

The Political Institute of Action Research

How has the COVID-19 pandemic affected the job market of today and how might this impact recent university graduates?

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EXECUTIVE SUMMARY

- The initial shock of COVID-19 on employment was far greater for young workers and recent university graduates than for other demographics.
- Employment volatility of recent university graduates is notably high compared to other demographics.
- Digitalised industries will continue to be the norm post-COVID-19.
- The employability of recent university graduates and young workers will depend on their adaptability in transferable skills.
- Graduates' low confidence in career prospects stem from both internal and external factors.
- Various industries' growth propelled by COVID-19 changed graduate career preferences significantly.
- The impact of COVID-19 on recent university graduate employability has varied across regions of the UK and across different student demographics.

1.0 INTRODUCTION

1.1 Study focus & population of interest

This paper focuses on the effect of the 2020 COVID-19 induced labour shock with a particular focus on recent university graduates. This study will utilise data from the quarterly Labour Force Surveys (The Office for National Statistics, Social Survey Division, 2016-2023) and will examine three populations: the general population, recent university graduates, and graduate-aged workers without degrees (also discussed as young workers).

We examine the statistical disparities between these populations with a particular focus on 1) the unemployment rate of each demographic, 2) the average hours worked of each demographic, and 3) the labour force participation of each demographic.

1.2 Method of calculating & recalculating variables

This study's variables of interest were generated using the Quarterly Labour Force surveys taken from January 2016 through June 2023.

The variables of interest were calculated as follows:

Hours worked per week was generated using Stata's generated mean for the variable SUMHRS¹, which sums the hours worked across all jobs. An if statement was used to ensure that the mean was only taken amongst workers (WRKING=1).

The unemployment rate was calculated using the simplified form: number of unemployed over the sum of unemployed and employed. Stata was used to count the number of unemployed and employed and the rate was calculated thereafter. It should be noted that to be unemployed a person must still be actively looking for employment, this is why LOOK4 was used as it reflects the number of people who have looked for employment in the last 4 weeks.

The labour force participation rate was calculated as the number of workers over the total population, resulting in a percentage. Stata was used to produce counts of those working and those not working and the participation rate was calculated thereafter.

The populations of interest were separated from the general population using the parameters hereafter described.

¹ Page 160 of the Labour Force Survey User Guide – Volume 3: Details of LFS variables 2022 recommends the use of SUMHRS instead of TOTHRS for data after Spring of 1995.

For the general population, all variables (hours worked per week, unemployment rate, and labour force participation) were calculated with no additional restrictions. It should be noted that these calculations do include all members of the two sub-groups.

For the recent university graduates demographic, the variables were re-calculated using only the data of those between the ages of 21 and 27 who held only a bachelor's degree (DEGREE71=2). It was felt that these parameters appropriately captured the population of interest as anyone holding a degree between these ages were likely to be recent graduates, apart from a few who might have graduated exceptionally young.

For the population of graduate-aged people without degrees (hereafter referred to as the control), the variables were recalculated using only the data of those between the ages of 21 and 27 who did not hold a bachelor's degree as their highest qualifications (DEGREE71!=2). These parameters captured the inverse of the recent university graduate population and are intended to help discern the COVID pandemic's effect on graduates as opposed to its effect on young workers in general.

Further details regarding these variables can be found in the Labour Force Survey Users Guide (The Office for National Statistics, 2021). The full Stata command line is available in section 2 of appendix A and a table of the resulting variables of interest is available in section 1 of Appendix A.

1.3 Labour Force Participation



Amongst the general population² the COVID-19 employment shock manifested as a 4% drop in labour force participation between quarter 1 and quarter 2 of 2020. There is a slow recovery from this shock through about quarter 2 of 2021 whereupon the general population seems to settle at a new lower participation rate (~35%). This permanent shift towards lower labour force participation has been attributed to greater economic inactivity driven by higher rates of long-term illness, early retirement, and more young people choosing to be students instead of workers (possibly due to disrupted A-level results) (Office for Budget Responsibility, 2022).

Amongst the recent graduate population³ we see a larger impact and longer recovery period in labour force participation after COVID-19, with participation first exceeding the pre-COVID average between quarter 4 of 2021 and quarter 1 of 2022. These characteristics are also mimicked in the control group⁴ of young workers without

² In the figures, the general population is represented in yellow and its pre-COVID average in dotted gold.

³ In the figures, recent graduates are represented in blue and its pre-COVID average in dotted navy.

⁴ In the figures, the control group of young workers of recent graduate age is represented in green and its pre-COVID average in dotted emerald.

degrees, indicating that the greater impact and longer recovery ought to be attributed to age rather than higher education qualifications.

The labour participation rate amongst recent graduates appears to have a cyclical nature with peaks in quarter 1 and troughs in quarter 3. This cycle is present before and after the pandemic, however, it seems more pronounced after the pandemic indicating greater volatility. Literature indicates that there are far fewer positions available to recent graduates post-COVID-19 (Zulfiqar et al., 2023), and we speculate that in the tighter job market fewer graduates are making a seamless transition from student to worker. This could manifest as greater volatility as more graduates are being shifted into the observed group (having failed to find a job before graduation).



1.4 Hours Worked Per Week

Amongst all populations after the initial downward shock in working hours during the pandemic, there is a temporary increase in hours worked, followed by a period below pre-COVID averages. No population has worked above pre-COVID average hours since quarter 2 of 2022. This has been attributed to a decrease in hours among full-time workers and men in particular, perhaps due to more flexible working options (Office for National Statistics, 2024).

Amongst all young workers (including both recent graduates & the control group) the COVID-19 shock's effect on hours worked is far more drastic than amongst the general population. However, the temporary bounce-back represents a far greater deviation from the average than in the general population. Parliamentary assessment indicates that the shock disproportionately affected young people because they worked in more vulnerable sectors including hospitality, retail, and leisure (House of Commons Library, 2022).



1.5 Unemployment

Amongst the general population and the control group we see lower unemployment after their recovery from the initial shock, this can likely be attributed to the lower overall participation rate and the subsequent increased labour demand. This decrease in unemployment seems particularly large in the control group. The parliamentary report indicates that after the pandemic there was a sectoral shift amongst young workers towards more professional sectors (House of Commons Library, 2022). This may be contributing to their lower unemployment as the portion of vacancies available to them has presumably increased.

Amongst recent graduates, we see a similar cyclical pattern as in section 1.3 and a similar increase in volatility. However, unlike the general population and the control, it is not clear that their unemployment rate is meaningfully different on average from before the COVID-19 pandemic.

1.6 Conclusions

This section explored how the COVID-19 labour shock manifested in three different populations: the general population, recent university graduates, and non-degree holders of graduate age (the control group). In labour force terms, there has been a general withdrawal from the workforce across the general population and greater volatility amongst recent graduates relative to both the general population and control group. In hours worked, while all populations have worked reduced hours since COVID, young workers have been particularly effected. In unemployment terms, we have seen greater volatility in employment amongst young people in general (both recent graduates and non-degree holders) and even greater volatility amongst recent graduates in particular.

1.7 Limitations & Caveats

This section and the data it utilises are limited by the flaws inherent to sampling as a result of its use of the Labour Force Survey. However, the demographic subsets examined consistently utilised between 700-1,000 observations from each survey, providing a significant sample.

It should be noted that due to the method of separating populations of interest, two edge cases are apparent. If a respondent held a bachelor's degree and was under the age of 21, they would not have been designated and examined as a recent graduate. Likewise, if someone between the ages of 21 and 27 held a graduate or postgraduate degree, they would not have been counted as a recent graduate. The former case was disregarded as it is believed to be relatively rare. The latter case was disregarded as this paper is focused on undergraduates' employability prospects.

2.0 THE IMPACTS OF DIGITALISATION FOR YOUNG WORKERS

2.1 Digitalisation of the Workplace post-COVID-19

This section will focus on the digital structural transformation of the workplace that was accelerated by the COVID-19 pandemic, and in turn will analyse the effect this has upon the inequality of the job market as lower-skill jobs are the most vulnerable to digital threat and redundancy.

Although in 2024, four years post-COVID-19, there seems to be a return to relative 'normal' in the absence of nation-wide lockdowns and social distancing, when focusing on the workplace, the COVID pandemic has left an enduring in the form of digitalisation. Enforced social distancing and lockdowns during the 2020 pandemic required businesses to adapt to continue operations in unprecedented circumstances. This led many businesses to embrace the transition to work-from-home frameworks, which could only operate successfully through digital transitions (Crawford, 2021). The transition towards the digitalisation of many business models was necessitated both by government restrictions placed on physical interaction and by a shift in consumer preferences, as consumers 'moved dramatically toward online channels' (McKinsey & Company, 2020, 2). Digitalisation adopted numerous forms in different industries with 'banks transitioning to remote sales and services teams', 'grocery stores [shifting] to online ordering and delivery' and 'doctors [...] delivering telemedicine' (Baig et al, 2020, 2) to list a few examples. These digital adoptions both served to overcome the obstacle of restricted physical interaction and helped to 'shield productivity and employment from the pandemic shock', and proved widely effective with the IMF reporting that 'labor productivity and hour losses in highly digitalised sectors were significantly smaller relative to the same less digitalised sectors in other countries' (Jaumotte et al., 2023, 4).

In 2024, the lockdowns and social distancing that necessitated this digitalisation are no longer enforced, but the great adoption of digital technologies in the workplace persists. This can be explained by a range of factors. Arguably, one of the primary explanations for the continuing use of digital models is due to the considerable investments into digitalisation made during the pandemic, such as 'in data security and an accelerated migration to the cloud' (McKinsey & Company, 2020, 6). Many companies made investments into technology during the pandemic with the intention of using this technology long-term, as it would otherwise become a sunk cost that could diminish profits. Moreover, many digital adoptions are ultimately more effective for businesses, with the work-from-home model that digitisation allows reportedly showing 'improved staff well-being (60%)', 'reduced overheads (43%)' and 'increased productivity (41%)' (Office for National Statistics, 2022). These three primary benefits of working from home can be attributed to an increase in workers' welfare by 'reducing commuting time and improving time management flexibility' (Jaumotte et al., 2023, 4). Hence, there is benefit and incentive for businesses and their workers to continue working remotely through digital platforms post-COVID-19. Furthermore, the adoption of digitalisation by a portion of businesses during the pandemic is likely to encourage a change in mindsets about the role of technology in business, and other companies are likely to follow the same path to remain digitally competitive (in the changing face of business) with 'more than half [of executives] say[ing] they are investing in technology for competitive advantage or refocusing their entire business around digital technologies' (McKinsey & Company, 2020, 7-8). Thus, COVID-19 can be recognised as driving great lasting structural change in business, boosting digitalisation and work-from-home models that have ultimately persisted through the recovery from the pandemic and are anticipated to replace the pre-COVID norms of work. Arguably, considering the digital age of the 21st century, this digitalisation of work was inevitable, but the pandemic created the conditions for the acceleration of this process and acted as a "catalyst' for the increase of digitalisation in work organisation and the office' (Amankwah-Amoah, 2021, 602).

2.2 The Impact of Accelerated Digitalisation upon Lower-skilled Workers This section will focus on how the digitalisation catalysed by COVID-19 can increase inequality between lower- and higher-skilled workers in the wider job market. During 2020, COVID-19 restrictions and lockdowns mostly disrupted close-proximity physical jobs such as hospitality and retail and thus 'the retail and wholesale sector had the largest number of jobs at risk -1.7 million, or 22 percent of the total 7.6 million' in the UK (Allas et al., 2020, 4). As asserted by McKinsev & Company. there is a low percentage of employees in the hospitality, retail and construction sectors that have higher education qualifications with more than half of the workers in each of these sectors not having qualifications beyond GCSEs (Allas et al., 2020, 6). Evidently, the jobs that were the most prone to job loss during COIVD-10 were lowskilled jobs. Not only were lower-skilled workers vulnerable to job losses during the pandemic, but also continue to be vulnerable to redundancy due to the increased levels of digitalisation that replaces many of their roles. Even before the pandemic, the ONS reported in 2019 that 'routine and repetitive tasks can be carried out more quickly and efficiently by [...] a machine designed for one specific function' and therefore 'around 1.5 million jobs in England [were] at high risk of some of their duties and tasks being automated in the future' (Office for National Statistics, 2019). As already stated, since COVID-19 accelerated the digital drive, which was already in process, we can also recognise an acceleration in job displacement specifically for lower-skilled workers as their jobs are more susceptible to increased post-pandemic automation and digitalisation. For example, self-service machines in grocery shops

and online shopping and delivery instead of in-person shopping in retail shops has become more prominent after being installed during the pandemic and has been sustained due to higher efficiency and lower costs for businesses. Given that the number of vacancies for lower-skilled workers is arguably already low, the increased digitalisation of the workplace evidently decreases the number of job opportunities to lower-skilled workers. Hence, existing inequalities in employment between lowerand higher- skilled workers was augmented by the accelerated digitalisation of the COVID-19 pandemic due to both increased redundancy and reduced vacancies for lower-skilled workers.

3.0 IMPACTS OF COVID-19 ON RECENT GRADUATE EMPLOYABILITY CONFIDENCE

3.1 Declining Employment Prospects in the UK and Declining Graduate Confidence

Data has found that COVID-19 resulted in a reduced number of employment prospects for recent university graduates, causing uncertainty for new graduates seeking initial employment. Between March and May of 2020, the initial period of the COVID-19 lockdown, the UK saw a 125.9% increase in unemployment claims (Arthur, 2021, 2). Additionally, an analysis of the job board *Indeed* found that there was a significant reduction in job vacancy postings within the UK (Arthur, 2021, 2). This information suggests a lack of stability and decreasing prospects in the UK job market at the start of COVID-19, which can be specifically linked to the employment prospects of recent graduates. On the job board *Reed.co.uk*, it was found that there was a 'drastic drop' in the number of listings for graduate schemes, or vacancies specifically geared towards graduates entering the workforce (Arthur, 2021, 9). Some university students even reported that they had secured future employment prior to the COVID-19 crisis but found their offers were withdrawn (Mayhew and Anand, 2020, SS220). Due to the increasing uncertainty within the market and the decreasing number of graduate jobs available, many students have had to accept lower-skill jobs that provide a lower wage (Mayhew and Anand, 2020, SS220). Graduates thus cannot utilise the specific knowledge and experience that they gained from their degree, contrasting with their expectations of post-graduate life. While the reality of accepting a lower-skilled job with reduced pay can be demoralising, it has also made it harder for graduates to make the switch to higher-level employment that matches one's university experience (Mayhew and Anand, 2020, SS220).

The factors of uncertainty and a decrease of opportunities in the graduate market, married with the possible disappointment in accepting a lower-skill job can come together to negatively impact the confidence of university graduates. The decrease in access to the job market during COVID-19 cited above has negatively affected many graduates' outlook on their employment prospects. For instance, 70.7% of graduate respondents perceived COVID-19 to have significant negative effects on their employment prospects, with 72.7% also stating that the pandemic has hurt their confidence in future employment endeavours (Tomlinson, Reedy, and Burg, 2022, 491). Facing rejection and application struggles, graduates noted that they began to question the value of their skills and university experience, ultimately making them feel as though they had little to offer employers (Tomlinson, Reedy, and Burg, 2022, 494). Thus, COVID-19 has not only impacted the labour market by causing a drop in graduate employment opportunities, but it also has caused a loss of confidence for

many recent graduates, which may discourage them from continuing to pursue employment that matches their credentials in the current job market.

3.2 Building Employability and Self-Efficacy Through Employment Activities

By and large, the lack of confidence in graduates during COVID-19 is related to lost opportunities to develop employability (Tomlinson, Reedy, and Burg, 2022, 492). These experiences are essential for developing a graduate's overall employability and supporting the transition from university to the labour market. Employability is a key part of graduate competency, including individual characteristics and skills that increase graduates' chances of finding and maintaining a job that matches their skill set (Capone, Marino, and Park, 2021, 2). One can increase their employability and in turn their competency by engaging in employability activities, which are experience and skill-building events such as workshops, internships, graduate employment schemes, and extracurricular activities. Engaging in these activities not only increases a university student's likelihood of gaining employment but also increases their selfconfidence regarding their employment trajectory. It has been found that higher levels of perceived competency, or 'career self-efficacy', have a positive relation to job search and employment outcomes (Pinguart, Juang, and Silbereisen, 2003). A study done on university students in Italy during the COVID-19 pandemic found positive associations between career self-efficacy, student engagement in extracurriculars and skill-building events, and overall student well-being (Capone, Marino, and Park, 2021, 5).

These findings demonstrate how the lack of confidence and career self-efficacy in UK undergraduate students can be linked to a lack of accessibility and engagement with employability activities. Prior to the COVID-19 pandemic, research demonstrated that students lacked confidence in their ability to direct their own careers and were aware of increasing challenges in the job market (Jackson and Tomlinson, 2020, 444). These students also reported that they rarely or only sometimes engaged in extracurricular activities, thus furthering the argument that students need to engage in employability activities to increase their confidence and employability alike (Jackson and Tomlinson, 2020, 444). Lockdowns and other restrictive responses to the pandemic have further exacerbated this issue, causing many employability activities to be cancelled or postponed. Some students and new graduates almost entirely lost the opportunities, resources, and social situations that would usually help them develop their employability. Therefore, the positive correlation between career self-efficacy and student engagement in these activities suggests that a

decrease in access to these situations may be linked to a decrease in career selfefficacy and recent graduate confidence in their job search.

After the imposition of pandemic-related restrictions, struggles in the job market and the need for career self-efficacy among students and graduates are increasingly apparent. In a time in which fewer career-building opportunities are available, it is important that employers and universities adapt to the lasting impacts of COVID-19 by seeking out new ways to help students and recent graduates build employability. While it may be unfeasible to employers who have digitalised to host new employees or interns in-person, employers should seek to provide increased learning and work opportunities virtually. This will allow those seeking to develop their employability to access these resources from home. Additionally, universities should strive to do the same with extracurricular employability events to prevent students from graduating without the skills and experiences that have been proven to increase career selfefficacy and overall confidence. To successfully transition into the labour market, it is integral that graduates gain these experiences during or immediately after university (Presti et al., 2021). With the lasting impacts of COVID-19 increasing the challenges of finding employment in today's labour markets, finding a way to adapt becomes even more crucial for the stability of graduate job prospects.

4.0 PREDICTED TRAJECTORY OF UNIVERSITY GRADUATE EMPLOYMENT POST-COVID-19

4.1 Industry Development and Recent Trends

This section analyses recent employment trends across the United Kingdom and several regions globally and explains the external factors contributing to the employability challenges that recent university graduates may face. COVID-19 and its corresponding economic downturn have caused a shift in employment opportunities available within various industries and has led to a shift in graduate career preferences, both within the United Kingdom and internationally.

4.2 Graduates Employment Recovery

While graduates may have worried about the significant impact of COVID-19 across all types of employment during the peak of the pandemic, recent employment data suggests a quick recovery of employment especially for university graduates (Section 1 provided an in-depth analysis on this). In the early COVID-19 periods of February to April of 2020, data was consistent in showing that young workers (commonly measured as ages 16 to 24) were one of the most impacted groups in terms of unemployment across the United States (Montenevo, et al., 2022) and the United Kingdom (Powell, Francis-Devine and Clark, 2022). The US data showed workers with 'some college' experience had an unemployment change of nearly -1.8, the second highest in unemployment across all categories (Montenevo, et al., 2022, 833), and the UK data showed that 56% of all job losses came from young workers under 25 years old (Powell, Francis-Devine and Clark, 2022, 31). Although these data were generalised and did not directly reflect the exact scenario for graduates, they aligned well with Tomlinson (2021, 11)'s survey that 16.1% of surveyed undergraduates were unemployed and were not in further studies at the time of survey, showing a high level of unemployment for graduates and people of similar age.

However, this trend was only significant during the beginning of the pandemic. While unemployment for the graduates was high, this was primarily due to the nature of the graduate's early career stages. Most recent graduates engaged in close-contact and face-to-face work that were suspended during the pandemic, when lockdown policies were in place. This resulted in high unemployment rates across young workers, yet employment has largely recovered at surprisingly rapid rates. Within a month from April 2020 to May 2020, workers with college experience in the US had reduced the unemployment change from over -1.0 to nearly -0.8 (Montenevo, et al., 2022, 833) and young workers in the UK had attained employment levels comparable to prepandemic levels by March 2022 (Powell, Francis-Devine and Clark, 2022, 32).

Specifically for recent university graduates, their education level had significant statistical influence on their employment and those with bachelor's degrees or higher were able to receive more remote work positions and had nearly double the take-up rates than others of slightly lower education levels of the same age (see table 1, Dey, et al., 2020).

Therefore, it cannot be concluded that the economic and employment environment was any rougher for university graduates than other demographics post-COVID-19. However, this also does not suggest that the low level of confidence from graduates as explored in the previous section is without reason. Concern about career prospects and perceived difficulties in securing job opportunities for UK graduates is often caused by unfavourable market conditions. Graduates felt that these impacts are caused by COVID-19 (Tomlinson, Reedy and Burg, 2022). Hence, the rest of this section intends to bring forward the causes of these external factors and how they are related to the pandemic.

4.3 Concern about the Recent Graduate Employment Environment

COVID-19 was not only an economic shock but a transitional event that transformed the mode of operation for most industries. In this process, some industries were able to adapt to the digitised world, while some suffered due to the nature of their work and had to reduce employees. Further, graduate preferences to work in a certain industry might have increased the entry competitiveness for some roles, creating the perception that securing job opportunities became more difficult.

When we compare across industries, those that were able to expand during and after the pandemic mostly fulfilled either of the following two conditions: 1) adaptation to the digitalization of work and 2) increased demand for the products provided by the industry after COVID-19. The most notable industries bounded by these conditions are technology, robotics, artificial intelligence, biotechnology, data science, social media, transportation, and healthcare (Mutebi and Hobbs, 2022, 16; Brannen, Ahmed and Newton, 2020; Dubina, et al., 2021, 18-21). All these industries shared features including growing utilisation of machinery and digital technology, as well as increased demand by the public in services provided by these sectors. However, there was also a scale-down of certain industries as compared to the above, which is reflected in the worries of some graduates. Notably, industries that are becoming more automated and may employ fewer people include production, food services, customer services, and office work in general (Lund, et al., 2021). As the process of automation continues, graduates that are looking to begin their careers in these types of jobs may encounter difficulties in securing job opportunities due to the reduction in labour demand for these industries.

Furthermore, this does not mean that it will be easier to secure a place at expanding industries, as career preferences of graduates are also changing. In Khan and Esha (2021, 182-184)'s case study in Bangladesh, undergraduates in business administration saw their career preferences shifting from finance, banking, entrepreneurial work and start-ups to governmental services and IT sectors, with their reasons for the change in preferences being stable job opportunities and income. This case reflects that recent graduates started to prefer a stable working environment in expanding industries over their 'dream job' when starting university. As a result, more graduates may compete for limited positions in a few industries, increasing the competition per position and creating a more challenging employment environment for graduates with similar career preferences. On top of that, for those who seek to secure opportunities in competitive industries, transferable skills such as digital communication and technological skills (see Sections 2 and 3), as well as adaptiveness to evolving working environments are seen as crucial signs of higher employability across all sectors (O'Toole, et al., 2023, 6-8). Hence, it may also be a real challenge for graduates who lack in-person working experience due to COVID-19 and the shutdown of offices to adapt to highly digitalised real-world working environments.

4.4 Conclusions

Overall, we see a significant impact from COVID-19 on changing labour markets, with some industries benefiting from the pandemic in terms of job creation while others had to scale-down on employment. This trend creates more employment competition that is concentrated in several industries, creating the perception among many university students and recent graduates that employment opportunities are becoming rarer.

5.0 DIVERGENCE OF COVID-19'S IMPACT ACROSS THE UNITED KINGDOM

This section will deal with the divergence of the incidence of COVID-19's effects across regions of the UK, as well as possible reasons for such divergences. The link between the emergence of COVID-19 and the condition of the recent graduate job market has been sufficiently highlighted, but it is critical to note that such effects vary across the UK and other regions of the world.

Overarchingly, the UK has pursued uniform policies for Scotland, Wales, Northern Ireland, and England in the form of the rollout of the vaccines, foreign travel restrictions, and economic support for employed individuals. As all regional governments relied on the same research and advisory bodies, such as 'The Scientific Advisory Group for Emergencies' and the 'Joint Committee on Vaccination and Immunization', central policy followed similar patterns (Cabinet Office, n.d.; Joint Committee on Vaccination and Immunization, 2013). Coordination was further achieved by the Civil Contingencies Committee (COBR) which allowed regular meetings between four government representatives on different areas of the UK's COVID-19 response; additionally, five individual ministerial implementation groups were organised to address different aspects of the pandemic. Across the four regions, milestones like the Omicron variant, the vaccine rollout, and the emergence of treatment have been coupled with similar shifts in cases, hospitalisations, and deaths. The first phase of the pandemic observed much more uniform policy by the four governments who committed to a 'four-nation' approach; however, differences in policy remained due to the individual requirements of each region. In Scotland, where fisheries play a critical economic role, financial assistance for this industry and others was offered at an earlier point than the rest of the UK (Sergeant, 2020).

Difference in policy was more prevalent in the second phase of the pandemic, from May to August 2020 (Scobie, 2022). England was the only nation to call for eased restrictions, a change from 'stay at home' to 'stay alert', kicking off the separation in the regional response. Each government offered a unique plan of shifting from high-restriction policy to a COVID-recovery plan; Wales opted for a traffic-light plan, Northern Ireland had a five-phase system and Scotland had four phases (Sergeant, 2020). Phase three, with the arrival of the new variant, began with efforts to coordinate policies, however this was short-lived. Northern Ireland and Wales opted for the strictest restrictions with school closures, non-essential business closure, and a shift to online schooling.

Aside from generalised trends, socioeconomic and demographic factors have affected disparities in the spread of cases of COVID-19 in the UK (Yapp, Steel and Wilis, 2022). Wales, where the population is the oldest out of the four regions, experienced a higher incidence of cases throughout the pandemic. Conversely, Northern Ireland, with the youngest population in the UK, displayed a lower incidence of deaths or hospitalisations in relation to cases. Additionally, the regions had slightly varied restriction timelines which affected the destructive capacity of the pandemic. In Northern Ireland, at the very start of the pandemic, the lockdown rollout began the earliest which reduced the emergence of COVID and lowered the number of deaths and hospital admissions. In the second wave, Scotland was the region with the most consistent restrictions between September and December 2020, again reducing their cases and COVID-related deaths.

Lastly, it is critical to briefly examine the economic impact of the pandemic within England itself. Birmingham, Wolverhampton, and Walsall were among the hardest economically hit by the pandemic with an over 11% decline in their economies. The consensus on economic studies done in the aftermath of the pandemic seems to be that cities with the most reliance on exporting industries suffered most in the aftermath of the pandemic. On a positive note, studies have suggested that these cities will also have the quickest recovery (pwc, 2021). 'The North Powerhouse', as industrial cities in the North of England are often called, faced the most adverse effects from the pandemic (BBC England, 2020). A study done by the BBC England Data Unit discovered that the total deaths from the pandemic in the region deviated significantly from the rest of England with 36 per 100,000 more deaths as of November 11, 2020 (BBC England, 2020).

6.0 INTERNATIONAL STUDENTS IN THE UNITED KINGDOM

This section will look at the experiences of international students in the context of the changing job market brought about by the COVID-19 pandemic. In recent years, the United Kingdom has consistently been in the top three of most popular international student destinations in the world. In the academic year starting in 2021. international students made up 24% of the total student population in the UK. Whilst the total numbers of international students coming in from the EU reduced by 40% since the implementation of Brexit, this has been compensated by a rise in incoming students of Indian, Nigerian and Pakistani citizenship (Bolton, Lewis and Gower, 2023; HESA, 2023). The large body of research on the experiences of students throughout the pandemic often forgoes the individual circumstances of international students, who often come to the UK alone and embark on an unfamiliar and demanding journey without the close support of family. Fischer (2021) found that the pandemic has hit international students particularly hard: this is echoed by Schartner (2022). In research done by Newcastle University, 55% of international students expressed concerns about finding work after graduation considering the impacts of the pandemic (Schartner and Wang, 2022).

Despite largely unsubstantiated concerns that international students pose a threat to the success of home students, it is indisputable that international students play a central role in the higher education sector and the wider UK economy (Bolton, Lewis and Gower, 2023). As domestic fees are universally capped across the UK, cuts in teaching grants and the rising cost of living puts an additional strain on universities. In the aftermath of the economic downturn, higher education institutions turned to income from international students to cover shortfalls in budget. Both for the government and universities, this proves to be a highly lucrative venture; in 2023, the impact of international students in the UK entailed a 9.4:1 benefit to cost ratio (Bolton, Lewis and Gower, 2023). Aside from economic benefits, a survey of home students revealed that international students offer significant cultural and social benefits. According to the research, 76% of students believed international students gave them a 'better world view' and 85% claimed that their presence offered home students a better chance of thriving in a global work environment (HEPI and HEA, 2015).

Whilst the COVID-19 pandemic did not have an overall negative effect on international students' immigration to the UK, it can be argued that the long-term economic effects of the pandemic played a factor in their graduate plans. A major factor in the graduate future of international students is UK immigration laws,

something that markedly distinguishes them from the general body of graduates; these laws have also been targeted by Rishi Sunak's government in attempts to curb immigration and raise economic growth. Since 2020, the Tier 4 Student Visa has been responsible for allowing students to stay in the UK for the duration of their course. Before 2021, the aftermath of the graduate visa would have to be a transition to the Skilled Worker (Tier 2) Visa granted by reputable employers to select graduates. This was changed by the introduction of the Graduate Visa route which allowed students to stay in the UK for a period of two years, or three for most PhD students, with no working restrictions. 2023 brought about much more restrictive legislation for future graduates with added restrictions on dependents, acquiring a skilled worker visa, as well as projected changes to the Graduate Visa pathway in 2025 (BBC News, 2023).

7.0 CONCLUSION

This paper has sought to explore how the UK labour market has been impacted by the COVID-19 pandemic and how this links to recent university graduates. In scope, our research and conclusions have mainly addressed the United Kingdom as a whole, with the last sections giving special attention to different regions as well as the population of international students for divergences.

In analysing the labour shock brought on by the COVID-19 pandemic, our research finds a general withdrawal in the workforce, with decreasing labour force participation and hours worked. Although this shock has impacted the general population of the UK, we find that it has greater impacts on younger populations, with recent graduates being affected the most. For this reason, we seek to further the information on how the changing labour market during the COVID-19 pandemic has impacted recent university graduates.

In evaluating the impacts of COVID-19 on the structure of the workplace, we find that the pandemic has caused many businesses to increase digitalisation to adapt to lockdowns and increasing digital tendencies from consumers. After the restrictions necessitated by COVID-19 were lifted, most digital adaptations made remained in place for businesses, with COVID-19 simply a catalyst for change.

We also found that digitalisation in certain industries such as hospitality and retail decreased job opportunities for lower-skilled workers, as many employees have been replaced by technology. Therefore, as opportunities for lower-skilled work continues to decrease in the new digital age, we argue that inequality in job opportunities between lower- and higher- skilled will increase.

When addressing the impacts of declining employment prospects for UK graduates, it was found that university students faced significant insecurity in their job search during COVID-19, resulting in them losing confidence or accepting lower-skill jobs. This has been linked to decreasing confidence for new graduates' futures, serving to further their struggles in the labour market.

Past research has found a positive correlation between high career self-efficacy stemming from employability skills and success in the labour market, which is why we recommend that businesses and universities continue to provide employability activities for students and recent graduates online and in-person.

Despite graduates' perceived difficulties in the job market during the pandemic, recent trends have shown that employment is largely recovering after COVID-19, attributing high percentages of graduate unemployment to their relative newness in the labour market rather than the pandemic itself. We explored other factors that may contribute to graduate job instability, concluding that job saturation, shifts in career

preferences, and greater digitalisation have increased competition in several highskilled industries, creating a higher perception of job insecurity for graduates looking to go into those industries.

In analysing trends of regional cooperation within COVID-19 policy, it is evident that the UK carried out uniform policies in the first phase of the pandemic, which then shifted to more national focused responses between England, Scotland, Wales, and Northern Ireland, all imposing differing levels of restrictions. The four countries faced different levels of severity of COVID cases that can be attributed to differing demographics, policies, and timelines.

International students were found to be both economically and socially beneficial to the UK, as their tuition fees support university budgets amidst economic instability and their presence provides a more expansive environment for domestic students. However, despite their apparent value, increasing restrictions around recent graduates' visas have been set in place, proving to make remaining in the UK increasingly difficult and possibly altering the plans of international graduates in the UK.

Overall, the COVID-19 pandemic has resulted in major changes within labour industries, mainly around digitalisation. This has negatively impacted lower-skilled workers, resulting in increased job displacement. Graduates have felt the demoralising effects of unemployment and decreasing job opportunities brought on by COVID-19, but as the job market bounces back it becomes evident that a perception of insecurity prevails among new graduates. This has been found to be shared by domestic and international graduates within the UK, with increased stress around visa policies for international graduates. While the job market may be recovering as the COVID-19 pandemic dissipates, we find that graduates continue to face struggles due to a lack of opportunities, low career self-efficacy, adapting to digitalisation, and restrictive governmental policies for international students. While the urgency of the COVID-19 pandemic may be gone, the lasting structural impacts on the labour market remain apparent.

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9.0 APPENDIX A: DATA & STATA COMMANDS

§1. Data Table

Quarter	GP-Hrs	RG-Hrs	CG-Hrs	GP-Uemp	RG-Uemp	CG-Uemp	GP-LFP	RG-LFP	CP-LFP
2023Q2	30.99	28.7	28.11	3.64%	4.55%	6.42%	34.86%	81.11%	69.45%
2023Q1	31.27	29.32	28.39	3.61%	6.70%	5.55%	35.15%	83.42%	68.89%
2022Q4	30.94	29.11	28.84	3.51%	6.45%	5.78%	34.72%	80.11%	68.96%
2022Q3	31.23	29.1	28.34	3.76%	7.12%	5.77%	34.52%	79.02%	69.45%
2022Q2	31.36	29.44	28.77	3.58%	4.21%	5.72%	35.42%	83.59%	68.61%
2022Q1	31.89	29.01	29.2	3.55%	3.34%	6.63%	35.31%	84.82%	69.29%
2021Q4	31.39	29.03	29.59	3.92%	6.94%	6.55%	34.80%	78.37%	68.04%
2021Q3	31.64	30.19	30.37	4.34%	8.38%	7.28%	34.73%	74.14%	68.91%
2021Q2	32.23	32.43	30.41	4.50%	6.26%	8.03%	34.75%	78.35%	66.48%
2021Q1	32.17	31.98	29.99	4.86%	7.21%	9.17%	33.69%	76.23%	61.85%
2020Q4	31.55	30.76	29.46	5.10%	9.54%	9.35%	33.62%	72.09%	62.99%
2020Q3	31.06	29.52	28.86	5.21%	11.39%	9.31%	33.06%	69.52%	59.45%
2020Q2	30.84	27.93	28.76	4.78%	7.52%	9.02%	32.18%	65.94%	51.51%
2020Q1	31.29	29.74	28.71	4.50%	5.82%	7.74%	36.66%	79.94%	66.21%
2019Q4	31.65	30.89	30.01	4.21%	5.88%	7.13%	36.66%	79.27%	66.93%
2019Q3	31.82	31.14	30.32	4.50%	7.40%	7.59%	36.43%	76.01%	66.81%
2019Q2	31.7	29.98	29.68	4.28%	5.62%	8.38%	36.80%	81.19%	66.74%
2019Q1	31.9	30.42	29.61	4.37%	5.07%	7.41%	36.93%	81.81%	65.77%
2018Q4	31.45	30.31	29.46	4.45%	5.64%	7.21%	36.50%	79.77%	66.72%
2018Q3	31.51	30.41	29.55	4.87%	6.67%	7.58%	36.16%	78.54%	67.18%
2018Q2	31.77	29.8	29.45	4.53%	4.97%	7.95%	36.76%	81.48%	71.69%
2018Q1	31.5	30.3	29.28	4.73%	5.36%	8.16%	36.71%	81.93%	65.39%
2017Q4	31.47	30.12	29.93	4.82%	5.54%	7.87%	36.19%	79.61%	65.39%
2017Q3	31.66	30.02	30.16	5.16%	6.54%	8.19%	35.81%	76.30%	67.03%
2017Q2	31.64	28.57	29.69	5.06%	4.95%	8.31%	36.62%	80.62%	66.54%
2017Q1	31.86	31.55	29.13	5.38%	5.12%	8.79%	36.63%	81.63%	66.23%
2016Q4	31.46	31.14	29.02	5.44%	5.14%	8.53%	36.14%	78.14%	66.25%
2016Q3	31.57	30.14	29.34	5.98%	7.55%	9.93%	35.91%	76.97%	66.32%
2016Q2	32.05	30.92	29.48	5.73%	6.72%	9.75%	36.46%	79.12%	64.98%
2016Q1	31.66	29.24	29.74	5.90%	6.26%	10.26%	36.39%	78.69%	64.26%
Pre-C Avg	31.66688	30.30938	29.61563	4.96%	5.90%	8.31%	36.44%	79.44%	66.51%
Post-C Avg	31.511	29.831	29.201	3.93%	6.12%	6.69%	34.79%	79.92%	67.99%

§2. Stata: Recalculating Vital Stats.

//* DATA CLEANING REGIME *//

//* GEN POP*// /* HOURS WORKED*/ mean SUMHRS if WRKING==1

/* UNEMPLOYMENT RATE (WRKING==1)/(WRKING==1)+(LOOK4==1) */ count if WRKING==1 /* # Working */ count if LOOK4==1 /* # Not Wrk & Sought Job in last 4 weeks */

/* LABOUR FORCE PARTICIPATION */ count if WRKING>=0 /* Population Size */

//*Recent Graduates Population (Age:21-27) (Bachelors+)*//
/* HOURS WORKED*/
mean SUMHRS if WRKING==1&AGE>=21&AGE<=27&DEGREE71==2</pre>

```
/* UNEMPLOYMENT RATE (WRKING==1)/(WRKING==1)+(LOOK4==1) */
count if WRKING==1&AGE>=21&AGE<=27&DEGREE71==2/* # Working */
count if LOOK4==1&AGE>=21&AGE<=27&DEGREE71==2/* # Not Wrk & Sought Job
in last 4 weeks */
```

```
/* LABOUR FORCE PARTICIPATION */
count if AGE>=21&AGE<=27&DEGREE71==2 /* Population Size */
```

//*Recent Graduate Equivalent Population (Age:21-27) (Bachelors:NO)*//
/* HOURS WORKED*/
mean SUMHRS if WRKING==1&AGE>=21&AGE<=27&DEGREE71!=2</pre>

/* UNEMPLOYMENT RATE (WRKING==1)/(WRKING==1)+(LOOK4==1) */ count if WRKING==1&AGE>=21&AGE<=27&DEGREE71!=2/* # Working */ count if LOOK4==1&AGE>=21&AGE<=27&DEGREE71!=2/* # Not Wrk & Sought Job in last 4 weeks */

/* LABOUR FORCE PARTICIPATION */ count if AGE>=21&AGE<=27&DEGREE71!=2 /* Population Size */





The Political Institute of Action Research

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