

## **Digital Revolution: Trends and Impacts on Women's Lives**

Ladies and gentlemen, dear colleagues. I'm happy to be invited to this very interesting and relevant conference and share views with you.

### **Gender mainstreaming**

Gender mainstreaming is the strategy chosen in Norway for developing gender equal policies and possibilities in all areas of society. In line with the Beijing platform, it is the different ministries responsibility to make sure that all policies are gender equal and do not increase differences or create new hindrances against gender equality. This of course includes digitalisation and labour policies.

### **Transition in 70's gender segregated labour market**

In Norway the transition of the work life and the influx of women in the labour market started in the 1970's and has been developing steadily since. At this time the care services went from being carried out in the private sphere to become a public responsibility. Childcare facilities, flexible working hours, parental leave, care for the elderly, etc. are among the most important policy measures that were introduced. This made it possible to work full time for people with care responsibilities – usually women. At the same time these arrangements and the new care taking sector also gave women new possibilities for paid work outside the home – performing professionally, and being paid for, duties they had already done within the household.

The subsidised day care for children, now has a coverage above 90 % and aims to reach all. Parents must pay for the childcare facilities, but there is a system with free coverage for low income families.

The high rate of female participation in the Norwegian labour market is also a result of welfare policies in other sectors. Free public higher education and financial support for students means that parents do not have to choose which child gets an education. Educational attainment is high and higher education is not only for the wealthy. In Norway 60 % of students in higher education are women.

Critics often state that Norway's experiences with gender equality is not a good example to use because the only reason we're able to maintain our extensive welfare system is oil. However, they couldn't be more wrong. The high rate of female participation in the labour market is far more important to our economic performance than oil. Calculated among others by the OECD. Women in the workforce are the key to our wealth – not natural resources.

Norway has a thoroughly regulated labour market with an insignificant informal sector and the informal sector has not been an important access point to the labour market for women. Unlike many other countries the transformation of the work life caused by the digital revolution and the new platform economy has not opened new job opportunities to women to a great extent.

Women and men are closing the remaining gap in participation in the labour market in Norway. The rate of women in the work force is today above 67 %, while it is 72 % for men. The OECD relevantly asked if 'the last mile is the longest' in a report about the Nordic countries economic gain from gender equality. We still have a gender segregated labour market, and women work

part-time more than men, - this is where we find today's greatest obstacle for achieving full parity.

### **Digital revolution – only success if both women and men are part of it**

The digital revolution and transformation can only be a success if both men and women, (as well as a diversity of people) are part of developing it. We need participation of both women and men in order to create a technological base to avoid the risk of backsliding gender equality.

It is the programmers who develop systems and code the machines that entails the artificial intelligence. We run the risk of reproducing stereotyped views when using algorithms – of creating a new way of excluding parts of the population. Several researchers point out the risk that the new digital society will not only reproduce the inequalities between women and men, but that it can also enhance the differences. There are several well-known examples from real life that illustrate this, like how Amazon's recruitment robot excluded female candidates. Or how Microsoft's chatbot 'Tay' turned into a misogynist hater in a few hours after trying to use Twitter as training field and had to be shut it down in a rush.

If we give robots important tasks within public administration – for example within immigration administration where decisions are made on who is allowed to stay in the country, and in the social security administration that decides what kind of social benefit applicants are entitled to – we need to be absolutely sure that they make correct decisions that are not based on bias.

In theory, new technological services should be open-minded and gender-neutral, yet solutions that favour men over women are being created. This often happens because the digital innovations are made by men and the data used in the development of new algorithms favour men. This bias may be defeated through recruiting more women to work in the field of technological development.

A central question is then how to recruit women and girls to educations within the STEM field (Science, Technology, Engineering and Mathematics). This can interest them in and prepare them for jobs in the tech-sector, and in turn prevent that digital development includes unconscious bias.

It is important to increase girls and women's interest in technology and digitalisation and make them see this as a carrier option. The future will need to recruit the best people to develop and innovate the digital sector.

Technological and social skills, as well as the ability to connect the two, will be important. It is crucial that we can choose from the best talent in the entire population, not only among the male 50 % of it.

It has been a goal for shifting governments of different political colours to change the gender segregated education choices as well as labour market, and we have a number of activities targeting the challenge of recruiting more women to the STEM-sector.

- *NOU 2019:19 about gender equality challenges for girls and boys*

Recently a government appointed mission called 'Young Today' handed over its report about gender equality challenges for girls and boys to the minister for

gender equality. It describes a number of gender inequalities in childhood and adolescence. It shows that gender stereotypes and segregation start at an early age and that measures must be targeted towards this. The report gives important recommendations that are now used for developing a government action plan to change the gender divided choices of education.

Girls and technology is a partnership between social partners, universities and the Confederation of Norwegian Enterprise. The aim is to recruit more girls to technology studies and programs through using role models. It started in 2003 and is upscaled this year. (We need to change the perception that a technology career only suits boys.)

- rollemodell.no

[WWW.rollemodell.no](http://WWW.rollemodell.no) is a publicly financed net resource offering to present what working in STEM sector means in real life and aims to increase interest for STEM-subjects.

## **AI – ministry level**

Now to digital policies.

Norway is a highly digitalised country and we rank high on international indexes (like the Digital Economy and Society Index), and the population have high digital competence and high rate of using digital tools. Norwegians use it for their tax declarations, school applications, bank services and buying tickets and checking in at the airport, to mention a few. The high degree of digitalisation is valuable in economic terms both for public services but also for private businesses as both gain financially from a high degree of digital competence.

The Norwegian government has an ambitious digital agenda, and to realize the benefits of digitalisation in public administration, competence is needed both to develop and maintain services. In Norway artificial intelligence is seen as the one emerging technology that may revolutionize how we deliver public services, operate our industries, and make our cities smart in order to meet UN sustainable development goals, quoting the minister of digitalisation. These changes will definitely change our work life and also what kind of skills workers need in the future.

The government recently launched a coordinated strategy for artificial intelligence, and it emphasises that there is a need for AI- friendly regulations, access to data and secure network connections. Norway has an ambition of being world leading in this field and compete with countries like the US and China according to the minister of digitalisation.

### **Good data**

One of Norway's, as well of the rest of the Nordics, great assets is the high sense of trust among the population. Both the trust in strangers – people you meet on the streets, but more importantly in the government and the public system. We trust that the government will work for the citizens best interest and will make systems and act in ways that will benefit us all.

This means among other things that the government has a good and detailed overview of its citizens. Most data in the National statistical office are found in registers that can be linked (by a common unique PIN code). The censuses are replaced by using registers and we no longer need questionnaire-based investigations (to get an overview of population, housing, income etc).

This builds a good base when it comes to digitalisation, and may give us advantages, but will also demand a great level of security especially related to ethics and protection of personal data.

## **Conclusion**

Artificial Intelligence can have a positive impact on our lives in many ways. However, the technological development also entails risks and threats that we need to be aware of.

A major message from Norway is that we need more research and knowledge about a number of aspects related to digitalisation and the opportunity given by new technologies. Researchers will not be out of research questions within the field of gender equality in the near future, including in relation to the sector of digitalisation.

Will this digitalisation and transformation lead to a more gender equal work life? Will it cement positions and maintain the status quo? Or will it create an even more gender segregated society and labour market?

For example: Will the change lead to that the men from the industry sector that now have been automatized enter the health care sector? Will the health care sector be digitalised? Will these men create a new male dominated high-tech branch of the health sector reproducing the gender segregation? These questions are difficult to answer – but definitely worth investigating. And the health sector will certainly need increased numbers of employees in the years

to come – with the demographic changes and the ageing population. Some tasks may be automatized, but we will still need more warm hands.

Digitalisation can widen the gender gap but used cleverly it can contribute to closing it. A lot of questions remain – but one thing is certain –an engaged female workforce benefits all of us and will be equally important in the years to come. Norway will continue to break down barriers and shatter glass ceilings and I hope you all want to join the fight.