

Human Rights Challenges Posed by the Fourth Industrial Revolution

– The Uber Case –

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Supervisor: Bård Anders Andreassen



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Acronyms

CeBIT	Centrum für Büroautomation, Informationstechnologie und Telekommunikation
CIA	Central Intelligence Agency
ERA	Employment Rights Act
EU	European Union
FLSA	The Fair Labor Standards Act
ICESCR	International Covenant on Economic Social and Cultural Rights
ILO	International Labour Organisation
IoT	Internet of Things
NMWA	National Minimum Wage Act
SDG	Sustainable development goals
Uber	Uber Technologies Inc., Uber BVN, Uber London, Uber France.
UDHR	Universal Declaration of Human Rights
WHO	World Health Organisation

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1. Introduction

Technological inventions have always made it easier to perform certain activities: a simple round wheel can transport heavy objects further and with less effort, one machines can perform work that would have exhausted many humans. For the ancient Greeks the word τέχνη (techne) was used to refer not only to mere craftsmanship or skill, but it also meant art¹; a person able to create new tools was both a skilled craftsman and an artist, since it needed knowledge, ability and imagination to create new tools. Technology can be used in many ways, but probably more relevant is how people are relating to it: in antiquity those advancing knowledge were considered inspired by gods and celebrated, in the Middle Ages it was a matter of witchcraft and punished as such, in the Renaissance it was for the visionaries and rewarded again. The current wave of technological developments does not elude contradictory positioning towards it. Some are deeming it as a threat to religion and democracies², a threat to privacy and private space³, a threat to traditional and future workplaces⁴, as a leading cause in raising income and gender inequality⁵, as enhancing tax crime⁶, while others are highlighting the positive aspects and are optimistic towards the future: new digital tools can be used to combat tax crime⁷, blockchains can be used to fight poverty⁸, algorithms can be used to predict crime even before it happens⁹, facial recognition technology can be used to detect genetic disease¹⁰, “lawyer” chatbots can help refugees claim asylum¹¹, drones can be used to deliver

¹ Anatol Bailly, *Dictionnaire grec français* (Paris, 1950), p. 1923, available at: <http://www.tabularium.be/bailly/>.

² Maëlle Gavet, “The digital revolution is destroying our democracies. It doesn’t have to be that way”, *World Economic Forum*, February 7, 2017, available at: <https://www.weforum.org/agenda/2017/02/the-digital-revolution-is-destroying-our-democracies-it-doesn-t-have-to-be-that-way/>.

³ Max Opray, “Revealed: Rio Tinto's plan to use drones to monitor workers' private lives”, *The Guardian*, 8 December 2016, <https://www.theguardian.com/world/2016/dec/08/revealedrio-tinto-surveillance-station-plans-to-use-drones-to-monitors-staffs-private-lives>.

⁴ Martin Ford, *Rise of the robots: technology and the threat of a jobless future*, Basic Books, New York, 2015.

⁵ Dina Bass, “Everyone Knows Tech Workers Are Mostly White Men – Except Tech Workers”, in *Bloomberg Technology*, March 22, 2017, available at: <https://www.bloomberg.com/news/articles/2017-03-22/everyone-knows-tech-workers-are-mostly-white-men-except-tech-workers>.

⁶ OECD Insights Blog, “Tax Crimes – The Fight Goes Digital”, April 4, 2017, available at: <http://oecdinsights.org/2017/04/04/tax-crimes-the-fight-goes-digital/>.

⁷ OECD, *Technology Tools to Tackle Tax Evasion and Tax Fraud*, March 31, 2017, available at: <http://www.oecd.org/tax/crime/technology-tools-to-tackle-tax-evasion-and-tax-fraud.pdf>.

⁸ Jane Thomason, “Opinion: Embracing blockchain solutions to fight global poverty”, *Devex*, February 03, 2017, available at: <https://www.devex.com/news/opinion-embracing-blockchain-solutions-to-fight-global-poverty-89564>.

⁹ Robert Muggah, “What happens when we can predict crimes before they happen?”, *World Economic Forum*, February 2, 2017, available at: <https://www.weforum.org/agenda/2017/02/what-happens-when-we-can-predict-crimes-before-they-happen/>.

¹⁰ US National Human Genome Research Institute, *22q11.2 deletion syndrome in diverse populations*, *American Journal of Medical Genetics*, March 22, 2017, DOI: 10.1002/ajmg.a.38199.

¹¹ Rob Price, “A Facebook chatbot that fought 250,000 parking fines is helping refugees claim asylum”, *Business Insider*, March 6, 2017, available at: <http://nordic.businessinsider.com/facebook-chatbot-donotpay-help-refugees-claim-asylum-us-canada-uk-joshua-browder-parking-fines-2017-3?r=UK&IR=T>.

food in humanitarian emergency situations¹², new machineries can be used to clean waters of plastics¹³ and be a major driver in the shift from a fossil fuel based energy to green and renewable sources in order to tackle climate change¹⁴.

Since different people see different opportunities and different challenges, the debate around it is important. Common questions include: what should be the legal framework for mobile surveillance tools and what should be done with the stored information?¹⁵ Should an autonomous car be programmed to clash with humans following a utilitarian principle¹⁶ and who is responsible when lives are endangered or lost due to robots?¹⁷ How to avoid the possibility of a machine being willingly programmed by a malevolent person to hurt another human?

Apocalyptic movie scenarios of cyborgs or computer programs taking over the world and subjugating the human race, or even more recent scenarios like the ones in the *Black Mirror* Netflix's show have been entertaining our minds and feeding our imagination. However, the fear of a future of total surveillance comparable to the one imagined in Orwellian political utopias is getting more ground in reality with the recent claims of CIA spying on peoples' living room conversations using smart TVs¹⁸ or with the widespread surveillance cameras in the public space that can be easily hacked into and the information run thorough facial recognition software¹⁹. The fear of cyber criminals generated by ransomware attracts, like WannaCry, that infected hundreds of thousands of computers from over 150 countries and

¹² Magda Mis, "It's a bird...It's a plane...It's an edible aid drone!", *Thomson Reuters Foundation*, February 20, 2017, available at: <http://news.trust.org/item/20170220170850-z0p09/>.

¹³ IFLScience!, "19 Year Old Develops Machine To Clean The Oceans Of Plastic", available at: <http://www.iflscience.com/environment/19-year-old-develops-machine-clean-oceans-plastic/> and The Ocean Cleanup initiative, website: <https://www.theoceancleanup.com/>.

¹⁴ Renewable Energy World, website: <http://www.renewableenergyworld.com/index.html>.

¹⁵ George Joseph, "Cellphone Spy Tools Have Flooded Local Police Departments", *CityLab*, <http://www.citylab.com/crime/2017/02/cellphone-spy-tools-have-flooded-local-police-departments/512543/>.

¹⁶ Ashley Halsey III, "When driverless cars crash, who gets the blame and pays the damages?", *The Washington Post*, February 25, 2017, available at: https://www.washingtonpost.com/local/trafficandcommuting/when-driverless-cars-crash-who-gets-the-blame-and-pays-the-damages/2017/02/25/3909d946-f97a-11e6-9845-576c69081518_story.html?utm_term=.602e90cd5579.

¹⁷ Steven Hoffer, "300-Pound Security Robot Runs Over Toddler At California Shopping Center", *The Huffington Post*, July 13, 2016, available at: http://www.huffingtonpost.com/entry/security-robot-toddler_us_57863670e4b03fc3ee4e8f3a.

¹⁸ The Guardian, "WikiLeaks publishes 'biggest ever leak of secret CIA documents'", March 7, 2017, available at: <https://www.theguardian.com/media/2017/mar/07/wikileaks-publishes-biggest-ever-leak-of-secret-cia-documents-hacking-surveillance>.

¹⁹ Adrienne LaFrance, "Who Owns Your Face? Advertising companies, tech giants, data collectors, and the federal government, it turns out", *The Atlantic Technology*, March 24, 2017, available at: https://www.theatlantic.com/technology/archive/2017/03/who-owns-your-face/520731/?utm_source=nl-atlantic-daily-032417.

asking for ransoms in bitcoins to unencrypt the files stored on those drives²⁰, as well as Elon Musk's new initiatives of merging human brains with computers²¹ are feeding expectations of a catastrophic future. This wave of technology that is merging inanimate objects with digital technology is generally called the fourth industrial revolution, a term popularised by the World Economic Forum and Klaus Schwab.

The fourth industrial revolution is changing many aspects of our lives. From a human rights perspective, states have the duty to protect their citizens of negative effects that might arise from an uncontained development of technology. This **paper will discuss the way in which three specific socio-economic rights are affected by the current technological developments**: the right to work (UDHR art. 23 and ICESCR art.6), rights at work (ICESCR, art. 7) and the right to social protection (UDHR art. 25 and ICESCR art.9). An important role in choosing these three rights was played by Wilkinsons' and Picketts' book on the effects of inequality on the society (higher criminality rates, lower life expectancy, higher teenage pregnancy, higher school dropout rates, social unrest)²². The general expectation is that the fourth industrial revolution will be a major player in increasing inequality within and between states, and even though inequality transpires at many levels, it is however primarily economic inequality, therefore I chose to focus on these three rights that have the most visible impact on the economic and social well-being of a person. My choice came both from an academic interest on researching how technology impacts on human rights and from the belief that the non-fulfilment of these rights has reverberations into the possibility of enjoying other rights, like the right to housing, education, healthcare and highest attainable standards of living.

The major case study of this paper is the California based transnational corporation Uber Technologies Inc. (hereafter Uber), which is considered representative for the businesses specific to the fourth industrial revolution because it was among the first to introduce with great success and controversies a mobile app used to hail "personal taxis". My research question is: to what extent is the fourth industrial revolution, and Uber in particular, affecting the states capabilities to protect and fulfil the right to work, rights at work and the right to social

²⁰ Jethro Mullen, Selena Larson and Samuel Bruke, "World reels from massive cyberattack that hit nearly 100 countries", in *CNN Tech*, May 13, 2017, available at: <http://money.cnn.com/2017/05/13/technology/ransomware-attack-nsa-microsoft/index.html?iid=EL>.

²¹ Rolfe Winkler, "Elon Musk Launches Neuralink to Connect Brains With Computers", *The Wall Street Journal*, March 27, 2017, available at: <https://www.wsj.com/articles/elon-musk-launches-neuralink-to-connect-brains-with-computers-1490642652>.

²² Richard Wilkinson and Kate Pickett, *The spirit level: why equality is better for everyone*, London, Penguin Books, 2010.

protection? This is not to say that other rights cannot be or are not affected by the fourth industrial revolution, most notably the right to privacy, only that the scope of my research is limited to these specific socio-economic rights.

1.1 Thesis structure

The thesis comprises of an introduction, three core chapters and a conclusion. **The first core chapter** will focus on two main issues: (1) introducing the fourth industrial revolution with its benefits and challenges to human rights and (2) introducing the new types of business created by the fourth industrial revolution and clarifying the terminology used to describe the changes in the economy (collaborative economy, peer to peer economy, sharing economy, human cloud).

The second chapter will take Uber as a case study and will analyse the benefits and challenges of their business model, expanding on the challenges posed by the classification of drivers as independent contractors. This section will analyse extensive case law and identify the national and international legislation relevant for employment contract law, with a special focus on social and economic rights. The aim of this chapter will be to show that the many benefits of technological development come with challenges that can threaten social stability and security.

The third chapter will consider the extent to which the states' capacity to fulfill and protect socio-economic human rights is challenged by the fourth industrial revolution, especially rights at work, like minimum and fair wage, overtime pay, holidays and sick leave, the right to social protection, which is overlapping to some extent with rights at work: sick leave and health insurance, unemployment benefits and pension. The right to work will be discussed in the light of increasing automation and the states commitment to full and productive employment. This chapter will also look into existing legal initiatives of international bodies like the International Labour Organisation (hereafter ILO)²³ and parliamentary initiatives in

²³ ILO Resolution on transport network companies – “Transporting tomorrow”, 2015, available at: http://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/meetingdocument/wcms_422443.pdf.

Europe²⁴ and the United States²⁵ to regulate different aspects of the fourth industrial revolution and discuss the idea of universal income as an umbrella right that can encompass basic socio-economic rights and render the right to work itself obsolete.

In the last part of my thesis I will present my **conclusions**, first by re-evaluating the research question in the light of arguments presented in the thesis, and secondly by underlining the importance of how the existing human rights can be employed as guidelines when considering institutional responses to the fourth industrial revolution, namely article 15.b) of the International Covenant on Economic Social and Cultural Rights (hereafter ICESCR) on the right to enjoy the benefits of scientific progress and its application.

1.2 Methodology and theoretical framework

My research question, “to what extent is the fourth industrial revolution, and Uber in particular, affecting the states capabilities to protect and fulfil the right to work, rights at work and the right to social protection?”, is asked in the context of globalisation and entails elements of the technological developments and their current applications, international human rights legislation, national law, case law, sociological studies and reports from various NGOs and international institutions. In the legal literature review I have focused on identifying UDHR art. 23 and 25 and ICESCR art.6, 7, 9 and 15 as the relevant legal provisions for this paper, as well as other *leges lata* at national level. For *leges ferenda* I have consulted legal journals concerning the gig economy and especially proposals related to Uber and the fourth industrial revolution. I have also consulted a number of sociological studies and reports related to the gig economy and the fourth industrial revolution, as well as interdisciplinary publications that describe the fourth industrial revolution. Extensive part of my research consisted in finding and analysing case law concerning Uber employment litigations.

For the legal review, I have accessed the relevant human rights treaties and General Comments through OHCHR website, and for the existing national law I focused on the official national websites. The legislation, proposals and recommendation from the European Union, I

²⁴ Mady Delvaux, European Parliament, Committee on Legal Affairs, “Draft Report with recommendations to the Commission on Civil Law Rules on Robotics”, available at: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML%2BCOMPARL%2BPE-582.443%2B01%2BDOC%2BPDF%2BV0//EN>.

²⁵ US Executive Office of the President National Science and Technology Council Committee on Technology, *Preparing for the future of Artificial Intelligence*, October 2016, available at: https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/microsites/ostp/NSTC/preparing_for_the_future_of_ai.pdf.

have accessed the official website of the European Parliament and European Commission. Regarding the case law, my data was compiled from online law databases such as curia.europa.eu, judiciary.gov.uk, juralindex.com, justia.com, findlaw.com, law360.com and to a limited extent PACER and pacermonitor.com, as well as from associated news websites where it was possible. The literature review of books, academic articles, reports and studies was done using the library database, Oria.no, independent online research, as well as consultations with peers, professors, the librarian and my supervisor, which came with extremely helpful feedback.

Given the novelty of this field, existing research was scarce, so it was of outmost importance to keep myself up to date with the newest report, articles and news on technology and policy issues, therefore I have subscribed to a number of relevant legal and non-legal newsletters. The large majority of my sources was published in 2016 and 2017.

1.2.1 Data reliability

The search system of different courts made it possible to find case law filed on labour rights, which in the case of Uber most often amounts to misclassification of drivers, but there is a strong indication that the combined case law offered by the online resources is not exhaustive; some cases on employment rights were classified by the online system as “other” and not as labour litigation, for example *In Re v. Uber*, merging the cases of Muhammed, Gillette and others against Uber is a case on misclassification of drivers, but is listed as “Nature of Suit: Other” on Justia database.²⁶ Another aspect to be noted is that the majority of court documents regarding the status of the trials or the content of the rulings or settlements were not available for the public, hindering the quantitative analysis of the case law. For 33 of the cases (45.2%) it was impossible to determine their status due to the lack of information, 21 (28.8%) are still ongoing, in 13 of them (17.8%) the court agreed to compel individual arbitrations on the plaintiffs, 4 (5.5%) were lost by Uber (2 have final and irreversible decisions), 1 cases (1.4%) have final settlements and in 1 case the complaint against Uber was dismissed. This made it difficult to compile a statistical analysis that could be relevant for the human rights discussed in the thesis, and therefore I chose to focus on a qualitative analysis of the cases where decisions were available and sometimes observe the general trends.

²⁶ Justia: <https://dockets.justia.com/docket/multi-district/jpml/CAN/3:14-cv-05200/965769>.

Out of the 73 cases gathered for this thesis, 63 of which are individual and class actions against Uber, and 10 are cases either from trade unions, independent agencies, or taxi associations. Even though the cases brought forth by taxi associations are on unfair competition, they have been included because unfair competition amounts to the fact that Uber is misclassifying its drivers as independent contractors, which gives them an unfair advantage against the traditional taxi companies, since it does not incur similar costs.

Another shortcoming generated by the scarce information that the reader needs to know about concerns the total number of Uber drivers used in the thesis. A former upper-management person at Uber tweeted that the number of Uber drivers in January 2016 was 1.5 million and I took this number as face value, as it is also mentioned in other academic articles. However, this number needs to be taken with caution: in March 2017, the Uber website stated that Uber operate in 542 cities worldwide, and in November 2017, that number went up to 632, which means that the number of drivers probably increased.

2. The larger context of economic human rights challenges posed by the fourth industrial revolution

2.1 What is the fourth industrial revolution?

The “fourth industrial revolution” is an expression popularised by Klaus Schwab and used to refer to the current wave of converging technologies that are changing how materials are produced (3D printers, lab-grown), how manufacturing is done (intelligent robots), how research is being conducted (computer programmes that communicate within networks and analyse simultaneously millions of samples, big data that creates statistical trends and algorithms that predict the future, *etc.*). K. Schwab considers it as the peak of the previous three revolutions (steam engine, electricity and IT) due to the fact that is connecting all previous technological developments and changes the computing and storage capacity at an exponential growth rate, doubling every 24 months, according to G.E. Moore’s law²⁷. Not all scholars agree on the denominations. Erik Brynjolfsson and Andrew McAfee consider the current stage of technology as a phase of the industrial revolution and view it as linked to the invention of the internet and integrated circuits and call it “the second machine age”²⁸. Jeremy Rifkin considers this as the third industrial revolution, following the mechanization of the textile industry and the assembly line, and, on account of its scale and impact, thinks that its main effect will be to change the economy towards a green economy and a more equal distribution of wealth²⁹; the European Union working papers refer to it as fourth industrial revolution³⁰, Industry 4.0³¹ or Society 5.0³². This thesis will follow the denomination of K. Schwab and employ the phrase

²⁷ Gordon E. Moore, *Cramming More Components onto Integrated Circuits*, first published in April 1965 in *Electronics Magazine*, presenting the following graph on the increasing components per integrated function: the graph predicts that, taken into account the known evolution of micro technology, the processing capacity and speed will double every 24 months. His law has not been disproven so far. See also David C. Brock (ed.), *Understanding Moore’s law: four decades of innovation*, Philadelphia Chemical Heritage Press, 2006.

²⁸ Erik Brynjolfsson and Andrew McAfee, *The second machine age: work, progress, and prosperity in a time of brilliant technologies*, New York, Norton, 2014.

²⁹ Jeremy Rifkin, *The third industrial revolution: how lateral power is transforming energy, the economy, and the world*, New York, Palgrave, 2011.

³⁰ European Parliament, Committee on Industry, Research and Energy Committee on the Internal Market and Consumer Protection, *Report on online platforms and the digital single market (2016/2276(INI))*, PE 599.814v02-00, A8-0204/2017, 31 May 2017, p.5, point B., available at: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+REPORT+A8-2017-0204+0+DOC+PDF+V0//EN>.

³¹ European Parliament, *Industry 4.0. Digitalization for productivity and growth*, September 2015. Report.

³² European Data Portal, *Open Data as foundation for Society 5.0*. Reflections from CeBIT 2017, March 29, 2017, available at: <https://www.europeandataportal.eu/en/news/open-data-foundation-society-50>.

“fourth industrial revolution” to refer to the current stage of the technology as it is the most used term in the literature and media.

Even though it is referred to by different names, it is agreed that the current wave of exponential growth in smart tech, artificial intelligence, machines and the interconnectedness of all aspects of modern life is bringing *systemic and profound changes* to society. The Internet of Things (IoT) can connect basically everything in one big virtual brain, making it possible to remotely lock your entrance door, program your fridge to notify you when the milk is getting outdated (and maybe order supplies from an online shop), or even “summon” your keys in case you don’t remember where you left them. Neurological brain enhancement, driverless cars, smart TVs, smart locks and smart fridges, quantum computing, gene sequencing and editing, bitcoins and blockchains: all are part of the fourth industrial revolution. The use of artificial computing and intelligent machines in education, medical treatment, administration, even writing articles or composing music, is creating an unprecedented shift from the way we are used to action and think. These changes have been an emerging issue in the public space in the past years, especially in the World Economic Forum annual conferences.

In 2016, K. Schwab published the book called *The Fourth Industrial Revolution*³³, which, even though it was not the first to recognize the general trend that the exponential growth of technology is setting for the pace of the society and the larger implications of this growth, it gave momentum to the international talk about the subject. The 2016 World Development Report was addressing the subject as well, with a special focus on how digital technology ends up dividing and isolating groups.³⁴ K. Schwab, on the other hand, is focusing on business and on the effects the exponential growth rate specific to the fourth industrial revolution, which is one of the key components that disrupts the society, because the changes are happening at a very fast pace, the companies that don’t keep up with technology will vanish. Another direct effect of the exponential and fast growth is that the administration and the legal system are left behind in regulating the new fields, leading to a shift of power towards tech and its owners, to growing inequality and to fragmented societies.³⁵

K. Schwab identifies three drivers of the fourth industrial revolution: physical (autonomous vehicles, 3D printing, advanced robotics and new materials), digital (blockchains

³³ Klaus Schwab, *The fourth industrial revolution*, (World Economic Forum, Genève, 2016).

³⁴ World Bank, *World Development Report 2016: Digital Dividends*, Washington, 2016, doi:10.1596/978-1-4648-0671-1.

³⁵ Schwab, *The fourth industrial revolution*.

and the connection between objects and virtual networks – Internet of Things) and biological (DNA sequencing, gene editing, lab grown organs)³⁶, and considers that it will have a strong impact in economy, society and culture.

The economic impact of the fourth industrial revolution is expected to result in **heightened economic inequality**. According to the 2017 Oxfam report on the economy of the 99%, the world’s 10 biggest corporations have a combined revenue that exceeds the combined revenue of the poorest 180 countries³⁷ and only 8 individuals own as much wealth as the bottom half of the society³⁸, down from 62 individuals in 2016.³⁹ The polarization of wealth is undoubtedly the result of unsuitable policies concerning the wealth distribution, but the fourth industrial revolution is also playing a significant role. Five of the eight richest people gain their wealth in businesses related to the new wave of technology (Microsoft, Telecom, Amazon, Facebook and Oracle), two of them conglomerate businesses, including shares in tech companies, and only one, Zara, belongs to a traditional field⁴⁰, but even the traditional fields are highly interconnected with technology⁴¹.

³⁶ Schwab, *Fourth Industrial Revolution.*, pp. 14-26.

³⁷ Oxfam, *An economy for the 99 percent*, Jan. 2017, available at: https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-economy-for-99-percent-160117-en.pdf.

³⁸ Oxfam, *An economy for the 99 percent*.

³⁹ Oxfam, *AN ECONOMY FOR THE 1%. How privilege and power in the economy drive extreme inequality and how this can be stopped*, January 2016, available at: https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp210-economy-one-percent-tax-havens-180116-en_0.pdf.

⁴⁰ According to Forbes, the following are the richest eight people in the world. What is also interesting to notice is how the wealth of these people has grown in one years’ time.

Eight richest people March 2016 (Forbes)	Eight richest people August 2017 (Forbes)
1. Bill Gates, Worth: \$75 B, Microsoft	Bill Gates, Worth: \$86 B, Microsoft
2. Amancio Ortega, Worth: \$67 B, Zara	Warren Buffett, Worth: \$75.6 B, Berkshire Hathaway
3. Warren Buffett, Worth: \$60.8B, Berkshire Hathaway	Jeff Bezos, Worth: \$72.8 B, Amazon
4. Carlos Slim Helu, Worth: \$50 B, telecom	Amancio Ortega, Worth: \$71.3 B, Zara
5. Jeff Bezos, Net Worth: \$45.2 B, Amazon	Mark Zuckerberg, Worth: \$56 B, Facebook
6. Mark Zuckerberg, Worth: \$44.6 B, Facebook	Carlos Slim Helu, Worth: \$54.5 B, telecom
7. Larry Ellison, (missing) Oracle	Larry Ellison, Worth: 52.2 B, Oracle
8. Michael Bloomberg, Worth: 47,5B, Bloomberg LP	Charles Koch, Worth: \$48.3 B, Koch Industries

Table 1 – The eight reachest men on the planet.

⁴¹Fortune, “Zara Looks to Online Growth as It Cuts Store Sales Forecast”, March 09, 2016, available at: <http://fortune.com/2016/03/09/zara-stores-online-sales-forecast/>.

Another effect of technology on the economy is that using automation for relocating manufacturing in Europe and the US⁴², jobs are lost elsewhere. It is difficult to run an automated factory if the electrical infrastructure is lacking, or if the transportation is not developed: machines run on electricity and the products need to be moved around, which means that developing countries are at disadvantage from the beginning. This is a problem for states that are trying to fulfil the right to work of people, more so in African and South Asian countries, where the population is booming, but the factories are being relocated. For example, Africa will have 1 billion young people in 2050 that on one hand will need education, and on the other will need employment, but with the production and services automatized and moved abroad, it will be a significant challenge.⁴³

James Harrigan, Ariell Reshef, and Farid Toubal conducted a study on the polarization of jobs in France and concluded that the divide of employment of either high skilled and high payed or low skilled and low payed people is increasing, and the rate of middle skilled and middle paying occupations is dramatically declining. Both blue and white collar jobs are being replaced (clerks, plant and machine operators), while the jobs not being replaced yet tend to be either more difficult to write an algorithm for, or too low payed to worth the effort of spending time to replace it.⁴⁴ This study is consistent with a recent ILO study in the shrinking middle class, due to the fact that workers are shifting to lower income groups⁴⁵, which, again, leads to higher inequality rate. The technological shift leads to structural unemployment: people with outdated skills that are unemployable⁴⁶.

⁴² Plamen Russev, "Poland's unicorn, Slovakia's flying car, and the future of Europe", *World Economic Forum*, March 16, 2017, available at: <https://www.weforum.org/agenda/2017/03/poland-unicorn-slovakia-flying-car-europe-tech/>.

⁴³ Jakaya Kikwete, "In 2050, Africa will be home to 1 billion young people. And they'll need educating", *World Economic Forum*, April 21, 2017, available at: <https://www.weforum.org/agenda/2017/04/in-2050-africa-will-be-home-to-1-billion-young-people-and-theyll-need-educating/>.

⁴⁴ James Harrigan, Ariell Reshef, and Farid Toubal, "The March of the Techies: Technology, Trade, and Job Polarization in France, 1994-2007", *NBER Working Paper No. 22110*, 2016. The paper is a case study on France, but the authors think there are reasons to believe that this is a common trend all over Europe and other developed countries.

⁴⁵ ILO, "ILO study highlights shrinking middle class in Europe", 2016 http://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_535607/lang--en/index.htm. ILO, "Europe's disappearing middle class? Evidence from the world of work", 2016. Executive summary available here: http://www.ilo.org/wcmsp5/groups/public/-/dgreports/-/dcomm/documents/publication/wcms_535617.pdf.

⁴⁶ CCP Grey, *Human Needs Not Apply*: <https://www.youtube.com/watch?v=7Pq-S557XQU> and Jerry Kaplan, *Humans Need Not Apply: A Guide to Wealth and Work in the Age of Artificial Intelligence*, Yale University Press, 2015.

The fourth industrial revolution gives rise to a new kind of economy, in which non-standard employment⁴⁷ is rising and along with some benefits, like having part-time work while studying, child-rearing or caring for the elder, it also brings income and employment insecurity, longer hours, increased ambiguity between paid work and personal time, resulting in lower well-being and higher levels of stress⁴⁸. This change in the economy is called by many names: “collaborative economy”, “sharing economy”, “peer-to-peer economy”, “gig economy”, “uberisation”. Probably the most significant economic impact of the fourth industrial revolution will be in the labour market, on the right to work and rights at work; life expectancy is getting higher, but economic growth happens with less human input, leading to employment imbalance in the higher technologized societies⁴⁹.

2.2 Collaborative economy. Sharing economy. Peer-to-peer economy. Gig economy. The uberisation of the workplace and precarisation of workers

According to the Cambridge dictionary, the verb *to uberize*, with the correlated noun *uberization*, means “to change the market for a service by introducing a different way of buying or using it, especially using mobile technology”⁵⁰. The word comes from the company Uber Technology Inc, and has set a certain trend: the new type of business tends on one hand to not own the entity that is producing their revenues (like Alibaba, Uber, Airbnb, Facebook)⁵¹, and on the other hand to automatize labour, replacing workers with software programmes or machines (like Uber, Waymo; FarmBot, Watson)⁵². As a result, a noteworthy amount of labour is substituted by automation because the newer industries tend to create growth by replacing humans rather than by creating new jobs: in 1990, the 3 biggest companies in Detroit, the major industrial centre at the time, had a combined revenue of \$250 billion with 1.2 million

⁴⁷ Temporary work, part-time, on-call work, “dispatch work”, self-employment and a rising trend of misclassifying workers as contractors.

⁴⁸ Deborah Greenfield, “Preparing The Future of Work We Want”, *ILO Blog*, March 13. 2017, available at: <https://iloblog.org/2017/03/13/preparing-the-future-of-work-we-want/>.

⁴⁹ Deborah Greenfield, “Preparing The Future of Work We Want”, pp. 30-36.

⁵⁰ Cambridge Dictionary, <http://dictionary.cambridge.org/dictionary/english/uberize?q=uberization>.

⁵¹ Airbnb, the biggest lodging company, does not own any hotels, Uber, the biggest ride-sharing company, does not own any car, Alibaba, the biggest retail company, does not own any inventory or warehouses, Facebook, the biggest social media company and YouTube, the biggest video-sharing platform, do not own any content.

⁵² Uber is replacing the traditional taxi call centres with an app and, the same as Google’s Waymo, are working on replacing drivers with autonomous cars; Zume is using Bruno and 3 other robots to replace chefs; FarmBot Inc. is replacing farmers with FarmBot Genesis, a robot that can seed, water and weed plants, Watson is an IBM own AI, a computer programs that learns from the data that’s feed into it and is highly involved in pharmaceutical research, making obsolete the work of many lab workers.

employees, in 2014, the 3 biggest companies in Silicon Valley, the major centre for the new technologies, generated the same income with only 137 thousand employees.⁵³ This is happening because robots perform the same work faster, better and at a cheaper cost: Changing Precision Technology Company, a cell phone module manufacturing factory in Dongguan, fired 90% of its workforce and replaced it with robot arms: the productivity went up by 200% and the faults in products went down with 80%.⁵⁴ The shrinking number of jobs available is not the only effect. Daron Acemoglu from MIT and Pascual Restrepo of Boston University, show that there is a direct link between industrial robot usage in the US local labour markets and the dropping number of jobs available and on the other hand the lowering wages in places where automation is increasing⁵⁵; this is a combined result in part due to direct replacement of jobs, in part because of the pressure on the market when automated, cheaper, products are available. The study, which took into account the timeframe between 1990 and 2007, found that with each robot per one 1000 workers, results in a drop of 0.18-0.34% in employment to population ratio and a drop of 0.25-0.5% in wages.⁵⁶

The new type of businesses is changing the economic discourse, introducing new terms to describe the economic reality: collaborative economy, sharing economy, gig economy, peer to peer economy, but they are all referring to different and most often overlapping aspects of a highly technologized economy. It is generally agreed that the emerging economy cuts out the middle man in transactions and connects directly, through digital platforms, the people involved in different economic relations, which brought it the name of peer-to-peer economy. According to the EU working papers, collaborative economy consists in “business models where activities are facilitated by collaborative platforms that create an open marketplace for the temporary usage of goods or services often provided by private individuals.”⁵⁷ – Uber and Lyft are offering a platform where people that need to go from one place to another can connect to people that are willing to take them there for a certain fee. “**Sharing economy**” has been defined as “a system in which people share resources or services — from homes to cars — by

⁵³ Klaus Schwab, *The Fourth Industrial Revolution*.

⁵⁴ Liang Jun (ed.), “First unmanned factory takes shape in Dongguan City”, *People's Daily, China*, July 15, 2015, available online at: <http://en.people.cn/n/2015/0715/c90000-8920747.html>.

⁵⁵ Daron Acemoglu and Pascual Restrepo, *Robots and Jobs: Evidence from Us Labor Markets*, NBER Working Paper No. w23285, March 2017, available at: <http://www.nber.org/papers/w23285.pdf>.

⁵⁶ Daron Acemoglu and Pascual Restrepo, “Robots and Jobs: Evidence from Us Labor Markets”, *NBER Working Paper No. w23285*, March 2017, p. 36, available at: <http://www.nber.org/papers/w23285.pdf>.

⁵⁷ European Commission, COM(2016) 356 - *A European agenda for the collaborative economy*, June 2016, available at: <http://ec.europa.eu/DocsRoom/documents/16881/attachments/2/translations>.

renting them from one another, typically via apps and websites”⁵⁸ – Airbnb and Nabobil are offering a platform where people can use other people’s homes or cars when those people are not using them, again, for a fee, or like BlaBlaCar, which offers a platform on which people can list their future car-rides and get others to share the same ride for a fee. **Gig economy** relies on self-employed individuals that are available when someone requires their services. “Gig” is a verb that has been informally transformed into a noun that means “a single performance by a musician or group of musicians”⁵⁹. Recently it started being used in the context of the current economy, referring to the expanding practice of companies to hire people on a freelance, casual and temporary basis. The people working in the gig economy are required to provide their services only ‘**on demand**’ and to fit around consumer behaviour.⁶⁰ The sharing economy is based on offering goods (people offering their homes or cars for short-time rent), meanwhile the gig economy is based on demanding services (demanding someone to do a specific, non-permanent task). A 2016 study on the online markets commissioned by the EU finds that: “individuals engage in these activities primarily for money, for a large segment of them this work is their primary source of income, and most are under-employed and self-employed.”⁶¹ When people are employed through the online markets, they tend to be employed as independent contractors, not as workers, which deprives them of certain working rights that labour law normally protects, like fair and minimum wage, health insurance, unemployment benefits, paid vacation, overtime pay, retirement benefits and forming or joining trade unions. This on demand workforce is also called a “human cloud” or “fluid workforce”. According to the World Economic Forum, ‘human cloud’ freelance workers already account for 35% of the active workforce.⁶²

An accurate description of the gig economy and the fluid workforce is given by Chris Yuill, lecturer in sociology at the School of Applied Social Sciences of Robert Gordon

⁵⁸ Catherine Cheney, “What can the sharing economy bring to emerging markets?”, *Devex*, March 9, 2017, available at: <https://www.devex.com/news/what-can-the-sharing-economy-bring-to-emerging-markets-89214>.

⁵⁹ Definition of “gig”, Cambridge Dictionary, available online at: <http://dictionary.cambridge.org/dictionary/english/gig>.

⁶⁰ Field&Forsey, “Sweated Labour: Uber and the 'gig economy'”, London, December 2016, available at: <http://www.frankfield.com/about-frank/publications.aspx>.

⁶¹ Cristiano Codagnone, Fabienne Abadie, Federico Biagi, “The Future of Work in the ‘Sharing Economy’. Market Efficiency and Equitable Opportunities or Unfair Precarisation?”, *Institute for Prospective Technological Studies*, JRC Science for Policy Report EUR 27913 EN, doi:10.2791/4314, available at: <http://publications.jrc.ec.europa.eu/repository/bitstream/JRC101280/jrc101280.pdf>.

⁶² Peter Miscovich, “The future is automated. Here’s how we can prepare for it”, *World Economic Forum Annual Meeting 2017*, January 12, 2017, available at: <https://www.weforum.org/agenda/2017/01/the-future-is-automated-here-s-how-we-can-prepare-for-it>.

University in Scotland, who notices that the gig economy that appeared in the current phase of neoliberal capitalism is dramatically changing the workplace relationships:

“job security, regular or minimum wage, maternity and paternity rights, holiday pay and sick pay are gone. The order of the working day (and night) can be one of **irregular work with no fixed hours or guaranteed level of income.** Workers can also be required to provide **the tools of their trade too, paying out for the cars or bicycles that they use as part of their job.** (...) The legitimating ideology for workers in companies such as Uber and Deliveroo is that they are not employees. Rather, they are self-motivated heroic micro-entrepreneurs free to carve out their own narrative and make their own destiny”⁶³ (my emphasis).

The human rights challenges for rights at work and the right to social protection posed by a large-scale spread of the “human cloud” can affect the states’ capacity to provide basic social safety nets, job security and assure a certain level of income that would assure a dignified existence. The *modus operandi* of the gig economy businesses that generally do not produce or own the operations that account for their revenues and externalize the costs and liabilities of their businesses. This is the source of this job insecurity and this thesis will dive deeper into the specific case of Uber to exemplify the human rights challenges.

⁶³ Chris Yuill, “Gig economy, gig health?”, *Third World RESURGENCE*, www.twn.my, No 319/320 Mar/Apr 17, ISSN 0128-357X, pp. 33-34.

3. The Uber Case

Uber Technologies Inc. is a company connecting drivers with riders with the purpose of sharing rides and is considered representative for the gig economy. It was founded in 2009 by Travis Kalanick (which was also the CEO of the company until July 2017) and Garrett Camp. It has its headquarters in San Francisco, California and in 2016 was valued at \$62 billion, up from \$51 billion in 2015. Due to its fast-growing revenues, it was deemed in 2016 the most successful ‘unicorn’ on the market.⁶⁴

According to their website, Uber operates in 632 cities worldwide (as of November 2017)⁶⁵, with over 1 billion people connected to it (both drivers and riders), considering the world population, it means that at least 1 in 7 people in the world is an Uber app user. When it comes to the Uber drivers, information is not easy to come by. In an interview for a national news agency, the head of Uber Romania consistently refused to give any information regarding the number and stratification of drivers. In Egypt, on the other hand, an Uber representative told BBC that it has 40,000 drivers in Cairo alone, 40% of them were unemployed at the moment they joined Uber and 30% of them drive full time.⁶⁶ A former head of Public Policy at Uber tweeted in 2016 that the number of actual drivers in January 2016 was 1.5 million⁶⁷.

The mobile app Uber, the product of Uber Technologies Inc., is part of the digital disruption of economy, according to Klaus Schwab’s classification of disruption generated by the fourth industrial revolution. One might be tempted to say that Uber is part of the sharing or gig economy since its purpose is sharing rides, but the ride-sharing status is debated due to the fact that the interaction between Uber drivers and Uber is very similar to the interaction between a taxi driver and a taxi company. This debated status is also present in how media reports on the company: in the 2015 Unicorn list of Fortune Magazine Uber is listed as a transportation company, but in the 2016 it’s listed as a software company. Traditional taxi companies have used this self-classification of Uber as IT company against Uber when negotiating changes in the national transportation law. For example, in Romania, Uber used its unclear legal status to join the negotiations on a new transportation law, but the taxi

⁶⁴ Fortune, “The Unicorn List”, available at: <http://fortune.com/unicorns/> .

⁶⁵ Up from 542 in March 2017: <https://www.uber.com/en-NO/>.

⁶⁶ BBC, “Has Uber Lost Its Way?”, *Business Daily*, available at: <http://www.bbc.co.uk/programmes/p04x30f0>.

⁶⁷ Markmacgann, former head of Public Policy at Uber, post on Twitter from 14 Jan 2016 at 2:50 AM, available at: <https://twitter.com/markmacgann/status/687587461711659009>.

associations argued against Ubers' participation in the negotiations, since Uber defines itself as an IT company, not a transportation company.⁶⁸

3.1 How does it work

The first step to become an Uber user is to go in the pay/app store and install the Uber app. The account can be set as a rider or as a driver, and the person needs to provide several personal details, depending on whether you opt to be a driver or a rider, including credit card details, name and phone number, car documentation.

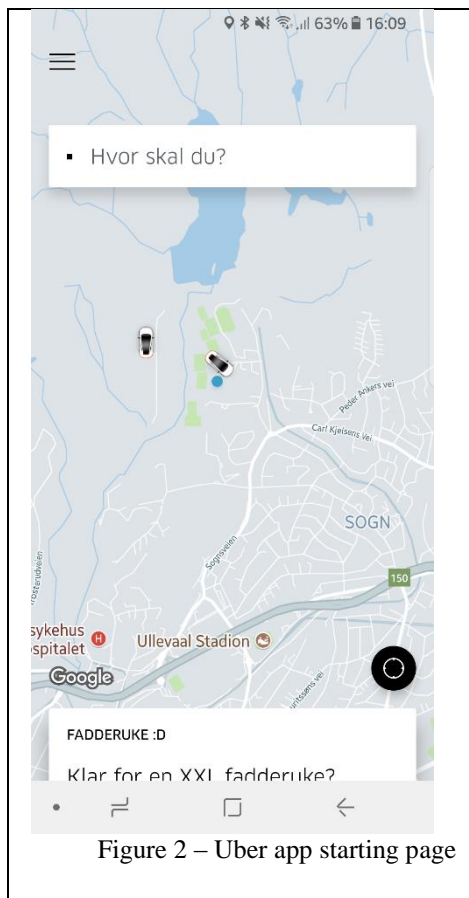


Figure 2 – Uber app starting page

The main function of the app is to connect drivers with prospective riders. It does so by using satellite geolocation systems integrated in the app. Figure 1 shows the app starting page of a rider: the blue dot is the location of the prospective rider, and the car symbols show the nearby drivers that are free to take a customer. When a ride is ordered, the app will show a pick-up location, where both the rider and the driver have to go in order to meet and start the journey. In 2017 a new function was introduced that does not require to physically opening the Uber app, but instead the user can “summon” an Uber driver directly from google maps.

In a traditional taxi company, the company owns cars, employs drivers and owns or rents a call centre that connects the potential riders with the drivers. There is also the option of being a freelance taxi driver, which pays a fee to a call centre that would connect him/her to the potential riders. In both cases the taxi drivers need special public transportation licences to carry their activity. In some countries/states the number of taxi licenses is limited, which drives the licence price up.

The Uber app combines the function of a sophisticated taxi dispatcher, connecting drivers with riders using geolocation, with that of a taxi company that sets the fares and working

⁶⁸ Digi24, “Taximetriștii cer excluderea UBER de la masa discuțiilor”, news report, May 24, 2017, available at: http://www.digi24.ro/stiri/economie/consumatori/taximetriștii-cer-excluderea-uber-de-la-masa-discuțiilor-730489?_grsc=cookieIsUndef&_grts=1495623996682.

conditions of drivers. The rider does not pay the driver directly, but Uber, who periodically transfers 75% or 80% (depending on when the driver signed up for Uber) of the fares to the driver. What is also to be noted is that the Uber rides do not have a fixed per kilometre or per minute fare, as traditional taxi companies do; the price is calculated by an algorithm and can rise or fall 7-8 times, depending on the ride requests and drivers available to take rides at that time. This is called “price-surge”. The price also varies on the location of the customer and its destination. The latter is a “route-based pricing”: riders departing from high-income locations being taxed more than a rider departing from a low-income location⁶⁹. Both are somewhat controversial features that can be turned on or off, depending on Uber’s choices. For example, during the general protest against Trump’s ban on Muslims, when all traditional taxi companies and some ride sharing companies like Lyft refused to go to the JFK airport to pick up passengers, Uber still offered its services and turned off the price-surge feature, which was seen by its users as a sign of supporting Trump and triggered a delete-Uber campaign.⁷⁰

3.2 Advantages and disadvantages of Uber

The fact that Uber is offering an innovative way of connecting drivers and riders is not debated, and like many innovations, it comes with benefits and pitfalls. Brishen Rogers sees as the main benefit, both for drivers and riders, the fact that Uber is cutting the search costs: a rider does not have to wait an undetermined amount of time for a car that might not come and drivers don’t have to go to an area where they have been summoned only to find out that the rider already found another ride; Uber also motivates riders not to buy cars by making it accessible and affordable to use an Uber ride, therefore also minimizing the environmental harm.⁷¹

On the riders’ side, there are many benefits that Uber is bringing by offering a very simplified access to transportation. From their phones, the riders can see in real time where the available cars are and how long it will take to get to the meeting point, can plan a trip days in advance and can get a very accurate estimate of the fare as long as they set the destination; Uber also brings an advantage to lower-income communities as it makes ride-sharing available

⁶⁹ Eric Newcomer, “Uber Starts Charging What It Thinks You’re Willing to Pay”, *Bloomberg Tech*, May 19, 2017, available at: <https://www.bloomberg.com/news/articles/2017-05-19/uber-s-future-may-rely-on-predicting-how-much-you-re-willing-to-pay>.

⁷⁰ Lucinda Shen, “200,000 Users Have Left Uber in the #DeleteUber Protest”, *Fortune Tech*, February 3, 2017, available at: <http://fortune.com/2017/02/03/uber-lyft-delete-donald-trump-executive-order/>.

⁷¹ Brishen Rogers, “The Social Costs of Uber”, *University of Chicago Law Review Dialogue*, Vol. 82, pp. 85-102, 82 U. Chi. L. Rev. Dialogue 85 (2015-2016), p.88-90.

for people that would not afford a traditional taxi: the cost of an Uber ride can be even less than half of a similar taxi ride⁷². An Australian study commanded by Uber claims that the Uber riders save in total 800,000 hours and \$31 million each year⁷³. The issue of safety is also important: since Uber has the personal details of each driver and each rider, even though the driver and rider only know each other's first name, Uber always knows which driver is driving which rider, so accountability is easily attainable⁷⁴, which can make especially foreigners feel safer while using Uber compared to using a local and unfamiliar taxi company. Following the Uber complex algorithm for setting the prices, a tourist in a foreign city that is not familiar with the local transportation market is less likely to be overcharged for the ride, as can happen with a traditional taxi. The cashless payment can also be considered a benefit: the money is withdrawn from the bank account of the rider automatically by Uber and no cash transaction takes place unless the rider wants to tip the driver outside the app.

On the drivers' side, the flexibility of the schedule is probably a benefit and the fact that the platform operates through a mobile phone with integrated maps and geolocation detection can also make it easier for drivers to locate the rider and reach the destination. The technological platform allows easy sign-up, which translates into a source of income for the driver. However, the easy sign up, is contested by transportation companies and customer protection agencies. If someone wishes to become a driver for Uber, it only needs to sign up and provide some personal details and details about the car, meanwhile for a traditional taxi company, a to-be employee needs to provide in addition to driving licences and driving record, police clearance and to take part in a training programme that consists in a minimum number of test-driving hours. Uber claims to do background checks for its future drivers, but the reliability of these checks started to be debated after an Uber driver in Delhi sexually assaulted a passenger and it was revealed that the driver had prior conviction for sexual assault⁷⁵; later it was revealed that several of the Uber drivers in US were also former offenders⁷⁶; both the Uber driver that committed the Michigan attacks in between picking up and dropping off Uber clients

⁷² The Telegraph, "Proof that Uber costs less than black cabs", 30 Sep 2015, available at: <http://www.telegraph.co.uk/technology/uber/11902613/Proof-that-Uber-costs-less-than-black-cabs.html>.

⁷³ News.com, "A new report explores the benefits of Uber", February 1, 2016, available at: <http://www.news.com.au/finance/business/travel/a-new-report-explores-the-benefits-of-uber/news-story/5e41687c9bc2614f07015f85eb784f7f>.

⁷⁴ It can be argued that this is not really safety, but more a possibility of holding someone accountable post factum.

⁷⁵ Jason Burke, "Uber banned in Delhi after taxi driver accused of rape", *The Guardian*, December 8, 2014, available at: <https://www.theguardian.com/technology/2014/dec/08/uber-banned-delhi-taxi-driver-accused-rape>.

⁷⁶ Olivia Blair, "Uber drivers 'convicted of manslaughter, child exploitation and DUI'", *The Independent*, August 7, 2015, available at: <http://www.independent.co.uk/news/world/americas/uber-los-angeles-drivers-convicted-of-manslaughter-child-exploitation-and-dui-10445082.html>.

and the suspect in the New York truck attack were Uber drivers that passed the background checks, CNN reports⁷⁷. Without meaning to say that Uber is less safe than traditional taxies or that traditional drivers commit fewer offences than Uber drivers, the reliability of Uber's background checks is nonetheless under scrutiny.

When it comes to the **transportation market**, Uber is driving the traditional taxi companies to innovate technologically: before Uber, in most taxies it was impossible to pay by card, but now some companies are even introducing uber-like apps⁷⁸. Uber has also been accused of unfair competition. In Germany, Portugal, Romania, Italy, UK, Spain and some US states it has been banned in inferior courts on this ground, waiting for the appeal to decide whether it stays banned or not. In London, its operating licence has not been renewed on similar grounds. This accusation is very popular and is based in Uber's business practice; Uber does not have many of the costs a traditional taxi company has. Uber does not classify its driver as employees, which means they don't have to pay minimum wage, parental leave, social insurance, unemployment benefits, night pay, overtime pay, sick leave or paid vacations of the drivers, Uber does not buy cars and does not pay for the fuel, maintenance and insurance of the cars that are making the revenue. Taking this into account, it is not difficult for Uber to charge lower fares compared to traditional taxi companies.

3.3 Uber drivers and socio-economic rights

Being part of the gig economy, Uber is susceptible to the same issues as any other company that operates on a model that externalizes its risks and dresses employment in self-employment clothes, rendering work insecure, unstable and casting it outside the labours' law legal protection. In September 2016, Frank Field and Andrew Forsey published a study on self-employment in the gig economy in Britain and found that workers in the gig economy end up being remunerated even three times less per hour than the hourly minimum wage and their working conditions are equivalent to the Victorian "sweated labour", where workers toil in precarity with almost no rights and no protection⁷⁹. The study notes that the gig-economy workers, "despite being classed as self-employed, work very long hours, often with one particular company, in return for chronically low rates of pay. Moreover, they do so without

⁷⁷ Jethro Mullen, "Uber: New York truck attack suspect passed background check", *CNN*, November 1, 2017, available at: <http://money.cnn.com/2017/11/01/technology/uber-new-york-attack-driver-background-check/index.html?sr=fbCNN110117uber-new-york-attack-driver-background-check1010AMStory>.

⁷⁸ Sara Ashley O'Brien, "Yellow cab drivers are using this app to compete with Uber", *CNN Tech*, May 10, 2017, available at: <http://money.cnn.com/2017/05/10/technology/streetsmart-nyc-taxi/index.html>.

⁷⁹ F.Field&A.Forsey, *Wild West Workplace*, London, September 2016.

the right to paid leave, to the National Living Wage, and to challenge an unfair dismissal, for example, which are among the protections granted to workers and employees”⁸⁰. Later the same year they made another study focused on Uber drivers; the study was aimed at Transport of London and the Department for Transport, and the authors were asking to not renew the operating licence for Uber in 2017, as it misclassifies its drivers as independent contractors and does not fulfil the legal duties of an employer towards its drivers. The study was backed by 83 interviews with London-based Uber drivers that described the financial difficulties they are facing, the control exercised by Uber over their income, means and conditions of working, as well as the lack of assistance from Uber when they encounter problems in their work. Their findings are that London drivers are paid less than the minimum wage, that they have to spend increasingly more hours in the car, waiting for someone to take a ride, due to the high number of drivers Uber is recruiting and due to the preferential assignment of rides to the newer drivers, from which Uber takes a higher fee; they also found that Uber is transferring almost all risks to the drivers and offer no assistance in cases where riders damage the car or threaten the driver.⁸¹ Another finding is that drivers “do not have the freedom to determine their own working patterns, as Uber holds the power to remove work from them if certain conditions are not met”⁸². The conclusion of Fields and Forseys study is that Uber is misclassifying its drivers as independent contractors in order to avoid abiding by labour laws.

In addition to the findings of this study, Uber has faced protests and law suits from taxi drivers worldwide, both from its own drivers requesting living wages⁸³ and from other taxi drivers and companies worldwide⁸⁴. In Cluj-Napoca, Romania, Uber has been banned while awaiting ruling on accusations of unfair competition and breaching passenger-transportation

⁸⁰ Field and Forsey, *Sweated Labour. Uber and the 'gig economy*, London, December 2016.

⁸¹ Field and Forsey, *Sweated Labour*.

⁸² Field and Forsey, *Sweated Labour*, p.5.

⁸³ Neha Wadekar, “Hundreds of Uber drivers in Kenya go on strike after price cuts”, Reuters, August 2, 2016, available at: <https://www.reuters.com/article/us-kenya-uber/hundreds-of-uber-drivers-in-kenya-go-on-strike-after-price-cuts-idUSKCN10D18P>.

In India the Uber drivers protesting against Uber became violent and damaged the Uber office in Bangalore: Officechai, “Striking Uber Drivers Throw Stones At Uber Office, Break Windows”, February 23, 2017, available at: <https://officechai.com/news/watch-striking-uber-drivers-throw-stones-uber-office-break-windows/#sthash.WPEBma7M.dpbs>.

⁸⁴ Reuters, “South African taxis block roads to main airport in Uber protest”, March 10, 2017, available at: <https://www.reuters.com/article/us-safrica-uber-tech/south-african-taxis-block-roads-to-main-airport-in-uber-protest-idUSKBN16H1PB>. and Reuters, “Portugal cab drivers block Lisbon airport in anti-Uber protest”, October 10, 2016, available at: <https://www.reuters.com/article/us-portugal-protests-uber/portugal-cab-drivers-block-lisbon-airport-in-anti-uber-protest-idUSKCN12A1YX>.

license law⁸⁵; the same has happened in Berlin⁸⁶. In France, a trial for re-classifying Uber drivers as employees was rejected on procedural grounds⁸⁷; in a trial in France accusing Uber of offering illegal taxi services, Uber was required to pay 800,000 EUR in compensations.⁸⁸ And even the European Court of Justice's advocate general expressed his opinion in *Asociación Profesional Elite Taxi v. Uber Systems Spain* that Uber qualifies as transportation company, not a digital service⁸⁹.

Considering Fields' and Forseys' study on Uber, the misclassification of drivers in independent contractors is weakening the drivers power to enjoy their labour rights, and given the fact that drivers elsewhere have also protested against Ubers' practice, it can be said that Uber is indeed creating among its drivers the feeling that their rights, especially the right to fair pay, is challenged by Uber's business model. The case of Uber drivers protesting against the low pay they receive is especially instructive in the way it functions. As self-employed, *de jure* the Uber drivers could only protest against their own person, since according to their signed agreements with Uber the drivers are their own bosses and is Uber merely a business partner, but in practice they recognize the *de facto* nature of their relationship with Uber and protest against Uber. And as a result of the protests, Uber announced to review the drivers' payment, as any employer would do when his workers go on strike. The next section will look into case law concerning the employment status of the Uber drivers.

3.3.1 Are Uber drivers employees or self-employed? Case law

The issue of granting social protection like health insurance or unemployment benefits and rights at work like minimum wage, maternity/paternity leave, sick leave, paid vacation and overtime pay, are all dependent on the employment status of the person. This is imperious for *de facto* safeguarding of social rights of the employee. When drivers sign up for Uber, they agree to certain terms which classify them as partners of Uber and therefore do not have

⁸⁵ Stiri de Cluj, "Uber nu mai are voie să lucreze în Cluj-Napoca, a decis Tribunalul Specializat Cluj / UBER atacă decizia", 16 November 2016, available at: <http://www.stiridecluj.ro/social/uber-nu-mai-are-voie-sa-lucreze-in-cluj-napoca-a-decis-tribunalul-specializat-cluj-uber-ataca-decizia>.

⁸⁶ Reuters, "Berlin court upholds ban on Uber ride-share service", 16 April 2015: <http://www.reuters.com/article/us-uber-germany-idUSKBN0N71WN20150416>.

⁸⁷ *URSAFF v Uber*, Christophe Alix, « Devant la justice, l'Urssaf perd face à Uber », *Liberation*, 17 mars 2017, http://www.liberation.fr/futurs/2017/03/17/devant-la-justice-l-urssaf-perd-face-a-uber_1556255.

⁸⁸ Chine Labbé, "French court fines Uber, execs for illegal taxi service", *Reuters*, June 9, 2016, available at: <http://www.reuters.com/article/us-france-ubertech-court/french-court-fines-uber-execs-for-illegal-taxi-service-idUSKCN0YV1DQ>.

⁸⁹ Court of Justice of the European Union, Press Release No 50/17, Luxembourg, May 11, 2017, available at: <https://curia.europa.eu/jcms/upload/docs/application/pdf/2017-05/cp170050en.pdf>.

employment rights. The international legislation is not unitary when it comes to the definition of what an employee is. The courts apply either the common law “control test” to determine if an employment relationship existed: “whether or not the 'employer' retains the right to control the manner and means by which the result is to be accomplished”, or the economic realities test, also known as Borello test, “whether the worker is economically dependent on the employer”⁹⁰. A landmark US case that is sometimes referred to in cases against Uber is *Brennan v. Partida*, which establishes that a person can have employment rights independent on whether there is an employment contract between the parties or not. In the EU, a milestone case in employment is *Lawrie-Blum vs. Land Baden-Württemberg*, which establishes that “the essential feature of an employment relationship (...) is that for a certain period of time a person performs services for and under the direction of another person in return for which he receives remuneration”, which, the same as in the US case, is not dependent on a written employment contract.

As far as the case law is concerned, this thesis offers a discussion of five cases from the US, one from EU and one from Latin America. I have chosen these cases based on the availability of court decisions and to the extent that they are relevant for rights at work and right to social protection. The limited number of cases discussed originates in the lack of available court documents, however, the thesis offers an annex of 73 cases that were available on issues of misclassification of drivers or related, the general trend is either to try and reach a settlement agreement where Uber is taking the responsibility to pay various amounts of money to the plaintiffs, or change the nature of the trial from ruling over employment rights to ruling over Uber’s motions to compel arbitration on the plaintiffs. This became possible after Uber unilaterally introduced in 2013 (revised in 2014 and 2015, after being deemed as invalid by the court⁹¹) individual arbitration clauses rather than public courts in solving any disputes between the parts using the Uber app. This clause was an opt-out clause that would render it impossible

⁹⁰ “[1]the extent to which the work performed is an integral part of the employer's business;" [2] "the worker's opportunity for profit or loss depending on his or her managerial skill;" [3] "the extent of the relative investments of the employer and the worker;" [4] "whether the work performed requires special skills and initiative;" [5] "the permanency of the relationship;" and [6] "the degree of control exercised or retained by the employer (U.S. Department of Labor Wage and Hour Division, Administrator’s Interpretation No. 2015-1 on The Application of the Fair Labor Standards Act’s “Suffer or Permit” Standard in the Identification of Employees Who Are Misclassified as Independent Contractors, July 15, 2015, available at: https://www.dol.gov/whd/workers/Misclassification/AI-2015_1.pdf).

⁹¹ *O’Connor v. Uber Techs., Inc.*, Docket No. 330 and *Yucesoy v. Uber Techs., Inc.*, Docket No. 206, Order Denying Plaintiffs’ motion for preliminary approval, August 18, 2016.

for drivers to bring class actions against Uber once they don't send within a designated time-frame a written demand to opt out.

In the US, the worker status is regulated by The Fair Labor Standards Act (FLSA) of 1938, and defines the employee as “any individual employed by an employer”⁹². Under the FLSA, any worker who is “economically dependent on the employer, regardless of skill level” is deemed an employee. According to the US Department of Labour Wage and Hour Division interpretation of FLSA, an independent contractor, as Uber officially classifies its drivers, is described as a person who is economically independent and who operates “a business on their own”⁹³. The same Administration Interpretation shows that in the US there is an increasing trend of misclassifying employees as independent contractors with the purpose of eluding “important workplace protections such as the minimum wage, overtime compensation, unemployment insurance, and workers’ compensation and in order to avoid compliance with labour laws”, with a side effect of “lower tax revenues for government and an uneven playing field for employers who properly classify their workers”⁹⁴.

Uber drivers don't have any employment agreement with Uber, but *Brennan v. Partida*, establishes that a worker may still be classified as an employee under the FLSA by looking at the broader economic realities⁹⁵ and it does not “matter that the parties had no intention of creating an employment relationship, for application of the FLSA does not turn on subjective intent”⁹⁶ and the employer is not excused of its legal obligations under FLSA. As Erica E. McCabe notes, by applying the US FLSA to Uber, its drivers would be classified as employees because the drivers are economically dependent on Uber, especially due to the fact that Uber controls the fares charged for rides and the entire Uber App; even though Uber drivers have an investment which consists in the car they are driving, this does not necessarily indicate that the person is an independent contractor⁹⁷.

⁹² FLSA, e (1), available at: <https://www.law.cornell.edu/uscode/text/29/203>.

⁹³ U.S. Department of Labor Wage and Hour Division Washington, D.C., *The Application of the Fair Labor Standards Act's “Suffer or Permit” Standard in the Identification of Employees Who Are Misclassified as Independent Contractors*, Administrator's Interpretation No. 2015-1, July 15, 2015, p.4, available at: https://www.dol.gov/whd/workers/Misclassification/AI-2015_1.pdf

⁹⁴ U.S. Department of Labor Wage and Hour Division Washington, D.C., *Interpretation*, p.1, available at: https://www.dol.gov/whd/workers/Misclassification/AI-2015_1.pdf.

⁹⁵ The “economic realities test” is established under FLSA as a tool to determine whether a person is an employee or not and it consists in testing the economic dependency of the worker on the employer.

⁹⁶ *Brennan v Partida*, No. 73-2112, US Court of Appeals, Fifth Circuit, April 12, 1974, available at: https://scholar.google.no/scholar_case?case=17181421577885438956&q=Brennan+v.+Partida&hl=en&as_sdt=2006&as_vis=1.

⁹⁷ U.S. Department of Labor Wage and Hour Division Washington, *Interpretation*.

One of the few US trials that reached a final decision is *Berwick v. Uber Technologies, Inc.*, where the court ruled that the plaintiff, an Uber driver, is an employee of Uber, and the fact that Uber does not control completely the driver (namely the driver can choose the working hours) does not exclude the employee-employer relationship, since the majority of working activities of the driver are controlled by Uber. The court found that Uber's claim that they are just a neutral technological platform is unfounded in reality: Uber requires the social security number, address, proof of car ownership and year of fabrication, car insurance and driver license and excludes drivers that don't meet the "industry standards", which the court deems to be the taxi industry requirements. Uber controls the fares charged, and blocks drivers that have a rating lower than 4.6 out of 5 from using the app; moreover, it is impossible for the drivers to take passengers outside Uber's app and they pay no intellectual property rights for using the app and GPS system provided by Uber. Also, the fact that the plaintiff was using her own car does not constitute lack of employee-employer relationship⁹⁸, since a 1990 ruling (*Toyota Motor Sales v. Superior Court 1990*) concerning pizza delivery services already established the fact that, even though the plaintiff used his own car and had to pay for the fuel and car insurance, he was still an employee. Furthermore, the plaintiffs' activity was an integral part of Uber's business, without it Uber would not exist: Uber is not selling or renting the Uber app, Uber is selling rides. These were the arguments that led to ruling in favour of the plaintiff, deeming her to be an employee of Uber and deciding that Uber has to pay car using fee at the 2014 IRS standards, when the events took place, as well as other parking fees that occurred during the time the plaintiff was driving for Uber.⁹⁹

Two other relevant US cases on misclassification of Californian Uber drivers as independent contractors are *O'Connor et al v. Uber Techs., Inc.* (on behalf of O'Connor and other 243,320 Californian Uber drivers) and *Yucesoy et al v. Uber Techs., Inc.* (on behalf of himself and other 60,047 Massachusetts Uber drivers). In these cases, Uber tried to force arbitration on the plaintiffs, but the court found that the arbitration clause was "invalid as a

⁹⁸ Same judgment in *Alexander v. FedEx Ground Package Sys., Inc.*, 765 F.3d 981, 987 (9th Cir. 2014) and *Air Couriers International v. Emp't Dev. Dep't*, 150 Cal. App. 4th 923, 934 (2007) and *JKH Enterprises, Inc. v. Dep't of Indus. Relations*, 142 Cal. App. 4th 1046, 1052(2006) concerning the schedule of the workers. Cases are cited in *O'Connor et al v Uber* (ORDER DENYING DEFENDANT UBER TECHNOLOGIES, INC.'S MOTION FOR SUMMARY JUDGMENT March 11, 2015).

⁹⁹ *Berwick v. Uber Technologies, Inc.*, Labor Commissioner Case No.: 11-46739 EK, ruling 3rd of June 2015, available at: <http://cdn.arstechnica.net/wp-content/uploads/2015/06/04954780-Page0-20.pdf>.

matter of public policy”, therefore the settlement agreement was denied by the court¹⁰⁰. Both cases concerned the misclassification of drivers into independent contractors and expenses drivers occurred while using their personal vehicles.

After changing the arbitration clause in 2015, Uber filed again to compel arbitration on the plaintiffs, arbitration that was declined by the court in the *O’Connor*, *Yucesoy* and *In Re* cases, but in other trials it shifted from judging over the arbitration instead of judging over the misclassification of drivers. For example, in *Mohamed v. Uber Technologies*, the US District Court of Appeals for the Ninth Circuit overthrew a prior decision that was declining Uber’s motion to compel arbitration due to the fact that the inferior court based its decision on the enforceability of the arbitration, which is not in the duties of the court, but among the duties of an arbitrator.¹⁰¹

The cases brought against Uber by independent agencies, however, tend to come to a result faster. For example in *Federal Trade Commission V. Uber Technologies, Inc.*, a settlement in which Uber agreed to pay \$20 million over allegations of misleading prospective drivers regarding payments and car expenses and producing financial injury to the drivers.¹⁰²

In the **European Union** the labour law lacks uniformity: the EU directive 2002/14/EC sets that an employee is “any person who, in the Member State concerned, is protected as an employee under national employment law and in accordance with national practice”¹⁰³. The soon to be 27 member states have national labour laws that define their respective labour codes. Uber is a new enterprise in the EU and cases against it are rare. In the **UK**, for example, labour rights are protected through the Employment Rights Act (ERA) of 1996 and through the National Minimum Wage Act (NMWA) of 1998, revised in 2015. In October 2016, the London Employment Tribunal has ruled in the class action case of the 40,000 London Uber drivers brought forth by *Aslam, Farrar et al v Uber* that Uber drivers are employees of Uber and they are entitled to be paid the national minimum and living wage, holiday pay and sick pay, as specified in ERA and NMWA¹⁰⁴. The ruling has been appealed by Uber; in November 2017

¹⁰⁰ *O’Connor v. Uber Techs., Inc.*, Case No. 13-cv-3826-EMC, Docket No. 330 (Second Amended Complaint) (SAC) and *Yucesoy v. Uber Techs., Inc.*, Case No. 15-cv-262-EMC, Order Denying Plaintiffs’ motion for preliminary approval (*O’Connor*, Docket No. 518, *Yucesoy*, Docket No. 206), August 18, 2016.

¹⁰¹ *Mohamed v. Uber Technologies, Inc.*, 15-16178.

¹⁰² *Federal Trade Commission V. Uber Technologies, Inc.*, 3:2017cv00261.

¹⁰³ Directive 2002/14/EC of the European Parliament and of the Council, 11 March 2002, establishing a general framework for informing and consulting employees in the European Community, art. 2(d).

¹⁰⁴ *Aslam, Farrar&Others v Uber*.

the appeal court upheld the decision of the first court¹⁰⁵. The issue between the parties was whether drivers are, or are not, “workers” within the meaning of Section 230(3)(b) of the ERA 1996, Regulation 36(1) of the Working Time Regulations and Section 54(3) of the NMWA 1998. Uber claimed it is merely a technology-selling company and not a transportation company, Uber drivers being its partners. However, the tribunal relied on the fact that the drivers are paid directly by Uber, are only given the first name of the passenger and their destination is not known to the driver before picking up the passenger, Uber forbids drivers to exchange personal information with passengers, the fare and the route are under Uber's control and the driver can deviate from the prescribed route on its own expense and not without explaining it to Uber, Uber unilaterally deducts from drivers payment if there is a complaint from the passengers, Uber can punish drivers if they decline rides or don't accept rides offered, a driver cannot work for Uber without prior submission of personal documents, screening and approval by Uber, Uber imposes technical traits for the cars as well as a rating system that can lead to permanent removal of the driver from the Uber platform¹⁰⁶. Based on these facts, the tribunal ruled that Uber drivers are employees and entitled to labour rights as prescribed by law. Uber's claim that it only intermediates contact between drivers and passengers, was deemed as “pure fiction which bore no relation to the real dealings and relationship between the parties”¹⁰⁷ and considers Uber's claim absurd that the drivers are not its drivers, since, extending Uber's reasoning to show its fallacy:

“the driver enters into a binding agreement with a person whose identity he does not know (and never will know) and who does not know and will never know his identity, to undertake a journey to a destination not told to him until the journey begins, by a route prescribed by a stranger to the contract (UBV) from which he is not free to depart (at least not without risk), for a fee which (a) is set by the stranger, and (b) is not known by the passenger (who is only told the total to be paid), (c) is calculated by the stranger (as a percentage of the total sum) and (d) is paid to the stranger.”¹⁰⁸

Due to its control over the drivers, the court decided that Uber is a technologically advanced transportation company that is selling transportation and not technology.¹⁰⁹ This is the same conclusion that *O'Connor v. Uber* and *Berwick v. Uber* have reached in the US. The

¹⁰⁵ Lizzie Dearden, “Uber ordered to treat drivers as workers with full rights after losing appeal in landmark case”, *The Independent*, November 11 2017, available at: <http://www.independent.co.uk/news/business/news/uber-drivers-employees-full-rights-court-appeal-lose-ordered-treat-ride-sharing-app-taxi-a8047316.html>.

¹⁰⁶ *Aslam, Farrar and Others v Uber Case Nos 2202550/2015 & Others*, paragraph 92.

¹⁰⁷ *Aslam, Farrar*, paragraph 91

¹⁰⁸ *Aslam, Farrar*, paragraph 91.

¹⁰⁹ *Aslam, Farrar*, paragraph 89, 122 and 123. The court dismissed the claim stating that “the notion that Uber is a mosaic of 30,000 small businesses linked by a common platform is faintly ridiculous”.

UK court states that an Uber driver is “working under a limb (b)¹¹⁰ contract when he has the App switched on, is in the territory in which he is licensed to use the App and is ready and willing to accept trips.”¹¹¹ In comparison to the US cases, the UK court tends to give more rights than the plaintiffs are asking for, for example the court states that the drivers should be remunerated for their time whenever they are in their working geographical area and have their app switched on¹¹². While the US ongoing cases tend to be blocked by the individual arbitration clause and the matter under scrutiny is changed from labour rights to contract agreements, in the UK court this has not been the case.

Even though there is a degree of agreement that Uber is controlling the work of its drivers to the extent that the drivers should be classified of employees, Uber fails to do so and therefore deprives the drivers of employment rights. Moreover, Uber is paying its drivers under the minimum wage and does not assist them when they are removed from the Uber app without explanation or when the riders produce damages to the drivers’ cars. The Uber payment system that is perceived as unfair by its own drivers, as well as by other taxi companies has generated a degree of social unrest among transportation providers. It is time and resource consuming for Uber drivers to gain protection for their rights: *O’Connor et al v. Uber Technologies, Inc. et al* was filed in august 2013 and even in November 2017 is still ongoing. So far, neither inferior nor superior courts have ruled against the claim of a driver of being misclassified, and considering the precedent from *Brennan v. Partida* and *Lawrie-Blum vs. Land Baden-Württemberg*, it is difficult to see how it would be possible to do so. However, the real challenge in the protection of drivers’ rights is the individual arbitration clause, which prevents any class actions against Uber and forces all complaints into individual arbitration, where Uber is the stronger party. UK decision both in the inferior court and in appeal and the opinion of the European Court of Justice, which have been highly mediatised confirms the employment status of the Uber drivers. In the next chapter I will undertake an analysis of how the case law relates to specific socio-economic rights and the states’ capacity to protect and fulfil them.

¹¹⁰ ERA, s230, 3(b): “any other contract, whether express or implied and (if it is express) whether oral or in writing, whereby the individual undertakes to do or perform personally any work or services for another party to the contract whose status is not by virtue of the contract that of a client or customer of any profession or business undertaking carried on by the individual”.

¹¹¹ *Aslam, Farrar&Others v Uber*, paragraph 100.

¹¹² *Aslam, Farrar*, paragraph 86.

4. To what extent is the protection and fulfilment of socio-economic rights affected by the fourth industrial revolution?

States that are part in the ICESCR are bound by the treaty to respect, protect and fulfil art.6 regarding the right to work, art.7 regarding rights at work, and art.9 regarding the right to social protection, in order to contribute to a dignified and worth-living life for the citizens under their jurisdiction. The protection and fulfilment of the right to work consists on the one hand in offering training relevant for employment and on the other hand in guaranteeing employment opportunities¹¹³. Among the rights at work relevant for this thesis, ICESCR indicates the rights to fair wages and equal remuneration for work of equal value, decent living for workers and their families, safe and healthy working conditions and the right to “rest, leisure and reasonable limitation of working hours and periodic holidays with pay, as well as remuneration for public holidays”.¹¹⁴ The right to social protection, which overlaps to some extent with rights at work, is not very explicit in ICESCR, but the *General Comment 19* of the Committee on Economic, Social and Cultural Rights defines the right to social protection as “the right to access and maintain benefits, whether in cash or in kind, without discrimination in order to secure protection, *inter alia*, from (a) lack of work-related income caused by sickness, disability, maternity, employment injury, unemployment, old age, or death of a family member; (b) unaffordable access to health care; [and] (c) insufficient family support, particularly for children and adult dependents.”¹¹⁵ As an illustration of the types of human rights challenges raised by the fourth industrial revolution, these rights are central for the Uber case.

4.1 Rights at work and social protection

Considering the case law consulted for this paper, when Uber is misclassifying its drivers as independent contractors, it denies them rights at work and to certain extent rights to social protection that are covered from employment contributions and offered on participatory-base. However, when drivers sued Uber for their misclassification as independent contractors, most did not requested to be compensated for rights at work, but generally asked for statutory employee reimbursement, which most often amounts to expenses related to the use of their car

¹¹³ ICESCR, art.6b: “2. The steps to be taken by a State Party to the present Covenant to achieve the full realization of this right shall include technical and vocational guidance and training programmes, policies and techniques to achieve steady economic, social and cultural development and full and productive employment under conditions safeguarding fundamental political and economic freedoms to the individual.”

¹¹⁴ ICESCR, art.7.

¹¹⁵ Committee on Economic, Social and Cultural Rights, General Comment No. 19 – The Right to Social Security.

(leasing costs, fuel, insurance, usage, parking tickets), which the drivers viewed as costs that they covered for the profit of Uber; no driver asked for covering the mobile device costs, for example, even though the Uber app only works on a mobile device that is connected to the internet and is as essential as the vehicle to carry out the work. There is no case asking for maternity/paternity benefits or for sick leave or health coverage, but these are nonetheless rights that drivers are entitled to, provided that they are employees, as the court practice shows. The most encompassing case discussing social and economic rights of Uber drivers is the Brazilian case of *Rodrigo Leonardo Silva Ferreira v Uber*, where Uber was ordered to pay compensation for overtime, night shifts, holidays, gasoline, as well as expenses with water and candy, which Uber requires the drivers to provide for their passengers; however, the case did not address other rights at work like sick pay, health coverage, pension or unemployment protection. This is not to say that if social protection and rights at work are only seldom mentioned in the case law they are not affected.

The ILO Convention 102 (1952) sets minimum standards for social protection which include: medical care, sickness benefits, unemployment benefits, old-age benefits, employment injury benefits, family benefits, maternity benefits, invalidity benefits, survivors' benefits. Of these rights, it can be said that to some extent Uber is concerned with employment injury benefits when it is insisting that the drivers have insurance in case of accident, but this insurance is paid for by the driver at Uber's request, not by Uber. For all the other rights an Uber driver can benefit only in states that have a voluntary contribution system and the drivers register themselves as contributors. As for rights at work provided by ICESCR art.7, the right to "fair wages and equal remuneration for work of equal value without distinction of any kind", is not respected when Uber is using route-based and demand-based pricing algorithms that results in different pay for the same work; "decent living for themselves and their families", which, according to the studies of Field and Forsey is not met due to working conditions and remuneration below the minimum wage; in addition to that, Bloomberg reports cases of a number of Uber drivers sleeping in their cars in parking lots¹¹⁶, one such case is Hephzibah Dollar, whom sued Uber for employment rights; her case ended in a settlement where Uber paid the entire amount she asked for as damages, however, without admitting any

¹¹⁶ Eric Newcomer and Olivia Zaleski, "When Their Shifts End, Uber Drivers Set Up Camp in Parking Lots Across the U.S.", *Bloomberg*, January 23, 2017, available at: <https://www.bloomberg.com/news/articles/2017-01-23/when-their-shifts-end-uber-drivers-set-up-camp-in-parking-lots-across-the-u-s>.

wrongdoing¹¹⁷. Another right mentioned in art. 7 of ICESCR is the right to “safe and healthy working conditions” – according to Brishen Rogers, Uber puts high psychological pressure especially on its ethnic drivers by using the rating system that can result in their deactivation from the Uber platform and he shows that ethnic drivers tend to get worst reviews compared to white drivers¹¹⁸. Field and Forsey tell the story of a driver that was threaten by his passenger and when contacted Uber, it was impossible to get assistance; and nonetheless the right to “rest, leisure and reasonable limitation of working hours and periodic holidays with pay, as well as remuneration for public holidays”, none of which Uber abides by in its practices, since the drivers are the ones responsible for making their own schedule, with the exception of being punished by Uber for not taking enough rides, for refusing rides or for having a rating lower than 4.6 (out of 5). With the technology Uber uses, it would not pose any difficulty to monitor a driver’s worked hours and follow the national employment legislation, remunerating accordingly night hours, overtime and national holidays. The UK case of *Aslam&Farrar v Uber* is instructive in providing guidelines for doing so: the ruling went at length to establish that the Uber drivers work not only when they are carrying a passenger, but whenever they are in their normal working territory and with the app turned on; in one instance they are working when outside their territory if they traveled there to deliver a passenger and their return trip should still be considered working time¹¹⁹. This can be considered relevant guiding for future legislation in the gig economy for Uber-like platforms when it comes to fulfilling art.7 of ICESCR.

There is no doubt that the Uber model has great potential and that it contributes to better comfort for riders. Unfortunately in many cases this comes with a hefty price for its drivers. The only way for workers to benefit from their rights is achieved after lengthy and costly trials, which, at least in the US, have the tendency to move into individual arbitration, where the worker is the weaker part, with less financial and juridical resources to negotiate for and attain their rights. As the court notices in *Aslam, Farrar et al*, “this is, we think, an excellent illustration of the phenomenon of which Elias J warned in the *Kalwak* case of “armies of lawyers” contriving documents in their clients’ interests which simply misrepresent the true

¹¹⁷ Biz Carson, “A former Uber driver who slept in her car just won a \$15,000 legal settlement with Uber”, *Business Insider*, January 12, 2016, available at: <http://www.businessinsider.com/uber-driver-slept-with-family-in-vehicle-rented-from-uber-2016-1?r=US&IR=T&IR=T>.

¹¹⁸ Brishen Rogers, “The Social Costs of Uber”, p.95.

¹¹⁹ *Aslan, Farrar et al v. Uber BVM et al*, para.122.

rights and obligations on both sides¹²⁰. And even though all cases on employment rights against Uber that reached a ruling were in favor of the plaintiffs, so far there is no effective action from the states to enforce the employment status of the workers in the gig economy. In the UK, after the London Employment Tribunal ruled that London Uber drivers are employees and the appeal court upheld the ruling, which meant that not only the three plaintiffs deserve employment status, but all the 40,000 Uber drivers in London, the drivers continued to work in the same conditions as before.

Even when states are trying to enforce the law, Uber is using “hell-view”, a complicated algorithm they developed that looks into phone numbers, social media, bank accounts, and other personal information in order to decide whether someone is a threat to Uber and its drivers. If the person is deemed a threat, she/he is immediately “greyballed” and the Uber app presents “ghost” Uber cars and makes it impossible for the person to get an Uber ride. This algorithm has been used since 2014 to elude law enforcement officers in sting operations or competitors with malicious intentions.¹²¹ The issue came to light when a Portland police officer made it public and Uber admitted to the purpose of this tool, stating that it was used, among other things, to tag “opponents who collude with officials on secret ‘stings’ meant to entrap drivers”¹²². A similar feature, god-view, used to determine the location of phones with the Uber app and help riders and drivers meet, was filled with controversies when it came to light that Uber employees were using it to spy on the whereabouts of former partners, politicians and celebrities.¹²³

Considering all this, it can be said that Uber and similar platforms are affecting social protection and rights at work to a large extent, not only by not granting the deserved rights to their workforce and therefore challenge the states commitment to protect socio-economic rights, but also by weakening the state’s power to fulfill them by not contributing to the budget. According to Brishen Rogers, in UK, every year Uber is dodging around £2820.19 for each driver in social contribution¹²⁴, corresponding to the 3% difference between the social and

¹²⁰ *Aslan, Farrar et al v. Uber*, para.96.

¹²¹ Mike Isaac, “How Uber Deceives the Authorities Worldwide”, *The New York Times*, March 3, 2017, available at: <https://www.nytimes.com/2017/03/03/technology/uber-greyball-program-evade-authorities.html>.

¹²² Mike Isaac, “How Uber Deceives the Authorities Worldwide”.

¹²³ Alex Hern, “Uber employees 'spied on ex-partners, politicians and Beyoncé”, *The Guardian*, December 13, 2016, available at: <https://www.theguardian.com/technology/2016/dec/13/uber-employees-spying-ex-partners-politicians-beyonce>.

¹²⁴ Brishen Rogers, “The Social Costs of Uber”, p.7.

income contributions of a self-employed and an employee, and is doing so world-wide, for its all 1.5 million drivers. Considering the World Economic Forum's prediction that by 2030 the number of workers in the gig economy is expected to rise to 75-80% of the active workforce¹²⁵, it can be expected that the social contributions from the gig economy will drop accordingly. And this would be the optimistic prediction, where the workers in the gig economy register as self-employed and contribute to the social funds, because often it is the case that they do not do so. For example, in Norway and Finland, Uber drivers that are operating without registering themselves as licensed taxi operators are sentenced to return their Uber-income as illicit gain¹²⁶, meanwhile in Germany, the authorities held Uber in violation of taxi licensing law, but after finding drivers that continued to operate without public transportation license and being fined €250,000 for each violation, Uber simply chose to withdraw from Germany altogether¹²⁷. Setting aside the states' positioning in this matter, punishing the drivers in some states and punishing Uber in others, what this shows is that there is a number of drivers operating in the dark economy; with the technological capacity of Uber, it would not be difficult to compile clear statistics on how many of its drivers work in the dark economy, however, at the moment such statistics are not available. Another point to be noted is that when states attempt to enforce existing laws, companies like Uber have the capacity and disposition to simply cease their activities in these locations instead abiding by the law.

4.2 The right to work

Self-driving cars are sophisticated engineering creations that incorporates visual, sound and movement sensors with geolocation knowledge, along with programs to interpret driving signs, speed and direction of other vehicles and pedestrians, all merged together in one single car-brain that is able to drive safely without human involvement. Such cars don't get tired like a human, don't get distracted by passengers, other cars, weather or by mobile phones, don't miss a red light or an indicator on the road. According to the 2015 World Health Organization *Global status report on road safety*, 1.2 million people die every year due to road accidents¹²⁸, but using an autonomous car, this number is expected to drop significantly; in 2015, during the

¹²⁵ Peter Miscovich, "The future is automated. Here's how we can prepare for it".

¹²⁶ UUTISET, "Helsinki Uber driver ordered to pay state 12,000 euros", April 7, 2016, available at: https://yle.fi/uutiset/osasto/news/helsinki_uber_driver_ordered_to_pay_state_12000_euros/8796273 and Bjørn Haugan, "Oslo tingrett dømmer en Uber-sjåfør til å tilbakebetale 285.854 kroner for å ha drevet «piratdrosjevirksomhet». Hans advokat reagerer sterkt. Taxiforbundet gleder seg", *Nyheter*, 11.01.2017, available at: <http://www.vg.no/nyheter/innenriks/uber/toeffeste-dom-mot-uber-hittil/a/23894912/>.

¹²⁷ Brishen Rogers, "The Social Costs of Uber", p.8.

¹²⁸ World Health Organization, *Global status report on road safety 2015*, ISBN 978 92 4 156506 6, p. ix.

6 years autonomous car test of Google, the Google autonomous cars were involved in 12 minor accidents, none of them caused by the autonomous car¹²⁹ and the Google self-driving car project, Waymo, reports that autonomous cars on the roads can reduce road fatalities with up to 94% by eliminating human error¹³⁰. Introducing autonomous cars can also reduce the environment impact of fossil fuels and reduce traffic congestion, since driverless cars tend to be electric, eco-friendly, and they can communicate with one another and use algorithms to avoid overcrowdings. However, this development is threatening the fulfilment of the right to work, recognised both in the art. 23 of the UDHR and in art. 6 of ICESCR¹³¹, and states are bound to “take appropriate steps to safeguard this right” (ICESCR art.6.1.), measures which consist in appropriate education and training, as well as policies that lead to steady income, development and “full and productive employment”. The right to work and the goal to achieve full and productive employment is reiterated in the 5th target of goal no. 8 of the UN Sustainable Development Goals agenda launched in 2015¹³².

One of the main concerns linked to the fourth industrial revolution is that of a jobless future, where machines, algorithms and computer programs take over the work done by humans and render humans not only unemployed, but also unemployable. Changing Precision Technology, replaced 90% of its workforce with robot arms¹³³, Foxconn replaced 60,000 of its workers with machines¹³⁴, 38% of the current retail work force is about to be replaced by

¹²⁹ Chris Urmson (director of Google’s Self-Driving Car Project), “The View from the Front Seat of the Google Self-Driving Car”, *Backchannel*, May 11, 2015, available at: <https://backchannel.com/the-view-from-the-front-seat-of-the-google-self-driving-car-46fc9f3e6088#.wvvlginfg> and Google Self-Driving Car Project “Monthly Report” from May 2015, available at: <http://static.googleusercontent.com/media/www.google.com/en/us/selfdrivingcar/files/reports/report-0515.pdf>.

¹³⁰ Waymo, *On the Road*, available at: <https://waymo.com/ontheroad/>.

¹³¹ ICESCR Article 6: 1. The States Parties to the present Covenant recognize the right to work, which includes the right of everyone to the opportunity to gain his living by work which he freely chooses or accepts, and will take appropriate steps to safeguard this right.

2. The steps to be taken by a State Party to the present Covenant to achieve the full realization of this right shall include technical and vocational guidance and training programmes, policies and techniques to achieve steady economic, social and cultural development and full and productive employment under conditions safeguarding fundamental political and economic freedoms to the individual.

¹³² “8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value”, UN General Assembly, *Transforming our world: the 2030 Agenda for Sustainable Development*, Resolution adopted by the General Assembly on 25 September 2015, A/RES/70/1, available at: <http://www.un.org/sustainabledevelopment/economic-growth/>.

¹³³ Liang Jun (ed.), “First unmanned factory takes shape in Dongguan City”, *People’s Daily, China* July 15, 2015, available at: <http://en.people.cn/n/2015/0715/c90000-8920747.html>.

¹³⁴ Zhang Tianrui (ed.), “Chinese factories use robots to replace workers who demand higher salaries”, *People’s Daily, China*, September 13, 2016 available at: <http://en.people.cn/n3/2016/0913/c90000-9114500.html>.

machines¹³⁵, Ford is scheduled to cut 10% of its global workforce¹³⁶. Uber is already testing autonomous cars that are scheduled to replace by 2021 the 1.5 million drivers it has worldwide¹³⁷, and in November 2017 announced that it's going to acquire 24,000 autonomous cars¹³⁸. In other fields algorithms are already replacing jobs that most people don't even know exist, like online content moderator¹³⁹. According to Osbourne and Frey the number of jobs about to be lost to intelligent machines is of 47% in the US¹⁴⁰ and 69% in India, 77% in China and 85% in Ethiopia¹⁴¹. Frey also provides statistical data showing that in the US the number of new jobs created continues to drop (8.2% new jobs created during the 1980s, 4.4% during the 1990s, prediction of 0.5% in the 2000s¹⁴²), and according to Martin Ford, 0 new jobs were created in the 2000s (by new jobs meaning jobs that did not exist before), compared to the 10 million jobs needed during the same decade.¹⁴³ In a world with continuously growing population this poses a problem. Other authors, like the economist Branko Milanović, are more optimistic and consider that when it comes to employment we should not fear the robots because 1) even though the new wave of automation is going to replace many jobs, new jobs will be created and humans will not become unemployable, and 2) human needs are not limited and new technologies will bring about new needs that need to be fulfilled.¹⁴⁴

While autonomous cars are more reliable than human drivers and less expensive than the monthly wage of a conventional driver, the implementation of such change can create great social instability; taxi drivers worldwide already engaged in violent protests against Uber and

¹³⁵ Chris Isidore, "Robots could wipe out another 6 million retail jobs", *CNN*, May 19, 2017, available at: <http://money.cnn.com/2017/05/19/technology/future/retail-job-robots/>.

¹³⁶ Christina Rogers, "Ford Aims to Cut Global Workforce by Roughly 10%", *The Wall Street Journal*, May 15, 2017, available at: <https://www.wsj.com/articles/ford-to-cut-global-workforce-roughly-10-1494897770>.

¹³⁷ Uber Press Release, "Pittsburgh, your Self-Driving Uber is arriving now", September 14, 2016, available at: <https://newsroom.uber.com/pittsburgh-self-driving-uber/>.

¹³⁸ Samuel Gibbs, "Uber plans to buy 24,000 autonomous Volvo SUVs in race for driverless future", *The Guardian*, November 20, 2017, available at: <https://www.theguardian.com/technology/2017/nov/20/uber-volvo-suv-self-driving-future-business-ride-hailing-lyft-waymo>.

¹³⁹ Maximillian Laumeister, "Google is Deleting Your Favorite YouTube Channels, And They Won't Say Why", May 12, 2016, available at: <https://www.maxlaumeister.com/blog/google-is-deleting-your-favorite-youtube-videos/>. And is extremely frustrating for those trying to reinstate their published content that was deleted by an algorithm because they end up talking with other bots, as this youtuber explains: LindyBeige, *Will YouTube kill my channel next?*, YouTube, October 23, 2017, available at: <https://www.youtube.com/watch?v=tzb8U0Bje5A>.

¹⁴⁰ Carl Benedikt Frey and Michael A. Osborne, *The Future of Employment: How Susceptible are jobs to Computerisation?*, Oxford University Engineering Sciences Department and the Oxford Martin Programme on the Impacts of Future Technology, 2013, p.44.

¹⁴¹ Citi and the Oxford Martin School, (Frey and Osbourne eds.), *Technology at Work v2.0: The Future Is Not What It Used To Be*, CITI Group 2016, p. 18.

¹⁴² Frey&Osborne, *The Future of Employment: How Susceptible are jobs to Computerisation?*.

¹⁴³ Martin Ford, *Rise of the robots: technology and the threat of a jobless future*, Basic Books, New York, 2015.

¹⁴⁴ Branko Milanović's blog, "Robotics or fascination with anthropomorphism", September 12, 2016, available at: <http://glineq.blogspot.no/2016/09/fascination-with-anthropomorphism.html>.

Uber drivers for what they perceived as unfair competition that was affecting their income. The introduction of autonomous cars will be, however, delayed on one hand by the ongoing intellectual property trial with Waymo over the driverless car technology¹⁴⁵ and on the other hand by the existing legislation that penalizes driving without human supervision of the process in most states¹⁴⁶. Even though Uber will not leave drivers unemployed immediately, there is a tendency of fields that incorporate the developments of the fourth industrial revolution to do so in the future, putting more pressure on states capacity to protect and fulfill art.6 of ICESCR and SDG8.

4.3 Initiatives to safeguard socio-economic rights vulnerable to the fourth industrial revolution

While the immediate effect of the fourth industrial revolution is to challenge the states capacity to enforce rights at work with the technological changes that the gig economy integrates, when it comes to the right to work, in the long term the fourth industrial revolution is threatening the existence of the right itself. In an attempt to safeguard the right to work, Sweden proposed the 6 hours work day, which would help employing more people by reducing the full-time hours requirements¹⁴⁷. However, it is unclear to what extent this type of measure can be a success, since the tendency of the gig economy is to create more underpaid, unmeasured and unsecure employment over which the states capacity to enforce existing laws is very low, as it is in the case of Uber. Another solution that regulatory bodies from the EU and several other countries like Canada, Malawi, Kenya, South Africa, India and Brazil are considering is the universal basic income. The core idea behind the universal basic income is to provide a living income that is not means-tested and is not dependent on the employment status of a person or other income sources. Such an income can insure social stability, improve health and reduce stress¹⁴⁸. The challenge for states would be to provide funding for such a

¹⁴⁵ *Waymo LLC v. Uber Technologies, Inc. et al*, Case Number: 3:2017cv00939, California Northern District Court.

¹⁴⁶ In the US there is a trend of pushing legislation to allow driverless cars and is up to the states to adopt it or not: NCSL, “Autonomous vehicles legislation”, ongoing project available at: <http://www.ncsl.org/research/transportation/autonomous-vehicles-self-driving-vehicles-enacted-legislation.aspx>.

¹⁴⁷ Rebecca Greenfield, “How the Six-Hour Workday Actually Saves Money”, *Bloomberg*, April 17, 2017, available at: <https://www.bloomberg.com/news/articles/2017-04-17/how-the-six-hour-workday-actually-saves-money>. After a 2 years trial found that people working the 6 hours shift took 4.7 percent fewer sick days and had a higher level of well-being, however, due to lack of funding the study was stopped.

¹⁴⁸ South by Southwest 2017, “Basic Income: Can Giving Away Free Money Save Us?”, talk moderated by Devex, with Michael Faye of GiveDirectly and Michael Tanner of the CATO Institute, Published on May 3, 2017, available at: <https://www.youtube.com/watch?v=YEsSBJzmbHs>.

measure. Mady Delvaux, chair of the Working Group on robotics in the EU, proposed taxing the robots as a way of replacing the social contribution funds that are lost by losing the job-related taxation and use those funds to sponsor a welfare system of universal basic income¹⁴⁹. The same idea is shared by Bill Gates in the US¹⁵⁰, even though in the EU Delvaux's proposal was rejected. Her proposal came with practical suggestions on how to fund a guaranteed income that would safeguard social protection rights and make the right to work irrelevant, since the right to work and the protection from unemployment comes in the context of assuring ones living, and the universal basic income would do precisely that. Aside from Delvaux's proposal, most EU proposals are vague and blurry: raising states' awareness over the digitalisation of the industry and changes technology is bringing, and collaborating and exchanging best practices with other countries¹⁵¹. A similar study commissioned by the same department of the EU pleads for market liberalisation to raise employment in the EU, following the US model¹⁵². In the US, on the other hand, the Office of Science and Technology Policy put forth a proposal on regulating the technological developments, emphasising the economic impact of the AI and on the fairness of the income distribution and threat to wage equality, on training and creating updated and relevant skills for the active workforce, and nonetheless, on good governance¹⁵³.

A complementary initiative is to train students to outpace automation, therefore helping them to integrate in the economic and labour market. The German chancellor Angela Merkel held an opening speech at the 2017 edition of *Centrum für Büroautomation, Informationstechnologie und Telekommunikation* (CeBIT), the biggest technology trade fair worldwide organised by Deutsche Messe AG and held annually in Hanover, where she underlined the importance of education in shaping a society able to integrate its youth in the

¹⁴⁹ Mady Delvaux, Motion for a European Parliament Resolution: with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)), 2016, available at: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML%2BCOMPARL%2BPE-582.443%2B01%2BDOC%2BPDF%2BV0//EN>.

¹⁵⁰ Robert J. Shiller, "Taxing robots? This is why we might need to", *World Economic Forum*, March 27, 2017, available at: <https://www.weforum.org/agenda/2017/03/taxing-robots-this-is-why-we-might-need-to>.

¹⁵¹ EU, Policy Department A: Economic and Scientific Policy European Parliament, "Industry 4.0", 2016, p.76, available at: [http://www.europarl.europa.eu/RegData/etudes/STUD/2016/570007/IPOL_STU\(2016\)570007_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/570007/IPOL_STU(2016)570007_EN.pdf).

¹⁵² EU, Policy Department A, "The Future of Work: Digitalisation in the US Labour Market", 2016, available at: [http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/578959/IPOL_BRI\(2016\)578959_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/578959/IPOL_BRI(2016)578959_EN.pdf).

¹⁵³ US Office of Science and Technology Policy, "Preparing for the Future of Artificial Intelligence", October 2016, p. 26, Available at: https://obamawhitehouse.archives.gov/sites/default/files/whitehouse_files/microsites/ostp/NSTC/preparing_for_the_future_of_ai.pdf.

changing labour market and she urged for introducing programming and coding alongside literacy and math¹⁵⁴. There is a certain degree of agreement that the education system needs to adapt to the technological changes in order to provide education that is relevant for the work field, but since the technological changes grow exponentially, it is understandably difficult to schedule an education plan for 12-15 years in advance, the average education span of a western citizen.

In the specific case of Uber, the regulatory bodies have different approaches, from the case of India where self-driven cars were completely banned due to the threat it poses to transportation jobs¹⁵⁵, to London, UK, where Transportation for London decided to not renew Uber's license, but it did so without mentioning Fields and Forseys study that was presenting a panoply of workers' rights violations or on the ruling from *Aslam, Farrar et al V. Uber*, but for

“its approach to reporting serious criminal offences; Its approach to how medical certificates are obtained; Its approach to how Enhanced Disclosure and Barring Service (DBS) checks are obtained; Its approach to explaining the use of Greyball in London - software that could be used to block regulatory bodies from gaining full access to the app and prevent officials from undertaking regulatory or law enforcement duties”¹⁵⁶

In Norway there are ongoing discussions between the ministry of finance and employers and employees' associations to reach an agreement for a legislative framework that would integrate businesses like Uber and Airbnb without hindering development¹⁵⁷, with Uber protesting against the strict taxi licensing regulations. While in the EU, The Internal Market committee voted a non-binding resolution regarding the gig economy (the likes of Uber and Airbnb) in relation to the grey areas of fair competition between traditional and modern businesses in similar sectors, rights of workers and tax compliance that arise from the different national case law and regulations.¹⁵⁸ The focus of the commission was the necessity of setting

¹⁵⁴ CeBit 2017 Eröffnungsrede Bunskanzlerin Angela Merkel, available at: <https://www.youtube.com/watch?v=sJ20MbjF7H0>.

¹⁵⁵ Vivek Wadhwa, “Why India's ban on self-driving cars is misguided”, *The Washington Post*, July 31, 2017, available at: https://www.washingtonpost.com/news/innovations/wp/2017/07/31/why-indias-ban-on-self-driving-cars-is-misguided/?utm_term=.6ec29f1668e3.

¹⁵⁶ Transport for London press release, “Licensing decision on Uber London Limited”, September 22, 2017, available at: <https://tfl.gov.uk/info-for/media/press-releases/2017/september/licensing-decision-on-uber-london-limited>.

¹⁵⁷ Views and News from Norway, “Airbnb, Uber come in from the cold”, January 5, 2016, available at: <http://www.newsinenglish.no/2016/01/05/welcome-warms-for-airbnb-uber/>.

¹⁵⁸ European Parliament Newsroom, “Internal Market Committee calls for EU strategy on the collaborative economy”, Press release - Free movement of goods / Free movement of services / Consumers – 03-05-2017 - 13:03, available at: <http://www.europarl.europa.eu/news/en/news-room/20170503IPR73223/internal-market-committee-calls-for-eu-strategy-on-the-collaborative-economy>.

clear criteria, like income-based thresholds, for distinguishing between peers¹⁵⁹ and professionals¹⁶⁰, making a transparent information platform regarding the rights and duties of consumers, as well as a dispute settling systems that clarifies the liability of collaborative platforms, protection and fair work conditions for those working in a collaborative platform, as well as the workers ability “to transfer and accumulate users’ electronic ratings and reviews, which constitute their «digital market value»”, and last but not least, apply similar taxation to businesses that are providing similar services.

On the opposite side, Erica McCabe, discussing the case of Uber drivers in the US, thinks that classifying Uber drivers as employees, will lead to lowering the standards that Uber has set for its taxi services and hinder innovation in peer-to-peer businesses.¹⁶¹ She is proposing to either insert, within the US FLSA, the concept of “dependent contractor”¹⁶² or to include an exemption of the peer-to-peer market from paying overtime hours, because this can limit the workers choices regarding the number of hours they can work¹⁶³. Introducing a third employment classification can be useful under other circumstances, but the reason given, namely that by not introducing such concept or by not exempting companies from paying overtime hours the choices a worker can make regarding the hours he/she can work are limited, does not follow from it. On the contrary, if an Uber driver would choose to work more than 40 hours a week and if those hours will be paid accordingly, it will benefit the driver to have his overtime remunerated accordingly and will also result in more revenues for the state from taxes. On the other hand, if it is a matter of re-negotiating boundaries between workers and employers to lower work standards for future innovation, then states will face the problem of social protection and guaranteeing decent living for its citizens, as they will not get enough pay from their work to support themselves and their families.

The gig economy is increasing non-standard employment and increasing job insecurity. By misclassifying its drivers into independent contractors, Uber is depriving the drivers of

¹⁵⁹ Citizens that provide a service on an occasional basis.

¹⁶⁰ Citizens that make a living by providing a certain service.

¹⁶¹ Erica E. McCabe, “Not like the others: applying the Fair Labor Standards Act to the sharing economy”, University of Kansas Law Review, 2016, Vol.65 (1), pp. 162-164.

¹⁶² The concept of “dependent contractor” was first used by HW Arthurs in 1965, “The Dependent Contractor: A Study of the Legal Problems of Countervailing Power”, The University of Toronto Law Journal, Vol. 16, No. 1 (1965), pp. 89-117, available at: <http://www.jstor.org/stable/825096>.

¹⁶³ Erica E. McCabe, *op.cit.*, pp.165-166.

employment rights that they are otherwise entitled to, and is weakening states capacity to fulfil social protection rights that are funded by the taxes avoided by Uber and other similar businesses. The right to work is also challenged, considering Ubers' propensity for driverless cars, but the impossibility to introduce driverless cars globally due to the existing vehicle-driving legislation, in the short future, means the jobs of the Uber drivers will still be available. As shown by the cases brought forth by *Berwick*, *O'Connor*, *Yucesoy*, *Aslam*, *Farrar et al* and especially *Rodrigo Leonardo Silva Ferreira* against Uber, the working conditions of created by Uber affect the rights at work and the rights to social protection of the drivers, like minimum wage, night pay, unemployment benefits, sick pay, health insurance, maternity/paternity benefits and paid vacation. The right to equal pay for equal work (ICESCR art.7) is not fulfilled and it's not possible to be fulfilled as long as Uber is going to use route-based and request-based fares. While there is no doubt that Uber is innovating the transportation industry, it does so at the cost of social protection and employment rights. The interpretation of the American Administration of FLSA notes with good reason that the misclassification of drivers has a negative impact on the capacity of the state to offer social protection to its citizens. Out of the 74 cases considered for this paper, none of them reached a decision that Uber drivers are not employees, which shows that the challenge states face is one of enforceability of existing laws and regulations.

5. Conclusions

This research has shown that the fourth industrial revolution brings about many changes to the society and has focused on the socio-economic advantages and challenges. The gig-economy is generating gig-workers, and these workers are more often than not classified as self-employed. The classification as self-employed has two practical effects that concern this research: 1. the workers are deprived of certain employment and social security rights and 2. the states get fewer revenues to invest in social protection and social safety nets. In the particular case of Uber, along with its many benefits, in this thesis I have addressed on one hand the challenge posed by misclassifying its drivers as self-employed, which entails the two challenges above, and on the other hand is potentially endangering the protection and fulfilment of the right to work when it plans to introduce driverless cars.

In responding to the research question, it would be difficult to put a number tag to the extent to which the fourth industrial revolution, and Uber in particular, are affecting the states capacity to protect and fulfil the right to work, rights at work and the right to social protection. However, considering that the workers in the gig economy is at 35% of the active workforce and expected to rise to up to 80% by 2030, we can get an estimate of the scale of the issue of work protection. The probability of jobs being replaced by machines and algorithms of 47% in a developed country like the US and up to 85% in least developed countries like Ethiopia provide another facet. By replacing jobs with robots and by increasing job insecurity and frailty with the gig economy, the fourth industrial revolution is putting a corresponding pressure first on states budgets that fund social protection coverage and secondly on the states commitment to fulfil the right to full and productive employment. A new report that was just launched by ILO finds that only 45% of the worlds' population is covered by at least one social benefit¹⁶⁴; even though this percentage is not parcelled in a way that would attribute some of it to the effects of the fourth industrial revolution, it offers a measure of the extent to which states already fail to fulfil their social protection commitments. In this context it can be said that, on top of the existing challenges to fulfil rights at work and the right to social protection, the fourth

¹⁶⁴ ILO, "World Social Protection Report 2017-2019", November 29, 2017, press release available at: http://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_601903/lang--en/index.htm.

industrial revolution is wielding even more pressure on states' capacity to safeguard these rights.

Aside from the economic pressure generated by the lack of state revenues from the gig economy and the additional pressure generated by the loss of jobs, another way in which the fourth industrial revolution is challenging states capacity to protect human rights consists in the lack of enforcement power of states over the businesses specific to the fourth industrial revolution. The way in which the new type of businesses are using technology is endowing them an unprecedented mobility, volatility and a global reach. This made it facile for Uber to simply withdraw from Germany when the authorities tried to enforce an irrevocable tribunal ruling. But Uber is also actively diminishing states' capacity to enforce the law with the use of hell-view; the fact that Uber has developed this algorithm that snoops in the private lives of Uber users and can determine with a certain degree of precision whether someone is law-enforcement with the purpose of eluding the law is evocative. The technological platform on which Uber operates and its global nature makes it very mobile and makes it easier to avoid taxation and nation-states' legislation. This is similar to companies using tax havens to dodge taxes. In order to address this issue, states have to improve their capacity to enforce the law in cases of Uber-like businesses by building and using technological countermeasures. Introducing specifications in the current regulations that will help keeping track of working hours in the gig economy, of the sort discussed in *Aslam, Farrar v Uber* could also prove useful.

Among the existing initiatives and proposals to safeguard socio-economic rights in the context of the gig economy, the universal basic income could become in the future an umbrella right that would render the right to work obsolete and could encompass social protection aspects, however, so far there are no viable solutions for funding such a right. Rethinking the education in a way that would help students outpace automation and build relevant skills can prove to be a sustainable measure, nevertheless, it has to surpass the innate exponential growth of the fourth industrial revolution that, unless changed, would make any planning for a time-frame longer than 2 years irrelevant.

The fourth industrial revolution has great potential to create a fairer and better world, but at the same time it can create great imbalances of power through the polarization of wealth and the more and more unequal access to technology. We live in a world where a person in Norway can remotely control gadgets in their house or 3D print missing limbs, meanwhile a person in

Kenya can have the years' crops destroyed due to lack of access to something as basic as a weather forecast. We live in a world where autonomous weapons can wipe out populations whose countries are less advanced technologically¹⁶⁵. The Nobel laureate Stephen Hawking warns that advent of the fourth industrial revolution and artificial intelligence brings about autonomous weapons, economic disruption and new ways of the few to oppress the many; the result will either wipe out humanity or save it¹⁶⁶. In this context, article 15b of ICESCR, which states the right of everyone to enjoy the benefits of scientific progress and its applications, is becoming more significant than ever. The companies in the gig economy are using technology and algorithms to increase their power and wealth, to predict trends and influence opinions, but the same technology can be used to reduce inequality and poverty and to increase the standards of living of everyone, not only of the fortunate few. If the international community were to work towards protecting and fulfilling this right for everyone, the irregular distribution of the technological developments could gradually become less uneven.

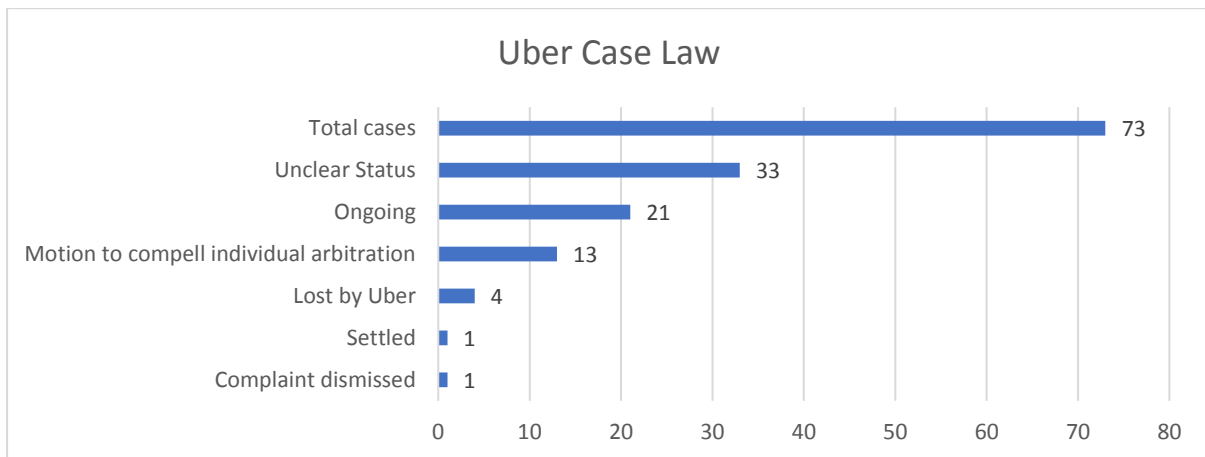
¹⁶⁵ Samuel Gibbs, "Elon Musk leads 116 experts calling for outright ban of killer robots", *The Guardian*, August 20, 2017, available at: <https://www.theguardian.com/technology/2017/aug/20/elon-musk-killer-robots-experts-outright-ban-lethal-autonomous-weapons-war>.

¹⁶⁶ Rory Cellan-Jones, "Stephen Hawking - will AI kill or save humankind?", *BBC*, October 20, 2016, available at: <http://www.bbc.com/news/technology-37713629>.

Appendix – Uber case law organized by date and status of trial

Cases list compiled from curia.europa.eu, judiciary.gov.uk, juralindex.com, justia.com, findlaw.com, law360.com, PACER and pacermonitor.com.

Processed data:



Motion to compel individual arbitration:

1. **Ogunmokun et al v. Uber Technologies, Inc. et al**

Filed: October 26, 2015 as 1:2015cv06143

Nature of Suit: Labor › Labor: Other

Court: Second Circuit › New York › New York Eastern District Court

2. **David Micheletti v. Uber Technologies, Inc., et al**

Filed: November 16, 2015 as 5:2015cv01001

Nature of Suit: Labor › Labor: Other

Court: Fifth Circuit › Texas › Texas Western District Court

3. **Varon v. Uber Technologies, Inc. et al** – appealing motion to compel arbitration

Filed: November 30, 2015 as 1:2015cv03650

Nature of Suit: Labor › Other Labor Litigation

Court: Fourth Circuit › Maryland › Maryland District Court

4. **Rimel v. Uber Technologies, Inc. et al**

Filed: December 31, 2015 as 6:2015cv02191

Nature of Suit: Labor › Other Labor Litigation, Diversity-Other Contract

Court: Eleventh Circuit › Florida › Florida Middle District Court

5. **Carey v. Uber Technologies Inc.**

Filed: May 2, 2016 as 1:2016cv01058

Nature of Suit: Fair Labor Standards Act

Court: Sixth Circuit › Ohio › Ohio Northern District Court

6. **Singh v. Uber Technologies Inc.**

Filed: May 27, 2016 as 3:2016cv03044

Nature of Suit: Labor › Other Labor Litigation

Court: Third Circuit › New Jersey › New Jersey District Court

7. **Scroggins v. Uber Technologies Inc. et al**

Filed: June 9, 2016 as 1:2016cv01419

Nature of Suit: Fair Labor Standards Act

Court: Seventh Circuit › Indiana › Indiana Southern District Court

8. **Olivares v. Uber Technologies, Inc.**

Filed: June 9, 2016 as 1:2016cv06062

Nature of Suit: Fair Labor Standards Act

Court: Seventh Circuit › Illinois › Illinois Northern District Court

9. **Gunn v. Uber Technologies Inc. et al**

Filed: June 24, 2016 as 1:2016cv01668

Nature of Suit: Labor › Labor: Other, Diversity-Other Contract

Court: Seventh Circuit › Indiana › Indiana Southern District Court

10. **Cavallo v. Uber Technologies Inc. et al**

Filed: July 14, 2016 as 3:2016cv04264

Nature of Suit: Fair Labor Standards Act

Court: Third Circuit › New Jersey › New Jersey District Court

11. **Marc v. Uber Technologies, Inc. et al**

Filed: July 25, 2016 as 2:2016cv00579

Nature of Suit: Labor › Other Labor Litigation, Diversity-Contract Dispute

Court: Eleventh Circuit › Florida › Florida Middle District Court

12. **Richemond v. Uber Technologies, Inc.**

Filed: July 29, 2016 as 1:2016cv23267

Nature of Suit: Fair Labor Standards Act

Court: Eleventh Circuit › Florida › Florida Southern District Court

13. **PRICE v. UBER TECHNOLOGIES, INC. et al**

Filed: March 8, 2017 as 1:2017cv00706

Nature of Suit: Fed. Question: Fair Labor Standards

Court: Seventh Circuit › Indiana › Indiana Southern District Court

Settled

14. **Hephzibah Dollar v Uber** - settled for \$15,018.30 according to media reports

Filed: April 2015

Nature of Suit: Labour, employee reimbursement

Court: California Labor Commissioner's Office

Complaint dismissed

15. **Berger v. Uber Technologies, Inc. et al** –

Filed: January 5, 2016 as 3:2016cv00041

Nature of Suit: Labor › Other Labor Litigation

Court: Ninth Circuit › California › California Northern District Court

Lost by Uber:

16. **Aslam, Farrar and Others v Uber** - Lost by Uber in the first two circuits – Uber announced intention to appeal

Nature of Suit: misclassification of drivers

Court: London Employment Tribunal

17. **Barbara Berwick v. Uber Technologies Inc.** – final and irreversible decision
November 22, 2016.

Filed: September 16, 2014 as 11-46739 EK

Nature of Suit - employee reimbursement

Court: California

18. **Rodrigo Leonardo Silva Ferreira v Uber** – not final, not appealed yet

Filed: not available

Nature of suite: Labour litigation

Court: Tribunal Regional do Trabalho da 3ª Região, Minas Gerais, Brasil

19. **Taxiunternehmer in Berlin v Uber Netherlands** – final and irreversible decision

Filed: not available

Nature of Suit: non-compliance with national transportation law

Court: Berlin-Brandenburg Higher Appeals Tribunal

Ongoing

Individual or class action:

20. **O'Connor et al v. Uber Technologies, Inc. et al** - judge denied settlement

Filed: August 16, 2013 as 4:2013cv03826

Nature of Suit: Labor Litigation, misclassification of drivers, statutory employee reimbursement

Court: Ninth Circuit › California › California Northern District Court

21. **Philliben et al v. Uber Technologies, Inc. et al** - settled on February 11, 2016 for \$28.5 million, settlement declined by California federal judge in august 2016.

Filed: December 23, 2014 as 3:2014cv05615

Miscellaneous: The People of the State of California

Nature of Suit: Diversity-Fraud

Court: Ninth Circuit › California › California Northern District Court

22. **Mena v. Uber Technologies, Inc.** - settled on February 11, 2016 for \$28.5 million, settlement declined by California federal judge in august 2016

Filed: January 6, 2015 as 3:15-cv-00064-JST

Nature of Suit: misleading consumers about its safe rides fee

Court: United States District Court, N.D. California, San Francisco Division

23. **Hakan Yucesoy v. Uber Technologies, Inc. et al.,** - merged with O'Connor

Filed: January 20, 2015 as 4:2015cv00262

24. **Suarez et al vs. Uber Technologies, Inc.** - appealing against motion to compel arbitration

Filed: January 22, 2016 as 8:2016cv00166

Nature of Suit: Fair Labor Standards Act

Court: Eleventh Circuit › Florida › Florida Middle District Court

25. **Del Rio v. Uber Technologies, Inc. et al**

Filed: August 11, 2015 as 3:2015cv03667

Nature of Suit: Labor Litigation

Court: Ninth Circuit › California › California Northern District Court

Type: Labor › Other Labor Litigation

26. **RAZAK et al v. UBER TECHNOLOGIES, INC. et al** – ongoing, arbitration denied

Filed: February 4, 2016 as 2:2016cv00573

Nature of Suit: Fair Labor Standards Act

Court: Third Circuit › Pennsylvania › Pennsylvania Eastern District Court

Type: Labor › Labor/Management Relations

27. **Bradshaw et al v. Uber Technologies Inc et al**

Filed: April 19, 2016 as 5:2016cv00388

Nature of Suit: Fed. Question: Fair Labor Standards

Court: Tenth Circuit › Oklahoma › Oklahoma Western District Court

28. **Trosper v. Uber Technologies, Inc. et al**

Filed: May 1, 2016 as 1:2016cv04842

Nature of Suit: (a) Fair Labor Standards Act

Court: Seventh Circuit › Illinois › Illinois Northern District Court

29. **Todd Johnston v. Uber Technologies, Inc.**

Filed: June 9, 2016 as 3:2016cv03134

Nature of Suit: Labour Litigation

Court: Ninth Circuit › California › California Northern District Court

30. **Meyer v. Uber Technologies, Inc. et al.** arbitration declined twice

Filed: August 5, 2016 as 16-2752 – 2016

Court: Second Circuit U.S. Court of Appeals, Second Circuit).

31. **Rojas v. Uber Technologies, Inc.**

Filed: August 26, 2016 as 1:2016cv23670

Nature of Suit: Fair Labor Standards Act, unpaid minimum and overtime wages pursuant to the Fair Labor Standards Act of 1938, 29 U.S.C. §§ 201–263

Court: Eleventh Circuit › Florida › Florida Southern District Court

32. **Granados et al v. Uber Technologies, Inc. et al** - ongoing motion to compel arbitration

Filed: December 15, 2016 as 2:2016cv02912

Nature of Suit: Labor: Fair Standards, Collect Unpaid Wages

Court: Ninth Circuit › Nevada › Nevada District Court

33. **O'Callaghan v. Uber Corporation of California** – Uber filed for compelling individual arbitration

Filed: March 22, 2017, as 1:17-cv-02094,

Nature of Suit: Civil Rights, Jobs

Court: New York Southern District Court

Institutions/organisations against Uber on workers issues:

34. **Boston Cab Dispatch et al v. Uber Technologies, Inc.**

Filed: April 3, 2013 as 1:2013cv10769

Nature of Suit: Labor: Other

Court: First Circuit › Massachusetts › Massachusetts District Court

35. Asociația de Monitorizare Taxi Transilvania v. Uber Systems Romania

Filed: November 04, 2016 as 984/1285/2016

Nature of Suit: Unfair competition

Court: Tribunalul Specializat CLUJ

36. Federal Trade Commission V. Uber Technologies, Inc.

Filed: January 19, 2017 as 3:2017cv00261

Nature of Suit: Other Statutes › Other Statutory Actions, Federal Trade Commission Act

Court: Ninth Circuit › California › California Northern District Court

37. L'Union de recouvrement des cotisations de la Sécurité sociale et d'allocations familiales (Urssaf) d'Ile-de-France v. Uber France – won in first court by Uber on procedural issues, Urssaf appealed.

Filed: Not available

Nature of Suit: Labour, misclassification of drivers and payment of social costs,

First Court: Tribunal des affaires de sécurité sociale (TASS) **Appeal at:** Court de cassation from Paris.

38. Tribunal de grande instance de Lille v. Uber France

Filed: July 29, 2016 as C-320/16

Nature of Suit: Approximation of laws

Court: European Court of Justice

39. Asociación Profesional Elite Taxi v Uber Systems Spain

Filed: October 6, 2015 as C-434/15

Nature of Suit: Freedom of establishment

Court: European Court of Justice

40. Bundesgerichtshof and Richard Leipold v. Uber BV

Filed: September 08, 2017 as C-371/17

Nature of Suit: Freedom of establishment

Court: European Court of Justice

Unclear status:

Individual or class action:

41. **Lavitman v. Uber Technologies, Inc. et al**

Filed: January 28, 2013 as 1:2013cv10172

Nature of Suit: Labor › Labor: Other

Court: First Circuit › Massachusetts › Massachusetts District Court

42. **Alatraqchi et al v. Uber Technologies, Inc.**

Filed: July 9, 2013 as 3:2013cv03156

Nature of Suit: Civil Rights - Employment

Court: Ninth Circuit › California › California Northern District Court

43. **Borja et al v. Uber Technologies Inc. et al**

Filed: January 7, 2015 as 1:2015cv20040

Nature of Suit: Labor › Other Labor Litigation

Court: Eleventh Circuit › Florida › Florida Southern District Court

44. **Greg Fisher v. Uber Technologies, Inc. et al**

Filed: August 18, 2015 as 4:2015cv03774

Nature of Suit: Labor Litigation

Court: Ninth Circuit › California › California Northern District Court

45. **Dunifa v. Uber Technoloiges Inc. et at**

Filed: November 13, 2015 as 1:2013cv10172

Nature of Suit: Labor › Labor: Other

Court: Federal, San Francisco Office

46. **Karaali v. Uber Technologies, Inc.**

Filed: November 24, 2015 as 4:2015cv03454

Nature of Suit: Labor › Other Labor Litigation

Court: Fifth Circuit › Texas › Texas Southern District Court

47. **In Re Uber FCRA Litigation**

Filed: December 16, 2015 as CAN/3:14-cv-05200

Nature of Suit: Labor › Other Labor Litigation, employee reimbursement

Court: Judicial Panel on Multidistrict Litigation

48. **Ortega et al v. Uber Technologies, Inc. et al**

Filed: December 29, 2015 as 1:2015cv07387

Nature of Suit: Labor › Labor: Other, Diversity-(Citizenship)

Court: Second Circuit › New York › New York Eastern District Court

49. **Lamour v. Uber Technologies, Inc.**

Filed: April 22, 2016 as 1:2016cv21449

Nature of Suit: Fair Labor Standards Act

Court: Eleventh Circuit › Florida › Florida Southern District Court

Type: Labor › Fair Labor Standards Act

50. **Hood v. Uber Technologies Inc. et al**

Filed: July 26, 2016 as 1:2016cv00998

Nature of Suit: Fair Labor Standards Act

Court: Fourth Circuit › North Carolina › North Carolina Middle District Court

51. **Papayorgis v. Uber Technologies, Inc.**

Filed: June 30, 2016 as 1:2016cv22827

Nature of Suit: Fair Labor Standards Act

Court: Eleventh Circuit › Florida › Florida Southern District Court

52. **Romine v. Uber Technologies, Inc. et al (RLJ2)**

Filed: June 23, 2016 as 3:2016cv00371

Nature of Suit: Fair Labor Standards Act

Court: Sixth Circuit › Tennessee › Tennessee Eastern District Court

53. **Jbara v. Uber Technologies, Inc. et al**

Filed: June 9, 2016 as 1:2016cv11073

Nature of Suit: Fair Labor Standards Act

Court: First Circuit › Massachusetts › Massachusetts District Court

54. **Burgos v. Uber Technologies, Inc. et al**

Filed: November 1, 2016 as 1:2016cv08512

Nature of Suit: Fair Labor Standards Act

Court: Second Circuit › New York › New York Southern District Court

55. **Jaswinder Singh v. Uber Technologies Inc**

Filed: February 23, 2017 as 17-1397

Nature of Suit: Labor › Other Labor Litigation

Court: Third Circuit U.S. Court of Appeals, Third Circuit

56. **Artur Zawada, et al v. Uber Technologies, Inc., et al**

Filed: January 27, 2017 as 17-1092

Nature of Suit: Labor › Labor: Fair Standards

Court: Sixth Circuit U.S. Court of Appeals, Sixth Circuit

57. **Crespo v. Uber Technologies, Inc.**

Filed: January 24, 2017 as 8:2017cv00187

Nature of Suit: Fair Labor Standards Act

Court: Eleventh Circuit › Florida › Florida Middle District Court

58. **Del Toro Lopez v. Uber Technologies, Inc.**

Filed: October 27, 2017 as 3:2017cv06254

Nature of Suit: Labor › Fair Labor Standards Act, Collect Unpaid Wages

Court: Ninth Circuit › California › California Northern District Court

59. **Sienkaniec v. Uber Technologies, Inc. et al**

Filed: September 29, 2017 as 0:2017cv04489

Nature of Suit: Fair Labor Standards Act

Court: Eighth Circuit › Minnesota › Minnesota District Court

60. **Berman et al v. Uber Technologies, Inc.**

Filed: June 30, 2017 as 4:2017cv02011

Nature of Suit: Fair Labor Standards Act

Court: Fifth Circuit › Texas › Texas Southern District Court

Unclear status, but linked to O'Connor v Uber, as one court decision denying Uber's request to compel arbitration mentions them:

61. *Ghazi v. Uber Technologies, Inc.*, Case No. CGC-15-545532;
62. *Richardson v. Uber Technologies, Inc.*, Case No. RG15775562;
63. *Zine v. Uber Technologies, Inc.*, Case No. BC591351;
64. *Narsi v. Uber Technologies, Inc.*, Case No. BC599027;
65. *Tabola v. Uber Technologies, Inc.*, Case No. CGC-16-550992;
66. *Barajas v. Uber Technologies, Inc.*, Case No. CGC-16-550198;
67. *Aquino v. Uber Technologies, Inc.*, Case No. BC608873;
68. *Adzhemyan v. Uber Technologies, Inc.*, Case No. BC608874;
69. *Gollnick v. Uber Technologies, Inc.*, Case No. CGC-15-547878;
70. *Mokeddas v. Uber Technologies, Inc.*, Case No. RG16807483;
71. *Mohamed v. Uber Technologies, Inc.*, 15-16178

Institutions/organisations against Uber on workers issues:

72. **National Labor Relations Board v. Uber Technologies, Inc.**

Filed: February 29, 2016 as 3:2016cv00987

Nature of Suit: Labor › Other Labor Litigation, National Labor Relations Act

Court: Ninth Circuit › California › California Northern District Court

73. **New York Taxi Workers Alliance et al v. Uber Technologies, Inc. et al**

Filed: June 2, 2016 as 1:2016cv04098

Nature of Suit: (a) Fair Labor Standards Act

Court: Second Circuit › New York › New York Southern District Court

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29. *Dollar v Uber*

30. *Federal Trade Commission V. Uber Technologies*

31. *Lawrie-Blum vs. Land Baden-Württemberg*

32. *Mohamed v. Uber Technologies, Inc.*

33. *O'Connor v. Uber Techs., Inc.*

34. *Rodrigo Leonardo Silva Ferreira v Uber*

35. *Toyota Motor Sales v. Superior Court 1990*

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