



Select Committee on COVID-19

Corrected oral evidence: Living online—the long-term impact on well-being

Tuesday 26 January 2021

10 am

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Members present: Baroness Lane-Fox of Soho (The Chair); Lord Alderdice; Baroness Benjamin; Baroness Chisholm of Owlpen; Lord Duncan of Springbank; Lord Elder; Lord Hain; Lord Harris of Haringey; Baroness Jay of Paddington; Baroness Morgan of Cotes; Lord Pickles; Baroness Young of Hornsey.

Evidence Session No. 7

Virtual Proceeding

Questions 81 - 90

Witnesses

I: Josh Abey, Researcher, Fabian Society; Verity Davidge, Director of Central Policy, Make UK; Andrew Goodacre, Chief Executive Officer, British Independent Retailers Association; Fabian Wallace-Stephens, Senior Researcher in the Economy, Enterprise and Manufacturing Team, RSA.

Examination of witnesses

Josh Abey, Verity Davidge, Andrew Goodacre and Fabian Wallace-Stephens.

Q81 The Chair: Good morning, and welcome to the House of Lords Select Committee on the long-term implications of Covid-19. I extend a special welcome to our witnesses this morning. Thank you so much for joining us and helping us in our inquiry. We look forward to hearing your answers on such an important and complex topic.

I have a few points of housekeeping before we begin. May I remind colleagues to declare interests before they speak? If they would like to add something beyond the agreed questions, please use the wave-hand function or give me a nudge by actually waving on your video, and we will endeavour to bring everybody in.

We will try to direct questions to specific witnesses, but if you would like to come in, please wave at me or use the wave-hand function.

I remind you that a transcript is being taken and that this session is being livestreamed.

As I mentioned, we are the House of Lords Select Committee on the long-term implications of Covid-19. This inquiry is looking at what this very rapid period of digitalisation will mean for the longer-term resilience and capacity of the UK. We have looked at many different aspects of well-being in our inquiry, and we are now focusing on work, particularly today on the jobs and skills that you are all expert in.

First, would our witnesses like to introduce themselves?

Andrew Goodacre: Good morning. I am chief executive of the British Independent Retailers Association. We are based in Birmingham and we represent 4,000-plus independent retailers throughout the UK.

The Chair: It is great to have you here; an important voice, particularly at the moment.

Verity Davidge: I am director of central policy at Make UK. We represent manufacturing and engineering companies of all sizes and across all sectors of England and Wales.

The Chair: It is great to have you here, too.

Josh Abey: I am a researcher at the Fabian Society, a political think tank founded in 1884. I have been the lead researcher on our Commission on Workers and Technology project, which was a partnership with the trade union, Community.

The Chair: We all enjoyed reading that evidence. Last, but certainly not least, Fabian.

Fabian Wallace-Stephens: I work at the Royal Society for the Encouragement of Arts, Manufactures and Commerce. I am senior researcher in our future work programme.

Q82 The Chair: Thank you very much. As I said, we are trying to unpick the longer-term implications of this pandemic. It is hard, because people are very focused on the current challenges, which is completely understandable, but if I may I ask witnesses to think about a two to five-year timeframe. That would be immensely helpful.

We are looking in this inquiry at the digitalisation of the UK—or not—and we are very interested to hear your views, particularly about how the period we have lived through in almost the past year will affect the longer term. If you kept those two aspects in your mind, it would be immensely helpful.

I will start with Andrew, but others can chip in, and ask for your view on how different businesses that you represent have used digital technologies over this last period, and any particular trends that you think have accelerated over the last year.

Andrew Goodacre: We have seen 80% of independent retailers closed for what will now be six months in the last nine or 10 or so. That is forcing people and these business owners to think differently. We have certainly seen that.

An interesting statistic might be that pre-Covid about 75% of our members had a website, and about half of those websites were transactional—they could do a sale over the internet. We did some research in October, which showed that the number of businesses with websites had risen to almost 90%, but, more importantly, the number of transactional websites was 80%. Much more business is being driven online, even in the independent sector, because if they are closed they need to find different ways to sell their products. They have turned to online, they have used social media, and they have been far more creative in adopting click-and-collect or using deliveries, whether delivering themselves or using delivery companies. They have changed and pivoted their model, in many cases with some success.

It is not completely straightforward. I have met or spoken to only a couple of retailers who would say that they have been able to shift everything that they have lost from their stores being closed on to an online world. However, it clearly shows that online shopping is here to stay, and has grown.

We have noticed two significant societal shifts. One is to do with where people buy, and that is online. For non-food sales, online shopping accounts for 50% of the volume of retail sales. Pre-Covid, it was 20%. That shift has occurred and is unlikely to fall back.

Another big change has been where people work and live. Many more people are working from home, and, even after the pandemic, flexible working will be very prevalent. If you work and live in the area, you are more likely to spend more time and more money in the area. We have certainly seen that local businesses that have been allowed to remain open during the pandemic have done better.

There are some positives and negatives to the impact on us, but the overall message is that any change that was happening before Covid has been accelerated by, most retailers say, a timescale of four or five years. What we might have been expecting to see in 2025 we have seen in 2020.

The Chair: I do not want to lead you, but would you say generally that the people you represent have seen this acceleration to digital as a positive or a negative for their business?

Andrew Goodacre: There is an acceptance, I suppose. Some have seen it as positive and some have seen the benefit. The beauty of the digital transformation in online shopping that we are seeing is that you are no longer limited to your local market for sales. Some people have been very surprised by the number of visitors they have had to an online store from hundreds of miles away. Suddenly they are seeing their horizons and aspirations broadened. I think they see it as an opportunity, but there is also the harsh reality that digital retailing is a different skill set. It is a different challenge, and ultimately it is far more competitive even than the high street. One thing is being there and seeing the opportunity. The next stage is whether they are able to take advantage of it. In some cases, absolutely yes.

The Chair: Josh, would you like to add anything?

Josh Abey: We certainly picked up on the acceleration of change in the work we have been doing on the Commission on Workers and Technology report. We started this research in the summer of 2018, and for the first year and a half or so our main concern was not so much that digitalisation and automation were going to permanently take away a large number of jobs in the next two to five years. We were looking over a 10-year horizon, and in the medium term we thought that what was most likely to be of concern was a quite drastic change to some people's jobs—a lot of their tasks being changed, and them not having the skills to keep up with those changes because of the inadequate nature of the adult skills system in the UK.

As the pandemic unfolded, it compounded that concern. We have seen the acceleration of some of those changes, combined with some of the Covid, but not digitalisation, impacts of this crisis. Many of the people who are on furlough from their jobs are the same people whose jobs consist of many tasks that can be automated or digitalised. There is a very real risk—some people may be seeing this already—that those people's jobs will not return after the crisis, not just because businesses have gone under or because of the recession taking away some jobs, as recessions generally do, but because employers have decided to automate some of those tasks because the technology now exists, or is now more cost effective or feasible. That may continue into the medium term and long term and, as a trend, into most sectors.

We are already seeing employers making those decisions. The World Economic Forum surveyed employers in a number of countries, including

the UK. Some 94% said that they were accelerating the digitalisation of job tasks among their workforces, and 57% said that they were accelerating the automation of tasks.

That is a serious concern for us. We knew that this kind of thing was coming. We also knew that the public policy infrastructure and response was not yet in place. Now it is coming sooner, it is even more urgent that it is put in place as soon as possible in order to deal with some of the risks and ensure that workers across the board are able to take advantage of some of the opportunities.

The Chair: We will definitely come back to some of those specific policy ideas later.

Fabian Wallace-Stephens: E-commerce has definitely been one of the biggest trends, but I will not talk too much about that now. I am sure we will probe into that in a little more detail in a moment.

It is worth talking a little more about remote working and just how prolific that rise has been, and potentially the wider impacts it might have on the structure of the economy. In 2019, only around 5% of people mostly worked from home. Some of the most recent data suggests that, for the first half of January, 35% of people worked exclusively from home. Over the summer, when there was a period with more of a semblance of normality, this figure fluctuated at around 20% to 25%. As regards rapid growth, that seems to be the biggest trend.

Alongside this, there has been a rise in businesses using platforms like Zoom to provide services directly to customers, particularly in sectors like health, with telemedicine; in education, with a big shift to online learning; in sectors like real estate, where most house viewings are now online; and in the entertainment industry. During the first lockdown, more than 45% of businesses in all these sectors reported a big increase in the use of platforms like Zoom.

Interestingly, when we talk about remote working, often the focus is the direct impacts this will have on people who are now spending less time in the office, but it is also quite important to emphasise the point that, as some economists have pointed out, telepresence is almost a form of automation. This shift to online services and remote working more generally replaces the need for cleaning staff, for security staff, for building maintenance staff, along with transport and hospitality jobs that serve commuters. Even if we end up with a hybrid model, there will be a big hit to demand in these sectors.

As Josh mentioned, we have definitely seen the case for accelerated adoption of potentially more radical technologies. If you look at the historical trends, you see that there is quite an interesting division. You see that some industries that are at risk of automation, such as retail and manufacturing, experienced a big decline over the last decade, but there are other industries, like hospitality for example, that are technically automatable but have experienced strong growth over the last decade.

The challenge is that the pandemic might represent a turning point. Public health considerations and the rising cost of labour mean that there is now a stronger business case for firms to adopt technologies that will displace human labour. In Hong Kong, we have seen hotels adopting robots that deliver room service. In the UK, we have seen a proliferation of self-service apps in pubs, which might seem pretty benign and simple but can drastically reduce the number of touchpoints between customers and staff and therefore lead to a reduced headcount in the sector in the long term.

The Chair: Verity, I know you work with manufacturers. Do you want to give a response?

Verity Davidge: We obviously come from a slightly different standpoint, because, as an industry, manufacturing has been allowed to stay open throughout the pandemic and through lockdowns. Many of our members have been involved in supporting the ventilator challenge. Many have repurposed production lines to produce PPE. Things have been done very differently. That said, it does not mean that we have not taken a huge hit. We have seen huge lapses in demand in sales and orders, and large-scale redundancies. Half our members have made redundancies and a third are considering further redundancies, even now, almost a year on from the start of this pandemic.

We have definitely seen digital adoption accelerated through the pandemic. Some 80% of companies are now saying that the adoption of digital technologies will be a full reality in their business within the next four years. That has increased quite considerably since we asked that question two years ago.

We have also seen a large number of companies move to what we call the revolution phase of digital adoption, which they are fully adopting, whether it is additive manufacturing, robotics or cobotics, the Internet of Things, or augmented and virtual reality. We see far fewer at the pre-conception phase. The “doing nothings” have really tailed off, and we have seen a lot of that due to the pandemic.

For our industry, something different that we have seen, and Fabian touched on this, is the idea of remote working. For the manufacturing industry, the concept of remote or flexible working pre-pandemic was seen, if I am honest, as something that the mums were asking for; mums are few and far between in our sector because of the gender balance. Now, suddenly, we have huge numbers of employees undertaking remote working, and not just office-based staff. The adoption of digital technology has allowed for even production-related staff to work on models outside the shop floor, outside the factory. That is all because firms have accelerated their pace of digital adoption.

The Chair: That is very interesting.

Q83 Lord Harris of Haringey: That has all been extremely interesting and leads helpfully on to the areas I want to cover.

Mr Goodacre told us about the massive shift to digital in the non-food retail sector. He gave quite a striking statistic of 20% to 50%, or something like that. I appreciate that Mr Wallace-Stephens has referred to this, but in two to five years' time how might the number and type of jobs available in the UK have changed because of the pandemic's effect on the use of new or increasing use of technology? Which sectors are likely to experience the biggest impacts? Perhaps Mr Goodacre will go first, and then the others might also want to comment.

Andrew Goodacre: We specialise in the high street. We represent retailers, but we have a keen interest in what happens on the high street, whether it is a restaurant, a cafe, hospitality, leisure, et cetera. Where people live and work now, and the changes we have seen, has already been mentioned. There is the inexorable rise in online shopping and a change in the way people shop. Let us face it, online shopping has many advantages. It is incredibly convenient, and you get delivery when and where you want it, and in this current climate, it is arguably also very safe.

So it will continue to rise, and I guess from a retail point of view we will see more store closures. We have seen some already. It is not entirely due to technology. It is due to weak and fragile businesses being unable to cope with closures and the impact of the pandemic. Those store closures are set to continue. We saw 180,000 jobs lost in retail in 2020, and it is anticipated that another 200,000 jobs could disappear in 2021.

Some of that workforce will be retargeted and relocated. If a transaction is taking place online, the fulfilment is no longer on the shop floor through a sales assistant but behind the scenes. Some of those jobs will move from front of house to back of house—to packing, to creating the product ready for delivery, perhaps in some cases moving into delivery itself. We have also seen owners, certainly in the independent sector, readjust to taking on technology and using their skills and using their employees' skills to better understand social media and the use of communication to really connect with their local community.

In some ways, job skills sets are already being reallocated. Currently there are 2.5 million people employed in retail. In two to five years' time, it will probably fall below 2 million within that timescale, as shops close and businesses change, and pivot to a more back-of-house emphasis, which is arguably more efficient than the front-of-house emphasis we have seen over the years from a retail perspective. The same would apply, to my mind, to hospitality as well, and to other parts of the high street.

Lord Harris of Haringey: Does Ms Davidge want to comment?

Verity Davidge: I am happy to come in, and it probably chimes with Andrew's comment, albeit from a different sector. When we look at where we will be in two to five years' time, employees in the lower-skilled roles are more likely to have their jobs displaced due to digital technology

adoption. We are finding an increasing demand from our members for more of the mid to higher-skilled roles because of digital adoption.

What is important is that employers want to take their employees with them on that journey. When we speak to companies to ask what action they are taking, or what they will do to support those employees who are potentially at risk, for the most part manufacturers say that they are going to reskill them to put them into other parts of the business, or upskill them to put them in those new roles.

That is a really important point. Often digital adoption is assumed to be the removing of roles and the displacing of workers, but if we can ensure that the right policy levers for skills initiatives are put in place, they can take the majority of those employees with them on the journey. They are then filling those higher-level, higher-skilled roles, and they are also the better-paid ones.

It is a very important theme. We need to speak more about the positives that digital adoption can bring, rather than just assume that we will all be replaced by robots, which I hope is not quite the case.

Lord Harris of Haringey: I would like to pursue that. I do not know whether the other witnesses or you two want to come in on this. Are we likely to see some regions or nations of the UK being affected in a bigger way as a result of all this? Similarly, are there particular demographic groups that will be adversely or positively affected?

Fabian Wallace-Stephens: We have conducted some research that looked at the rise of e-commerce over the previous decade and particularly the impacts that had on the occupational and demographic shifts in the industry. What we saw, as Andrew mentioned, is that this leads to a shift from customer service roles towards warehousing and logistics jobs. Over the last decade, we saw about 100,000 jobs lost in customer service roles and about 40,000 created in warehousing and logistics.

We have seen a similar shift in online sales in a matter of months compared to previous years. We can infer that this might be an appropriate way to think about how jobs will be created and lost in response to Covid. This significantly tilted the gender profile of jobs towards more male employment.

There are also signs that we might start to see this dynamic play out in other industries—for example, hospitality. We have seen food delivery platforms such as Deliveroo being such a lifeblood to restaurants during lockdown. This would further increase demand for male-dominated roles such as delivery workers, while reducing the need for waiting staff, who are more likely to be women.

It is really hard to say exactly how many jobs will be related to tech itself, because we have so many complex factors at play here. Many of the jobs that are lost will be lost for other reasons. Our analysis

highlighted that a lot of the industries that are at risk from the pandemic are also highly at risk from automation. There are lots of jobs in industries like air transport and entertainment that we thought were resilient to technological change, but these industries are now on the brink of collapse due to other reasons.

Equally, a lot of the industries that are experiencing growth, such as warehousing and logistics, are at high risk from automation. Directly in response to the pandemic, to meet this increased demand we are seeing some businesses turning to robots instead of recruiting new staff. All this paints perhaps a bit of a bleak jobs picture.

Specifically on the regional impacts, the impact of the shift to remote working that I have seen seems to be mostly in an exodus from London. What will the impacts be here? It might not lead to a levelling up in the sense that the Government are aiming for, but potentially it will lead to a reallocation away from London more towards suburban areas, as well as other commuting hubs in the south-east and east of England. There is not enough data on commuting patterns, and it is not updated regularly enough, but that data would really help us to understand where some of this economic rebalancing might take place.

Lord Harris of Haringey: I want to move on to Mr Abey in a moment, but, just before that, you said in passing that delivery jobs were almost necessarily more male. I was intrigued by that. Why do you think that?

Fabian Wallace-Stephens: I do not think they are necessarily more male, but historically that has been the case. History tends to have a habit of repeating itself, particularly when it comes to the gendered nature of occupations. While this problem is not insurmountable, it is what I have taken from my understanding of the data.

Lord Harris of Haringey: Mr Abey, you talked earlier about how AI and machine learning would change the nature of work. I would like to pursue that a bit. For example, will we need lawyers and doctors when a machine can assess legal precedence or symptoms better than a human? What will happen when many mechanical processing tasks can be more easily automated? You referred to that before. Has any of this accelerated during Covid? How quickly do you expect these trends to become even more apparent and impact on the workforce? What do you expect to be the main changes?

Josh Abey: On your question about the first technology change that you referred to regarding AI and its capacity to take over some of the tasks of these higher-level higher-paid cognitive jobs, there is still some time, despite the pandemic and its acceleration of some kinds of automation, before those technologies are advanced enough or cost effective enough to automate that non-routine, judgment-led, problem solving-led kind of work. Certainly, we have seen more routine cognitive work in secretarial work, and some of the kinds of work that people do, for example, in the finance and insurance industry in assessing risk and assessing claims, be automated because of its more routine rules-based nature.

There are two types of work, cognitive and manual, to talk about here. It is the routine and rules based versus the judgment, intuition and problem solving-led types of tasks. As I say, despite the pandemic's acceleration of businesses' adoption of some of these new technologies, the technology is not quite there yet, or is not quite developed enough, to automate that non-routine category. I am not sure we will see an acceleration of that kind of automation at this point.

On the broader question about sectors, geography and demographics which the other three witnesses commented on, I would echo some of those points. In the short to medium term, two to five years, we are worried about the retail and hospitality sectors, precisely because of this double whammy from Covid—furlough rates and jobs being lost to unemployment, and the high feasibility of automation in some of those sectors.

Some subcategories in the hospitality sector—food and beverage service activities, restaurant work, bar work—have seen an incredibly high number of furloughs. According to an ONS analysis of the feasibility of automation of tasks in certain jobs and sectors, that subsector is at the highest risk of automation. Those two things interacting together make us really worried for a number of jobs in those industries over the next few years.

The consequent concern is that labour market inequalities that already exist, and have existed over the last however long, will deepen as a result. Retail and hospitality see a higher number of lower-paid workers compared to the average across the economy.

Those sectors also provide a large number of entry-level jobs. For young people and unemployed workers, if there are fewer of those jobs over the next two to five years as we are recovering from a recession, that spells trouble for workers who may otherwise have entered or re-entered work via those industries.

Moving on quickly to the geographic question, the main finding of our work was not so much that there is this deep regional inequality in who is affected by automation but more the types of place, as other witnesses have touched on. Even though city centres have been a large source of concern over the pandemic because of service jobs that served commuters no longer being needed, what we are worried about in the medium term is the kinds of areas and places in the country where the skills base is not so broad and deep, and where they may have less economic resilience and diversity of skills to support workers as change unfolds.

We have found a number of places, and sectors, that face a double whammy. Twenty-five of the 28 areas that fall within the worst quarter of places for both Covid impacts are made up of towns and villages as opposed to cities, and we are judging that by the percentage of the population who were furloughed, who have moved on to universal credit and who have made use of the self-employment income support scheme,

and the worst quarter of places with a susceptibility to automation of tasks. There is real concern about how we support those areas, some of which have been economically disadvantaged for a long period, so they do not miss out over the next three to five years.

I will touch quickly on the demographic groups and who is most likely to lose out and benefit. Again, referring to the ONS's analysis of who faces the most automation risk, it is groups that are historically disadvantaged in the labour market. This is based on the risk of tasks that make up their jobs being automated. Quite a striking statistic from that ONS analysis is that 99% of people in jobs who face a high risk of automation do not have a higher education degree. It really is about skills—Verity touched on this—and about how we approach retraining and upskilling people who do not already have higher levels of education.

Fabian touched on the jobs at higher risk of automation, 70% of which are done by women. There is that labour market inequality there as well. All this is explained by who does the jobs that contain routine, easily automatable tasks and who does the jobs that contain more high-level cognitive or non-routine manual tasks.

Lord Harris of Haringey: That has been hugely helpful. I would happily carry on drilling into that for the rest of the morning, but that is unfair on my colleagues. So I will hand back to the Chair.

The Chair: Baroness Jay, I think you have a supplementary that has been somewhat covered, but perhaps you want to drill down a little further.

Q84 **Baroness Jay of Paddington:** Thank you very much to everybody who has contributed. I would like to press you a little further on the future of women's employment. You have made some very pessimistic assumptions about what may happen to it, but, of course, we have been used over the last generation or so to family incomes being based on two wages. That has been a common practice. What will happen to overall levels of poverty if the impact on women's employment is as you describe?

Perhaps I could start with Andrew because you mentioned when you spoke about how 180,000 jobs have already gone in retail. Retail is traditionally, of course—I do not need to tell you—an area where there is a very high level of women's employment. Can you tell us, for example, what proportion of that 180,000 were women who have already lost their jobs, and what proportion of the 2 million that you are prospectively thinking will be lost, will be women? What is the impact on the broader socioeconomic pattern of two wages, one family?

Andrew Goodacre: I am afraid I cannot give that breakdown. I am happy to go back and supply that information later.

Baroness Jay of Paddington: I would be very grateful.

Andrew Goodacre: You are right that, traditionally, there is a high percentage of female workers in retail, especially on the shop floor, and especially in clothing. Clothing is one of the subsectors in the retail sector that has been particularly hard hit through this pandemic.

The other point worth making, and I think it was touched on by one of the other witnesses, is that, while we have seen retail decline over a period on the high street as people have moved online, some of those jobs have been replaced by hospitality. If a shop has closed, a cafe has opened up, and some of those jobs have transferred naturally across. Prior to the pandemic many people thought that the high street would become a real leisure zone and be entertainment driven, and so on, because retail would naturally decline to an extent. What we have seen is that those hitherto resilient sectors of leisure, hospitality and entertainment, have felt the full force of Covid-19, and the fear is that they will not pick up the slack that we might see lost out of retail.

There are two interesting factors about the socioeconomic impact. Before this call started, I was reading with interest a report on the BBC about how the poorest areas of the country seem to have suffered most from people not progressing educationally. It is all about preparing people with the different skill set that will be required in three to five years' time, with technology influencing more the way jobs get done. Education and preparing people for that is crucial, no matter what their gender is. That is gender neutral and should apply to everyone.

The other thing we will see, because traditionally this is what happens, is many people saying, "What can I do for myself? How do I make technology work for me?" Arguably, from a retail perspective, it is much easier to set up your own business selling than it was, because the internet has opened up many more opportunities. You do not need a shop or premises to sell things. Over the years, we have seen online develop, and I think that will continue. In a way, that will help people. Again, I do not know the statistics, but I get a sense that sometimes women are far more entrepreneurial and find that easier to accept and take on than their male counterparts.

There are opportunities for self-employment, but that needs encouragement, and the Government need to recognise the creation of small businesses and microbusinesses that will come from this. There are already many hundreds of thousands in the UK, and I think that will grow, but they need support to carry on doing that. I expect that will probably be driven by the need for families to replace incomes. People will look at different ways of generating income. The internet and the technology allow that to happen much easier these days.

Baroness Jay of Paddington: I would be grateful if you could let us have any statistical breakdowns that you have. I do not know whether Josh wants to add something. He has already spoken about this in a general way. Do you have any more points that you want to make about the prospects for women's employment and the wider social impact that that might have?

Josh Abey: I would reiterate the point that the more pessimistic picture when it comes to women and inequality between genders is based on the jobs that women currently do tending to involve more of the routine tasks. A survey by the IMF across 30 countries created something called a routine task index, and it found that women have a 13 percentage point higher score on that index than men do. It comes back to that point about skills and accessibility to a skills offer/adult education offer for everyone, which we have argued is not currently the case.

There is also concern about opportunities for women in some of the growth sectors. I am thinking about the technology sectors in particular. Survey evidence suggests that, for whatever reason, women are less likely to consider careers in the technology sector, and there is a much lower prevalence of women in leadership roles in the technology sector, even more so than across the economy on average, which is a big concern.

The other side of the picture is that in certain growth sectors that are not to do with technology—for example, social care, healthcare, education—women are more represented than men, but the problem in some of those sectors, in particular social care, is that those jobs are undervalued and underpaid and do not have the status that they deserve. As those sectors grow and other sectors in which women are employed decline, there needs to be a concerted strategy to improve pay and conditions in those sectors. That is a big part of the picture.

Finally, all this compounds what we have seen through the pandemic, which is essentially an unequal gender impact. A survey of mothers by the charity Pregnant Then Screwed found that lack of childcare was a factor behind almost half the Covid-19 redundancies reported to them, and two-thirds of the cases of furlough or reduced hours. There has been that impact from the pandemic directly as well.

Baroness Jay of Paddington: Again, I would be grateful, if you have any more statistics like the one you just gave, if you sent them in. I rest my optimism on the fact about women's entrepreneurial skills. Here is a technology queen in our Chair.

The Chair: That is dubious. I know that Lord Hain would like to come in with another supplementary.

Q85 **Lord Hain:** I have specific questions to each of you. Fabian, you mentioned that remote home viewings had shot up, but does anybody buy a house without visiting it?

Related, but for Andrew, we all go into shops intending to buy something and end up seeing other things and buying them as well. Will that affect retail?

Verity and Josh, on the throwaway society, we never get a PC printer repaired because it is cheaper to buy a new one. What is that doing for the green agenda and climate change?

Fabian Wallace-Stephens: On that shift to online and just how much it features in the new normal, in most of these contexts the likely outcome will be some hybrid model whereby you probably will not go to view houses where you end up being disappointed by the viewing because you will do some sort of initial screening. The potential implications that has for the number of workers and the number of tour guides you need when it is all done through an online exploring tool could be significant.

The sustainability question was interesting, and I wanted to pick up on it, because the trend towards even using printers is an interesting one. A lot of younger people have made the shift to paperless and all their documents are on their iPad. It is that point about the future perhaps not being more of the same. It might be completely different and we might resolve the challenges of our time through some kind of creative innovation.

Andrew Goodacre: You have picked up on one of the big challenges of online sales, and that is ancillary sales. You are exactly right that one of the aspects of running a shop, and shop staff are particularly good at this, is selling up. If someone goes in to buy a shirt, they can often sell a tie with it, as an example. This is where the hybrid version will exist. I do not see an end of shops altogether. Even within our membership, and looking at what is happening on the high street, the internet shop will supplement and complement the physical premises—the two will work hand in hand.

I think that in the not-too-distant future people will realise how far technology can take them. Clothing is a good example. At the moment online shopping is fairly one-dimensional and boring by comparison to visiting a shop, but you could create the experience online as well. Why not create virtual sales assistants who will talk you through a range of clothing or a range of products? Even if you are doing DIY and you want to buy a hammer, what are the best nails to go with it? That is a crass example, but it gives the idea that you can get that physical experience online. That is a key role for someone to fulfil, a key job, although perhaps a slightly different skill set. It creates the ability for the retailer to sell up, and the ability for the customer to get exactly what they are looking for, and the best advice and reassurance they need.

The shop experience can travel forward to online, but it will never fully replace when people really need to visit premises to touch and feel something. You cannot get that online, even with the best of technology. We will see it moderate. But perhaps the initial viewing, the initial expression of interest, will occur online, so the window shopping you used to do on your feet will happen through your mouse and computer, in that respect.

I have a quick comment on sustainability from a retail perspective. It is really important to retailers, and they need to embrace it. We are certainly encouraging retailers to embrace a net zero aspect. Retail, depending on which sector, but clothing again in particular, is a big contributor to the environmental carbon footprint because of the

production process. Perhaps the idea of a £2 T-shirt should change, and people will move away from that as they become conscious of the impact that products have on the environment itself. More durable and more sustainable products are also where the more conscious consumer wants to be. The whole environmental sustainability argument is being embraced by retail, and it needs to do it at pace.

Lord Hain: I will ask Verity about throwaway manufacturing, perhaps not printers, as Fabian shot that fox by saying that everything is going paperless. You cannot get anything repaired these days. People just want you to buy a new one.

Verity Davidge: On the smaller scale of printers, I agree with Fabian: many of the younger generation would not know what a printer does these days. It is all paperless.

The sustainability point is a huge one for manufacturers at the moment. There are ambitious net zero targets for sectors like ours. If I look to my colleagues in the energy-intensive steel sector, these are very ambitious targets, and they will need to put sustainability to the forefront of their agendas. I think we are moving towards that now. Last year, we did a lot of the work on energy efficiencies, and we are seeing an increasing number of companies put that at the top of their leadership agendas and make energy efficiency improvements, not just for the bottom line and to reduce costs but because they know they have a corporate social responsibility in doing so.

At Make UK, we are about to undertake a big piece of work setting out a road map for meeting a net zero target. We know that it will be challenging for a lot of our members. We imagine that some of them will be stretching targets. We feel that we need to play a leading role. Your comments about a throwaway culture will be part of that. We need to move more sustainably and think about a circular economy.

The Chair: Josh, would you like to add something quickly? We still have a lot of questions to crack through.

Josh Abey: I will come in very quickly on Lord Hain's point on sustainability. There are some potentially positive stories about the growth of automation and digital technologies as regards the environment and green issues. Over the pandemic, we have seen, albeit for tragic reasons, an interesting phenomenon in the reduction in car usage and commuting, which has had a positive impact on emissions. If some of those trends are made more permanent—for example, if remote working becomes permanent for a significant minority of workers—we may see those benefits of lower emissions from commuting.

I also want to point out that, in some of the growth industries, technology may be both enabling and be required because of the displacement of workers from other sectors. Digital, green transport infrastructure, energy efficiency retrofitting and building of flood defences—all these growth industries that require capital spending to create new good jobs—

should all be the focus as technology makes other jobs potentially redundant.

The Chair: I would just add that I have a friend who bought a house without seeing it, so desperate were they to leave the country. May I move to Baroness Young? You have a supplementary to this question and two other questions.

Q86 **Baroness Young of Hornsey:** I was not going to drill down any further into the demographics issue, but I think it is worthwhile, even if you can give me a “don’t know” or “we will find out for you” answer, to everybody who has come as a witness.

We talked a lot about women and a little about socioeconomic deprivation. No one has mentioned black and minority ethnic people, and the extent to which they may or may not be disadvantaged in different sectors and through the different developments that have happened. We know that our communities have been enormously adversely affected health-wise with regard to the pandemic.

It is a very complex and complicated picture, and I am quite well aware of that. What concerns me is that we do not seem to get any data or evidence regarding what happens to this particular group across those other areas, such as being university educated or not, or being female or not. Will each of you very quickly respond to that?

Josh Abey: One of the surprising things about the ONS dataset that I have referenced, which picks apart some of these inequalities, is that it did not have an accompanying analysis of the breakdown of risk for different ethnic minority groups.

There has been a little more work from the US perspective on the likely impact of automation and digitalisation on minority groups. We know that BAME people are overrepresented in the jobs that consist of more routine tasks, as I have mentioned. From that we can infer that there is again a higher risk and vulnerability for people in BAME communities. Whenever we are considering inequalities and labour market impacts, that should be factored into the equation.

Baroness Young of Hornsey: To push back a little on that very quickly, black and minority ethnic young people are overrepresented, if you like, in the higher education system, whereas white working-class people are underrepresented. This is what I mean about the complexity of it. Is there any more sophisticated way of thinking about it other than in these very stark reductive terms?

Josh Abey: That is a really good point. The focus of the work we did was on people who are already in the workforce. The picture may be changing and morphing as we look at the generation of workers who are just coming into the labour market. If we look at 2030, 80% of the workers are already in the workforce. That is the perspective that we took. Yes, we need to note that and factor into the analysis the shape of who has what skills, and that is changing.

Baroness Young of Hornsey: If you have anything on that, perhaps you will let us know. May I ask Verity to respond to my initial remarks, please?

Verity Davidge: We have tracked the companies that have made redundancies due to the pandemic, but we have not had a breakdown, whether by gender or BAME employees. What I can tell you quite honestly about the proportion of BAME employees in the manufacturing sector is that it is even lower than for women. That is why we did work previously with TUC Union on how we address perception barriers. We know that is also a part of it.

We are just about to undertake some work on diversity and inclusion in manufacturing. Again, it is more of a call to action to the industry to say that at a time when it continues to say that skills are scarce—exactly to your point—there are a lot of highly educated BAME individuals, yet we are still talking about how we need more skilled engineers. There seems to be a big missing link. We are just undertaking that work now, and I would be happy to share that with you as it progresses.

Baroness Young of Hornsey: That would be great. Thank you.

Andrew Goodacre: The data I tend to see is very broad brush and does not really tick the detailed questions that you are asking. They are perfectly valid questions. We are members of the Retail Sector Council, which is a committee that works closely with BEIS. I will take this whole inquiry and question back to BEIS. I will also speak with the British Retail Consortium, which we work closely with as well, and look at an analysis of the statistics, whether it is to do with job losses or where jobs are, and break it down in a more productive way that addresses the gender, the socioeconomic background and the ethnicity of the constituents in the research.

Fabian Wallace-Stephens: It is completely right for you to pick up on this point. Unfortunately, I do not think any of us will have the answer, because it is such a huge problem. It would be very interesting to explore in your recommendations how we can improve data collection in understanding the challenges for this group of workers.

It is a very badly defined group and, increasingly, the whole terminology of grouping everyone who is not white together will blur a really wide range of different experiences. Even when we find studies that say that BAME workers are overrepresented, it is this group that perhaps does not make that much sense in the real world.

The studies might say, for example, that BAME workers are overrepresented in the most at-risk industries, the industries with the highest level of furlough take-up or the industries most at risk of automation. There is another challenge, because they still make up only a small part of these industries. If you read the numbers carefully, you would say that 15% of workers in retail are BAME, for example. The figures might not be that precise here, but this is just to understand the

example. If 15% of workers in retail are ethnic minorities, it means they are overrepresented in industry, but if 15% of workers in this industry are furloughed, that could be almost all the workers who are minorities or none of them, because they make up a small part. It is really hard to interpret the statistics in a way that is foolproof.

Baroness Young of Hornsey: I want to stick with you for the moment, Fabian. You made a very interesting comment in your written submission to the committee before you appeared, and you referred to it earlier. It was about a sector being at high risk of being decimated by Covid but at low risk from automation, and a sector at high risk of being decimated by Covid and at high risk from automation. In the latter category, you placed sports and leisure, and in the former category—at high risk from Covid and low risk from automation—you placed arts and culture. Have I remembered that correctly?

Fabian Wallace-Stephens: Yes.

Baroness Young of Hornsey: I am interested in the implications for arts and culture and sports and leisure in the next two to five years, given the high risk and the absolute devastation, particularly the arts, during the pandemic. If they are considered to be at low risk from automation, how can they move forward when we have had this huge blow in the sector?

Fabian Wallace-Stephens: We conducted this analysis to try to encourage decision-makers to think of more nuanced strategies. My response on the point about the arts and culture sector is that we need to throw everything we can at protecting jobs in this industry, because it seems that it may be too difficult to develop business models that successfully adapt. Theatres, for example, have to be operating at 80% capacity to break even, and it is perhaps not quite the same to move them completely online. The fact that these jobs are viable in the long term, and we are quite confident that they will not be automated, should put more pressure on the Government to think about the period after the current furlough system ends, and what a more targeted, more strategic job protection scheme would look like, to safeguard some of the jobs of the future once we are in the post-pandemic world.

The leisure industry is interesting. It definitely speaks to the point that automation predictions are about what is in theory automatable, not necessarily what has played out over the last decade, and what will play out in the future. We know that the leisure industry has been experiencing growth. There are lots of areas where you could automate things. For example, do you really need someone at the check-in desk at the gym, or could that whole experience be automated?

Another trend is this shift to online. A thought experiment that I often pose to people is: what impact will Joe Wicks, who is now serving millions of people on YouTube, have on the number of personal trainers in the UK? It is plausible to suggest that it will reduce demand for them.

However, we can also see what technology does and its wider systemic impact. It could be that, through increasing access to health and well-being services, we make a bigger market for it, by stimulating demand. That would mean more fitness fanatics, and in the long run there could be some hybrid model that is online and offline, which would mean that we continue to see jobs growth in the sector. It is very hard to say, but there are lots of different dynamics that I could see playing out in the leisure industry.

Q87 Baroness Young of Hornsey: I move to another question. To what extent can increased use of digital technologies support economic recovery post Covid, what are the opportunities are for job creation, and who is most likely to benefit? This touches on some of the areas that we have discussed. I will let you off the hook for now, Fabian, and move perhaps to Andrew.

Would you like to comment on the increased use of new technologies in supporting economic recovery post the pandemic, what the opportunities are, and who will benefit?

Andrew Goodacre: In fairness, there is a very strong argument to suggest that digital technology has already played its role in preserving jobs, because businesses that have closed have found some way of doing business and growing the business online. That is continuing, and I think we have covered that ground.

I mentioned when talking to Lord Hain the way in which shopping could change, even from an online experience. I believe that retailers will move the shopping experience more into an online environment, using technology such as Zoom. There is no reason why a virtual sales assistant could not connect with a customer, even in a pre-set appointment, to talk through their clothing range or what they are looking for, for a wedding or for whatever it may be. Job creation moves into a different world.

As you move online, however, it is about your distribution centres. The larger retailers, which are very dominant, whether it is Asos or John Lewis, have protected their businesses by putting them online. The ultimate giant of the sector, Amazon, creates jobs through its distribution centres. It has opened up new centres around the country now. That will certainly continue. People will move into those areas of logistics and distribution. Retail takes on a different balance on where the employment is. Technology helps to drive that, effectively, in the way people adapt it and use it.

There is a different skill set, and if you are self-employed in the sector I know the people we work with are looking for these skills, and they will look to work with freelancers or employ people who can help them to develop their digital media presence. Having a website is one thing, but succeeding is about e-presence and connecting with your community and your customer base, and engaging with them through those ever so powerful channels of social media. That is a skill set in its own right. If I

want to know anything about Facebook, I turn to my daughter. It is the same principle with your shop owner. You look at the skill set you have and you use the people there, or you freelance it so that people can come in and help you to develop those areas.

There are new jobs. There is a new emphasis on technology that comes with it. However, the job creation that comes from that does not fully equate to the job losses from the closure of shops and the loss of shop floor staff. There will be an imbalance and a net loss of jobs on the high street. As I say, when I say the high street, I mean retail, leisure and hospitality.

Baroness Young of Hornsey: You have talked before, as indeed have other witnesses, about the skills issue. You say that it is not just about building a website but that you need to design one that is practical. Apart from that, and other barriers that have been mentioned, are there any more big challenges that might prevent us from maximising these opportunities afforded by digitalisation?

Andrew Goodacre: It is about helping people to develop digital retail marketing skills. You find Amazon when you are looking for something very quickly, because it spends an awful lot of money on search engine optimisation. It has been there a lot of years. It understands that consumer behaviour aspect. If we can help businesses to understand how to be found online, as much as just being there, that is the real secret to digital marketing. This is a competitive world. To an extent, it is driven by how large your budgets are to spend on pay-per-click advertising or SEO—search engine optimisation.

Smaller businesses can win in the way they engage with their local communities. It is about supporting businesses to take the next step from accepting technology as a benefit and not a threat. Prior to the pandemic, a lot of retailers may well have seen the internet as a threat, but it is actually an opportunity. It is about helping them to understand the skills and where they need to focus their efforts to be successful in that arena.

Having a website is one thing, and making it transactional is another, but you have to be found. That is where the skills of the digital marketer come in. I did marketing as my degree. The marketing I learned would not be applicable to what is needed today to market a business successfully online. It is partly the educational aspect and partly about the skills to find people to come into the business and help them do that. It is partly about whether they can access a network of mentors and experts who can also help them to make that transition.

Baroness Young of Hornsey: Verity, what is your response to the question about making the most of digital technologies to aid recovery, and what the key barriers and challenges are? Do you have anything to add to what has already been said?

Verity Davidge: We see digital adoption as key to a longer-term plan for economic recovery. The companies that told us that they invest in digital

technology were the most resilient during the pandemic. Likewise, the companies that had invested in digital skills were better able to move to remote working more quickly, within a two-week window, whether that was production or non-production staff. They were better able to repurpose production lines, whether it was for their own business or for the supply of PPE or parts for ventilators. For us, it is a crucial strand of the long-term recovery plan.

It is probably unsurprising that the biggest barrier to digital adoption is indeed skills. It is one reason why we have recommended having a lifelong digital skills account for individuals. At some point in our lives, we will all need access to digital skills, whether they are basic, middle or higher skills. There seem to be a lot of government initiatives that tap into this—digital skills boot camps, lifetime skills guarantees—but what individuals, and indeed employers, need is that ability to tap into a set pot of funding, when they need to, to ensure that we can retain as many people as possible in their jobs, sectors and industries.

The second biggest barrier is finance. That might just be reflective of the pandemic and what we are experiencing, but we tend to find that awareness of a lot of the initiatives launched by government to aid digital adoption is extremely low. In thinking about innovation and digital adoption, companies are most likely to cite using knowledge transfer partnerships and R&D tax credits and less likely to talk about innovation vouchers. Some companies are using the Made Smarter pilot, but awareness of the funding schemes that are available is still quite low.

Those are the biggest barriers that we face. There are other barriers such as cultural awareness, cybersecurity and change management, but the skills and finance points are the key ones that we see come up time and time again.

Baroness Young of Hornsey: Josh, do you have anything to add?

Josh Abey: First, I would echo what Andrew and Verity have said about what has happened already. It is clear that the short-term economic impact would have been significantly more severe had businesses not been able to make use of existing technologies to adapt and provide the goods and services that they provide during the pandemic.

Looking to the future and the recovery, and how this digital acceleration can support growth, the main point and the big picture point to make is about productivity. Essentially, productivity growth will not rise without innovation and technology. That is a prerequisite. The implication of higher productivity is the potential for living standards for workers to rise. Historically, over the last 100 to 150 years, productivity, earnings and living standards have risen together. They track each other. We can be optimistic about that. If businesses adopt new technology, if they innovate, if they consequently grow their productivity, living standards can grow for everyone. The positive message from what we are seeing with this digital acceleration is that potential.

You mentioned barriers. Two potential barriers to that positive story might arise. First, despite the acceleration that we have seen, sufficient adoption of technology across the whole economy is not guaranteed. Prior to the pandemic, we had this frontier of leading innovative businesses that are good at adopting new technology and growing their productivity. There is then what Andy Haldane, chief economist at the Bank of England, has described as the long tail of firms that have not been so good at adopting new technology and implementing it to grow their productivity. One problem that we have seen in the UK is lots of businesses that have not managed to take advantage and share in and share with their workers this productivity growth.

Hopefully, we are starting to see that turn around with this acceleration, with more businesses essentially being forced to adopt new technology as a result of the pandemic. We need concerted strategies to ensure that that happens over the next few years. We have seen sector deals for particular industries, but they tend to be in industries with already high productivity.

In industries that have been mentioned previously, such as retail and hospitality, we need to see a new industrial strategy, co-ordinated by government, led by employers in the sector, and involving representatives of workers in those sectors. At the moment, those industries have high employment and low productivity. We need new industrial strategies to ensure that there is sufficient adoption of these new technologies, and to ensure that they are implemented in the right way across those industries, in order to grow productivity and to raise living standards and wages.

I echo what Verity said about more robust support for businesses to innovate and to adopt the new technologies. One thing the Commission on Workers and Technology report has called for is better integration of business support, and money for innovation and support for upskilling workforces provided to businesses, so that they can take advantage of the innovation and the changes that are available.

The second barrier I wanted to touch on is that even if businesses adopt these new technologies sufficiently, and even if their productivity grows, the link between productivity growth and rising living standards for workers is not automatic. There need to be mechanisms in place that translate those productivity rises into rising living standards and growth in people's wages and earnings.

It is commendable that the Government are committed to ensuring that the national living wage rises by the middle of the decade to two-thirds of median earnings, but we think that that should be firmed up as a legislative commitment. It should be the law that that should be the target.

Finally, we think that wages and earnings across the board need to rise as a result of productivity growth. It cannot happen without more robust collective bargaining in the UK. We have seen trade union and worker

representation decline over the last 40 years. To ensure that the very significant potential rewards from technological change are shared, and that growth means something for everyone, we need to see collective bargaining strengthened and made more widespread.

Baroness Young of Hornsey: Fabian, if you have something to add to what has already been said, perhaps you could briefly respond to the question.

Fabian Wallace-Stephens: I will try to be super brief. In some sectors, we have already seen just how transformative tech can be. Covid put us in a situation where people were forced to innovate. In health, it will be so transformative. I am sure that telemedicine will massively increase productivity in the NHS, for example.

I completely agree with Andrew about lowering the barriers to entrepreneurship. One thing that I have seen is the rise of the influencer entrepreneur. If you are a yoga teacher or a personal trainer, you no longer need your studio or the gym you used to work for to provide services. You can do this at scale online using your social media and Zoom accounts.

There is definitely a risk here about who the winner will be. Digitalisation can lead to the “winner takes most” dynamic, whereby sectors are dominated by a handful of platforms like your Amazons and Netflixes. This is something to watch out for. We can see that some of the biggest winners to date have been the Amazons and Netflixes of this world.

On barriers, the access to capital question is interesting. I have come across it, and I think that a really interesting solution is the idea of automation as a service. We have seen lots of technology companies develop solutions that do not require up-front investment from businesses, but, rather, are sustained through transaction fees, and which can be very quickly and easily scaled up or down in line with business needs. It is a much lower-risk strategy for firms that are looking to innovate.

Going back to the regional question, another challenge that is talked about so much is the fact that lots of parts of the country, particularly rural areas, do not have access to fast broadband speeds. This will discourage workers from relocating, and prevent that influencer entrepreneurship from flourishing, and prevent firms from using really advanced technologies on their manufacturing sites, or elsewhere.

These are the basics that we need to get right.

The Chair: That leads very neatly on to my colleague Baroness Chisholm’s questions, drilling down a bit more into skills.

Q88 **Baroness Chisholm of Owlpen:** It has been fascinating so far. Thank you to all our witnesses.

We have heard this morning how digital acceleration is leading to the

likelihood of changed skills in two to five years' time. I would like to drill down further. What specific actions must be taken to ensure that people can move from lost jobs to new ones created by the digital acceleration?

I would like to touch on education. Do we need to rethink the curriculum to prepare our children for a different workplace that they will face in three to five years' time? Indeed, should we be encouraging our girls when they go into secondary education perhaps to think about going into the tech sector? Fabian, do you want to start on this?

Fabian Wallace-Stephens: First, the skills and jobs of the future do not relate just to technology. In the next two to five years, job creation can and will need to be driven significantly by the public sector. We talk a lot about the future of work being some kind of mix of high-tech and high-touch skills. The industries that will be most resilient to both Covid and automation include computer programming, healthcare and education. To support workers' transition into the jobs of the future, the Government will need a much more robust active labour market policy.

We have recommended that this takes the form of an end-to-end transition service or, as we call it, a job security centre. Our idea is modelled on the Swedish approach of job security councils. The aim here would be to redeploy workers who are most at risk into sectors that are more resilient, through providing local labour market information, access to career coaching and training opportunities, and supporting them up to the point of placing them in a new job.

Based on our analysis, we think that this should be targeted first at workers whose jobs are at high risk from both Covid and automation. Bearing in mind that lots of different jobs are at a higher risk from Covid but lower risk from automation, we think that we will need some iterated furlough model to support them once the current scheme tapers out. Crucially, to help workers to retrain, you will have to provide much more generous financial support than people get under the current universal credit system. We have recommended alongside the job security centre a transitional universal basic income. There is so much evidence that a lack of finance and being able to take time off work are the key barriers to participation in lifelong learning.

Alongside this, a lot of interesting innovations are emerging on the technology side with solutions to support workers. Many of them use AI and labour market data to offer personalised advice to displaced workers. Currently, the RSA is working with a French tech-for-good start-up called Bayes Impact. It has developed a platform that it is calling Jobflix, a sort of Netflix for jobs. It uses algorithms in the same way Netflix does, to offer free and tailored support for jobseekers in France. We are working with them to explore how their model could scale up and become part of the policy and labour market systems in the UK.

Specifically on the diversity point, getting more women into the tech sector is hugely important. I do not know quite what the solution is there. I can speak to the data points here. We have found that the cliché of tech

bro's is completely warranted. Over the last decade, for example, fewer than 20% of new jobs in the tech sector were filled by women, and these are the fastest-growing, best-paid jobs of the future.

The Chair: I must interrupt to tell my colleagues, and they may know this number already, that as a percentage there are more women in the House of Lords than there are in the technology sector.

Baroness Chisholm of Owlpen: That is a very worrying statistic. Who wants to come in now? Go ahead, Josh.

Josh Abey: I would echo a lot of what Fabian says about creative ideas for solutions. To talk about some of the particular skills that may be needed, in our report we reference a study by NESTA looking at skills demand in 2030. Given what everyone has said about the way some of these changes have been brought forward by five years or more, some of these future skills are more relevant within the next two to five years than in the next 10. It found of increasing importance interpersonal skills such as active listening and social perceptiveness, and those kinds of things. Judgment and decision-making skills, as well as high-level cognitive abilities, and having fluency of ideas and originality, are the skills that will grow in demand over the next few years.

I would like to touch again on the creative and arts sector. Despite the potential decimation of that sector, if the right public policy measures are taken to ensure that that sector has not completely disappeared and declined by the end of this pandemic, the relative importance of the skills involved in jobs in those sectors will increase. Those jobs are viable and there is still demand for them. They are not particularly vulnerable to automation. We will see those creative skills increasing in importance rather than declining in importance over the next few years.

Some measures and actions can be taken to ensure that workers are equipped and ready for these changes. One of the main sets of recommendations from the Commission's work is on overhauling the adult skills system. We have recently seen from the Government a step in the right direction, with a lifetime skills guarantee, guaranteeing level 3 qualifications for free, for people who have not received one. That is a step in the right direction.

Similarly, from the FE White Paper, there are positive steps as regards building employer input into the system to determine which level 4 and 5 qualifications are offered by FE colleges in local areas, and the design of those qualifications.

Our problem with that package is that on the one hand it is much too slow. We are worried that, essentially, the changes will not come in in time to equip the workers who are now seeing their jobs at threat.

Although including employers in the design of qualifications is vital, and we have called for it, the other side of the picture is including worker representatives to ensure that the design of these qualifications makes

sense from the perspective of workers on the ground as well as their employers, so that you have that proper tripartite approach, as opposed to collaboration between employers and government but excluding the third party from the picture.

On the broad picture of what needs to change, the main message from what we have found is that, as well as underfunding and inadequacy of supply of adult skills, there is no culture of constant lifelong learning and reskilling in the UK. Part of the reason for that is that a lot of the adult skills offer is piecemeal. There may be quite a lot on offer, but it is available from a lot of different sources, and it is hard for workers to navigate that landscape.

One thing that we are calling for in the medium term is an integrated adult skills system, the spine of it being a digital portal for every worker so that they can see what is on offer for them as regards training and reskilling, their current career options given the skills they currently have, and what they might need to do to acquire new skills and advance along a career path.

We think that skills and employment support needs to be integrated better. For workers who have been on furlough for a long time or have been made unemployed as a result of the Covid crisis, as well as Jobcentre Plus supporting workers to find a new job, part of that offer, part of that service, should be to provide them with training as soon as possible at the same time as looking for a job.

We think that the DWP should implement a work and training guarantee for workers. While workers are jobseeking, they should be able to undertake part-time training. If people are unemployed for a long spell, they should be guaranteed a job placement with training. It is understandable why the DWP currently operates a work first model, to try to get a worker into a job as soon as possible, but essentially with the nature of the changing economy and the changing labour market, the value of training alongside jobseeking is paramount.

As Fabian touched on, part of the barrier to workers taking part in training is that there is a big opportunity cost to their incomes. We think there should be more financial support for workers while they train or relearn. That includes reforms to universal credit. While 21 year-olds train full-time, they should have access to universal credit to support that training, or, alternatively, a replacement for the educational maintenance allowance—a flat-rate payment that supports their training. While older workers above that 21 year-old age cut-off engage in part-time work and part-time learning, they should also have access to a universal credit entitlement to support that training so that they do not forgo quite as much income to do so.

Apprenticeships need to be expanded and used as a mechanism and a tool while unemployment is high in the aftermath of this recession in order to get more people into work and into training. In the long term, they should be expanded as a means of upskilling and reskilling and

promoting the career progression of workers across the skills spectrum and the age spectrum.

Touching on Jobcentre Plus again, and the medium term, Jobcentre Plus has been doing a great job through the crisis to support workers where it can. There has been extra funding from the Government to support employment coaches, et cetera, which is welcome, but ultimately its activities should be scaled up. Eventually, we think that Jobcentre Plus should be reformed into a work and skills service, not just serving workers at the point at which they have been made unemployed but being accessible to workers who are still in work, who want to find out about the entitlements they are able to access for training and to explore careers and career changes. Ultimately, a lot of that provision should be devolved so that local areas and locally elected and accountable representatives are able to tailor the offer of reformed jobcentres to local labour market needs.

That is my view of some of the changes that would support people to acquire the new skills that will be needed in the future.

Baroness Chisholm of Owlpen: Thank you, Josh. Verity, do you think that employers ought to do more, when in the future they can see what jobs will be like, perhaps to upskill the employees they already have so they can ensure that they keep them?

Verity Davidge: Absolutely. We have just surveyed our members on what skills demands, job roles and qualification levels they will expect of their employees in the next two years. Rather than go through the headlines, I will send that through to the committee. There are some interesting points, including a greater focus on level 4 and level 5 technical skills, which have been almost forgotten about. For us, it is great to see that focus in the FE White Paper on those mid to higher-level technical skills.

As regards employers doing more, in our sector people are the lifeblood of manufacturing companies. We have seen huge investments in people and training. However, the pandemic has meant that they have taken a huge hit. This year, some 45% of manufacturers are planning to recruit an apprentice. That figure may seem high compared to other sectors, but for us it is usually around 75% to 80%. It is a huge hit, especially for apprenticeships. They are the way in which we train and upskill.

Make UK is an apprenticeship training provider. We have two training centres in the Midlands. We would normally be looking to recruit a cohort of 400 generally younger people. In September, it was 90, because we could not get the employer demand. We had a number of young people looking for places. We tried to put them on other placements. We are looking at the Kickstart scheme, to which we are a gateway. We saw a huge learner demand, almost even more than in normal years, because of everything that happened with GCSEs and A-levels, but we could not find them places with employers. Those figures are quite stark.

What is also concerning is that, during the height of the pandemic in the summer, two-thirds of companies said that they had cut their non-apprenticeship training budgets. The pandemic has caused a massive hit at a time when employers need to be training their employees. It is how we connect the dots with government support. Josh has touched on a number of these already. We are seeing things move in the right direction, but the timings do not always work. The lifetime skills guarantee will not be available until April, yet half our members are already making redundancies. What happens to those people? We will upskill and reskill wherever we can, but unfortunately not every job can be saved.

Alongside the TUC and other sector bodies, we called on government to establish a national skills task force, looking at how we can retain those workers within the industry. We have not had such a positive response, so Make UK, the TUC and our respective manufacturing trade associations have come together and established our own manufacturing skills task force. As an industry and as employer representatives, we will see what we can do in that space. We can see what our employers and indeed individuals need, and there are gaps that, frankly, the Government are not fixing quickly enough.

Josh mentioned apprenticeships, and longer term there is a lot more that we can do. Companies have offered fewer skills since the introduction of the apprenticeship levy. We think that there are quick fixes and quick wins that could be made by making that a bit more flexible. If there is a time to make changes and reforms to that model, it seems that the time is now, because the numbers have fallen so dramatically.

Finally, on your point about the education system and the curriculum, two-thirds of manufacturers say that they do not think the education system is keeping pace with the advances in digital technology. They do not always see the training market deliver what they need. If we are going to keep on saying that the UK wants to be a global leader in science and innovation and AI, we need to ensure that the education system does not lag behind.

I agree with your point. We need to embed digital skills in the curriculum and perhaps have gateways, where you cannot go past certain points without having a certain level of digital confidence. It is really important, and if we get it right it will have massive advantages for a sector like manufacturing. If we can talk to the next generation, who are digital natives, about manufacturing being more about technology and innovation, that will be attractive to them all, and it might even fix the gender imbalance. If we get these pieces right, there are advantages to be had for everyone.

Andrew Goodacre: I would endorse the point about an aspect of the apprenticeship scheme. In the past 10 months, I have attended many meetings with large retailers, large retail groups and Ministers, and I would say that, for skills development, the apprenticeship scheme as it stands has been a failure for retail and hospitality. It does not deliver

what those employees need. Verity is absolutely right that, if there ever was a time to address the apprenticeship scheme, it is now.

Q89 **Baroness Morgan of Cotes:** I have a very specific question and the panellists might not have a view on it.

In some jobs, a new employee needs to work alongside somebody to gain experience. I am a solicitor by background, and there has been a tradition that a new solicitor will sit alongside an older, experienced one to pick up experience by osmosis.

Specifically on the digital acceleration in jobs or sectors that you have looked at, do you think that we will go back to non-digital working methods for people to get experience, or is it possible to reinvent how people get experience in the digital world so that they can effectively digitally sit alongside each other? Verity, it occurred to me that that might be particularly relevant for the sectors you look after.

Verity Davidge: Absolutely. We have had this both among our members and as an apprenticeship training provider. As an education provider, we have had to close during the lockdown and, where we can, we have moved to remote learning. As you can imagine, when a lot of the skills being taught are on specialist equipment, you need a mentor side by side working with you, sometimes for health and safety aspects. We have adopted a lot of moves to remote learning, but there will always be a time, particularly if you are training younger people, when you will need someone alongside you.

Another unfortunate consequence of the pandemic is that we have seen a lot of companies withdrawing opportunities such as work experience, placements, site visits and factory visits. We will have this whole unfortunate cohort of young people who have not had those experiences. Yes, you can do virtual commissioning and virtual reality, and adopt those models, but we are still some way from quite getting it to be what it looks like and feels like in the real world of work.

For us, it is a bit of a concern that we might be locking down this generation of 14 to 18 year-olds who right now would be going into companies, seeing how they work, shadowing them, seeing a CNC machine or a welding machine in action. Some of that simply cannot be done remotely. I think that we will be playing a lot of catch-up, particularly for that cohort.

Baroness Morgan of Cotes: Do any of the other panellists have a particular sector that they could point to where that is also of relevance?

Andrew Goodacre: What you learn in retail when you start out—for example, in a Saturday job in a shop—are social skills and social interaction skills. Those things are very difficult to learn online, because it is learning from experience and from live feedback from your customer. You sometimes need a colleague there to support you to deal with some of the more challenging customers. There are some roles that just cannot be done remotely.

There is a danger in working too remotely. As we come out of Covid, there will be greater flexible working, but I think people will get back together. Being together is a great problem solver. It is true that a problem shared is a problem halved. You get creativity in that way. I know from our own workforce that my marketing team are disparate, and I need them to be together at times to be creative and to come up with unique and innovative solutions to the challenges we face.

It is the same for every business, whether it is retail or manufacturing. We are at risk of losing some of that creative spark by people working too remotely, as well as losing the learning from experienced people in a more direct way. We cannot replace everything by working remotely.

The Chair: I think my colleagues would have some views about creativity from having to run a committee from the start digitally. I think we might agree with you.

Q90 **Baroness Benjamin:** I, too, would like to thank all the witnesses for a most interesting session this morning. As you know, we are looking into the future to see what is on the horizon, and trying to visualise what might work and what might go wrong, and working out how to deal with it. You have given us plenty of food for thought this morning. I am just imagining a robot delivering room service and whether we will still have to give a tip.

I am an optimist and I always look on the bright side of life, but how are we going to get the whole nation to feel a sense of optimism for the future? As we move forward, embracing and considering all communities—and I say all communities—across society, being inclusive, delving into the issues that we have covered today, I want to ask you all what recommendations this committee should have for government, and other organisations, to maximise the potential economic benefits of the increasing digitalisation we are going through, and, most importantly, to mitigate the risks and guard against the potential negative consequences. I would really be interested to hear your views, Fabian, so perhaps you can start it off.

Fabian Wallace-Stephens: I will try to be brief, even though this could be the subject of a book.

The Chair: May I reiterate that we have only about five minutes? You have given us lots of specific, very helpful recommendations, and you can always write to us with more, but would you highlight one in answer to Baroness Benjamin's question particularly?

Fabian Wallace-Stephens: I want to flag one complementary recommendation to the earlier idea I mentioned. When we are thinking about this two and five-year time horizon, five years is just far away enough for there to be another really disruptive change, although we do not know what it will be. Our analysis showed that a lot of jobs that are at low risk of Covid-19 impacts are at high risk of automation. This includes a lot of key workers such as supermarket workers and delivery

drivers. We will need a lot more to upskill these workers and upskill all workers so that all workers have access to training opportunities.

To do this, we recommend that the Government explore how personal learning accounts could future-proof these and other roles. These are being experimented with in France and Singapore. They would give all workers an annual training allowance to spend on different courses. Alongside this, there are new technologies such as digital badges. These will allow employers and learning providers to identify training pathways, and provide people with a digital CV, which will be very helpful as workers look to navigate the future.

Baroness Benjamin: Josh, perhaps you can tell us your thoughts.

Josh Abey: I will also try to be brief. There are 31 recommendations in the final report of the Commission on Workers and Technology, which I suggest you all take a look at.

One of the most pressing recommendations that we would make to deal with the fallout from the Covid crisis and the interaction with the potential automation of lots of jobs would be to start with furloughed workers, some of whom will have been without work but not technically unemployed for a year when it comes to March. The first thing to do is to provide training, whether it is via employers or FE colleges, via the Union Learning Fund or Jobcentre Plus, for furloughed workers who are currently still employed but are not undertaking the work that they are being paid for.

As I touched on earlier, the Government should co-ordinate urgent new industry plans for some of the industries that are at high risk of Covid-related unemployment and of automation, especially retail and hospitality. Employers, unions and government should work together to co-ordinate how to protect viable work in those sectors, and how to supply additional resources for training for workers who may be made unemployed in those sectors.

Alongside that, the Government should focus now and start working out how to direct public funding to create good new jobs in growth sectors. That can be by bringing forward capital investment spending that the Government have already earmarked for this Parliament, frontloading it into the next year or two, to generate good jobs in energy retrofitting, social housebuilding and digital infrastructure, et cetera, and creating jobs through public service spending in education, healthcare, social care, and early years.

Those are growth sectors that the Government can create new jobs in now via public spending to absorb some of that unemployment. As I said, the Government should get started on the work and training guarantee, and work out how to ensure that workers who are unemployed and seeking work can take part in training at least part-time alongside jobseeking.

Finally, there should be funding for a major increase in adult education spending, ensuring that the system is integrated and accessible for all. That is my broad message about what should happen.

Baroness Benjamin: Very visionary, Josh. Verity, perhaps we can hear from you next.

Verity Davidge: I have a two year-old at my door, so I will be quick, otherwise he will be joining in, as in many of the meetings that we now have as parents when your children are in the background.

The Chair: He is very welcome, Verity.

Verity Davidge: You say that, but you may live to regret it. We are really pushing for this lifelong digital skills account. It could form a safety net for those individuals who feel that their jobs might be at risk. It could empower them to think, "This is something that I can tap into when I'm ready to upskill myself". Employers will know that it is always there.

The problem with a lot of the initiatives that the Government announce is that they are short term, or they come at the wrong time, or as soon as they start to get good they close them off and do not fix the ones that are failing.

However we scope that out, we are very open to working with others on what that would look like. That could be seen as a real positive. When we talk about adopting digital technologies, as a sector, we will be one that says that through the adoption we were able to repurpose production lines and produce PPE, or we were able to continue to provide food and drink on your shelves and power your homes with energy.

I am completely with you. I am an absolute optimist about this. We need to move into the real positive messaging that digital adoption can bring great opportunities not just for employers but for individuals.

Baroness Benjamin: Thank you, fellow optimist. Finally, Andrew.

Andrew Goodacre: I am an optimist as well. I do not think this is the end of the high street or the end of retail. I think that there are opportunities there for people.

I would focus on young people and do everything to help them in the future. I think they will be the most affected. We need them to have that opportunity, whether they are in school or higher education. Higher education is not the answer to everything. I would like to see more apprenticeships into trades and skills that perhaps cannot be replaced digitally. There need to be incentives for employers to create jobs in the growth areas, focusing again on younger people.

The final aspect is that you need to remove some of the reminders of a troubled past. There is no doubt that the high streets will look different, and with shop closures you get boarded-up premises. We need a repurposing of those areas to come along as well, to show that we have

moved on and developed; otherwise, we have that legacy behind us that becomes a symbol of a poor past. We need that optimism in there as well.

Baroness Benjamin: Thank you all very much.

The Chair: I would like to add my thanks to those of my colleagues. It has been a really involved session, and we have covered a huge topic. It could be an inquiry in and of itself. We really appreciate your helping us to navigate this. I have certainly come away more optimistic than perhaps I had expected to be. Thank you for that as well.