

# The future of labour in the digital era: Norway

Finalised september 2016

## 1 Status Quo

EU's *Digital Agenda Scoreboard*<sup>1</sup> and *Digital Economy and Society Index*<sup>2</sup> puts Norway in front when it comes to digitalisation. Industry, the public sector, and society in general have already been subject to digitalisation. In addition, Norway has one of the most organised labour markets in Europe, for both employers and employees.

### 33 percent jobs at high risk

The international debate on computerisation and jobs has been heavily influenced by Frey and Osborne's article "The Future of Employment: How Susceptible are Jobs to Computerisation"<sup>3</sup> published in 2013. Using the same approach, a recent report has estimated that 33 percent of Norwegian employment have a high risk of computerisation in the next decade or two.<sup>4</sup> This is on the same level as for Finland, while corresponding numbers for Sweden and the US are significantly higher.

This reflects differences in occupational structures, with fewer manufacturing and private sector jobs in Norway. The occupational groups in Norway that will be most influenced by computerisation are, among others, accounting and bookkeeping professionals, shop sales assistants and general office clerks.

### Factories and labs

For Norway, the recent decline in the oil price has made the shift to a sustainable and digitalised economy more urgent than ever before. Leading actors are taking new initiatives to compete in a digital future. The Kongsberg Group, one of the biggest technology corporations in Norway, recently launched a new subsidiary, Kongsberg Digital<sup>5</sup>, to complement its four established business areas in maritime, defence, remote weapon systems and oil and gas technologies.

The telecom-giant Telenor has established an innovation and research lab for AI and Big Data, in co-operation with the Norwegian University of Science and Technology and SINTEF Research Institute.<sup>6</sup>

In August 2016, a consortium of big industrial players announced the establishment of a national "top industry centre" with support from the government. The centre draws inspiration from a similar centre for Norwegian top athletes, and from Germany's *Industrie 4.0*-strategy.<sup>7</sup> The aim is greater collaboration and sharing between Norwegian industry (both big and small companies), research in-

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<sup>1</sup> <https://ec.europa.eu/digital-single-market/en/digital-scoreboard>

<sup>2</sup> <https://ec.europa.eu/digital-single-market/en/desi>

<sup>3</sup> Frey, C.B. and Osborne M. (2013) *The Future of Employment: How Susceptible are jobs to computerization?* [http://www.oxfordmartin.ox.ac.uk/downloads/academic/The\\_Future\\_of\\_Employment.pdf](http://www.oxfordmartin.ox.ac.uk/downloads/academic/The_Future_of_Employment.pdf)

<sup>4</sup> Pajarinen, M, Rouvinen P. and Ekeland, A. (2015) *Computerization and the Future of Jobs in Norway* <http://nettsteder.regjeringen.no/fremtidensskole/files/2014/05/Computerization-and-the-Future-of-Jobs-in-Norway.pdf>. The researchers have used a slightly modified classification compared to Frey and Osborne. With this classification, the high-risk category of US employment drops from 49% to 45%. This share is still significantly higher in the US compared to Norway.

<sup>5</sup> <http://www.kongsberg.com/en/kog/news/2016/february/establishes-kongsberg-digital/>

<sup>6</sup> <https://www.telenor.com/no/media/pressemeldinger/en-digital-grundernasjon-telenor-investerer-i-norsk-entreprenorskap-og-digital-kompetansebygging/>

<sup>7</sup> <http://toppindustrisenter.no/>

stitutions and universities, and increased productivity and competitiveness for Norwegian businesses. Another trend is the emerging shared factory spaces, in traditional industry areas on the west coast of Norway.<sup>8</sup> These shared spaces will give smaller companies access to advanced equipment for production, without having to take on the costs of investing in such equipment themselves.

### Sharing economy in Norway

The number of potential users of digital platforms for sharing goods and services is very high in Norway. Numbers from Statistics Norway show that 97 percent of Norwegian households have Internet access, and 89 percent own a smartphone.<sup>9</sup> A study by the National Institute for Consumer Research shows that 45 percent of Norwegian citizens are familiar with the use of “sharing activities” in digital channels.<sup>10</sup>

Finn.no, a classifieds platform, has long been the dominant platform for sharing goods and services in Norway. From this home market of early adapters, Schibsted Media Group, which owns Finn.no, has expanded to 30 countries.

In addition to Finn.no, there are several other sharing services established in Norway. Nabobil.no, a service coordinating the sharing of private cars, has been one of the fastest growing sharing services the last year.<sup>11</sup> Other successful start-ups include Nimber, a delivery service utilising empty space in cars, trains, and vans, and Gelato, which connects printers from different locations to a print cloud open to everyone. International actors like AirBnB are also entering the Norwegian market. In 2015 AirBnB had 197 000 guests stayed with 7900 registered Norwegian hosts.<sup>12</sup> Uber also has a presence, but face more difficult market access because of the strictly regulated taxi market.

## 2 Policy dimensions

### Stakeholders in the labour market

Norwegian labour policy is firmly based on a tripartite co-operation between the government, trade unions and enterprise federations. Trade union membership is high, wage formation is relatively coordinated at the national level, and working life is well regulated. This is also the case when it comes to discussing the emerging sharing economy.

In March 2016, the Government appointed a commission that will investigate how the sharing economy can contribute to increased resource efficiency.<sup>13</sup> Reflecting the emphasis on stakeholder involvement, the commission has members from both academia, business, interest organizations and labour unions. The Commission will present its report in early 2017. The commission’s mandate includes assessment of regulation (both at the general and sector specific level), assessment of the effects of the sharing economy could have on the labour market and the possible need for adjustment of consumer rights and requirements for standards.

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<sup>8</sup> Examples include Creator Makerspace in Stavanger, RobTek in Brattvåg and BitRaf in Oslo

<sup>9</sup> <https://www.ssb.no/teknologi-og-innovasjon/statistikker/ikthus>

<sup>10</sup> SIFO 2016 [http://www.sifo.no/files/file80528\\_sifo\\_oppdragsrapport\\_3\\_16.pdf](http://www.sifo.no/files/file80528_sifo_oppdragsrapport_3_16.pdf)

<sup>11</sup> <http://www.dn.no/grunder/2016/09/09/0807/Delingskonomi/nabobil-er-ett-r-slik-har-det-gtt> After one year of running, the service has more than 50 000 users and 13 000 transactions completed.

<sup>12</sup> [https://www.airbnbaction.com/wp-content/uploads/2016/03/norway\\_minireport\\_D3\\_norwegian\\_20160302.pdf](https://www.airbnbaction.com/wp-content/uploads/2016/03/norway_minireport_D3_norwegian_20160302.pdf)

<sup>13</sup> <https://www.regjeringen.no/no/aktuelt/utvalg-skal-utrede-delingsokonomien/id2478123/>

While the ICT sector is generally positive and see many possibilities in the sharing economy, the tourism and hotel industry wants a regulation of new actors like Airbnb and Uber. The Norwegian Confederation of Trade Unions (LO) warns against a new precariat, and demands tougher regulation of the sharing economy and digital labour. LO insists on clear definitions of the roles as employer and employee, regardless of whether a job is facilitated through an app or in a more traditional way<sup>14</sup>.

### Competition in the taxi market

The Norwegian Competition Authority has investigated future challenges in two areas: financial services (peer-to-peer lending and crowdfunding) and transportation (the taxi market)<sup>15</sup>. The Authority sees the need for updated, and in some instances new regulation, and regards the introduction of new digital services as a productive force. The Authority is not in favour of a de-regulation of the taxi market, but see this as a good opportunity to rethink existing regulation to create a market better suited to new business models and consumers' needs.<sup>16</sup>

Recent court cases illustrate how the legislation for transport services in the sharing economy has yet to be clearly defined. The Norwegian taxi market is highly regulated, and in the autumn of 2015, an Uber driver was fined by the police for providing illegal transport services.<sup>17</sup> The Norwegian law for taxi services specifies that a permit is required for offering transport services in public space. In December 2015, the District Court annulled the charges against the driver, stating that the online Uber app does not count as a legally defined "public space".<sup>18</sup>

However, the Appeal Court revoked the annulment. Although the Appeal Court agreed that the Uber app is not a public space, it stated that the intention of the driver, to use Uber to provide transportation services on a regular basis, makes the services subject of regulation. More recently, three drivers using the Norwegian ridesharing app Haxi have gone through Supreme Court in a similar case. The Haxi-drivers were acquitted of all charges, on the basis that using the app does not count as offering taxi services in a public space.<sup>19</sup>

### Digitised tax and the sharing economy

The Norwegian tax system is digital, and has been so for many years. This should make it easier to develop real-time solutions to report income from different types of employment in new and more flexible forms of employment. The Norwegian Tax Administration has tried to clarify how current taxation applies for sharing services<sup>20</sup> and has an ambition to develop technical solutions for reporting and informing the public.

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<sup>14</sup> [http://www.lo.no/Documents/Okonomi\\_og\\_sysselsetting/Samhandlings%C3%B8konomien%20hefte%20A4-NETT.pdf](http://www.lo.no/Documents/Okonomi_og_sysselsetting/Samhandlings%C3%B8konomien%20hefte%20A4-NETT.pdf)

<sup>15</sup> [http://www.konkurransetilsynet.no/globalassets/filer/publikasjoner/rapporter/rapport\\_drosjemarked-for-fremtiden.pdf](http://www.konkurransetilsynet.no/globalassets/filer/publikasjoner/rapporter/rapport_drosjemarked-for-fremtiden.pdf)

<sup>16</sup> <http://www.konkurransetilsynet.no/nb-NO/aktuelt/artiklar-og-innlegg/deling-for-konkurranse/>

<sup>17</sup> <http://www.osloby.no/Politiet-avskiltet-Uber-bil-8205700.html>

<sup>18</sup> <http://e24.no/lov-og-rett/uber-sjafoer-frifunnet-i-oslo-tingrett/23576065>

<sup>19</sup> <http://www.domstol.no/globalassets/upload/hret/avgjorelser/2016/avgjorelser-juni-2016/sak-2016-477-anonymisert.pdf>

<sup>20</sup> [http://www.skatteetaten.no/delingsokonomi\\_2](http://www.skatteetaten.no/delingsokonomi_2)

While it seems to be feasible to collect taxes from the users of sharing services (and the possible income is quite modest), there bigger problems related to the sharing platforms themselves. Most of these are big, international companies that pay no taxes to the countries where they are active.

### 3 TA perspectives

#### Manufacturing renaissance without jobs?

Development in robotics, 3D-printers and digitalisation bring new opportunities for high-cost countries like Norway. Hence, industrial policy is back in fashion. The NBT-report “Made in Norway” investigates how advanced manufacturing technology could revolutionise industrial production in Norway.<sup>21</sup> A further investigation of the possibilities of a competitive, high tech Norwegian industry outside the oil and gas cluster was published in 2015.<sup>22</sup> One point of discussion is how policy-makers can facilitate this development, while refraining from “picking the winners” in the industrial sector.

#### This time it is personal: time to rethink public services

In the report “This time it’s personal – the digital shift in the public sector”, the NBT identifies technology-driven trends that has the potential to effect public services in fundamental ways.<sup>23</sup>

1. *Participatory*: Interactive technologies such as smartphones and the internet of things could make citizens not only users, but also *active participants* in designing and executing public services. For example, patients with chronic illnesses can monitor their health from home instead of going to see a doctor.
2. *Personalised*: Public data gives the government more detailed knowledge of citizens, and creates possibilities for a more diversified and *personalised* service, tailored to each citizens need. Adaptive learning technologies can provide personalised learning opportunities and more and better feedback to students.
3. *Predictive*: Widespread use of data analysis by public institutions can create opportunities towards *predictive* work, instead of reacting and rectification after an incident. The national tax authority could for example make targeted controls by using predictive models that identifies tax reports with a high probability of error.

Increased focus on digital services and data analysis creates new challenges: are algorithms used to provide support and alternatives, or can they contribute to stigmatization of individuals and groups? Where are the limits for what technology and algorithms can do in the public sector?

#### Platforms and power in employment

Emerging platforms and digital labour challenges the traditional ways of organising employment. More flexible relations and the notion of “micro-entrepreneurs” blur the distinction between being employed and being an independent contractor. The on-demand economy’s use of algorithms and information asymmetries also change traditional power structures that have a great effect on working conditions.<sup>24</sup>

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<sup>21</sup> Norwegian Board of Technology (2013) *Made in Norway? How robots, 3D-printers and digitalisation bring new opportunities for Norwegian industry.* [http://teknologiradet.no/wp-content/uploads/sites/19/2014/10/Made-in-Norway-engelsk\\_m-forside.pdf](http://teknologiradet.no/wp-content/uploads/sites/19/2014/10/Made-in-Norway-engelsk_m-forside.pdf)

<sup>22</sup> Teknologirådet (2015) *Luksusfellen – omstilling i en oljeøkonomi* [http://d2dczhp6dhfxqb.cloudfront.net/sites/19/2015/07/Luksusfellen-endelig\\_120615\\_med-forside.pdf](http://d2dczhp6dhfxqb.cloudfront.net/sites/19/2015/07/Luksusfellen-endelig_120615_med-forside.pdf)

<sup>23</sup> Teknologirådet (2016) *Denne gangen er det personlig. Digitalt skifte for offentlig sektor.*

<sup>24</sup> Alex Rosenblat and Luke Stark (2015): *Uber’s Drivers: Information Asymmetries and Control in Dynamic Work* <http://datasociety.net/output/ubers-drivers-information-asymmetries-and-control-in-dynamic-work/>