 'SMEs' and comprise more than 98 per cent of all enterprises, accounting for 43 per cent of the total business employment.⁴³ Programmes to support women's entrepreneurship have been established since 2013, increasing women's share of MSMEs ownership.⁴⁴ However, only 34 per cent of all firms in Armenia have female co-owners, and only 24 per cent of firms have female top managers.⁴⁵

 Several barriers hinder women's entry into business. Based on a 2021 women entrepreneurship study in Armenia,⁴⁶ the main obstacles are access to finance, political instability, lack of skills, lack of time and difficulties to balance work and family life, access to land, access to markets, lack of professional networks and the lack of Internet and online presence.

 According to the *Global Findex database*, 48 per cent of adults in Armenia had a bank account in 2017;⁴⁷ the percentage was 15 per cent higher for men than for women. In the World Bank's 'Doing Business 2020', Armenia is ranked 48th in the 'getting credit' criterion.⁴⁸ Banks are the main source of external funding for MSMEs, mostly through loans. Many MSMEs are discouraged from applying for a loan due to high-interest rates, complex procedures and collateral requirements. Long-term funding is even more problematic.⁴⁹

Although legislation provides equal opportunities for opening and owning a business, collateral requirements represent a bigger barrier for women compared to men. Despite equal inheritance rights for sons and daughters, in practice, land and property ownership among women is low. Local custom often results in sons inheriting property and money, thus limiting women's land, business, and capital ownership.⁵⁰

37 World Bank, *Work for a better future in Armenia, an analysis of jobs dynamics*, 2019

38 Asian Development Bank, *Armenia Country Gender Assessment*, 2019

39 Save the Children, *Assessment on access of children to pre-school education services in Armenia*, 2017

40 Un Women, Armstat, *Analysis of the Gender Pay Gap and Gender Inequality in the Labour Market in Armenia*, 2020

41 Asian Development Bank, *Armenia Country Gender Assessment*, 2019

42 *Women and Men in Armenia*, Armstat, 2020

43 UNIDO, *Country Diagnostic report Armenia*, 2021

44 Asian Development Bank, *Armenia Country Gender Assessment*, 2019

45 *The Global Gender Gap Report*, 2021

46 IFC, *Women Entrepreneurship Study in Armenia*, 2021

47 The Global Findex Database 2017: https://globalfindex.worldbank.org/node?field_databank_country_target_id=7

48 World Bank, *Doing Business*, 2020: <https://documents1.worldbank.org/curated/en/688761571934946384/pdf/Doing-Business-2020-Comparing-Business-Regulation-in-190-Economies.pdf>

49 UNIDO, *Country Diagnostic report Armenia*, 2021

50 World Bank, *Armenia Country Gender Assessment*, 2016

3.3 LABOUR MARKETS' HORIZONTAL AND VERTICAL SEGREGATION

Horizontal and vertical segregation characterize Armenia's labour market.⁵¹ Education, health care and social work are female-dominated employment sectors; employment sectors such as agriculture, forestry and construction are male-dominated.⁵² Women in Armenia are 11 per cent less likely than men to work in highly paid sectors (e.g., financial intermediation, manufacturing or transport).⁵³

The concentration of women in a few sectors limits economic growth at a time when Armenia needs to diversify its employment sectors, particularly towards the sciences and ICT.

Women are less likely to be managers. Only 4 per cent of employed women work as managers (29 per cent of all managers), whereas 8 per cent of employed men work as managers (71 per cent of all managers).⁵⁴

Women's presence in the ICT sector is relatively new and growing. Currently, women constitute 42 per cent of the ICT workforce; men represent 58 per cent.⁵⁵ Thirty-eight per cent of technical specialists of ICT companies in Armenia are women; 62 per cent are men.⁵⁶

Women are more likely to choose careers that are associated with traditional female roles or that allow them to fulfil their family care burdens. Perceptions about occupational choices limit women's employment and further reinforce stereotypes about what roles are appropriate for women and men. Such stereotypes also have an impact on men who are oriented away from caregiving-related jobs. Occupational stereotypes and family responsibilities also limit women's advancement to higher-level positions; ambitions for professional advancement are

perceived as less appropriate for women than for men.⁵⁷ Such barriers contribute to the vertical segregation - glass ceilings - for women, as they are often regarded as not having the traits required in high-level positions.

In Armenia, the total informality rate of work is about 46 per cent.⁵⁸ Women are less likely to be engaged in informal employment than men (22 per cent and 13 per cent, respectively)⁵⁹.

Having children is associated with a higher rate of informal employment; 28 per cent of non-working women stay at home because of childcare responsibilities, while only 1 per cent of non-working men report the same.⁶⁰ Marriage was also cited as contributing to a high rate of unemployment for women; 22 per cent of unemployed women reported that their spouse wants them to stay home, the same was reported by 2 per cent of men.⁶¹

A UN Women 2018 study⁶² examined the factors predicting women's entry in the informal employment, which concluded that having children or being married is associated with a higher rate of informal employment for women, while women with a tertiary-level of education are much less likely to be in informal employment.

51 CEDAW Committee, Concluding observations on the combined fifth and sixth periodic reports of Armenia, 2016: <https://www.refworld.org/docid/583863b34.html>

52 USAID/Armenia, Gender Analysis Report, 2019: <https://banyanglobal.com/resource/usaidd-armenia-gender-analysis-report/>

53 UN Women and SDC. Women's Economic Inactivity and Engagement in the Informal Sector in Armenia, 2019.

54 International Labour Organization. Statistics and Databases. <https://www.ilo.org/global/statistics-and-databases/lang--en/index.htm> (accessed 1 August 2019).

55 Government of Armenia, Statistical Committee. 2018. Labour Market Survey. Yerevan.

56 Enterprise Incubator Foundation. 2018. Armenia ICT Sector: State of the Industry Report. Yerevan. (Survey of the 750 information and communication technology (ICT) companies operating in Armenia)

57 World Bank, Republic of Armenia Levelling the STEM Playing Field for Women: Differences in Opportunity and Outcomes in Fields of Study and the Labour Market, Washington, DC., 2017: <https://openknowledge.worldbank.org/bitstream/handle/10986/26766/ACS21924-WP-P157930-PUBLIC-ArmeniaGenderandSTEMReportFINAL.pdf?sequence=1&isAllowed=y>

58 World Bank, Work for a better future in Armenia, an analysis of jobs dynamics, 2019

59 ILO (2020), Rapid assessment of the employment impact and the polici responses on the Covid-19 pandemic in Armenia

60 UN Women (2018), Women's economic inactivity and engagement in the informal sector in Armenia, causes and consequences

61 Ibid.

62 UN Women (2018), Women's economic inactivity and engagement in the informal sector in Armenia, causes and consequences

3.4 GENDER DISCRIMINATION IN LABOUR RELATIONS



Gender wage gaps result from systemic gender discrimination that affects women’s positions in the workforce. Women’s domestic roles result in them occupying more part-time and lower-paid positions than men do. Gender stereotypes about occupations cause women to be concentrated in lower-paying fields. The lower representation of women in management also contributes to wage gaps. It is crucial to address these factors by changing attitudes about gender roles, improving women’s access to more occupations and promoting their career advancement opportunities.

Armenia’s gender pay gap is 2.5 times higher than the European Union (EU) average, and it is the second-greatest gender wage gap among 17 upper-middle-income countries.⁶⁴ Regionally, the gender wage gap is 49 per cent in Azerbaijan , 36 per cent in Georgia, and 16 per cent in Turkey.⁶⁵

The gender pay gap in the ICT sector is 36 per cent. The highest gaps are in the male-dominated financial and insurance sector (47 per cent) and information and communication sector (37 per cent).⁶⁶



Armenia’s legal code grants equal economic rights to men and women. However, the code does not prohibit employers from asking personal questions to identify - and discriminate against — mothers who have children or women planning on having children.

Armenia does not have any legislation related to sexual harassment. According to a country gender analysis by the United States Agency for International Development (USAID),⁶⁷ sexual harassment is not seen as an issue that warrants discussion or policy development. Data on workplace sexual harassment is not available in Armenia.

63 Women and Men in Armenia, Armstat, 2020

64 The European Commission. The Gender Pay Gap Situation in the EU. https://ec.europa.eu/info/policies/justice-and-fundamental-rights/gender-equality/equal-pay/gender-pay-gap-situation-eu_en; International Labour Organization. 2018. Global Wage Report 2018/19: What Lies Behind Gender Pay Gaps. Geneva.

65 Azerbaijan: <https://unece.org/statistics/press/unece-calls-decisive-action-close-gender-pay-gap-region>; Georgia: Geostat, *Women and men in Georgia, 2020*; Turkey: https://www.ilo.org/ankara/news/WCMS_757055/lang--en/index.htm

66 Armstat, Women and Men in Armenia, 2021.

67 USAID/Armenia, Gender Analysis Report, 2019

Gender norms that associate women with unpaid care and domestic work roles have major impacts on their time poverty. Only about 30 per cent of children in Armenia are enrolled in preschool.⁶⁸ Further, primary school hours finish early in the afternoon, leaving women with minimal affordable childcare options. On average, in every age group men spend more time in paid activity (44 hours per week for men in the 25 to 34 years age group, and 37 hours for women in the same age group). At the same time, women spend, on average, 59 hours per week on domestic work, while men only spend 28 hours.⁶⁹

3.5 GENDER DISPARITIES IN STEM EDUCATION

In Armenia, the differences in female and male participation in different types of tertiary education remain wide because gender stereotypes about education and career paths affect both girls' and boys' early life choices. For example, female students are much less likely to enter vocational training than male students. However, women are more likely than men to enrol in university education. In 2020-2021, among students in higher educational institutions conducting first degree education programs, 53.4 per cent are women and 46.6 per cent are men. Men's number at this educational level is significantly higher on the faculties of engineering, information and technology, industry and technology, physical sciences, and slightly higher in the faculty of mathematics and statistics.⁷⁰

Among master's degree specializations, 68.9 per cent of the graduates were women in 2020 and 31.1 per cent were men (66.9 and 33.1 per cent respectively among enrolled students).⁷¹

The choices women and men make in terms of field of study reveal gender differences. Women are the large majority of students in arts, history, and social fields (e.g. social work, education and journalism). Female students represent only 35 per cent of students in the ICT sector in first-degree educational programmes and about 28 per cent of students in middle vocational educational institutions. Similar gaps exist in other sectors, such as engineering (10 per cent female students) and industry and technology (about 22 per cent female students). The gender balance is almost equal in the fields of mathematics and statistics.⁷²

The Labour Code does not contribute to equalizing the distribution of unpaid domestic and care work. Women are entitled to 140 days of maternity leave (180 days under some circumstances) and is paid in accordance to women's salary. Women can also request up to three years unpaid leave after the birth of a child. Men can only take five days of paternity leave within 30 days of their child's birth. USAID's gender analysis highlights that working fathers in Armenia tend not to take paternity leave, as childcare is seen mostly as a woman's responsibility, adding another barrier to women's employment.

Another problematic issue is the education system's lack of relevance and its lack of ability to equip the population with the skills needed to integrate into higher-productive sectors. For example, although the ICT and high-tech sectors are two of the fastest-growing sectors in Armenia, the size of these programmes within vocational education and training is small.

A World Bank study⁷³ found that employers have difficulty finding skilled workers in skills intensive service sectors. At the same time, employees in the ICT sector and financial and insurance markets, reported that they need more training for higher technical skills. This highlights that the educational system is not prepared to meet the rise in demand for more skilled workers in skills intensive sectors. Skills mismatches and gaps in skills affect job creation. Education, particularly in STEM fields, is critical for the advancement of innovation. A highly skilled workforce with a solid post-secondary education is a prerequisite for innovation and growth.⁷⁴



68 <https://www.unicef.org/armenia/en/node/521>

69 UN Women, Armstat, Analysis of the Gender Pay Gap and Gender Inequality in the Labour Market in Armenia, 2020

70 Women and Men in Armenia, Armstat, 202

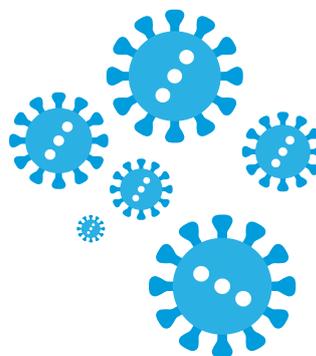
71 Ibid.

72 Women and Men in Armenia, Armstat, 2021

73 World Bank report "Future Armenia: Connect, Complete, Prosper

74 Ibid.

3.6 HOW ARMENIA RESPONDED TO THE SOCIO-ECONOMIC IMPACTS OF THE COVID-19 PANDEMIC



In Armenia, women's economic security has been hit hard, impacting employment and income.⁷⁵ The closure of non-essential businesses had an immediate impact on the economic situation, resulting in lost jobs and decreased working hours. This particularly affected women, as they disproportionately work in insecure and informal labour settings.

Among all groups of employed women, self-employed women suffered the worst consequences. The pandemic increased women's unpaid care and domestic work burdens, especially for married women with children. According to a socio-economic impact assessment of COVID-19 in Armenian communities⁷⁶, 28 per cent of women declared that no one could help them in household chores or caring for family during the pandemic.

The working hours of frontline workers (doctors, nurses and care providers) greatly increased during this period. Because most frontline workers are women, they were at higher risk of physical and mental stress.

Almost half of the registered MSMEs in Armenia were working in sectors hit harder by the crisis, resulting in immediate, strong shocks. Women-led MSMEs and women employed by MSMEs were particularly affected because the majority of them were operating in the sectors most impacted by lockdown restrictions (e.g. tourism, food service, transport and beauty services). The COVID-19 pandemic has also affected social enterprises run by civil society organizations supporting home-based, non-registered businesses that engaged vulnerable groups of women (e.g. single parents, women with disabilities, women subjected to domestic violence). MSMEs in urban areas, Yerevan in particular, introduced staffing changes to a greater extent than MSMEs in rural areas. In rural areas, MSMEs (mostly those involved in agriculture) showed greater resilience to the crisis; staffing changes in these communities were the lowest.⁷⁷

The Government of Armenia took a number of social and economic stimulus measures to mitigate the gendered impacts of the COVID-19 pandemic. Preschools and child-care service providers were explicitly included in government-sponsored emergency business support measures. Moreover, support for socially disadvantaged families (households entitled to family and social benefits) was offered in the form of a one-time assistance payment at the rate of 50 per cent of the amount of the social benefit.

Armenia developed measures that specifically address the situation of pregnant women during the pandemic. A one-time benefit was made available, under certain conditions, for pregnant women and single pregnant women (women not in a registered marriage, and those who are divorced or whose spouses are deceased). Conditions included that they had no paid employment as of 30 March 2020, and that they were facing social difficulties caused by challenges in the labour market as a result of the COVID-19 outbreak.⁷⁸

Some support measures were designed for the business sector, such as co-financing, refinancing and subsidizing entrepreneurs with good tax and credit records; providing loans to small businesses operating in the sectors heavily hit by the pandemic (e.g. the processing industry, accommodation and public catering, transportation and storage, tourism services, health care and other service sectors); and providing effective job support in the form of a one-time grant in the amount of the salary of every fifth employee for companies with two to 50 employees.⁷⁹

Despite some preliminary results, the full extent of the pandemic's gendered impacts on the MSME sector has yet to be assessed. An in-depth gender impact assessment would identify existing gender gaps and vulnerabilities for specific target groups and would determine proper measures to be planned and implemented.

75 The subchapter is based on "Socio-economic Impact Assessment of the COVID-19 Outbreak in Armenian Communities", UNDP 2020 and "The Impact of COVID-19 on Women's and Men's Lives and Livelihoods in Europe and central Asia: Preliminary Results from a Rapid Gender Assessment", UN Women, 2020

76 UNDP, socio-economic impact assessment of COVID-19 in Armenian communities, 2020: <https://armenia.un.org/index.php/en/134665-socio-economic-impact-assessment-covid-19-outbreak-armenian-communities>

77 UNDP, socio-economic impact assessment of COVID-19 in Armenian communities, 2020: <https://armenia.un.org/index.php/en/134665-socio-economic-impact-assessment-covid-19-outbreak-armenian-communities>

78 UNECE, COVID-19 Response Policies and the Care Economy: Mapping economic and social policies in the ECE region, 2021 https://unece.org/sites/default/files/2021-01/Mapping%20ECE%20Care%20COVID_final_SDGU_with%20covers.pdf

79 <https://home.kpmg/xx/en/home/insights/2020/04/armenia-government-and-institution-measures-in-response-to-covid.html>

4. THE DIGITAL ECONOMY AND WEE

According to a World Bank assessment,⁸⁰ Armenia has the potential to pursue digital opportunities; several improvements should be made to facilitate this progress. According to the assessment, Armenia could do more to position its businesses, households and individuals to integrate into and benefit from the opportunities created by the global digital economy.

Armenia has an Internet penetration rate of 68 per cent.⁸¹ The country has a developed mobile phone market and modern, digitalized communication lines across the country. However, in rural areas, minimal fixed broadband infrastructure leaves a significant number of the most marginalized segments of the population without Internet access.

The COVID-19 pandemic and the resultant increase in the number of employees and businesses working remotely has shown the importance of digital economies. This suggests that digital skills will be among the most demanded in terms of education and the labour market.

4.1 DIGITAL LITERACY AND GENDER EQUALITY

As digital technologies are becoming increasingly indispensable to an individual's well-being, they open new pathways to further skills development and economic opportunities. Assessments by the United Nations Educational, Science and Cultural Organization (UNESCO) have found that digital skills and competences have moved from optional to essential. However, women and girls are often left behind; the gender gap in digital skills is growing.⁸²

- Higher-level skills that facilitate the use of digital technologies in empowering and transformative ways.⁸³

Digital skills are now considered to be critical to job and social inclusion. However, the persistent digital skills gender gap is apparent from the lowest skill proficiency levels (such as using apps on a mobile phone) to the most advanced skills (such as coding computer software to support the analysis of large data sets). UNESCO estimates that men are four times more likely than women to have advanced ICT skills. The gender divide widens as technologies get more sophisticated and expensive.

4.1.1 DEFINING DIGITAL SKILLS

Developing digital literacy skills is a specific target within SDG 4, 'Ensure Inclusive and Equitable Quality Education and Promote Lifelong Learning Opportunities for All'. UNESCO defines digital literacy as "the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital devices and networked technologies for participation in economic and social life," with three tiers of skill levels:

- Basic functional skills that enable access and engagement with digital technologies;
- Generic skills that allow for meaningful and beneficial use;

4.1.2 DIGITAL SKILLS GENDER DIVIDE AND ITS CAUSES

Even women who use digital technologies are statistically less likely to know how to leverage devices and Internet access to their full potential.⁸⁴ Several challenges can limit women's and girls' access to digital literacy, such as patriarchal cultures that often prevent women and girls from developing digital skills; a lack of financial independence to purchase digital technologies or to pay for Inter-

80 World Bank World Bank, Partnership Framework for the Republic of Armenia, 2019 World Bank World Bank, Partnership Framework for the Republic of Armenia, 2019

81 The 'Internet penetration rate' corresponds to the percentage of the total population of a given country or region that uses the Internet. Digital Armenia 2021. <https://datareportal.com/reports/digital-2021-armenia>

82 UNESCO, "I'd blush if I could, closing gender divides in digital skills through education", 2019. <https://en.unesco.org/id-blush-if-i-could>

83 <https://unesdoc.unesco.org/ark:/48223/pf0000265537>

84 UNESCO, "I'd blush if I could, closing gender divides in digital skills through education", 2019

net connectivity; and the pervasive stereotype of technology as a male domain that affects girls' confidence in their digital skills from a young age.

a. Gender divide in basic functional digital skills and generic skills

The World Bank's Skills Towards Employability and Productivity (STEP) survey⁸⁵ measures skills in different domains.⁸⁶ Measures of ICT used in everyday activities include the frequency with which an individual uses a computer at work and the complexity of computer-related tasks required with regards to a person's job. STEP's overall score for Armenia is low. STEP survey also observed significant gender gaps in skills that represent bottlenecks to digitalization, such as analytical and interpersonal skills, and skills that are necessary to cope with the digital transformation of occupations, such as ICT skills and socio-emotional skills.⁸⁷

The STEP dataset comprises individuals who reside in urban areas. Because the urban population differs from the rural population in terms of the level of formal education and skill endowments, there are likely larger gender differences in rural areas. However, there is no comparable nationwide dataset available for analysis.

b. Gender divide in higher-level digital skills

Worldwide, women's low participation in STEM education and, consequently, STEM careers remain a major concern. Narrowing the gender gap in STEM education is crucial not only for WEE, but also for sustainable economic development. The European Institute for Gender Equality study found that narrowing the gender gap in STEM education could create up to 1.2 million more jobs and increase long-term GDP by up to USD 960 billion by 2050.⁸⁸

Technology-related gender stereotypes affect career choices. At the primary and lower secondary education levels, the gender gap in mathematics and science is non-existent. Some analyses have described that even if girls scored better in computer and information literacy, a girls' perceived 'self-efficacy' in advanced ICT skills was lower.⁸⁹

c. Bridging the digital skills divide matters

The proliferation of digital technology and digital services has made digital skills a prerequisite for full participation

in society. Inability to access the Internet constitute disadvantages in many regards. Digital skills are becoming essential for financial inclusion.

Accessing online markets and micro-loans can empower women to start income-generating businesses. In the labour market, women who do not have digital skills risk being left behind.

ICT skills also benefit women engaged in agriculture by helping them to learn new farming techniques, to understand and predict crop pricing and to anticipate weather conditions. Digital technologies enable women to access online education, to start their own businesses or to participate in the informal economy.

Studies indicate that enhancing women's ICT skills can narrow the gender pay gap. Labour market returns for women with ICT skills are, in general, considerably higher than the returns generated by other skills. For example, in the EU, the ICT sector's gender wage gap (13 per cent) is smaller than other sectors. ICT skills are also crucial for career advancement, as the most skilled occupations exhibit a more intensive use of ICT than less-skilled occupations. Women who develop more advanced digital skills will also have access to the rapidly expanding ICT job market, which tends to produce jobs that are more highly compensated than those in other fields.⁹⁰

4.2 WOMEN'S EMPLOYMENT IN THE DIGITAL ECONOMY



85 World Bank, Armenia - Skills toward Employment and Productivity (STEP) survey findings (urban areas)

86 <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/774051473400159803/armenia-skills-toward-employment-and-productivity-step-survey-findings-urban-areas>

87 Such as cognitive skills (e.g. reading and writing proficiency), job-relevant skills (e.g. physical demand of jobs and interpersonal skills), and socio-emotional skills (e.g. the five dimensions of personality).

88 UNIDO, The Impact of New Digital Technologies on Gender Equality in Developing Countries, 2019

89 <https://bangkok.unesco.org/content/facts-and-figures-cracking-code-girls'-and-women's-education-science-technology-engineering>

90 Organisation for Economic Co-operation and Development, The Survey of Adult Skills, 2019

In the digital economy, an important dimension of value addition is related to employment. Two aspects are particularly important in this context: employment in the ICT sector itself and employment in e-commerce. Both create valuable opportunities for WEE.

4.2.1 EMPLOYMENT IN THE ICT SECTOR

The gender divide persists in the ICT sector in Armenia and worldwide.

a. The gender divide in the ICT sector

The world of digital work is highly dynamic and rapidly growing. In 2016, there were about 8.2 million ICT specialists in the EU, representing about 4 per cent of all people employed in the EU.⁹¹ In EU-28, more than eight out of 10 ICT jobs go to men; only 17 per cent of ICT specialists were women.⁹²

Overall, high gender segregation within ICT jobs surpasses the gender imbalance of many other STEM jobs, especially those that demand higher qualifications. For example, women constitute about 25 per cent of science and engineering professionals in the EU, whereas they constitute only 17 per cent of ICT professionals.⁹³

Software coding is a male-dominated world, especially in companies (women make up 15 per cent of software authors).⁹⁴ Analysis focusing on a well-known open-source software package shows that women programmers are underrepresented and that they play a relatively less important role. Many women programmers are less connected to the network of software developers than their male colleagues.

On average, across Organisation for Economic Co-operation and Development countries, only 0.5 per cent of fifteen-year-old girls wish to become ICT professionals; in comparison, 5 per cent of boys wish to become ICT professionals. Similarly, twice as many boys as girls expect to become engineers, scientists or architects.⁹⁵

Women in ICT jobs also assess their upskilling opportunities and career prospects somewhat lower in comparison to

men, lack of upskilling opportunities represents a challenge not only to the current attractiveness of ICT jobs but also to women's future potential of keeping up in digital jobs.

ICT jobs will be accompanied by an increasing need for lifelong learning. In the EU, 41 per cent of female ICT specialists and 50 per cent of male ICT specialists received employer-provided or employer-funded training in 2017.⁹⁶ Many women are at great risk of being left behind because they often can't afford training or because their family responsibilities pose difficulties in finding time to retrain.

The ICT sector is growing in importance to Armenia's national economy.⁹⁷ Between 2008 and 2018, an average of 53 ICT companies were established annually.⁹⁸ In 2018, there were 800 ICT companies in Armenia (53 per cent of them were Armenian). The sector as a whole employed over 19,500 people (27 per cent growth over 2017) with an average salary of USD 845. ICT workforce productivity reached USD 50,070 per worker. Unlocking the full potential of the ICT sector will require overcoming several challenges, including low levels of STEM education.⁹⁹

b. Opportunities amid COVID-19

The COVID-19 pandemic has created new opportunities for Armenia's technology sector. Due to Armenia's geographical position and associated high costs of trading in physical goods, high-tech, digital exports will be key to Armenia's growth.¹⁰⁰ ICT services exports doubled between 2009 and 2017, growing from USD 94 million to USD 212 million. However, despite its impressive growth, the ICT sector has yet to assume a lead role in driving innovative activities, primarily due to a lack of the skills and resources for efficient specialization in technology-intensive activities.¹⁰¹

In this context, it will be paramount to attract more women and girls to the ICT sector. This can be accomplished by supporting their involvement in the STEM fields, by creating incentives for women's entrepreneurship in the digital economy and by engaging ICT companies to support women's employment.

91 Women and men in ICT: a chance for better work-life balance, European Institute for Gender Equality, 2018

92 Ibid.

93 Ibid.

94 OECD, Bridging the Digital Gender Divide, 2018

95 OCDE, Bridging the Digital Gender Divide, 2018

96 Ibid.

97 According to the "ICT Business in Armenia" report the overall income of the "Software and Services" and "Internet Service Provider" segments has reached 922.3 million US dollars in 2018, more than 20 per cent higher than previous year. The income of the industry reached 2.8% or 99.1 million USD in Armenia's GDP.

98 Enterprise Incubator foundation, Armenian ICT Sector, State of Industry report, 2018

99 UNIDO, Country Diagnostic report Armenia, 2021

100 World Bank, Realizing Armenia's high-tech potential, 2020.

101 United Nations Economic Commission for Europe, "The Impact of COVID-19 on trade and structural transformation in Armenia." 2020

4.2.2 E-COMMERCE, EMPLOYMENT AND THE LABOUR MARKET

a. Global gender challenges in e-commerce in the COVID-19 era

In 2021 the global value of e-commerce is estimated at USD 26.7 trillion, the result of a dramatic increase caused by COVID-19 induced restrictions. Integrating women-led MSMEs and women employed by MSMEs into global digital markets can be a powerful force for sustainable development. However, women often face inequalities and special challenges in tapping into e-commerce potential. In order to make e-commerce equally accessible for women and men, several factors should be analysed:

- **ICT infrastructure and services:** affordable and reliable ICT infrastructure crucial to e-commerce and to ensuring universal Internet access.
- **Trade logistics and trade facilitation:** an effective national and international trade logistics environment is vital for achieving e-commerce success. Traders would benefit from full tracking of all shipments, predictable delivery times and fully transparent procedures and duties.
- **Payment solutions:** E-commerce actors would benefit from an environment where payments can be easily and confidently made through bank and non-bank actors.
- **Legal and regulatory frameworks:** security and trust are fundamental to e-commerce because they reassure both consumers and businesses. These dimensions are particularly relevant to vulnerable groups, such as women. It is essential for countries to establish laws and regulations related to electronic transactions, consumer protection, data protection and cybercrime in order to build the necessary trust for developing inclusive e-commerce systems.
- **E-commerce skills development:** E-commerce can only be effective if the people managing and engaging with it have the right skills. This may require overcoming structural barriers by promoting women's education in ICT fields, enhancing women's access to finance and technologies, supporting women's entrepreneurship, and disseminating relevant information to women on how to be active in e-commerce.
- **Access to financing:** it is important to facilitate the evolution of a robust financial architecture that funds innovation and entrepreneurship in the e-commerce value chain.

b. E-commerce: state of play in Armenia during the COVID-19 era

When compared to men in Armenia, women have much lower access to financial institutions, less access to consumer credit and are less prone to make online transactions. The obstacles to women's digital access and use can be linked to deeply rooted social and economic barriers. Many women remain unaware of the potential and opportunities of e-commerce. Women with minimal disposable income, time, literacy or Internet awareness have little incentive to spend time and money to gain access. The lack of relevant content also exacerbates this problem. ICT services and applications are sometimes criticized for focusing mostly on men's priorities or paying too little attention to women's needs, such as private access to information on reproductive health.¹⁰²

The internet can be intimidating to a woman in a rural village who has had very little interaction with technology and who has been accustomed to running her micro-business without engaging customers from outside her village. Business and digital skills are crucial for women's successful participation in the e-commerce sector.

Approaches for increasing women's uptake of e-commerce should address deeply rooted stereotypes regarding women's socio-economic roles, raise women's awareness about e-commerce opportunities and support the development of relevant e-commerce skills. Gender-disaggregated data on Internet access and use is critical for understanding and measuring the digital gender gap and for informing policy and strategies for addressing it.

4.3 THE DIGITAL ENTREPRENEURIAL ECOSYSTEM

For women and girls, the digital entrepreneurial ecosystem represents a huge opportunity to enhance WEE. Gender responsive measures in the digital entrepreneurial ecosystem can counteract gender gaps and biases in the business market and digital economy.

Targeted and expanded digital entrepreneurial support (e.g., use of digital tools and platforms) for women and vulnerable groups at risk of exclusion should be used to expand women's digital literacy and opportunities in the digital entrepreneurial ecosystem.

102 Recommendations are based on UNESCO's guidelines "Designing inclusive digital solutions and developing digital skills", 2018.

4.3.1 GLOBAL CHALLENGES IN DIGITAL ENTREPRENEURSHIP

Boosting entrepreneurship in the digital sector will facilitate more value creation in the digital economy. Innovation and entrepreneurship depend on the quality of the surrounding ecosystems. Notwithstanding increases in broadband Internet availability, affordability and reliability issues persist.

The geographical context of digital enterprises' physical embodiment (e.g., entrepreneurs and their social circles, staff, offices and computers) influences their ability to grow and contribute to local economic development. The main ecosystem bottlenecks include small and fragmented local markets (which present difficulties in reaching international markets), inadequate entrepreneurial knowledge and skills, lack of a highly skilled workforce and limited access to finance. Digital entrepreneurs face several barriers, such as global, established competitors in the most scalable digital product categories, building a local user base and creating a unique value proposition.

Thus, policymakers should target their actions and measures to the specific dynamics of local digital entrepreneurship. The traditional channels for supporting MSMEs are unlikely to be effective. For example, digital entrepreneurs may not have the required collateral or may be too young to qualify for traditional grants or loans. It is especially important to facilitate the long-term build-up of entrepreneurial resources, such as connectivity infrastructure, subsidized office space in hubs and incubators, and financial resources.

Governments should foster entrepreneurial knowledge creation by subsidizing mentoring programmes, vocational training, apprenticeships and internships, also do not exclude start-ups in the informal sector from the requirements of government subsidies.

Several business protection measures can be considered. Some countries have formulated specific policies aimed at enabling local platforms to grow. Ethiopia, for example, prohibits Uber, Didi and other foreign ride-sharing platforms from setting up operations. In their absence, various alternative services have emerged, tailored to local

conditions (e.g., slow Internet speeds and a lack of smartphones and mobile payment systems). In Kenya, Uber is facing stiff competition from locally based ride-sharing companies like Little. Such direct policy support may expand opportunities, especially in niche markets that are relatively unattractive for global competitors.

Improving women's access to digital entrepreneurial opportunities will help bridge the gender digital divide. This entails fostering women's mobility from the informal to the formal sector. Mentoring, networking and greater exposure to relevant role models can help overcome inherent gender biases and cultural norms.¹⁰³ Dialogue between policymakers, the private sector and civil society on how to empower women in the digital economy should be encouraged at all levels,¹⁰⁴ as well as redirecting investment towards gender-responsive solutions.

4.3.2 DIGITAL ENTREPRENEURSHIP IN ARMENIA

Although there is no data on women's digital entrepreneurship in Armenia, analysis of the general entrepreneurial landscape reveals various challenges that women face in starting a business.

Entrepreneurship among women is limited in Armenia. In 2019, women represented about 21 per cent of owners of all active enterprises (16,200 of 78,000 enterprises). Women made up about 30 per cent of individual entrepreneurs and owners of micro-sized enterprises (about 15,000 of 50,000 enterprises). Less than 1 per cent of working women were also owners of their own business, whereas slightly over 2 per cent of men were. Compared to men, women were less likely to own firms with at least five employees (only 19 per cent of such firms) and were more likely to own retail businesses.¹⁰⁵

4.3.3 WOMEN'S EMPOWERMENT PRINCIPLES FOR BUSINESSES

The WEPs is a joint initiative established by the UN Global Compact and UN Women. Recognising that businesses have a stake in, and a responsibility for, gender equality and women's empowerment, the WEPs help businesses develop and share best practices for empowering women and promoting gender equality.

103 Around the world, a number of initiatives are supporting women entrepreneurs in the technology field. For example:

- In India, Wireless Women for Entrepreneurship and Empowerment, led by the Digital Empowerment Foundation, creates women-driven ICT-based micro social enterprises. Wireless Internet supports women entrepreneurs in underserved locations.
- In Haiti, Radikal aims to address poverty by providing women with tools to help their micro-enterprises produce high-quality, organic products with local raw materials.
- In Ghana, the Soronko Academy, through the Tech Needs Girls Project, has trained over 4,500 girls in eight regions in Ghana and in Burkina Faso on how to code and create technology.

104 See United Nations Conference on Trade and development's e-Trade for Women initiative: <https://unctad.org/topic/e-commerce-and-digital-economy/etrade-for-all>

105 UN Women Armenia country gender equality brief, 2019

The WEPs are a set of seven Principles¹⁰⁶ that offer guidance to businesses on how to effectively promote gender equality and women’s empowerment in the workplace, marketplace and community.

Legal instrument	Related Principles
Principle 1	Establish high-level corporate leadership for gender equality
Principle 2	Treat all women and men fairly at work - respect and support human rights and non-discrimination
Principle 3	Ensure the health, safety and well-being of all women and men workers
Principle 4	Promote education, training and professional development for women
Principle 5	Implement enterprise development, supply chain and marketing practices that empower women
Principle 6	Promote equality through community initiatives and advocacy
Principle 7	Measure and publicly report on progress to achieve gender equality

106 <https://www.weeps.org/about>

5. RECOMMENDATIONS TO BUILD MORE

5.1 STRATEGIC PRIORITY ONE: DIGITAL SKILLS DEVELOPMENT

Developing women's digital literacy is the critical first step to building more inclusive labour markets. As a key part of this effort, initiatives should focus on narrowing the gender gap in STEM education. These initiatives should address all three tiers of skill levels: basic functional skills that enable access and engagement with digital technologies; generic skills that allow for meaningful and beneficial use; and higher-level skills that facilitate the use of digital technologies in empowering and transforming ways.



Empower women with basic digital literacy¹⁰⁷

Initiatives should be designed to strengthen the digital skills of several target groups, including women entrepreneurs, women-led MSMEs, women with little or no labour experience and women with minimal exposure to the STEM fields. A needs analysis on these target groups should include information about their literacy level, technology usage and digital competences, and analysis of how these needs and motivations meet the current labour market demands.

Initiatives should identify relevant stakeholders and entities to develop flexible learning pathways and pedagogically sound content that is grounded on the needs analysis of the target groups. The process should be constantly monitored, measured and improved.¹⁰⁸



Address the gender gap in digital skills

Interventions should be designed to support girls' skills development, to address harmful sociocultural norms related to gender and technology and to encourage girls to pursue careers in STEM fields. Activities should engage policymakers and private-sector actors in making STEM more inclusive to women and girls. Activities include:

i. Change perceptions, attitudes and stereotypes towards women in STEM

a. Promote awareness to overcome cultural and unconscious and gender biases and gender stereotypes among educators, policymakers, the media and the public at large.

b. Promote the visibility of women with STEM qualifications and careers, especially in leadership positions in government, business enterprises, universities and research organizations.

ii. Engage with policymakers in order to integrate gender perspectives into educational approaches

a. Provide technical support to policymakers for integrating gender perspectives into educational content.

b. Promote gender-sensitive pedagogical approaches and career counselling in secondary education institutions.

c. Support gender mainstreaming and prioritization of gender equality in STEM-related policy design, monitoring and evaluation.

iii. Partner with private companies to support women's and girls' inclusion in STEM

a. Facilitate partnerships between ICT companies and technology training programmes in order to offer girls real-world experience.

b. Encourage ICT and high-tech companies operating in the community to showcase successful women that work in the industry in order to foster girls' interest in future job opportunities.

5.2 STRATEGIC PRIORITY TWO: WOMEN'S ENTREPRENEURSHIP IN THE DIGITAL ECONOMY

Women entrepreneurs face various obstacles to engaging in the digital sector; many are related to a lack of access, information, skills, resources and support networks. It is necessary to thoroughly identify and analyse and effectively respond to these bottlenecks in the digital entrepreneurship ecosystem.

107 Recommendations are based on UNESCO's guidelines "Designing inclusive digital solutions and developing digital skills", 2018.

108 See e.g. UNESCO, 'A Global Framework of Reference on Digital Literacy Skills for Indicator 4.4.2', 2018. <http://uis.unesco.org/sites/default/files/documents/ip51-global-framework-reference-digital-literacy-skills-2018-en.pdf>



Engage in dialogue with policymakers and financial institutions in support of women's access to finance and financial services

- i. Strengthen stakeholders' overall perceptions about the influence that the digital economy has on WEE and the obstacles that women face in digital entrepreneurship
- ii. Provide technical expertise and support to policymakers for the integration of gender perspectives into digital strategies and initiatives.
- iii. Integration of gender perspective into digital strategies should focus *inter alia* on the following initiatives:
 - a. Giving women-led firms in the digital sector preferences under MSME support programmes.
 - b. Offering women-led companies in the digital sector the option to defer financial obligations for a short period.
 - c. Creating incentives for financial institutions to provide loans to women.
 - d. Providing subsidized equipment and inputs.
 - e. Designing market protection measures for local entrepreneurs.
 - f. Designing measures that increase women's participation in public procurement opportunities.
 - g. Encouraging the regular collection and analysis of gender-disaggregated data to continuously identify the needs of women entrepreneurs and potential policy interventions.
- iv. Advocate for the creation of financial products that match the needs of women-led MSMEs in the digital sector.



Support digital literacy and build capacities in digital entrepreneurship

- i. Assess the needs of target groups and provide adaptive training in digital skills for women entrepreneurs directly or with the support of professional educational organizations.
- ii. Support current and future female entrepreneurs in identifying e-commerce opportunities through country-specific market analysis, focus groups, multi-stakeholder consultations, online surveys and targeted interviews).
- iii. Support existing women-led businesses' digitalization through capacity building and technical advice.
- iv. Offer training to women-led firms on procurement processes.



Support public-private dialogue and cooperation

- i. Establish a public-private platform for continuous dialogue with the involvement of female entrepreneurs, financial sector representatives and policymakers.
- ii. Regularly provide organizational and logistic support and technical expertise for the platform.
- iii. Facilitate partnerships between start-up enterprises and technology training programmes.

5.3 STRATEGIC PRIORITY THREE: INTEGRATING THE WOMEN'S EMPOWERMENT PRINCIPLES IN PRIVATE COMPANIES IN THE DIGITAL SECTOR

Engaging the private sector is necessary to support gender equality and WEE initiatives. It is important to promote the idea of corporate social responsibility¹⁰⁹ and women's empowerment as integral parts of corporate social responsibility.



Support companies to fully comprehend gender equality needs and the commercial benefits of integrating the WEPs

- i. Engage in dialogue and awareness-raising with companies regarding economic indicators, gender gaps in the digital economy and the digital economy's potential for WEE.
- ii. Jointly explore how gender equality and women's empowerment will benefit companies in terms of innovation, productivity, competitiveness and market growth.
- iii. Secure commitments from executives on integrating the WEPs and support companies to integrate WEPs into their operation.

109 Communication of the European Commission on the definition of Corporate Social responsibility: (2011): "The responsibility of enterprises for their impacts on society. Respect for applicable legislation, and for collective agreements between social partners, is a prerequisite for meeting that responsibility. To fully meet their corporate social responsibility, enterprises should have in place a process to integrate social, environmental, ethical, human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders, with the aim of: (i) Maximizing the creation of shared value for their owners/shareholders and for their other stakeholders and society at large; (ii) Identifying, preventing and mitigating their possible adverse impacts." https://ec.europa.eu/commission/presscorner/detail/en/MEMO_11_730

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