

# Women and the future of work

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# The origins of gender inequality



Hoe



Plow

The advancement of technology in agriculture seems to have determined the subaltern role of women.

The invention of the hoe and then the plow would cause the men's superiority and their domination over women.

“The forager groups who represent 99 percent of human time on earth were relatively egalitarian, but 10,000 years ago the invention of the hoe and then the plow entailed a food surplus that led to warfare and a system of social stratification based on birth. The non-fit of reproduction with warfare let men monopolize both war and politics and consigned women to secondary status, but the reproductive constraints were poorly understood until the 1990s. Infants had been suckled at intervals of about fifteen minutes by day (less often at night) for two years, and at a lesser rate for at least two more until the invention of a safe substitute for human milk in the 1880s.”

[Huber, J. (2015). Chapter 20 On the origin of gender inequality, in Turner, J. H., Machlek, R., Maryansky, A. (eds) *Handbook on Evolution and Society*, p. 383].

At present, the progress of technology can disrupt this inequality stratified over ages. **Technology is opening new unbelievable perspectives.** Information and communication technology (ICT) has spread worldwide penetrating into the contemporary life from defense and industry, to business, hospitals, education and entertainment.



May the technology give back to women the equality that once the same has subtracted



The cultural barriers that prevent the empowerment of women remain still numerous and deeply rooted.





## **The fourth industrial revolution**

The advent of the fourth industrial revolution is ultimately transforming society and as well as the labor market. The disruptions are unsettling. For instance, according to McGrath (2018), the advent of autonomous vehicles will cause massive transformations in the transportation industries and related sectors, bringing a significant loss of jobs.

Overall, digital technologies are bringing about huge changes and will increasingly condition participation in society.



The following figure chronicles the different phases of industrial revolution, from the mass production of cotton weaving to the smart factories of today.

<p>The first industrial revolution (late 1700s) was characterized by the use of water and steam-powered machines and the introduction of more optimized forms of works</p>	
<p>The second industrial revolution (early 20th century) was characterized by the introduction of steel and use of electricity in factories as well as new ways of productivity.</p>	
<p>The third industrial revolution (the late 1950s) was characterized by the increasing use of electronic and digital technology into factories</p>	
<p>The fourth industrial revolution (today) is characterized by high levels of interconnectivity, access to real-time data, and the introduction of cyber-physical systems.</p>	

## **Internet of Things (IoT)**

IoT is a concept that refers to the connections between people, data, and intelligent devices (objects).

The IoT refers to a system of interrelated, internet-connected objects that are able to collect and transfer data over a wireless network without human intervention. The personal or business possibilities are endless.

In a nutshell, IoT refers to connected devices, sprawling networks, and massive amount of data.

<https://www.youtube.com/watch?v=LlhmzVL5bm8>

PECOS: Provider, Enrollment, Chain and Ownership System

## **Effects on the labor market**

The report by Deloitte Global and GBC-Education, *Preparing tomorrow's workforce for the Fourth Industrial Revolution, For businesses: A framework for action*, claims that two-thirds of today's five-year-olds will, in about 15 years-time, find themselves doing jobs that don't exist today, while the jobs that do exist won't necessarily be located where the job seekers live.

Nowadays, skills such as flexibility and creativity are becoming increasingly relevant, and are expected to be considerably more important tomorrow. Recently, it has been observed that:

As it currently stands, 25 percent of today's workforce will either need to find new professional activities by 2020 or significantly broaden their technological skills as well as their digital citizenship and classic skills—i.e., their cross-disciplinary skills. These skills include programming, agile working, and adaptability. Even elementary school students need to get ready for the change, since by 2030, 85 percent of them will work in professions that do not yet exist.

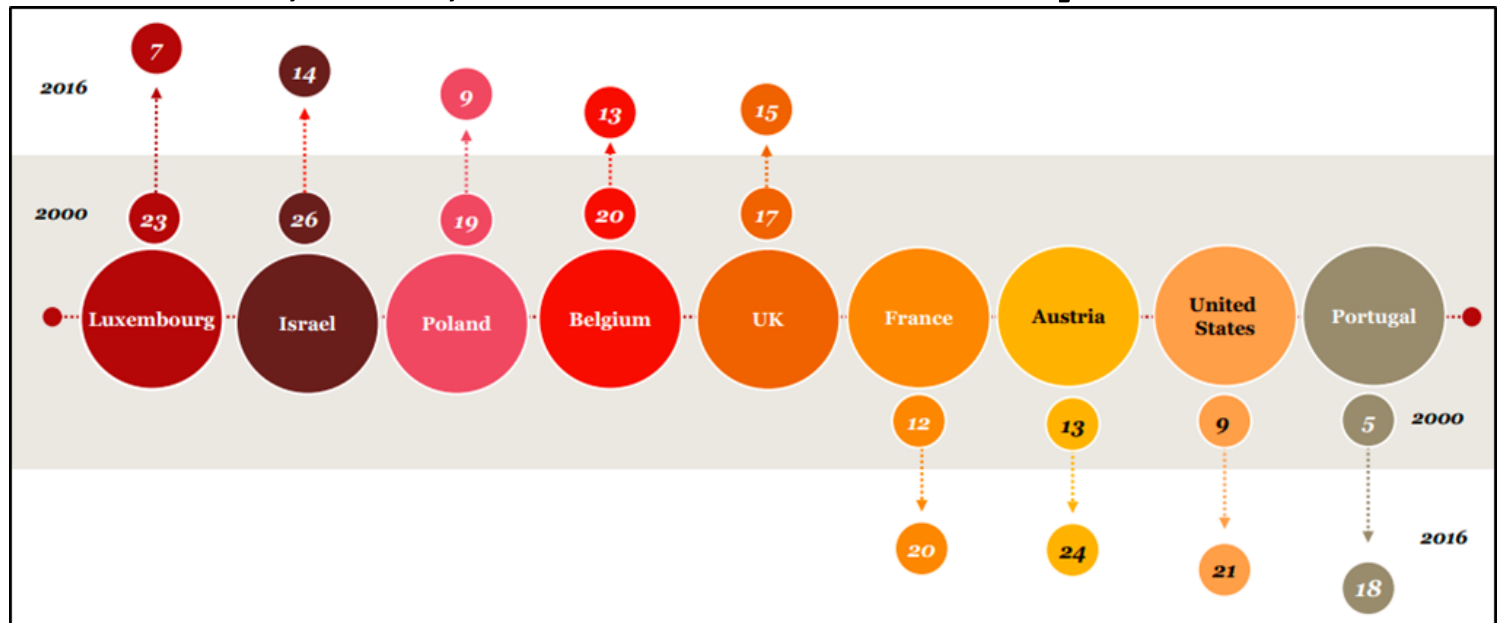
[Enders, Z., Hünnekes, F., & Müller, G. J. (2019). Firm Expectations and Economic Activity, *CESifo Working Paper No. 7623*, p. 2. Available at:

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3384314](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3384314)]

## The situation of women at work

United States, the largest OECD (Organization for Economic Co-operation and Development) economy, has fallen from 9th to 21st position since 2000 as a result of falling female labor force participation and rising female unemployment.

The following figure shows the women in work index rate from 2000 to 2016. [source: PwC, 2018, Women in Work Index]

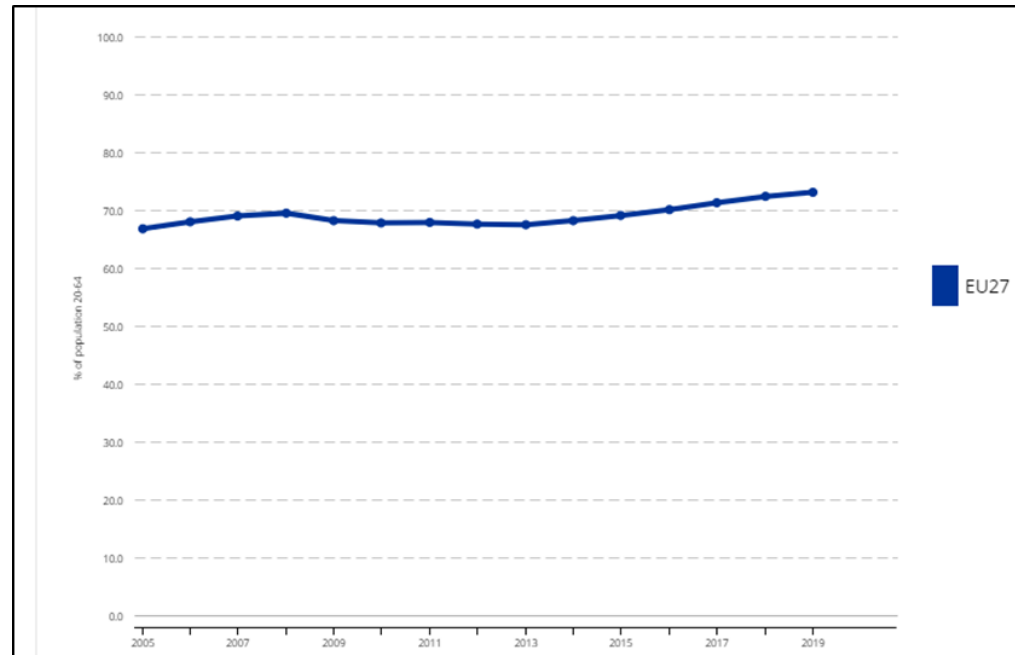


## **In the USA the progress toward gender parity remains slow**

A recent McKinsey's study (<https://www.mckinsey.com/featured-insights/diversity-and-inclusion/women-in-the-workplace>) shows that, at the beginning of 2020, the representation of women in corporate America was trending in the right direction. This was most pronounced in senior management: between January 2015 and January 2020, representation of women in senior-vice-president positions grew from 23 to 28 percent, and representation in the C-suite (senior executives) grew from 17 to 21 percent. Women remained dramatically underrepresented - particularly women of color- but the numbers were slowly improving.

## Women employment in Europe

In Europe, the gender employment gap is gradually shrinking (Eurostat, 2020, [https://ec.europa.eu/eurostat/statistics-explained/index.php/Employment\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php/Employment_statistics) ). At EU-27 level, the gender employment gap has decreased since 2005 but the employment rate in 2019 was still 11.7 percentage points higher for men than for women.



Although women's employment is increasing (64.1% of all women were employed in 2019, compared to 58.3% in 2009), there are still fewer women in the labor force, and they are concentrated in jobs that pay less (European Commission, 2019, p-18).

<https://www.youtube.com/watch?v=9IxUrgloGEI>



The employment rate for older workers (ages 55-64) is on the rise, contributing to the overall increase in employment across the EU (Eurostat, 2020,

[https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Europe 2020 indicators - employment#EU employment on the rise again .E2.80.94 signs of gradual recovery](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Europe_2020_indicators_-_employment#EU_employment_on_the_rise_again_.E2.80.94_signs_of_gradual_recovery))

From 2002-2018, the employment rate of older women grew faster than that of older men (23.6 percentage points compared to 17.2 percentage points, respectively (Eurostat, 2020, [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Europe 2020 indicators - employment#EU employment on the rise again .E2.80.94 signs of gradual recovery](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Europe_2020_indicators_-_employment#EU_employment_on_the_rise_again_.E2.80.94_signs_of_gradual_recovery)).

**However, A Gender Gap Persists Among Migrants in the Labor Force (Eurostat, 2019).**

In 2019, only 54.6% of women (ages 15 and over) born outside the EU-28 participated in the labor force, compared to 73.1% of men (Eurostat, 2020 a).

**Women with young children are still less likely to participate in the labor force than men.**

Only 62.7% of mothers with young children (less than six years old) were employed in the EU-28 in 2019, compared to 89.1% of fathers with young children (Eurostat, 2020 b).

## **COVID-19 effects on the labor world**

The events of 2020 have turned workplaces upside down. Under the highly challenging circumstances of the COVID-19 pandemic, many employees are struggling to do their jobs.

What is your opinion about the  
COVID-19 impact on women



In 2015, the 193 member countries of the United Nations came together to commit to 17 Sustainable Development Goals. **Goal 5** focused on gender equality and set the ambitious target of achieving gender equality and empowering women and girls everywhere by 2030.

Five years later, large gender gaps remain across the world, and the early evidence suggests that the COVID-19 pandemic has had a regressive effect on gender equality (<https://www.mckinsey.com/featured-insights/diversity-and-inclusion/ten-things-to-know-about-gender-equality>).

## Exercises

Read and comment the report by Lauren Pasquarella Daley  
“Women and the future of work”

[https://catalyst.org/wp-content/uploads/2019/11/WomenFutureofWork\\_Oct2019.pdf](https://catalyst.org/wp-content/uploads/2019/11/WomenFutureofWork_Oct2019.pdf)

# Women and Information and Communication Technologies (ICT)

Digital competence, creativity, entrepreneurship, and learning-to-learn are emerging as key factors for innovation, growth, and participation in society and the economy.

Soft skills

[https://www.youtube.com/watch?v=mANeBjv\\_azA](https://www.youtube.com/watch?v=mANeBjv_azA)

## **New perspectives for innovation**

**Digital Social Innovation** (DSI) is a new field that conjugates digital technology and social innovation. It is an evolving and broad field:

A type of social and collaborative innovation in which innovators, users and communities collaborate using digital technologies to co-create knowledge and solutions for a wide range of social needs and at a scale and speed that was unimaginable before the rise of the Internet (Bria et al., 2015).

## **Digital education in Europe**

In 2018, the European Commission presented a Digital Education Action Plan (COM(2018)22), a proposal for a Council Recommendation on Promoting Common Values, Inclusive Education, and the European Dimension of Teaching (COM(2018)23), and a proposal for a Council Recommendation on Key Competences for Lifelong Learning (COM(2018)24). In addition, in April 2018, the Commission also presented two documents: Communications on Disinformation (COM(2018)236) and Communication on Artificial Intelligence (COM(2018)237).



The European Commission Joint Research Centre (JRC) has, as a primary aim, the objective of identifying and designing the digital skills and competences necessary to face the ongoing societal changes.

The JRC is the European Commission's science and knowledge service that develops studies on the labor market implications of the digital transformation.

JRC's current research activities cover the following projects:

Digital Competence for citizens ([DigComp](#));

Digital Competence for Consumers ([DigCompConsumers](#));

Entrepreneurship Competence ([EntreComp](#));

Computational Thinking ([CompuThink](#)).

JRC claims that the development of digital competences breaks down the boundaries between education, work, and civic engagement.

In this respect, **digital competences are transversal to formal, non-formal, and informal learning contexts**, and applies equally to education and training systems, from primary right through to higher education and vocational training, and to non-structured learning contexts.

## Competences for citizens



**The EntreComp model** includes the following basic competences (Bacigalupo, Kampylis, Punie, & Van den Brande, 2016):

Spotting opportunities, that is the ability to identify opportunities for creating value by exploring the social, cultural, and economic landscape as well as the capacity to identify needs and challenges to create value.

Creativity, that is the skill to develop creative and purposeful ideas to create value, including finding better solutions to existing and new challenges as well as combining knowledge and resources to achieve valuable effects.

Vision, that is the capacity to imagine the future and develop a vision to turn ideas into action.

**Computational thinking** (CT) represents a primary means to address the impact of the digital revolution.

CT is the ability to use the concepts of computer science to formulate and solve problems. According to Wing, thinking computationally is a fundamental skill for everyone, not just computer scientists. Indeed, CT is a method of analytical thinking that encompasses many skills, such as designing algorithms, decomposing problems, and modeling phenomena. It can take place without a computer, since CT describes “a way of solving problems, designing systems, and understanding human behavior that draws on concepts fundamental to computer science” (Wing, 2006, p. 35).

Read and comment the article

**THE DIGITAL GENDER DIVIDE: AN OVERVIEW**

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<https://core.ac.uk/download/pdf/276269871.pdf>