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Labour Rights, Artificial Intelligence and Automation in the context
of the UK, Brexit, and Covid-19 with a comparative study of
Singapore

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ABSTRACT

The impact of Artificial Intelligence and automation presents an unprecedented challenge to workers' rights. The potential automation crisis in UK can lead to further problems in social justice and income inequality beyond job retention. The UK sits in a unique human rights position due to its ongoing process of legal sovereignty post-Brexit and the economic challenges presented by Covid-19. The question posed here is can British sovereignty be used to strengthen labour rights rather than threaten judicial independence in the UK? And does its altruistic response to Covid-19 bode well for the future of labour policy in the UK?

By addressing the effect of Artificial intelligence as a direct human rights issue there is the opportunity to depoliticise solutions to labour displacement, such as increases in trade union power, strengthened labour policy and government funded lifelong learning, creating a New Social Contract. Automation naturally leads to the devolution of the traditional working environment and a rise in the gig economy which leads to deregulation and de-unionisation, a reinvention of the traditional trade union structure is necessary to accommodate the new forms of unstable work. Trade unions play a key role in securing Britain's future and in the new classification of subordinate workers.

Monopolisation of the markets is the likely occurrence when BigTech replaces human labour, causing Small and Mid-size enterprises (SME) to fail. This can lead to unfair pricing and low wages with little protection for skilled and non-skilled workers. Making automation and a universal progressive tax structure, a key human rights issue is therefore pertinent so that the UK can correctly address these issues before the exploitation of its citizens.

Comparing the UK's approach to automation to Singapore, the country predicted to have the lowest rate of job at high-risk of computerisation shows that a heightened focus on lifelong learning is key to positively fulfilling the human right to work.

The UK must positively fulfil their human rights obligations by improving the futures of the labour force.

TABLE OF ABBREVIATIONS

AI	artificial intelligence
CJEU	Court of Justice for the European Union
ECJ	Court of Justice
ECA	European Communities Act
ECHR	European Convention on Human Rights
ECtHR	European Court of Human Rights
EU	European Union
HMRC	Her Majesty's Revenue & Customs
LLL	Lifelong Learning
MIT	Massachusetts Institute of Technology
NLP	natural language processing
RPA	robotic process automation
SME	medium-sized enterprise
UK	United Kingdom
VET	vocational education and training

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INTRODUCTION

1.1 Automation & Artificial Intelligence

Automation is the replacement of human labour with machines, or the assistance to human labour from machines. This has occurred since tools were manufactured, the most notable shift in changes to being the Industrial Revolution where the use of electricity and the opening of factories led to pivotal changes in our markets, in what could be produced, how much, how quickly and at lower costs. This led to urbanisation and ultimately more jobs, at the time people were afraid they were becoming obsolete but retraining and refocussing meant that was not the case.

The difference between what is happening now, during the ‘Technological Revolution’ is something we have not seen before. This is not a renewal of the Luddite movement of the early 19th century. With Artificial Intelligence (AI) there has been an unprecedented pace of changes to technology and shifts in work that could not have been imagined, and the exact extent of possibilities is still not known.

My thesis will explore the effects of this extreme impact of Artificial Intelligence and automation on Human Rights, namely on the right to work, the right to social security, the realisation of the right to form trade unions, the right to rest and leisure and the right to a standard of living.

Before evaluating the impact on rights or analysis of potential protections and strengthening mechanisms it is necessary to evaluate the extent of the impact of automation in the Technological Revolution. In order to do this one must look at investment trends and current rates of job losses in order to have a picture of the future. There is also a breakdown of types of workers, (employees, self-employed, employers) and the different effects on each of these.

Previously when robots replaced human labour they led to higher productivity and therefore job creation, however with AI these new jobs created can also be taken over by the cognitive abilities these robots possess. Higher productivity no longer means rising living standards under the current economic structure.

1.2 Investment trends

AI will affect different industries and policy must adapt accordingly to fit the needs. For example, more investment in AI transparency will lead to significant increases of use of AI in fields such as advocacy and medicine. With greater transparency machines that can give diagnoses and determine validity of court cases will be trusted by the public and put more into use.

Currently 42% of ‘game changers’ in industry rely on AI (Data Science Central, 2018) this shows upwards trends in the high use of AI in industry. Those who are regularly

using this technology are the ones paving the way for future business, the companies who will last going forward and therefore the businesses of ‘tomorrow’ have a high reliance on AI technology.

The price of robots has been decreasing roughly 10% a year since 1990 (Data Science Central, 2019) meaning naturally more investment is being funnelled into this technology as they become a more viable replacement for human labour every year. It is becoming the situation and due to the dropping price of robots, will continue to be the situation going into the future; where robots are more cost-effective and often have a lower risk-level than human labour, not needing sick leave for example. This is especially true in countries with strong labour policy and protections surrounding wages and working conditions like the UK, the concern here are a few alternatives, either jobs of quality are replaced by robots, jobs are outsourced to countries with more relaxed labour policies and cheaper labour or as the UK becomes a more sovereign state, they relax labour laws in order to remain competitive. For example, fully automated Customer Service Representatives reduce costs 60% to 80% compared to outsourced call centres.

Having said that, currently 57% of AI applications are currently being aimed at consumers rather than reducing labour costs. This means although there is high investment in AI, often it is to improve customer experience rather than replacing workers. This is due to high start-up costs of an AI driven company and a lack of capital.

1.3 AI Development

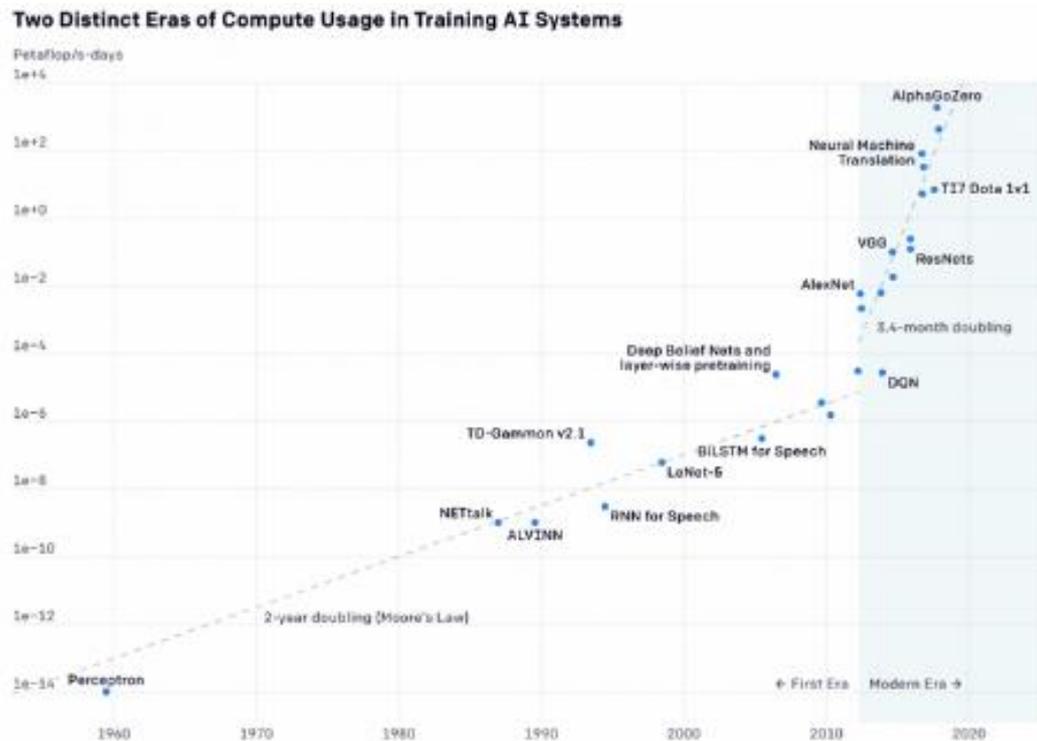


Figure 1: OpenAI, 2018

In Figure 1 you can see what is called the ‘modern era’ for AI post-2012, with landmark developments happening in much quicker succession. 2015 is alternatively marked as the threshold date as it is when image classification by deep learning surpassed the human accuracy threshold (95%) and when speech and text processing reached close to 99% accuracy. AI computing power has exceeded Moore’s law of doubling every two years, the study ran by OpenAI has put it at 3.4-month doubling time.

The replacement of humans by machines relies on the competitiveness of the AI market, the cost of the technology leads to necessary supply and demand dynamics. AI development is mostly about the progress of mobile robotics. Traditionally industrial robots are fixed machines in a static position, in order to replace labour and for personal use, mobility is key. This is happening with self-driving cars now, mobile warehouse pick-and-pack robots, delivery drones, and ships such as the Japanese venture to have driverless cargo-ships. Robotic exo-skeletons for the disabled, AI enhanced virtual robots, chatbots such as Siri and Alexa. There is ‘Watson’, a question-answering machine that can input and output various forms of data and aids in medical diagnoses.

Targeted online advertising uses AI to recognise profiles and match adverts with viewers in milliseconds, fulfilling the economic contract between advertiser and media without human intervention. AI is now also capable to detect fraud, condition monitor, detect anomalies, conduct image processing enabled automatic error or damage detection.

AutoML (automated machine learning) is the process of AI designing AI, meaning progress in AI development will happen even more rapidly. Even AI will take over designing AI. It’s predicted to be the end of Data Scientists and designers among many other professions. CB Insights, an intelligence platform on emerging technology, predicts trends in media change, federated learning, natural language processing and dealing with small data problems using AI.

In other developments, 3D printing has democratised the manufacturing process and changed the nature of global trade entirely, with the potential to make the transportation of goods obsolete as products can be printed in a different country to its design. This of course could lead to the mass-shutdown of factories and irrelevance of goods transportation that accounts for 9.8% of the US labour force alone, (Bureau of Transportation Statistics, 2019) and 1,790,000 transportation/storage jobs in the UK. (ONS, 2020)

1.4 Society and trust in AI

Societal trends are also significant, currently AI is not seen as huge of a threat to employment as it will be. This is due to views towards AI, many don’t have trust in its capabilities and it often has a lack of transparency. Often people will not want to visit with an automated doctor who diagnoses through computing power, either due to their desire to have human interaction or because there is a lack of accountability with robots due to long supply chains. Similarly, automated lawyers are not seen as desirable as people want to be able to hold a single person accountable and what’s at stake is very important and personal, prison time or large fines. For example the two crashes of the Boeing 737 Max highlighted the limits and challenges of automation to the public

consciousness and created a view that the threat of complete automation would be impossible due to errors.

Gary Marcus of *The Economist* says trust of AI should wait until transparency of algorithms is improved, the beginning of creating trustworthy AI is good engineering practices, mandated by laws and industry standards, both of which are currently largely absent.

However, the younger generations have a different relationship to technology and are much more likely to have trust in its usage. They have grown up with a much larger exposure to technology and don't hold the same reservations as the older generations. There is also the chance that the element that keeps humans currently in employment, the emotional connection and socialisation, will be obsolete and not seen as fundamental by new generations. In Japan jobs that are considered 'safe' in other places such as hotel front desk staff are already being automated due to different cultural ideas over human interaction.

1.5 AI limitations

Differing opinions exist on the potential for AI development, Pesenti claims advancements in areas like deep fake image detection and eliminating fake news will not be able to happen. Ultimately as the AI gets more complex it gets more expensive and so certain rates of progress cannot be sustained. 'If you look at top experiments, each year the cost is going up 10-fold. Right now, an experiment might be in seven figures, but it's not going to go to nine or ten figures, it's not possible, nobody can afford that. It means that at some point we're going to hit the wall. In many ways we already have'. There is often an over concentrated investment in certain cities and of talent of AI producers that makes types of AI investment uneconomic.

The amount we can rely on AI and how much trust that can be put into it also limits the extent of how much we will be able to automate with it. 30% of respondents to a Forbes survey said they had to 'rethink, redesign, or override an entire AI-based system due to questionable or unsatisfactory results', (Forbes, 2019) proving it will not be 'tomorrow' that human labour becomes irrelevant. As organisations mature in their AI capability, they find that AI is not infallible. It will never have 100% accuracy and the most successful implementations of AI are reviewed at least weekly.

Jobs that are unlikely to be automated due to AI limitations are those with analytical tasks such as building and repairing engineers, electricians (in fact these ought to show a growth in opportunities). Those involving interpersonal tasks including leadership roles, sales and jobs requiring emotional intelligence or maintaining a long-term rapport with clients or other humans. Tasks requiring a creative and social intelligence are said to be protected.

Jobs such as teachers, consultants and medical professions that have to deal with conflicting information and make judgements based on non-verbal cues and social skills are possible to be programmed. However, it is very possible that the lack of accountability that machines possess, with a long path of producers, that they do not make suitable replacements, people want to know who to point to so-to-speak.

There is also a lack in capability for the technology to cross over into cognitive, non-routine tasks. They can complete cognitive/routine (e.g. Watson application), manual/routine and manual/non-routine (e.g. NLP image processing) tasks only.

1.6 Impact of AI on labour

‘We are advancing into a post-professional society’. (Susskind, R. 2016) We can see that despite some limitations, the extent of the power of AI will fundamentally change the world of work. What does this mean exactly the impact will be on labour?

The McKinsey reports that ‘half of all the activities people are paid to do in the world’s workforce could potentially be automated by adapting currently demonstrated technologies’ amounting to roughly \$15 trillion in wages lost by 2055 dependent on economic conditions. In order to realise the total productivity gains they estimate it will require human work alongside machines, with a new degree of cooperation. Of course, much of these studies are made with a degree of speculation, figures on job losses will depend on the speed of computerisation, in turn that relies on the pace of technological progress and capital limitations.

The highest reported implementation of automation is Robotic Process Automation (RPA) in North America, China and Europe [followed by; machine learning, conversational interfaces, computer vision, NL text understanding, NL speech understanding, NL generation, physical robotics, autonomous vehicles] as determined by the McKinsey & Company 2018 research basing the frequency of the type of AI by what capabilities are embedded in at least one company function. Although at the core of RPA it has human defined rules, it is by nature designed to replace human labour and streamline business, so called ‘marketing automation’.

This new form of automation covers jobs traditionally thought to be non-threatenable, David Beyer, a Partner at VC Amplify Partners says ‘almost every task that is not specifically analytical, social, or interpersonal is at risk’, including non-routine manual skills like the repair of increasingly complex machinery, or cognitive skills with a repetitive pattern. Developer roles and demonstrator roles, demonstrator roles use pre-existing

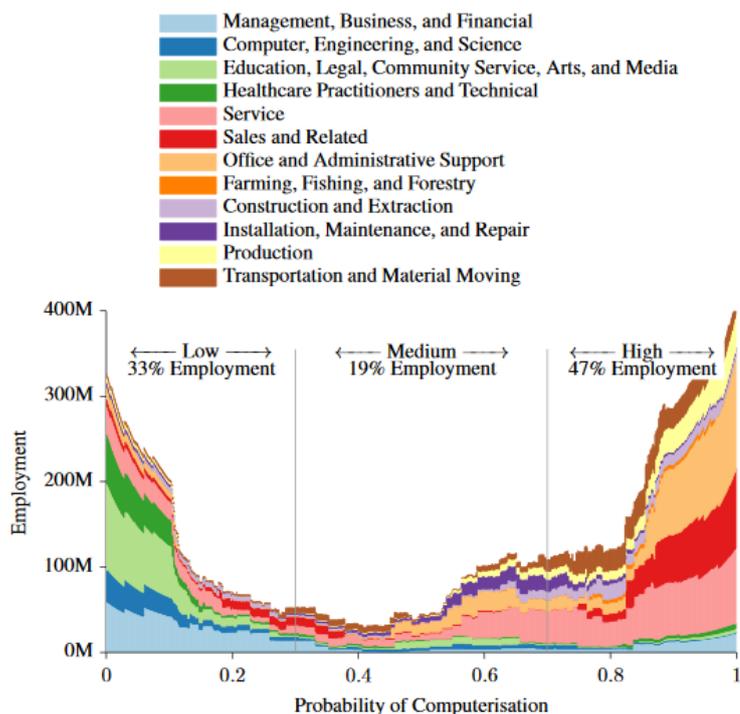


Figure 2: The distribution of BLS 2010 occupational employment over the probability of computerisation, along with the share in low, medium and high probability categories. Note that the total area under all curves is equal to total US employment (Frey, Osborne. 2013)

knowledge in their tasks and could remain only relevant to provide good customer-relations. The US Department of Labour predicts 35% to 45% of jobs that existed in 2010 may be at risk of automation, but that 65% of the jobs people will be doing have not been thought of yet.

Figure 2 shows the probability of computerisation of various occupations, categorising them in different risk levels of potential unemployment. Frey and Osborne have predicted 47% of US employment to be high risk of being automated within roughly 10 years and the medium risk category also being automatable but in a longer amount of time. They point particularly at jobs in transportation, logistics, office administration and production. They have used a Gaussian process classifier to estimate the computerisation of 702 occupations.

Bridgewater Associates, the world's largest hedge fund is building of software to automate strategic decision making. Consequently, the day-to-day management of the firm, including hiring, firing employees would be run by this software. So although many predict that management positions are safe from automation, there are already large companies preparing to automate these roles as well.

Forrester estimates that most organizations have automated at least 20% of what the service desk has traditionally done and that some have automated up to 80%. Gartner has predicted autonomous things will increasingly be deployed in uncontrolled public spaces. Erik Brynjolfsson and Andrew McAfee (MIT) believe those with the lower skill sets are at huge risk as the rate of automation for low-skilled jobs is extremely high. But the largest trend in analysis is that jobs are difficult to entirely automate and workers will be required to work alongside robots, McKinsey says that while few jobs are fully automatable, 60% of occupations are at least 30% automatable.

1.7 Degree of job losses

David Autor, an economist at the Massachusetts Institute of Technology (MIT), Frank Levy, Richard J. Mernane question Frey and Osborne's conclusion that there will be widespread job loss as computerisation leads to redesign rather than elimination of jobs. Autor believes that the dramatic job loss has been exaggerated, predicting instead that middle-skill jobs involving a combination of skills such as literacy, adaptability, numeracy, common sense, will not be obsolete. He believes there will be a complementing effect on labour from robots. For example, automation provides great benefits when it comes to our ageing labour force as physical tasks can be handled by machines (this can be contested however in that new technologies are often much harder for older generations to understand how to operate).

There is speculation over the possibility of economic hypergrowth, if/when AI starts to generate original thought there will be a rapid growth in the rate of innovation and therefore increasing GDP gains. Where there is an increase in GDP there is generally a benefit to everyone's income (however the nature of automation is that this money will be concentrated in the few who own the technology). Jeremy Rifkin also counters this argument and predicts an 'optimum general welfare' where the marginal cost of producing additional products and services is zero. Therefore arguing that increases in productivity will not lead to an increase in job production.

There are also a range of policies that can help slow the subsequent job losses, including unemployment insurance, public assistance in finding work, portable benefits and supplementing incomes when workers are between jobs, comprehensive minimum wage policies, universal basic income, retraining schemes and tying wages to productivity for example.

AI can be considered a liberation, intelligence and progress is becoming widely available and it stops people from being 'trapped' within a profession for life. The nature of these kinds of rapid technological increases means the jobs available will continuously change throughout ones career, for many this could be a refreshing and stimulating change AI also makes great headway in terms of fields such as advertising, in turn leading to increased consumerism and potential for jobs.

1.8 Job Quality and Income

Robert Reich, Professor of Public Policy at the University of California at Berkeley and former Secretary of Labour (USA) theorises that it will not be the number of jobs available affected but the quality of what work is available and whether there will be income stability. The quality of job a university graduate is looking at will be far from that of the past. This level of automation is not only replacing manufacturing jobs as in the past but white-collar workers too.

Witte and Steijn examine the relationship between automation and the autonomy and complexity of job content, if workers qualifications and skills match up to their job content and therefore the impacts on job satisfaction. Analysing the utilisation gaps in work, the credential gap, (if they were overqualified) the performance gap (if the skills they had were used in the job) and the development gap (the possibility to learn new skills) and relating them to job satisfaction. Witte and Steijn checked for the degree of automation, (how often a worker uses an automated device) the job complexity, (if the tasks require mental or interpersonal skill and how much control one has over the manner in which the task is completed). They found it statistically significant that the more a person used automated devices in their jobs, the more complex their job was, but with less autonomy over controlling how their job was completed. More significant to those in subordinate work. Automation leads to a more significant barrier to blue-collar workers to progress as it was shown that they also did not benefit from a higher complexity within their professions due to the technology they work with. Social mobility becomes almost impossible when professions contain these barriers.

Moreover, job complexity, autonomy and utilisation gaps were found to have effect on job satisfaction. Meaning that for blue-collar workers, job satisfaction could drop with automation due to complexity drops and also for white-collar workers due to less autonomy and the performance and development gaps. Different results are found for different occupational classes; overall the professional class remains content with levels of automation (hypothetically due to managerial decisions that mean those of the professional class design their work and can therefore maintain satisfaction)

Many believe in the creation of a professional class is in progress, that in advanced economies such as the UK that there will be the need for technical skills and job quality increases. However others such as Livingston argue about the presence of the education-jobs gap, where the opportunity to apply skills achieved dwindles and one ends up working below their skill level, that the qualifications of the workforce is not

matched by the upgrading of jobs. The pace of automation will be different for different occupations, wage and skill levels.

The Gini coefficient measures income equality across households, 0% being defined as complete equal income sharing and 100% where one household accounts for all income. In the UK the Gini coefficient is 34.6, with the income of the richest 20% being over six times higher than the poorest 20% (ONS, 2020). Automation will lead to a greater disparity of wealth distribution as job quality drops with automation, with most wealth being concentrated in those who own technology. This consequently could lead to political instability and a wide range of social disruptions. The most important challenge for policy makers is to prevent such growing disparities (OECD, 2019)

The big questions surrounding automation are, how dramatic will the shift be, how quickly can replacement work be found, how long will retraining take, will people be able to support themselves during retraining, will they earn a similar salary in order to avoid displacement, how to ensure people are trying.

1.9 Automation and the gig economy

Automation naturally leads to a gig economy, as it becomes harder to find adequate hours at current wage rates to sustain a decent quality of life in one profession, people must take on several forms of work to survive. This gig economy tears down the structure of career progression and trade unionism that protects workers. Meaning those in precarious work positions are even less protected, I will talk further on the importance of the implementation of the right to form Trade Unions and strengthen labour law in the UK in further chapters.

Technologies created have led to the rise of hiring platforms that are the foundation of the gig economy where employers can request short term workers in an on-demand market. These online platforms hold separate contracts with the employers and the employees, they hold some responsibility for the employees but they are mostly defined as 'self-employed' despite fulfilling a lot of the criteria for the status of a subordinate employee. Workers defined as self-employed hold significantly less rights than their counterparts such as sick pay. Labour law for example only concerns subordinate workers. The automation of work that is leading more into a gig economy requires new indicators for these types of workers and there is a requirement for new legislation to protect the emerging forms of work.

1.10 Sociological effects of automation

The wider problems surrounding automation, beyond workers rights that are worth mentioning, are abuses of technology such as the 3D printing of weapons and firearms giving unlicensed access to various terrorist organisations, cyber security challenges, for example the hacking of self-driving cars, sabotaging 3D printed aeroplane parts, drone theft through technological interceptions.

The potential xenophobia and racism that can be created. As jobs and jobs of quality become more scarce, there is a pattern for tensions to rise in attitudes towards

immigration and refugee policy as citizens blame their job displacement on foreign workers.

Automation and the future of work highlights serious social justice issues, with little room to advance one's career later in life, the importance of one's childhood situation and education becomes much more important. This means there is a reduction in social mobility for those who had a poorer beginning.

Automation has potential to completely monopolise the markets, small businesses fail due to not being able to compete with those who hold the rights or the means to technology. This can lead to unfair pricing and low wages with little protection for skilled and non-skilled workers. Making automation a key human rights issue is therefore pertinent so that states correctly address these issues before the exploitation of its citizens occurs. Through much strengthened labour law.

Automation affects women disproportionately, jobs held by predominately women such as in retail are the ones most vulnerable to automation. This in turn can lead to further difficulties in the emancipation of women. E-commerce constitutes 19% of retail sales leading to a decrease in sales and customer service workers which affects women and also the UK regionally. Workers in the north are at highest risk of automation (Guardian, 2018) The North East, South West and East Midlands are the harshest affected by this automated replacement of retail jobs, bringing further regional disparity to the UK.

Wider benefits of automation with human rights are that increased productivity should mean more to go around, also more efficient housing production for example could solve a homelessness issue.

CURRENT PROTECTIONS IN THE UK

The UK mid-Brexit faces a potential human rights crisis in terms of labour rights in the age of the technological revolution. As the UK devolves from the European Union (EU) it loses a check on its domestic power in relation to legislature on trade unions, social security, education and labour law. All elements required to assure residents a satisfactory fulfilment of their rights going into the future of work.

Primarily a look into the current protections that are in force in the UK, including the remaining EU laws and judicial structure. Secondly an assessment of the White Paper on a Great Repeal Bill and plans made by the sitting government on labour law going into the future and how this will interact with the changes that AI is bringing to the UK. Thirdly, a brief look into what would be required to strengthen the rule of law and protections to workers in the future of unstable work that will be expanded on the following sections.

Protections while in the EU – a relevant assessment of the pre-Brexit picture to see exactly what will be lost once exited. The UK is currently undergoing a potentially very large threat to human rights due to the reversal of separating powers. The separation of powers of governing a state is the independence of the legislature, the executive branch and the judiciary. Known as fundamental for the democracy of a state. Historical and current breaches to this separation has shown a path down the loss of human rights.

2.1 Education

The Digital Skills Partnership (DSP) led by the Lloyds Banking Group and the Tech Partnership have created an Essential Digital Skills Framework to enhance adults' digital skills through innovative digital skills programmes, therefore tackling digital exclusion, sharing best practice, and raising awareness of digital skills regionally. They help charities and small businesses upskill their employees' digital capabilities in order to increase productivity and also ensure teachers have the knowledge to effectively teach computing in schools. It brings together public, private and charity sectors and was established in 2017.

Currently the government 'is working with Local Enterprise Partnerships (LEPs) and Combined Authorities (Cas) to help establish Local Digital Skills Partnerships (Local DSPs) across the country to tackle local digital skills challenges and build thriving and inclusive local economies' (gov.uk) There are however only 6 of these Local DSPs in the UK. They have identified five key areas in which are key to this form of learning. Communicating, handling information and content, transacting, problem solving, being safe and legal online. Plymouth Cities of Learning team at RIO train residents to match with local credential needs. This kind of specific and targeted vocational education is fundamental to a relevant labour force and needs to be expanded.

The Chancellor of the Exchequer Rishi Sunak and the Conservative government have promised a New Skills Fund amounting to £600 million a year, totalling around £3 billion over 5 years in courses and apprenticeships in the name of the 'right to retrain'. This, if it comes to fruition is a key step in the right direction to ensure adults have

access to education to stay relevant in the labour force. The manifesto promises more apprenticeships, and that the National Skills Fund will fund 'high-quality education' to boost qualifications in transition periods. Colleges will receive £2 billion and they promise 20 Institutes of Technology

2.2 Conservative Manifesto

Within the Conservative Manifesto we can get a picture of what protections are already set to be in place in the future, however these are not binding decisions and are contingent on circumstances. The following statements are taken from the 2019 Conservative Manifesto:

2.2.1 Labour

More people than ever are moving into self-employment, especially women. We will therefore launch a review to explore how we can better support the self-employed. That includes improving their access to finance and credit (not least mortgages), making the tax system easier to navigate, and examining how better broadband can boost home-working'

We have already taken forward a number of recommendations from the Taylor Review and will build on existing employment law with measures that protect those in low paid work and the gig economy. For example:

We will create a single enforcement body and crack down on any employer abusing employment law, whether by taking workers' tips or refusing them sick pay.

We will ensure that workers have the right to request a more predictable contract and other reasonable protections.

-

2.2.2 Tax

We will continue to build on this to tackle tax evasion and reduce opportunities for aggressive tax avoidance' which currently amounts to £35billion by doubling the maximum prison sentence, strengthening the HMRC, introducing more anti-evasion measures and implementing a Digital Services tax aimed to strike the right balance between the flexibility that the economy needs and the security that employees deserve, introducing new protections for workers while preserving the dynamism and job creation that drive our shared prosperity'

2.2.3 Investment

We are committing to the fastest ever increase in domestic public R&D spending, including in basic science research to meet our target of 2.4 per cent of GDP being spent on R&D across the economy.

We will focus our efforts on areas where the UK can generate a commanding lead in the industries of the future – life sciences, clean energy, space, design, computing, robotics and artificial intelligence

2.2.4 The arts

he UK's creative industries and its unparalleled cultural heritage. In addition to our new support for arts in schools, business rates relief for music venues and cinemas, and the largest cultural capital programme in a century – £250 million to support local libraries and museums – we will maintain support for creative sector tax reliefs and free entry to the UK's national museums

[There was a significant lack of detail on supporting creative industries which from analyses will be a fundamental part of the automated economy.]

2.3 Tax System

The UK runs a tax system dating back to 1913 when labour income was the determinate point of most contributors. Income tax accounts for 25% of tax revenue in the UK and National Insurance contributions of 19%, with capital taxes only amounting 5% and corporation taxes only 8%. (ifs, 2018) Due to automation, income disparity amongst those with the patents to technology and the majority of the labour force will continue to increase. Therefore collecting the majority of taxes through income will no longer be appropriate.

There is a savings premium on how taxes are organised at the moment, with the intention to encourage stimulus however if people are expected to continuously take time off work to retrain and upskill then they will need to fall back on savings to smooth transition.

The benefits to income tax is that it is a highly visible tax and hard to avoid, providing a certain revenue for the government. However with the credit system and wire transfers with electronic traces as opposed to a cash-based system it is becoming harder to avoid taxes, there needs to be more resources put into the HMRC to curb tax avoidance to source the money from those who owe. Also to change perspectives on what is considered income and what is profit, as profits are not taxed in the same way as income however many treat them as such.

Machines are extremely productive and therefore there is no requirement for tax incentives to invest in machinery. Internet investment has also made this process much easier and appealing. Technology can become the substitutability between labour and capital income. The benefits of a lower labour tax also means demand for labour will increase and therefore wages.

AUTOMATION AND HUMAN RIGHTS

Protecting workers against the effects of automation is a human rights issue. The UK has ratified the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights. It is therefore bound to uphold the standards and laws held within.

My argument is that due to the capabilities of the UK, without adequately protecting persons within the UK, it is either directly or indirectly not fulfilling its positive human rights obligations. I refer to the relevant human rights literature that the UK is party to highlight their positive obligations to fully protect workers.

In doing this there is an intention to stress the importance of adequately protecting workers through mechanisms available to the UK government such as investment and changes to labour law but also to destigmatise the solutions surrounding the future of work. The solutions that I explore and others that exist are often labelled as politically left or 'Marxist-leaning' especially ideas such as a universal income. My argument is that this issue is beyond political orientations, it is a human rights issue and should be treated accordingly. The future of work is unlike we've seen before, it is no longer a question of political standing.

Highlighting the extent of the problem of automation and using the perspective of workers rights in this way being a human rights issue. It is possible to depoliticise the arguments surrounding workers, it is no longer a 'socialist' or 'leftist' view to place adequate protections from the danger of the future of work. The fundamental structure of work is changing and after Covid-19 corporate responsibility cannot be relied on, it can no longer be argued in a way of politics as this is no longer relevant. The human rights issue of automation must be addressed accordingly and we can manipulate the situation of Brexit to design policies that are UK-specific.

Due to the nature of automation, those affected most come from poorer backgrounds, of whom many are also people of colour or immigrants. By not facilitating the retraining in such manner as I will describe, the UK is not positively fulfilling the right that all individuals should benefit 'without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status.' As dictated in the Covenant of Civil and Political Rights.

'Where not already provided for by existing legislative or other measures, each State Party to the present Covenant undertakes to take the necessary steps, in accordance with its constitutional processes and with the provisions of the present Covenant, to adopt such laws or other measures as may be necessary to give effect to the rights recognized in the present Covenant.' The UK is bound to a convention stating it will take measures to make sure the rights of its constituents are realised, this then includes the steps laid out here to curb the effects of automation.

3.1 The Universal Declaration of Human Rights UDHR, 1948

Article 22

Everyone, as a member of society, has *the right to social security* and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.

Article 23

1. Everyone *has the right to work*, to free choice of employment, to just and favourable conditions of work and to *protection against unemployment*.
2. Everyone, without any discrimination, has the right to equal pay for equal work.
3. Everyone who works has the right to just and *favourable remuneration* ensuring for himself and his family an existence worthy of human dignity, and *supplemented, if necessary, by other means of social protection*.
4. Everyone has the *right to form and to join trade unions* for the protection of his interests.

Article 24

Everyone has the right to rest and leisure, including reasonable *limitation of working hours* and periodic holidays with pay.

Article 25

1. Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, *and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control*.
2. Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

The right to social security can no longer mean the social security currently undertaken by the UK and a universal income should be considered.

Protection against unemployment is fundamental to this argument, in order to positively fulfil this right further action must be taken.

The limitation of working hours in the case of the UK could mean less than the traditional 40-hour working week and steps to be taken reducing it further but with full pay in order to ensure work is available for more people.

‘The right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control’ needs to include those under all categories of employment, with more exhaustive definitions of subordinate unemployment.

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.

Article 7

The States Parties to the present Covenant recognize the right of everyone to the enjoyment of just and favourable conditions of work which ensure, in particular:

(a) Remuneration which provides all workers, as a minimum, with:

(i) Fair wages and equal remuneration for work of equal value without distinction of any kind, in particular women being guaranteed conditions of work not inferior to those enjoyed by men, with equal pay for equal work;

(ii) A decent living for themselves and their families in accordance with the provisions of the present Covenant;

(b) Safe and healthy working conditions;

(c) Equal opportunity for everyone to be promoted in his employment to an appropriate higher level, subject to no considerations other than those of seniority and competence;

(d) Rest, leisure and reasonable limitation of working hours and periodic holidays with pay, as well as remuneration for public holidays

The right to work can be interpreted several ways, with regards to the UK and the future of work this can be interpreted as the UK's positive obligation to ensure there are jobs available. Included in Article 6 is the obligation to provide adequate vocational training, of which now includes lifelong learning not just up to age 19.

Here is written legislature on women being protected in their access to quality of work of which is under serious threat due to automation. Women are unproportionally affected by automation due to their high concentrated employment in industries such as retail.

A decent living in terms of the UK means to maintain a similar standard of life as is considered normal, a lack of home displacement for example. Of which due to serious job quality declines could be a common outcome.

Equal opportunity to be promoted will not be protected under the current UK policy, access to retraining is limited to those who can afford to take time off and not to those in precarious work who are forced to identify as self-employed. There are also limited opportunities for promotion under the new nature of work due to a lack of workplace learning.

Article 8

1. The States Parties to the present Covenant undertake to ensure:

- (a) The right of everyone to form trade unions and join the trade union of his choice, subject only to the rules of the organization concerned, for the promotion and protection of his economic and social interests. No restrictions may be placed on the exercise of this right other than those prescribed by law and which are necessary in a democratic society in the interests of national security or public order or for the protection of the rights and freedoms of others;
- (b) The right of trade unions to establish national federations or confederations and the right of the latter to form or join international trade-union organizations;
- (c) The right of trade unions to function freely subject to no limitations other than those prescribed by law and which are necessary in a democratic society in the interests of national security or public order or for the protection of the rights and freedoms of others;
- (d) The right to strike, provided that it is exercised in conformity with the laws of the particular country.

2. This article shall not prevent the imposition of lawful restrictions on the exercise of these rights by members of the armed forces or of the police or of the administration of the State.

8. Nothing in this article shall authorize States Parties to the International Labour Organisation Convention of 1948 concerning Freedom of Association and Protection of the Right to Organize to take legislative measures which would prejudice, or apply the law in such a manner as would prejudice, the guarantees provided for in that Convention.

- Due to the nature of work shifting I think the right to form trade unions requires more of a positive obligation towards the realisation of this right as it cannot be simply just allowed for workers to form trade unions but it needs to be actively facilitated due to the gig economy and those having to work several jobs or digital work. This can be achieved by implementing policies such as automatic membership or general advocacy for trade union membership

Article 9

The States Parties to the present Covenant recognize the right of everyone to social security, including social insurance.

- This pertains to adequate monetary support, of which due to the UK's capability can be redirected towards a Universal income

Article 11

1. The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing, and to the continuous improvement of living conditions.

The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international co-operation based on free consent.

Article 13

1. The States Parties to the present Covenant recognize the *right of everyone to education*. They agree that education shall be directed to the full development of the human personality and the sense of its dignity, and shall strengthen the respect for human rights and fundamental freedoms. They further agree that education shall *enable all persons to participate effectively* in a free society, promote understanding, tolerance and friendship among all nations and all racial, ethnic or religious groups, and further the activities of the United Nations for the maintenance of peace.

2. The States Parties to the present Covenant recognize that, with a view to achieving the full realization of this right:
 - (a) Primary education shall be compulsory and available free to all;
 - (b) Secondary education in its different forms, including technical and vocational secondary education, shall be made *generally available and accessible to all by every appropriate means, and in particular by the progressive introduction of free education*;
I Higher education shall be made equally accessible to all, on the basis of capacity, by every appropriate means, and in particular by the progressive introduction of free education;
 - (d) Fundamental education shall be encouraged or intensified as far as possible for those persons who have not received or completed the whole period of their primary education;
I The development of a system of schools at all levels shall be actively pursued, an adequate fellowship system shall be established, and the material conditions of teaching staff shall be *continuously improved*.

3. The States Parties to the present Covenant undertake to have respect for the liberty of parents and, when applicable, legal guardians to choose for their children schools, other than those established by the public authorities, which conform to such minimum educational standards as may be laid down or approved by the State and to ensure the religious and moral education of their children in conformity with their own convictions.

4. No part of this article shall be construed so as to interfere with the liberty of individuals and bodies to establish and direct educational institutions, subject always to the observance of the principles set forth in paragraph I of this article and to the requirement that *the education given in such institutions shall conform to such minimum standards as may be laid down by the State*

The progressive introduction of free education is not continuously understood by the UK, they have halted at a point and believed that comparatively they have achieved an end goal. However, their obligation states that it should always be progressive, and there is progress to be made.

Article 13(2)(4) talks of non-governmental education institutions keeping up to state standards, in order to make full use of this right I believe the government needs to adapt their standards to accommodate and recognise new qualifications to give value to modern workers.

Article 15

1. The States Parties to the present Covenant recognize the right of everyone:
 - (a) To take part in cultural life;
 - (b) *To enjoy the benefits of scientific progress* and its applications;
 - (c) *To benefit from the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.*
2. The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for the conservation, the development and the diffusion of science and culture.
3. The States Parties to the present Covenant undertake to respect the freedom indispensable for scientific research and creative activity.
4. The States Parties to the present Covenant recognize the benefits to be derived from the encouragement and development of international contacts and co-operation in the scientific and cultural fields.

Article 15 (1.c), when talking of patent law and taxation it is not a violation of such a right, however with the modern nature of work, the rights of the whole outweigh this particular individual right that stems from a capitalist society. In order to fulfil the right that everyone enjoys the benefits of scientific progress, a reform of the taxation law so that who owns the patents to technology is required.

BREXIT AND HUMAN RIGHTS

Brexit refers to the process of Britain leaving the European Union following a referendum in 2016. The European Union is a collection of European countries and it allows for free trade and mobility of citizens, providing a competitive power on the world stage. The European Union was designed with the intent of creating peace in a region, with which is necessary for economic growth and therefore the realisation of the rights of workers and income. It is governed by the European Council, representing national governments and adopting law, The European Parliament who are elected every five years who oversee legislation and the European Commission that propose new legislation. The Court of Justice (CJEU) is the supreme court that implements the European law created.

The intentions behind being part of an international court are to solidify rule of law by a general agreement to a separate agency. The Court of Justice differs from the other international courts Britain is a part of. Particularly for the focus of this paper, in matters of economics and labour rights, due to the nature of the EU being an economic union, there are more opportunities to take matters of work related issues to the Court of Justice than say the International Court of Justice who has a much broader jurisdiction in scope of legislature but also the number of countries and is already over saturated with applications. Similarly, the European Court of Human Rights (EctHR) jurisdiction is spread across the 47 member states of the Council of Europe.

Exiting the EU and therefore the CJEU means that the UK government loses a judicial power that provides a check on its sovereignty. The current Conservative government also have plans to further endanger the separation of powers within the national judicial system. Boris Johnson has appointed the new Attorney General, Suella Braverman, who have both expressed plans to move the supreme court back into the House of Lords and intend on curbing judicial activism. The separation of the Supreme Court took place after the Constitutional Reform Act 2005 with establishment in 2009, taking over the judicial functions of the House of Lords as there was too close of a relationship between the legislature and the judiciary. The reason being to strengthen democracy by separating the state powers. A move backwards would create significant jeopardies for human rights. Boris Johnson faces no internal opposition within his cabinet, with a desire to keep as many loyal to no.10 in a 'New Model Army' format, and there is therefore a dangerous concentration of power.

The human rights situation, for the purpose of this essay those laws pertaining to labour law and income, is not entirely clear as of yet and will depend heavily on the laws that are passed during the exiting of Brexit. The immediate concerns following Brexit surrounded a relaxation of environmental policy standards however there is a risk for deregulation in other areas including labour law.

A look at the monitoring bodies of the European Union that ensure labour standards are kept in the UK shows that what will be gone post-Brexit will impede UK success, the use of the CJEU and the protections it provides to British individuals also. An assessment of what the EU plans to do with the future of work to compare if the UK's sovereign plans are up to par. Also the powers of the other international courts UK is subject to and if they can provide significant protections without the CJEU. An analysis of the Great Repeal Bill and the future British Bill of Rights that is to replace EU law. I

look at the situation of judicial independence in the UK and if this is in threat, therefore the severity of losing an international human rights court. Finally an optimistic look on how the new British sovereignty could be manipulated to be beneficial for labour rights.

4.1 European centre of expertise in the field of labour law, employment and labour market policies

Alongside the Court of Justice, the EU also provides other monitoring bodies to its members so their policies are implemented without also needing court proceedings. Among these is the European centre of expertise in the field of labour law, employment and labour market policies.

The centre's official roles are written as, 'to assist the Commission in its role of ensuring a correct application of EU-law across all Member States and monitor reforms in labour legislation as part of the European Semester process within the context of the EU 2020 strategy; to reinforce the Commission's capacity to anticipate any issues that could arise from the application of EU directives, and analyse potential legal issues and the impact of European Court of Justice (ECJ) rulings; and to improve awareness and encourage public debate on topical issues of interest for EU labour law and legislation.' (EU, no date)

These are key roles in checking that countries are operating up-to-standard on labour legislation, their scope includes vocational training where they enquire into available training enterprises, what kinds of vocational training are available and how countries will strategize to develop workforce skills from the governments' responsibility but also into social partners so that continued training takes place in the workplace. They try ensure that people have access to a continued training in information and communication technologies and check that EU countries have put in place measures for those who have disadvantages in the labour market, including older people, minorities, women and those in weaker employment contracts. They also have a faction that deals with the modernisation of vocational education, strategically focussed on LLL and monitoring the effectiveness of education institutions through the European Quality Assurance Reference Framework for VET. Reviews of teachers skills are through this mechanism and tools are developed to improve work-based learning and labour market relevance. This faction also validates non-formal education and training through the European Qualifications Framework and the European Credit Systems for Vocational Education and Training.

Among what they monitor is the effectiveness of regional social protection policies, including monitoring the development of related policies, facilitating exchange on effectiveness of policies and regulates all traditional branches of social security. A key theme of social security regulations are that they extend to those who are not employed and to non-EU nationals, of which could change once the UK fully leaves the EU.

All reports that are submitted must follow guidelines to ensure quality data and in this way the European centre of expertise in the field of labour law, employment and labour market policies provides a service to the workforce of the UK, by the power of information collection, communication and standard setting. Achievements in their goals are highlighted in a succession of communiqués, Maastricht 2004, Helsinki 2006, Bordeaux 2008 and Bruges 2010; where various steps were made in the Copenhagen Process in funding and training and implementations of tools to promote links between VET and the labour market.

The nature of future work will require flexibility in skills and also locations, worker mobility will be essential in a relevant labour force. This centre of expertise and the

other European bodies aim for a common European objective to create transferable qualifications, enable transparency and foster mutual learning. This level of cooperation will be lost for the UK.

4.2 EU, CJEU & The European Commission

The Court of Justice interprets and enforces EU law and can be accessed by individuals, companies and organisations as well as settling disputes between national governments. Through infringement proceedings it can find fault with a country and issue them a fine or implement actions for failure to act (ensuring the EU takes action) or actions for damages which instigates sanctions on EU institutions. Individuals have power through the CJEU in that if you believe an EU institution has violated EU law through action or inaction, one can bring the case in front of the General Court.

The UK has a series of binding treaties with the EU, the main ones including the Treaty of Lisbon, Treaty of Nice, Treaty of Amsterdam, Maastricht Treaty, the Single European Act, the Brussels Treaty, Treaties of Rome and the Treaty establishing the European Coal and Steel Community. The legislature included within these treaties provides protections to individuals concerning democracy, the powers of the EU, and rights guaranteed. EU law has primacy over inconsistent UK law.

The Charter of Fundamental Rights of the European Union provides essential human rights to those residing in the European Union. The Charter includes rights on freedom of assembly and of association, a right to education, the right to engage in work, various solidarity laws such as collective bargaining and the right to consultation within the undertaking. The Charter also provides protection in the event of unjustified dismissal, fair and just working conditions, social protections such as social security and social assistance, access to services of general economic interest, consumer protection.

Once the UK formally leaves the EU it has been promised that the Charter will no longer apply. EU law will apply until a formal exit or if it is written into UK law by an Act of Parliament. It has been predicted that the British Prime Minister will reject the European Court's jurisdiction. (cited in BBC, 2020)

The EU and the CJEU provide a sort of external constitution for the UK, with a check & balance and a forum to deliberate and amend legislation. Rights that have stemmed from the EU are surrounding data protection, human trafficking, rights of victims of crimes, disability rights, workplace discrimination and equal pay. Indeed, many EU laws have already been written into UK law, equality rights for example.

The European Commission provides another important service to workers' rights, they 'check that EU directives are incorporated into national law and ensures through systematic monitoring that the rules are correctly implemented. When the Commission considers that an EU country has not incorporated a directive into national law correctly, it may decide to start infringement proceedings. In this way, it ensures that all the rights set out in the directives are available in national law. However, the Commission cannot procure redress to individual citizens (i.e. compensate damages or set a situation right) – that is up to the competent national authorities' (EU, no date)

If/when the Communities Act is repealed then EU laws that have been brought through secondary legislation will disappear. However, laws that have been passed through

primary legislation (acts of parliament) will remain unless the government repeals the specific act, for example the equality act will not automatically disappear once Brexit is completed. The likely repeals will be the Working Time Regulations and the Agency Workers Regulations. (Crowley, Woodford. 2016)

Other opinions say that despite leaving the EU court, progressive judgements made by the CJEU have had the power to embolden national courts and expand human rights which is a continuing legacy and can be seen in the push back the national courts have had during the Brexit process.

In a practical sense, the level of protection the British public has received from the CJEU and EU law can be quantified by the amount the court has been used and the judgements resulting. I refer to CJEU case C-344/18, ISS Facility Services, 26 March 2020, CJEU case C-298/18, Grafe und Pohle, 27 February 2020. Rafal Prefeta v Secretary of State for Work and Pensions, Conley King v The Sash Window Workshop Ltd and Richard Dollar, Secretary of State for Work and Pensions v Tolley, Secretary of State for the Home Department v NA as evidence on the importance of the CJEU comparative to other international courts.

4.3 EU and automation rights

Workers' rights in the technological age of AI is an area in need of amending and updating in order to incorporate the new challenges being faced and the new responsibilities of governments. If the EU is appropriately acknowledging the new need for strengthened labour laws then losing the government of their laws and judicial body is a great threat.

Being a part of an economic community in itself is an asset when considering automation as freedom of movement and the mobility of the labour force will be of even larger importance as education and skills needs shift.

The UK could sign on to be a part of EU employment law, in which case solutions for the problem of automation must be considered at a European level. In the event of a partial Brexit, the UK could participate in the European Free Trade Association as Norway is. Therefore being signed onto all employment law, or they could participate in a series of bilateral treaties such as Switzerland. (Richard Yeomans, 2015)

However, the foreign secretary Dominic Raab has made a statement saying that aligning strongly with EU regulations would 'defeat the point of Brexit'. From this it looks unlikely that Britain will be signed onto EU employment law and the trade agreement that could be created will look more like Canada's, which allows tariff-free trade, bar the service industry however, which makes up 80% of UK jobs. (BBC, 2020) Stephen Hocking and suggests there could be the potential to retain EU citizenship for those who desire it, or those already living in EU countries however their access to the CJEU is not guaranteed.

4.4 European Convention of Human Rights & European Court of Human Rights

The ECHR is a convention tied to the Council of Europe, of which the UK will remain a part of once having left the EU and its ratified laws will remain binding. Brexit will not directly affect the protections awarded by the ECHR.

After an assessment of the case law of the European Court of Human rights (EctHR) it is clear it does not act as the primary source of justice on labour law within the UK.

The ECHR is incorporated into UK law via the Human Rights Act 1998, it is not as extensive as The Charter of Fundamental Rights of the European Union, the Charter includes certain rights not in the Human Rights Act such as the rights of the child and non-discrimination and the UK courts cannot protect ECHR rights in the face of inconsistent primary legislation.

There is a wider concern that leaving the EU and its jurisdiction will spark a desire to leave the ECHR also, the UK has long talked of providing only national legislation when it comes to human rights. Creating only national human rights legislation or a Bill of Human Rights would most likely be a reduction in rights and especially pertaining to asylum seekers and immigrants. For example, the lack of economic, social and cultural rights in the Human Rights Act 1998 mean it is not possible for individuals to bring violations to domestic courts.

4.5 United Nations (UN) & International Court of Justice (ICJ)

Brexit will not affect the UK's membership to the UN or the jurisdiction of the ICJ with respect to implementing the Charter of the United Nations. The purpose of the UN and its associated court are to 'achieve international co-operation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights'. (Charter of the United Nations, 1945)

However, this court is for disputes between states rather than individuals and is reserved for the gravest of cases and therefore not particularly relevant in protecting the intricacies of British labour policy. In fact the court has only been used to assess the UK four times since 1972 on issues relating to Nuclear Disarmament 2014, the legality of the use of force in Serbia and Montenegro 1999, on the Montreal Convention in 1992 and the jurisdiction of fisheries in 1972.

4.6 White Paper on a Great Repeal Bill

The White Paper on a Great Repeal Bill is the outline of what is likely to happen once the UK exits the EU. It is a Repeal of the Communities Act 1972 and outlines the path to UK sovereignty and will allow the government to change or remove EU law that does not 'function properly'.

They have stated that 'existing EU law in place at the point the UK leaves the EU will be preserved 'wherever possible'', that 'the protections in the Equality Acts 2006 and 2010

will be retained after we leave the EU', that 'worker's rights that arise from EU law will continue to be available in the UK', that 'current European Court (CJEU) case law will be preserved, but the Bill will not provide any role for the CJEU in the interpretation of new laws and will not require our courts to consider future CJEU's case law' and that the Charter of Fundamental Rights will be removed from UK law. (White Paper on a Great Repeal Bill, 2017)

These promises of retention of most protections can be reassuring however the government will have the ability to repeal what they wish, and it will rely on the independence and power of the national judiciary. So far, the UK government has been relatively secretive about what the terms will be of Brexit, there has also been a change in Prime Minister since which is likely to change outcomes. A British Bill of Rights does not exist yet in the UK. A domestic bill was included in the 2015 Conservative manifesto and is planned to replace the Human Rights Act.

4.7 Judicial independence in the UK

Judicial independence is fundamental to the democratisation of any state and finding a necessary balance between judicial independence and accountability. Despite if the White Paper on a Great Repeal Bill is passed and many EU laws will be preserved, the threat of a lack of judicial independence, or the undermining of the court still presents a significant threat to labour rights in the UK. A weakening of democracy, in this case the judiciary, comes with it self-serving legislature.

The judiciary is always attacked first, and their authority undermined. Although in the UK politicians are today generally less dismissive of judges, Brexit has proved a great challenge to judicial authority. To begin, the judiciary sided with the legislature over the executive and therefore siding with democracy, however they were unclear in their message.

Secondly, it is not just the separation from the international court of the EU that is threatening the judicial independence of the court but the process of Brexit and public opinions on the judiciary that is a threat. Third party reports and the presentation of rulings strongly affect public opinion and therefore the legitimacy of the courts. This was a particular theme with the Supreme Court's controversial Brexit ruling. UK Supreme Court President Lady Hale says the Lord Chancellor could have done more to support the judges following the 'Enemies of the People' controversy, and that the damage may be long-term.

Not only the has the legitimacy of the courts been undermined by the 'Enemies of the People' controversy but it has deterred good people from joining the judiciary, and if you cannot persuade good people to become judges then rule of law is in peril. Pensions have been changed and the traditional accolades for judges such as knighthoods are not so sought after or considered valuable, therefore disincentivising many from becoming judges.

After the Supreme Court declared Boris Johnson's wish to prorogue parliament unlawful he expressed a desire to put the Supreme Court back into the House of Lords and reverse the democratic separation that took place in 2009.

Despite there already being many human rights laws written into UK law these can be repealed by parliament as desired and could be taken below the current standard expected by the EU. For example rights that already existed in the UK are non-discrimination in employment on grounds of sex, race and disability, the public sector equality duty and non-discrimination in the provision of goods and services:

The weakness of constitutional law and the Conservative government's desire to remove elements of the separations of powers brings with it worrying possibilities for the future stability of worker's rights. 'The only constitutional principle that really stands, and indeed emasculates all others, is the principle that Parliament is sovereign.' (Eeckhout, P. 2018)

In the case (*R(Miller) v Secretary of State for Exiting the European Union*), The Supreme Court ruled that the UK executive could not withdraw from the EU by a notice to the Council of the European Union as stated under Article 50 without an act of parliament, as withdrawing from international agreements without parliamentary authorisation was deemed unlawful. The Government's appeals to the High Court's decision that they had to consult parliament and the resulting conclusion from the Supreme Court that they did in fact have to shows how political UK constitutional law is and how willing the current executive body is to proceed according to their own will.

Article 50, the clause in the EU Lisbon Treaty lays out the process for voluntary leaving the EU. If other member states implemented this Article would have had to have constitutional debate around an approach towards European re-integration, with probable constitutional amendments. However, with the UK, the focus surrounded the royal prerogative giving a prediction of exactly how unwilling the UK will be to continue relations with the EU.

The UK's positivist and doctrinal approach to exiting the EU showed a lack of foresight into the future age of globalisation (a key theme in an automated future). Their approach is antiquated, they presumed European integration as a part of their international relations. Despite the devolution the UK has undergone, the 2014 Scottish referendum for independence for example, the Miller litigation and Brexit has proved that the UK has not devolved its powers. Leading back to the beginning of this chapter that this separation of powers is endangered looking into the future.

The Brexit referendum ignored the UK from a constituent perspective, needing only a majority from the region as a whole. Northern Ireland and Scotland constitutively voted for remain. The Sewel convention, providing that devolved assemblies be present in decisions of concern to them was juridically overruled as such conventions 'are not legally forceable'. (Eeckhout, P. 2018)

'There is no role for Parliament in the withdrawal negotiations which the constitution demands, other than that any changes to UK law will at the end of the day need to be approved by Parliament', (Eeckhout, P. 2018) Parliament can do as they wish with referendums as there is no constitutional law around them. Deals are proposed to Parliament with yes or no options, often meaning if Parliament says no then all rights are stripped and they have to concede with their one other option.

Post-Brexit immigration policy is fundamental to this conversation on workers' rights in automation as the skills-based entry system of the allowance of skilled workers is a changing narrative. We will need a lot of national investment in education now as there will be an increase in reliance on national talent.

4.8 How British Sovereignty can be used to benefit human rights

Despite the lack of European cooperation that will stem from Brexit, making it harder for labour force mobility and policy communication, there are various ways in which the situation can be manipulated to benefit the rights of workers.

Within the Brexit campaign it was often cited that Britain would be able to reclaim control over its own laws without the overarching EU legislative power. Patent law and intellectual property is one area in which if the UK had full control over they could start to appropriately allocate wealth from patents and monopolising technology. The UK has been a part of the EU for over four decades and therefore much of its laws have been integrated and its difficult to separate what is quintessentially British and what will remain, or what represents purely European law. Intellectual property law is the most Europeanised area of private law. (Mimler, 2018)

There has been debate over replacing the Human Rights Act 1998 with a British Bill of Rights for some time now, under the Blair administration particularly. The benefits of this stem from the argument that taking cases to international courts is lengthy and costly and utilising the British Courts (if the courts can retain independence) would be much more efficient. A knowledge of these international protections are also said to be not widely enough known and creating a national legislature would promote an understanding of rights and how to apply them in everyday life.

The constitutional weakness of the English system means it can be manipulated to faster adapt to the changing shape of work if used correctly. The EU due to it having a range of members can only go so far in setting standards for its members, they explicitly write that 'individual EU countries are free to provide higher levels of protection if they wish' meaning they are aware that there is room for stronger protections. Therefore, being a member of the European Union does not inherently provide more protections to the UK through legislature. It could also allow for an easier path to universal income.

Ultimately a good relationship with the EU continuing is fundamental as free trade will be key to Britain's future. Due to this, sharing standards in workers' rights should be expected, but I believe the UK has the potential to go beyond what is 'expected'. The European centre of expertise in the field of labour law, employment and labour market policies for example checks that the UK is operating to EU standards but in order to completely fulfil their human rights obligations, the UK must be checked to a higher degree.

RETRAINING

Human capital theorists made the link between educational achievement and high-level employment and as such the education system shifted in the direction to increase productivity, pushing importance onto achieving tertiary education. However, an updated vocational education is now necessary in order to keep up with the changing nature of work, we need to continuously keep learning so that we don't fall behind. There is not enough time for universities and traditional learning to adapt as new occupations arise.

The argument presented here is that it is the responsibility of the UK government to provide adequate forms of education, not only in childhood but facilitate adult learning as a childhood education is now not the only requirement to hold a job/income for life. The argument is aided by a depoliticization of a parental state by strengthening the idea of workers' rights in automation being fundamental human rights.

A potential use of the unique situation of the UK becoming more sovereign is that the standards of human rights can be increased above and beyond the standards capable of the EU as a whole, who can be restricted by less capable or more conservative members.

There are seen to be three perspectives on the future of work, labour scarcity, job scarcity and the end of work. With focuses on the scale of technological unemployment or the new format of working in the gig, platform, and internet economy. Bessen 2015 for example finds that computers will lead to occupations growing faster and will not lead to a significant net technological unemployment. However, that it will require constant new skills and the challenge faced by the workforce will be to retrain and educate consistently.

'Harvard economists Claudia Goldin and Lawrence Katz explain rising income inequality in the US as a result of the education system failing to keep pace with technological innovation and the rising demand for higher-level skills' (Brown, P. 2018)

The extent of the need for education reform depends on which future of automation is hypothesised. As explored earlier, there are beliefs that there is an 'end of work' coming where even those highly skilled will find it near impossible to find work. On the other side there are beliefs that this technological revolution will provide as many jobs however there will be a requirement to upskill several times in one's lifetime and a serious reform of the education system in the UK will be necessary.

5.1 Internal Differentiation

Witte and Steijn find that 'jobs that are directly influenced by processes of automation display increasing complexity, while at the same time the level of autonomy of these workers decreases.' Of which they title 'internal differentiation', it is what happens when jobs are partly rather than wholly automated, of which has been hypothesised to be the way automation will happen. They found increasing complexity of jobs was due to new technologies and these new complexities therefore required more educational

qualifications, while at the same time the technologies standardised and routinised the work, making it impossible to upskill whilst working.

Therefore, due to technological developments, it is not possible for policymakers to suggest that career progress could happen naturally in the workplace as before, because of this new standardisation. This brings forward the issue of not only retraining workers so that they can join the labour force at any income/skill level, but also managing those occupations where due to the partial automation of their work, they cannot progress beyond their level.

Witte and Steijn conclude that there isn't a lack of educated workforce, as often people are found to perceive a performance gap, in that they feel overqualified for their position. Instead policymakers should focus on job creation to match the knowledge and skills already available.

5.2 European Goals

The EU has the Riga Conclusions based on the results of previous communiqués of their VET program. They have established five priority areas for improvement in vocational education on a European level. These are 'to promote work-based learning in all its forms; to further develop quality assurance mechanisms in VET in line with the European quality assurance in VET recommendation; to enhance access to VET and qualifications for all through more flexible and permeable systems; to further strengthen key competences in VET curricula and provide more effective opportunities to acquire or develop those skills through initial VET and continuing VET and to introduce systematic approaches to, and opportunities for, initial and continuous professional development of VET teachers, trainers and mentors in both school- and work-based settings' (EU, no date)

5.3 Transition periods

Periods off work at present mean a loss of 'continuity of employment'. Under the hypothesis of labour scarcity, it proposes that there will be jobs available throughout peoples' working lives but of different skill sets, which is at least almost certainly the case in the near future. However these jobs can be significantly different to the skill set one has acquired and therefore there will be significant transition periods between jobs in order to retrain.

The OECD has analysed that those in low paying jobs are three times less likely to partake in retraining opportunities despite those being the group that will be the most affected by automation. This is likely due to the fact that they do not have the resources to be able to afford to take time off to participate in these opportunities. Currently it could be possible that despite not participating in these opportunities they are not acceding in their careers but they are retaining their current jobs. In the future the job that they hold at one time is much more likely to be obsolete meaning they will have to take time off to transition. It will be the government's responsibility to ensure they will be financially secure without displacement during these periods.

5.4 Upskilling/skill-biased technological change

The traditional definition of 'highly-skilled' will not mean the same thing in future work, obtaining a university degree or professional capabilities will not be enough. Klaus Schwab, founder of the World Economic Forum talks of needing to adapt continuously to keep learning new skills.

Currently the UK's educational structure is focused on childhood and early adulthood, which is an antiquated system based on the idea that upskilling would be relatively minute. Due to the technological revolution structural changes to the system will require a lot of attention.

What Cities of Learning are doing needs to be a widespread practice of which the government should assist with. With the current Job centre scheme there can be more focus on upskilling residents to fit with the local needs. In Sweden there are job security centres operating like this currently.

5.5 Type of education

It is mostly uncontested that in order to stay relevant and protect workers' futures in the UK that a focus on science, technology, engineering and mathematics (STEM) is key. This comes from the assumption that the technological revolution will lead to a demand for new jobs with expert knowledge. AI also however means there needs to be a focus on individual agility, creativity and lifelong learning.

The fastest growing occupations between 2011 and 2019 were in tech, like programmers and software development professionals and carers/educators and these trends are predicted to continue into the next decade. Coders, digital designers, data analysts, sustainable consumption trends and 'empathy jobs' are all areas on which the UK's education system needs to follow.

5.6 School System

There are programmes running in the UK at the moment to address the future of work. Programmes such as Digital Skills Partnership (DSP) are not sufficient however in addressing the problem of education in the UK. They do not penetrate the national education system, they have failed to deliver on such promises as developing a Digital Skills Partnership Guide, and only have 6 operational Local DSPs across the country. Their blog – the only source of updates on the programme has not been updated since October 2019. As one of the few government backed initiatives into updating the education system in the UK and providing adult training, it is extremely underwhelming.

There is a significant lack of adequately qualified teachers (there is reform needed in regards to payment and incentives for teachers) and necessary equipment to provide students with simulations of workplace environments and applicable skills.

Under the ‘no more jobs’ assumption made by theorists such as Keynes and Rifkin, the education system currently utilised by the UK which is designed so that students will be able to perform effectively in the labour market will be somewhat useless. A focus onto education where teamwork and communications would be more effective, much different to the UK’s pattern of individualistic learning.

5.7 Corporate Responsibility

Labour law surrounding corporate responsibility will have to be strengthened in light of the need to upskill throughout one’s careers. Redundancy due to automation while employed within a company could be transferred into periods of retraining rather than total dismissal in order to make an employee relevant once again with new skills. (See Singapore model)

For those operating as part of the gig economy this of course will be difficult to attach responsibility to one company for retraining, those also self-employed workers who need time to retrain will have to be supported in other ways. The World Economic Forum argues that ‘businesses will need to put talent development and future workforce strategy front and centre to their growth. Firms can no longer be passive consumers of ready-made capital. They require a new mindset to meet their talent needs and to optimise social outcomes’

‘If we leave it to professionals themselves to reinvent their workplace, are we asking the rabbits to guard the lettuce?’ (Sasskin, R. 2016) Richard Susskin here presents a pessimistic view on the efficiency of relying on corporate social responsibility to implement protections on their workers.

The New Skills Fund presented by the Conservative Government would do well to allocate its money to employers so that transitions are easier and there is less job displacement and more retention of employees.

5.8 Sectoral Retraining

The retail industry who will be hit significantly hard by automation are also one of the industries who lack retraining opportunities for their workers in order to transition into a still productive and relevant industry. PwC estimates 44% of retail jobs are high risk and offer little training. Sectoral training is one approach that can be taken to upskilling workers. Workers in retail would find it a lot easier and perhaps prefer to remain in their industry, it would also cut down on the time taken to retrain as it builds on existing skills. Therefore, there are benefits to training within industries even at a low-skill level like they do in bigger corporate firms already for promotions. In this way, shop assistants can be retrained to become for example delivery drone operators rather than the corporately irresponsible thing of firing employees and rehiring ones that have already the required skills.

5.9 Redefining qualifications

Due to the nature of automation, those who are more in need to retrain and partake in lifelong learning are those who are 'low-skilled' and young workers. Formal education is not a viable option for everyone, being a long and expensive process and in the nature of lifelong learning, it is not possible to always return to formal education throughout one's life. Therefore, more significant recognition must occur to other skills acquired, for example digital credentials to those who engage in social organising, digital mentoring, and collaborations to give value to invisible learning. This not only proves skills to employers but can boost confidence of workers who can learn their value and demand appropriate treatment. This kind of micro-credentials are fundamental for those who formal education is not an option.

If course-based learning and the recognition of deformed learning is accomplished, then reducing the traditional framework of a working week at 40 hours could prove extremely beneficial. As less jobs become available, this gives more opportunity for more people to work and also extra time to dedicate to retraining.

The European Qualifications Framework and the European Credit Systems for Vocational Education and Training is something that needs to be continued once leaving the EU, as it provides validation for skills that are acquired outside of formal education.

5.10 Facilitating education

Asset strategies could be used to alleviate social inequality as in the UK wealth is the larger social divider than income. Asset strategies could give low-risk no interest loans to those who are poorer in order to invest in training or business providing those who are rich in assets cannot take advantage of such a scheme. Also, personal learning accounts such as in Singapore or France provide accredited courses that can be earned separate to an employer, there is potential funding for this through a reform of the apprenticeship levy.

AI can be used to assist with learning opportunities. Chatbots are a conversational AI that provides an easy way for many to access a level of education previously impossible.

UK LABOUR LAW

In this chapter there is an assessment of the areas of labour law that will be relevant in the way work is changing. After an explanation of what protections these current laws give, it is possible to see what improvements or adaptations are necessary. Redundancy law is a key theme of automation and the categorisation of subordinate employees.

6.1 Redundancy Law

The definition of redundancy in UK employment law is in s.139 (1) of the Employment Rights Act 1996 (ERA, 1996) where it states that redundancies arise for a number of reasons such as, the employer has ceased, or intends to cease to carry on business in the place where the employee was employed. Or because the need for the kind of task the employee was required to do has ceased or diminished or is expected to diminish. The law surrounding redundancy is upheld by employment tribunals.

Current redundancy law in the UK is relevant in this study as it lays out the current protections within a range of categories of employees have when they are no longer a necessary component of the company or if the company cannot afford to retain them. These protections will become more necessary once AI and automation replaces jobs at a much more rapid pace and this structure of redundancy will be used more.

6.1.1 Guidelines on redundancy

Elements of existing redundancy law will need to remain, notice periods for example will be essential to ensure smoother transition periods. Currently the guidelines on redundancy are;

Testing for whether a redundancy is due there are two avenues, a contract test that evaluates the duties defined in the contract of employment and whether they have ceased necessity and the function test that focusses on the duties that the employee undertook in a practical sense. As the contract test prevails, it is important to remember that many are not offered the kinds of fixed contract that is required in order to receive the benefits of redundancy. The protections that redundancy provides needs to be in some way extended to other forms of work. The employer also needs to discuss the reasons as to why they're making you redundant (protecting workers from discriminatory practices).

Voluntary redundancies could prove useful, those who offer to step away are usually those who have options or the capital to sustain themselves, government could also give incentives such as government issued training credits. Voluntary redundancies are often framed in a way where it seems like there is a choice to stay on but the job being offered in replacement can be a lot of work for the same or less money or in a completely different field. Often settlement agreements can be long legal documents with a lot of detail that can confuse employees, here is where trade unions are a key player.

Redundancy pay is calculated as half a week's pay for each full year you were under 22, one week's pay for each full year you were 22 or older, but under 41, one and half week's pay for each full year you were 41 or older, Length of service is capped at 20 years. Your weekly pay is the average you earned per week over the 12 weeks before the day you got your redundancy notice (gov.uk, no date) they are also required to give notice pay and accrued holiday pay.

In cases where the employer is removing 20 or more employees then trade unions must be consulted. Trade unions have a central role in redundancies especially collective redundancies, where one isn't present there must be temporarily elected representatives to negotiate and consult over all possible alternatives.

Employers must consider the employee for alternative employment if their contract of employment has relatively vaguely defined duties. This I believe is a key element of redundancy law in the future of work as if duty contracts remain widely defined then it becomes more difficult to dismiss by reason of redundancy and the employer is obliged to suit them with alternative employment within the company, providing more opportunities for at work learning and reduces work transition periods.

What covid19 has taught, restrictions that employers face mean giving lower wages or giving part time work is difficult and they have furloughed work instead. 'The institutional framework of labour law has been hollowed out so that we no longer have collective mechanisms (collective bargaining, wages boards, works councils) to secure and implement creative negotiated solutions to the economic crisis.' (Bogg, Ford. 2020) The crisis has affected those on zero-hour contracts hardest, and in lower paid jobs, often migrant workers. As the Government's Furlough Job Retention Scheme 2020 begins to end as it has cost the treasury a lot to sustain, businesses will be exercising redundancies significant amounts. Perverse effects on redundancies have also arisen from Covid-19; those on the Furlough Job Retention Scheme have received 80% of their wages however those that have had their hours reduced but still employed have seen a greater reduction in their wages.

6.2 *Gig economy*

The gig economy is posing challenges to existing labour law in the UK, there is now the need for alternative representation structures and legislature that addresses the specific needs of platform workers. This does not always mean the traditional trade union structure, it will differ in different circumstances and be highly heterogeneous across different platforms.

Platform based workers face the issue of rating systems and there is a need for these to be better monitored, for example a taxi that refuses to accept an extra passenger beyond the legal limit faces a bad consumer rating which consequently affects all future business. Digital collective bargaining methods is one avenue in which the gig economy and labour law can coexist peacefully.

As Jeremias Prassl puts it, 'the benefits of the resulting collectivisation will accrue to all involved: workers will be able to enjoy the flexibility of new forms of work without the risk of exploitative working conditions and low wages; platform operators will be able to harness the skills and experience of a dedicated workforce; and consumers will benefit from a sustainable work environment and much-improved service delivery.'

7.3 Irregular contracts

The classification of self-employment among platform and gig economy workers is problematic as they are awarded significantly less protections. There has been a rise of insecure work, zero hour contracts and platform workers in the UK, as of 2017 1.1 million are estimated to be working in the gig economy 62% who are self-employed or employees who are compensating their income through platforms. (RSA, 2017) there is an estimated 6,241,741 working flexible hours in the UK (ONS, 2018) and a staggering 11.2% of ages 16-19 in zero-hour contracts, shifting to 5.8% in ages 20-24, 2.2% of 25-29 year olds, 1.4% in 30-59 year olds and 3.3% in the 60+ category, (ONS, 2020) showing a trend in the emerging labour market towards precarious work. The UK also holds 22 different work-related visa schemes all with different rights dependent on workers' skills.

This format of work is dangerous as it promotes flexibility on part of the employer without them having to provide income stability or guaranteed hours. Even with a ban on zero hour contracts, short hour contracts would just replace them but with employers still expecting their employees to regularly work more than that set amount.

There needs to be a better digital practice, so everyone has access to necessary equipment and networks..

There needs to be stronger legislation surrounding the gig economy, with improved rights for non-standard contract workers. One solution is a portable benefits scheme, those who are 'self-employed' could accumulate benefits from various employers in case of event such as illness.

6.4 Corporate responsibility

There is an extent to what government's can do for workers and some responsibility is imposed onto employers. Schemes such as in Sweden require businesses to fund 'end-to-end transition services' for redundancies, proving effective. Some policy advisors have suggested that there be a 'kitemark' that marks products as having been produced by workers with decent conditions, similar to how they do already with 'free-range' animal products.

There needs to be pressure on companies to not make those redundant who could be easily retrained. Often what protects workers' rights in cases like redundancy is the want of the company to have a good relationship with the retained workers and to not receive bad publicity, this can be manipulated if there is a strong collective public attitude to corporate responsibility, of which governments can help to foster.

TRADE UNIONS

The strength of trade unions is directly related to the strength of labour rights. Where the right to collective bargaining is upheld to the full degree and there is adequate representation of workers there is a stronger social contract. Individual rights can only be effectively enforced where workers are organised in a trade union. Historically, trade unions in the UK have been responsible for the introduction of the National Minimum Wage, a maximum working week and paid annual holiday. The Conservatives have long had a complicated relationship with trade unions and a legacy of Thatcherism has remained but in the future of work it is important that they positively fulfil this human right to form trade unions. There is a dwindling of trade union membership in the UK by the new generation that needs to be addressed as trade unions will be the answer to the directive on agency work, the casualisation of labour and workplace learning.

The UK has ratified the ILO's fundamental principles however there have been a number of restrictions imposed onto collective action through trade union laws. The right to form trade unions needs to also extend beyond the traditional structure of a trade union, modern work is often not in the format it once was with groups of workers in the same place and its representation needs to reflect that. The format of work is leading to a degree of deregulation and trade unions need to have a stronger negotiating position with public services.

7.1 Trade union power

The UK is currently imposing restrictions on trade union power that are noncompliant with their ILO obligations. These include restrictions on the pursuit of democratic ballots for industrial action, picketing, the protection of activists from discrimination, and collective bargaining. (Moretta, 2020)

Trade Union membership and the incomes of the top earners are directly linked, if membership is down then they earn more and vice versa. The powers exercised by trade unions in the past in working hours and paid holidays can and should be used again, without these imposed restrictions that are noncompliant with international law.

Trade unions hold the power to resist changes to employment law and the casualisation of labour, they are fundamental to workers' rights, they are the institutions that have the knowledge and resources to protect workers. One of their main roles is to handle the legal aspects of redundancy on behalf of the employees, a crucial role to be played in the future of work where redundancies will become much more common. It is required in the UK as of 1997 that workers be accompanied by a trade union representative on any grievances or disciplinary hearings in the workplace. (Monks, 2002)

For example when a worker is made redundant in the UK, all avenues to find a place for that worker within the company should be explored and no position that is similar can be advertised for a period after the redundancy. Due to automation it is becoming increasingly more appealing to make workers redundant and hire new employees who have already attained the skills required for the modified technology they have

introduced rather than training their existing employees. This can be protected by trade unions and in the case that the company does not keep the employee on, they can fight for adequate compensatory payments in order to retrain for future work.

7.2 Trade unions and the gig economy

Trade unions are especially important when it comes to insecure workers as workers with weak contracts are too afraid to burden their employers with requests of contracts that accurately represent the hours they worked rather than zero hour contracts or short term contracts as they fear replacement. Therefore there needs to be a separate, representative body on their behalf.

The Directive on Fixed Term Work excludes casual workers, there needs to be a new Directive on Agency Work.

Trade Union membership in the UK has halved since 1979 and in the private sector membership is only 13.3% and there would need to be twice as many members recruited under 35 to replace those from the older generations in the workforce when retired. In the UK lack of membership can be accredited to attitudes of the workers themselves, that they don't see their worth especially under the traditional model. Trade union membership has been in decline since 1979 despite an enlarged workforce, membership sat at 13,212,000 and in 2018 it had fallen to 6,768,000, a mere 23% of all employees.

Trade unions require renewal to accommodate the new structures of work. With automation there is unstable work, with many people having to work several jobs and many having to identify as self-employed especially when working through platforms. In order to prevent the exploitation of such workers they need to unionise in a new way. For example, Prospect is working with a UNI global union to grow membership of self-employed and freelance workers.

Ways in which trade unions need to modernise are, provide online systems connecting members and also to training opportunities, wage information and career opportunities. Within the trade unions themselves there needs to be a data-driven approach to learning to really be able to assess what works in terms of recruitment and retention of members. A decentralised trade union structure would also be beneficial, in the true nature of a trade union where members can use their own collective data.

7.3 New social contract

Included in the new social contract shall be an increase in trade union membership, democratic data, financial support through periods of retraining and lifelong learning. It is a union innovation deal, a democratic model of the firm through works councils, a minimum floor of data protection for workers where explanations are given as to how their data is used. Universal income, expanding rights onto platform workers and the self-employed, personal learning accounts could give credits to retrain. A new job security centre providing special assistance to those who are at risk of automation so that people are directed into industries that are growing rather than becoming irrelevant.

Ways in which policymakers can support Trade Unions are new sectoral bargaining structures or auto-enrolment into unions. It is fundamental to support trade union membership because enough people have to join a union in false self-employment for it to function.

As of 2019, being a member of a trade union gives a wage premium of 10.3%, going as high as 37.5% in the 'human health and social work activities' sector (ONS, 2020). Trade union membership is especially important for those in working 'non-professional' sectors, where the highest wage premiums are seen for being part of a union. These groups are also the ones to be hit hardest by automation and therefore the UK's total fulfilment of giving the right to unionise is more important than ever. There is also a massive underrepresentation of young workers in unions. Although workers 50+ only represent 29.8% of all employees, they make up 40.1% of union members and workers aged 16-24 and 25-34 constitute 4.4% and 19.5% of union membership respectively. This is a cause for concern as the effects of automation will hit these groups the hardest.

There is also a much smaller presence of trade unions in the private sector who are in much more volatile positions in terms of job security. Trade union presence is measured by 'the proportion of employees whose workplace has some employees who are union members', the private sector has 32.2%.

'This shift is not just about amplifying worker power. Stronger worker voice can also lead to a more flexible and dynamic form of capitalism. A more stakeholder or 'corporatist' model of capitalism – grounded in a stronger relationship between workers, unions and employers – can create a social contract that is both more resilient and where firms face less regulatory red tap.' (Lockey, Wallace-Stephens. 2020) The Manifesto of Labour Law recommends the establishment of a Ministry of Labour and an Industrial Relations Bill to enable the strengthening of trade union rights.

There is a present risk that due to Brexit and Covid-19 that the UK will be desperate to remain competitive and relax some labour rights. However it is a main responsibility of trade unions to ensure that does not happen as it is historically evident that a relaxation of labour protections does not in fact increase one's competitiveness internationally and those who maintain a strong social contract fair better in the long run.

COVID-19 & AUTOMATION

Covid-19 has had and will continue to have an effect on all aspects of governing the UK. The responses of the UK government to Covid-19 are telling of potential future policies protecting the labour force but the economic downturn resulting will create an even more uncertain future for the workforce.

8.1 Positive impact

Working from home made huge leaps in the dismantling of the culture of a working week and certain set hours. It has made many people question the necessity of the clocked hours where they waste time in an office.

Our mentality of wage-per-hour is problematic going forward as when less hours are available, people will be left with insufficient income to sustain their lives. Instead we need to look at value-evaluation for wages. Covid-19 and working from home is a stride in this direction.

The UK's furlough scheme 'Coronavirus Job Retention Scheme', paying 80% of wages of those on leave of absence proved an empathetic step to the labour force. Roughly a quarter of the labour market was furloughed totalling £32.7bn at the end of June (ONS, 2020) and is as of yet continuing this aid, saving thousands of jobs. With also business loans being underwritten reaching a cost of £45bn. This can be seen as a large step from the UK government that it's moving towards a new social contract with a stakeholder capitalism.

A culture of volunteering has been born from the time spent at home, with working hours reduced and socialising restricted, many took to humanitarian hobbies and acquired altruistic experiences. This can be harnessed for the future and provide a basis for a universal income, awarding learning credits to those occupied in volunteer work and officially acknowledging the skills gained.

The gig economy has grown to a higher prominence during Covid-19, delivery service platform workers have become in higher demand due to people not leaving their houses to go to restaurants or shops. With also many workers being furloughed or made redundant looking to supplement their income with the available work platform, online. The continuing poor economy due to the crisis and a drop in productivity will necessarily lead to many sourcing their incomes from a variety of places, with a mixture of employed and self-employed positions.

8.2 Covid-19 and Trade Unions

The attitude and greatened community spirit rising from a virtually connected Britain in a time where most shared the same concern, their future of work means there could be a bright future for Trade Union membership. Trade unions also proved invaluable

during the crisis in protecting essential workers particularly negotiating with employers on issues surrounding health and safety, compensatory pay, and parental leave rights.

In order to build a democratic model of the firm, policymakers have the opportunity due to Covid-19 to impose regulations on firms to give trade unions a stronger negotiating position. The Government has a unique opportunity to enforce this on firms that required a bailout from the government during the Covid-19 crisis.

8.3 Covid-19 and Retraining

Digital learning took strides under quarantine, the rise of access of sites like OpenLearn and FutureLearn was phenomenal and proves not only that platforms like these can work for the future but given the time, people want to learn and upskill once formal education has ended.

The recession that has followed as an effect of Covid-19 means there will be an uptick in university enrolment. During recessions when jobs are not as available more people decide to attend university as there aren't many other options available, this however as explained in the retraining chapter is becoming a much less effective form of education to be relevant in the job market and could just indebt those who cannot afford it.

Covid-19 has led to a huge increase in 'smart-working' where all or part of one's duties are now completed at home, due to the wide access of technology and it being a possibility to continue this, many businesses are finding it cost-effective to keep their workers at home thinking even beyond the crisis and have closed their office spaces for good. This however presents a huge problem for those who are in more junior positions as this takes away the key opportunity to learn from more senior employees and enhance their skills, meaning they will need an external method to upskill and retrain in order to progress.

8.4 Negative impact

The crisis that Covid-19 has presented of course changes the nature of policies available to the UK to undertake. It has accrued a lot of debt from borrowing in trying to keep the country afloat. Much of the focus in creating good work and job satisfaction could be put aside to instead focus on job creation. Chancellor of the Exchequer Rishi Sunak's job retention schemes have been a costly but necessary endeavour however if this ends early there will be 2 million jobs at risk and 'The Institute for Public Policy Research estimates that 3 million workers will still be relying on the plan when it ends in October, two-thirds of whom are in roles that would be sustainable if the help was extended into next year'. (Business Standard, 2020)

The uncertainty that has stemmed from Covid-19 on how things will be able to continue in terms of business operations and travel policy leads to halts on investment and consumption which will hinder the immediate possibilities for huge financial aid in these solutions to the human rights crisis that is the nature of work due to automation. Similar to Brexit, Covid-19 and the uncertainties caused have led to a rise in unstable work like zero-hour contracts and false 'self-employment'.

One possible negative effect from this crisis is that more investment will be poured into finding ways to automate labour even quicker in the worries that a future such crisis could occur in which that industry is safeguarded due to their use of technology rather than infectable, risky human labour.

Covid-19 has put a lot of pressure on industries and companies to survive and it has made it unrealistic to expect that they will have the means or the motivation to start imposing stricter labour regulations or rights surrounding their workers at this time, it therefore must be a government responsibility.

COMPARITIVE STUDY WITH SINGAPORE

Singapore represents one of the few economies that shows to have less automatable jobs in its occupational structure than the UK. (Fuei, 2017)

Figure 3: International Comparison of Proportion of Employment at High Risk of Computerisation Across Countries

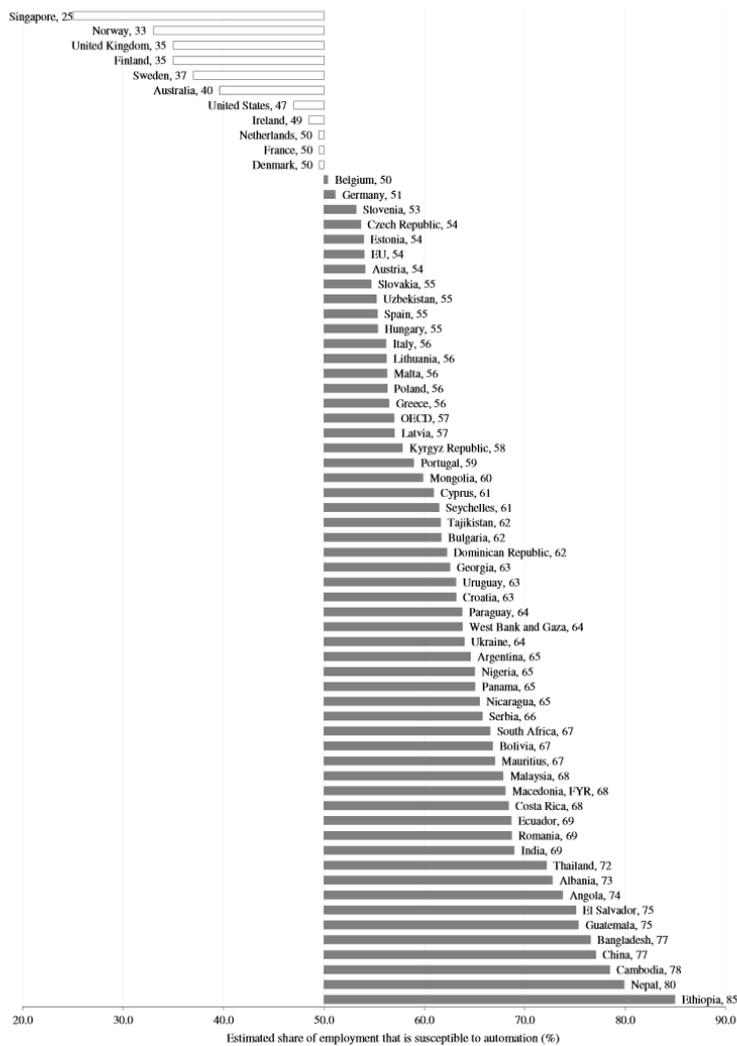


Figure 3. (Fuei Lee, 2016)

The figure, taken from a paper on Automation, Computerisation and Future Employment in Singapore, shows Singapore with the lowest proportion of employees at high risk of computerisation

Note: Estimates for countries are obtained from: US (Frey and Osborne, 2013), UK (Knowles-Cutler, Frey and Osborne, 2014), Australia (Durrant-Whyte et al, 2016), Finland and Norway (Pajarinen, Rouvinen and Ekeland, 2015), EU countries (Bowles, 2014), All other countries (World Bank, 2016)

9.1 Comparative Utility

When it comes to automation comparisons a look at the occupational structure of the country is pertinent. Different labour market indicators are the size of the labour force, labour force participation rates by sex, employment as a percent of the working age population, average annual growth rates in employment, unemployment rates, youth

unemployment rates, persons unemployed 1 year or longer as a percent of total unemployment.

An examination of the economic and cultural context of the UK and Singapore relies on looking at the key economic indicators of both countries.

	Country Name	2009	2014	2019
Labour force, total	United Kingdom	31.85m	33.19m	34.53m
Labour force, total	Singapore	2.90m	3.36m	3.53m
GDP growth (annual %)	United Kingdom	-4.25	2.61	1.41
GDP growth (annual %)	Singapore	0.12	3.94	0.73
GDP per capita (current US\$)	United Kingdom	38,713	47,425	42,300
GDP per capita (current US\$)	Singapore	38,927	57,562	65,233

Figures taken from The World Bank database 2019

Although Singapore's labour force is significantly smaller than the UK's their economic make-up and proportions of industry are comparable. The UK has more employed in industry 17.88% to Singapore's 15.47% and Singapore has more in services 83.80% to the UK's 81.09% however these are marginal differences, suggesting a similar make-up of labour markets. They also both have similar numbers of 'self-employed' workers.

Singapore is also part of the ASEAN economic community, comparable to the European Union in their developments of their own politico-ideological culture and politico-economic considerations, with similar economic policy positions.

9.2 Automation in Singapore

In Singapore, nearly one in five employees fears that automation will take away their jobs, a survey by recruitment firm Randstad found. 'One quarter of Singaporean employment is at high risk of computerisation' (Fuei, 2017) comparatively speaking this puts them at one of the lowest risks of automation internationally. Most of those in the high-risk category are non-tertiary educated and are older. This raises the question, why does Singapore have such a lower risk than the UK? Europe holds an estimated 54% of job losses due to automation (Bowles, 2014) and the UK with 35% (Knowles-Cutler, Frey and Osborne 2014).

In Fuei's study of computerisation of jobs in Singapore he uses a similar methodology to Frey and Osborne's 2013 study of automation in the US. He finds that 46% of Singaporean jobs fall into the medium-risk category, having a 30-70% chance of automation. (low-risk, 30% chance of computerisation & high-risk, over 70% chance of computerisation)

Fuei's study shows the occupations Keyboard Clerks & Sales Worker (244,800) and Drivers & Mobile Machinery Operators (114,700) are Singapore's most susceptible trades. The least being Managers & Administrators and Science & Engineering Professionals (363,400)

Significant relationships between the likelihood of re-employment and age/educational qualifications have been found by Wanberg et al. and the Singapore Ministry of Manpower. 81% of the high-risk category have non-tertiary education. The proportion of workers in the high-risk category has gone from 46% in 1991 to 25% in 2014 due to a modernisation of companies in their use of technology and the rise of the services industry, becoming a fundamental part of the economy. Those in the high-risk are in a large part over 50, of who will be exiting the labour market in due course anyways.

9.3 Growth in Singapore

Singapore has had very recent and rapid growth, because of this their job susceptibility fell significantly and the industries invested in maintain longevity. Their growth can be attributed to their non-usage of one ideology to dictate the direction of the country. They balance socialism and capitalism delicately within policy, their cars for example are highly taxed and this tax is used to develop public transport systems.

Singapore is considered a politically stable, safe place to invest in and to set up business connections. They have taxation and banking privacy laws that are appealing to investors. Singapore has 2,405 more researchers in R&D than the UK (2009) and spends on average 0.4% more of GDP on R&D.

The comparative tax revenues as a percentage of GDP are 24.12% in the UK and 12.95% Singapore suggesting increases in taxes are not necessarily the solution to a productive workforce but instead, tax allocation. Singapore also retains less of its taxes from income, profits, and capital gains check.

9.4 Labour policy in Singapore

Singapore runs a forced savings scheme called CPF that funds housing, healthcare and retirement. Differing from the UK state pension scheme as you receive the benefits continually and a guaranteed risk-free interest rate is paid on your CPF account. They reduce the amount taken from salaries incrementally from above the age of 55. Under the age-55, contributions are set mostly at 37% of income, decreasing to 12.5% at above 65. (Ministry of Manpower, no date) This allows for those who are older, who have potentially outdated skills to retain their income. The CPF contributions are split between employee contributions of their income and employer contributions. When an employee gets older they also reduce employer contributions, so older employees are less expensive to employers and there is incentive to hire or retrain them.

The CPF scheme also protects those in precarious work, as if you earn between \$50 and \$500 a month you do not pay CPF contributions, only the employer pays their share. There are three types of CPF accounts, an Ordinary Account, Special Account and Medisave Account. When looking at the allocations of the accounts they make sense according to life stages, contributions to the Ordinary Account are made more in youth, contributing to housing and when you age the Ordinary Account contributions reduce and more is funnelled into the Special Account and Medisave account, paying for retirement and healthcare.

Citizens and permanent residents are permitted to use their CPF contributions to pay for mortgages and housing down-payments, investment in the stock market or financial products (contributing to the productivity of Singapore), paying for insurance, or paying for education.

The 2016 UN human rights report dictates ways in which they have stepped out ahead in terms of labour law especially in regards to migrant workers who, like the UK, form a crucial part of the workforce.

123. Singapore had one of world's highest migrant worker concentrations. One in three persons in its workforce was foreign. Singapore valued their contributions and was committed to safeguarding their well-being and rights.

124. Surveys showed most migrant workers were happy with their work conditions, and would recommend to their families and friends to work in Singapore. Laws such as the Employment Act provided them the same avenues of justice as locals. Additional safeguards were provided through the Employment of Foreign Manpower Act and the Employment Agencies Act. Those mandated, for instance, that employers give payslips, and that the withholding of passports against workers' wishes was illegal. Fees that Singapore employment agencies could charge workers were also limited.

125. The Government shared complaints with relevant embassies in Singapore for investigations by local authorities. Singapore had taken a range of actions against more than 2,000 errant employers in 2015. Every complaint of abuse reported was investigated. Singapore was working with civil society to reach out to foreign workers about their rights and where they could seek help.

126. Singapore noted that all types of foreign worker housing must adhere to rules on safety and well-being. The longer-term direction was to improve workers' living conditions towards larger dormitories with full facilities.

127. Singapore introduced a weekly rest day for foreign domestic workers, and the maximum penalties for abuses of such workers under its Penal Code were 1.5 times the norm. The Government worked with civil society to provide skills training on workers' rest days

The feelings that arise with unemployment can be extremely counter-productive. Often those out of work remain out of work for a long period of time as their confidence declines and they find themselves out of touch with a work environment, which as the nature of work is changing much more rapidly than before, can be bewildering. Singapore's welfare system works differently to the UK in order to counter the negative psychological impact of unemployment that can lead to a lack of willingness to adapt and retrain to new job requirements. They provide companies with capital to keep their employees on rather than making them redundant. The UK's furlough scheme can be said to mirror this policy in some way, keeping people employed

The EU's long-term unemployment registration policy and job integration agreements with Singapore's company benefit policy for unemployment are comparable and are something for the UK to consider retaining post-Brexit. Singapore's policy for company incentives to keep on workers can be translated to the UK by using National Insurance tax as a means of incentive to encourage the hiring of more employees.

9.5 Education in Singapore

Education plays a large role in the relevance of a labour force and their risk of computerisation, here I compare the differences in Singaporean and British education priorities to see potential for improvements.

Singapore's compulsory education is 5 years lower than that of the UK and the spend similar amounts on primary, secondary, and tertiary education (as the % of total expenditure in public institutions). Despite this, although the UK has a higher percentage of people attaining a Bachelors or equivalent degree (29.33%, 27.74% 2014), Singapore has a significantly higher percentage of people having completed at least post-secondary (51.15%, 38.98% 2014) and having at least completed short-cycle tertiary education (42.44%, 38.98% 2014). Suggesting that the traditional framework of tertiary education is not as applicable to work preparation

Singapore dedicates the largest proportion of education spending into tertiary education (34.41% 2009) compared to UK with (14.37%), with the UK's highest spending being put into secondary education (48.92%). Singapore dedicates 21.85% of total government expenditure into education compared to a 12.61% in the UK. However only amounting to 3.01% of Singapore's GDP to 5.11% of UKs (2009). They have 3.66 less students to teachers in tertiary education.

Share of youth not in education, employment or training, total (% of youth population)
UK at a much higher 11.86% compared to Singapore's 3.60%

Singapore runs a SkillsFuture initiative since 2016 that identifies the type of work that will be available in the digital area to assist small and medium enterprises to develop their employee's skills. There are also two Continuing Education and Training (CET) campuses to address the disruptive impact of technology. Their educational policy initiatives are aimed at maximising national productivity.

The 2016 UN human rights report dictates ways in which they have stepped out ahead in terms of vocational education.

121. Singapore explained how it created better skills, better jobs and better careers as the best form of welfare for its workers. It recently implemented the SkillsFuture initiative to develop an integrated system of education, training and career progression, and foster lifelong learning. It provided grants and subsidies for training and support for leadership development, and fostered collaboration with employers and unions to meet industries' future manpower needs.

122. The Workfare Income Supplement Scheme was a targeted scheme that helped low income workers be self-reliant through continued employment through cash supplements, retirement savings top-ups, and up to 95 per cent subsidies for training courses. For sectors facing depressed wages, the Progressive Wage Model set out training requirements in exchange for higher wages. Those efforts contributed to social mobility.

Singapore is also piloting personal learning accounts where workers have access to annual training credits that they can spend on accredited courses, they are accessible to those who are 'self-employed' also as they are independent from their direct

employment. Therefore, those who are in precarious work or who become unemployed are protected by the scheme.

9.6 Human rights in Singapore

Although the UK may do well to learn lessons from Singapore in tax allocation and education reform, it is important not to let human rights go as collateral damage. I refer to Singapore's human rights situation in respect to other areas as a kind of warning for the UK, to not let other areas lessen for the greater protection of retaining secure employment.

Therefore, it is not to say Singapore stands as a human rights goal to the UK, they have made strides in rights for their workers in order to maintain productivity going forward with automated work, however I include violations to human rights in Singapore, with a particular focus to workers' rights within Singapore to condition the parallel and example being used of Singapore.

The U.S. Department of State human rights reports in 2019 that Singapore is guilty of 'preventive detention by the government under various laws that dispense with regular judicial due process; monitoring private electronic or telephone conversations without a warrant; significant restrictions on the press and internet, including criminal libel laws; significant legal and regulatory limitations on the rights of peaceful assembly and freedom of association; and a law criminalizing sexual activities between men, although this was not enforced'.

On freedom of speech, no one in Singapore was prosecuted for criticizing the Government or its policies, and many were doing so. The Constitution guaranteed the right to freedom of expression. However, there must be safeguards against those who abused this right to denigrate or offend the beliefs of others, or to incite racial or religious hatred

The vision of Singapore was to create "A Nation for All Ages". It launched an action plan for successful ageing in August 2015 to create a conducive workplace for all ages, and reorganised its health-care system to place more emphasis on prevention and make the delivery of health-care services more appropriate for the ageing population, they made their city infrastructure more senior-friendly, and provide a greater range of social activities for its senior population.

However they have not ratified the International Covenant on Civil and Political Rights or the International Covenant on Economic, Social and Cultural Rights or the International Convention on the Elimination of All Forms of Racial Discrimination, Convention against Torture, has the death penalty, International Convention for the Protection of All Persons from Enforced Disappearance, the Optional Protocol to the Convention on the Rights of the Child on the sale of children, International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, the Convention against Discrimination in Education, the Rome Statute of the International Criminal Court.

There is an Internet Code of Practice binding on all Internet content providers aimed at ensuring that no prohibited material can be broadcast via the Internet, this resulted in the detention of a 16 year old who criticised former Prime Minister Lee Kuan Yew

which was considered a violation of fundamental rights and an disproportionate punishment and to a minor.

The UN 2016 Human rights report stated there was need for improvement in 'occupational segregation, both horizontal and vertical, and to adopt legislation guaranteeing equal pay for work of equal value to narrow and close the wage gap between women and men', that there is a need to 'amend the existing labour legislation so that it applies to foreign domestic workers, or adopt new legislation ensuring that such workers are entitled to adequate wages, decent working conditions, including a day off, benefits and access to complaint and redress mechanisms'. That reconsideration needs to happen pertaining to the 'law requiring a work-permit holder, including foreign domestic workers, to be deported on grounds of pregnancy or the diagnosis of sexually transmitted diseases such as HIV/AIDS', that the 'paid maternity leave of 16 weeks applied only to citizen births and that single unwed mothers did not receive the same benefits as married women' is a violation and needs amending and that Singapore needs to impose stricter regulations with regard to safety.

UNESCO noted that, since the first cycle of the universal periodic review, no specific additional measures had been taken to ensure education for all, particularly for poor children, persons with disabilities and persons living with HIV/AIDS, to promote and guarantee gender equality in educational institutions, and to ensure human rights education and training for the judiciary and law enforcement officials.

9.7 Lessons from Singapore

Singapore relies heavily on international trade and the global economy which are vulnerable to the Technological revolution like the UK but they are considered to fair better in the long term. What can we take from Singapore is how to protect a country from future automation with education reform and a more radical shift of focus on priorities, with better job retention and workplace learning. But keeping in mind what warnings they bring.

The UK and Singapore both have a vested interest in higher education as part of developing the labour force, they operate in a competitive knowledge economy. However, they have taken different approaches in securing national prosperity.

CONCLUSION

In conclusion, Brexit poses a significant risk to human rights in the UK in that judicial independence is under threat and individuals are losing an important avenue to air grievances to on issues relating to labour law in the EU. However, the new legal sovereignty does not have to be threatening and instead could be used to excel the UK beyond expectations and the constitutional weakness of the UK system allows for the legislature to adapt quickly to the changing needs of the labour force. Boris Johnson's weak cabinet, his attitude to judicial independence and use of prorogation however will stand in the way.³¹

There are a variety of achievable means that the UK has available to them with respect to ensuring a smooth transition into the Technological Age and the computerisation of jobs, that by not completing them they are in violation of their human rights obligations as pertaining to the Universal Declaration of Human Rights 1948 and the International Covenant of Economic, Social and Cultural Rights 1976.

Their obligations include protecting and positively fulfilling all the rights in connection to labour within their means, the reforms within this paper; the recategorisation of subordinate workers, increased negotiating power to trade unions and a prioritisation of lifelong and workplace learning, are all feasible for the UK to achieve. Inaction is inexcusable, securing the future of workers in a quasi-post-capitalistic society is not a political issue it is a human rights issue and lessons can be learned from Singapore in the tangibility of protecting work in an age of automation, in their corporation tax model and education system, added however with the reservation not to let other human rights protections falter in achieving it.

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