Examining the Impact of Brexit & COVID-19 on the working lives of Business, Management and Economics' academics in the UK

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Foreword

While COVID-19 has posed an unprecedented challenge to the international scientific community the UK academic community has also been impacted by potential opportunities and challenges associated with Britain's exit from the European Union.

The study examines these challenges in the context of a key sector of the UK economy, Higher Education (HE). HE generated £42.4 billion in revenues in 2019-20 (HESA, 2021) and is a major employer with significant links to other sectors. Although each sector operates in a specific context, insights from studying HE has wider implications for the UK as whole. First, the sector was largely able to continue operating in a digital context and, in this respect, it provides a working sample of remote work for a group that generally have flexibility in choosing whether to work from the office or from home.

Second, there are implications for the wider education and training domain beyond HE, such as market research, primary and secondary education. Third, there are implications for other sectors where remote work plays an important role.

Brexit remains a divisive issue and institutions have looked to accommodate the various impacts on grant funding, hiring, and other elements of their provision. Whilst several institutions have made commitments to provide online delivery well into the future, it is unclear whether the majority of staff or students have a preference for face-to-face interaction, or some hybrid in between. Similarly, while online conferences and seminars may be able to bolster attendance, particularly in a period where lives were constrained to the home, it is not clear whether this form of interaction has gathered long term traction – or whether the extent that the use of interaction will benefit the development of new knowledge. Examining the key factors impacting universities' operating models on how academics' work provides valuable lessons both during the lockdown and a 'new normal' where face-to-face delivery has largely been achieved. Understanding the factors that impede or promote the successful application of on-line delivery, as well as how to better facilitate academic research will enable the sector to be more resilient and productive.

There is growing evidence that the pandemic has influenced the research output in higher education (HE), and researchers in various ways. For example, we know that early career researchers (ECRs) have been especially adversely affected (Levine and Rathmell, 2020). These differential effects

could be exacerbated, with researchers who have been most adversely affected deciding not to invest effort in applying for resources to fund non-pandemic work, thus building-in future inequality (Walker et al., 2021). In the longer term, certain groups of scholars will be more affected than others, such as parents with young children, and early careers researchers. This study aims to lay the foundation to provide longitudinal evidence from a matched representative sample of academics during lockdown and in the period immediately thereafter to inform decision making in the Higher Education sector.

This study is a multidisciplinary one based on a longitudinal survey with academics in business, management, and economics. Business schools have traditionally engaged extensively with post-experience students and have been at the forefront of developing on-line delivery methods for decades. Business schools capture a broad set of disciplines from the humanities (e.g. business history) to more scientific domains (e.g. IT). Thus, as we have argued previously, business, management and economics faculty are perhaps indicative of academics in other contexts where such remote work practices are applicable.

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Executive summary

The *Consultation on the Impact of Brexit and COVID-19 on the working lives of business, management, and economics' academics in UK (2021)* builds upon an earlier survey examining the impact of COVID-19 during the months following the first complete lockdown in the UK in March 2020. The current study had two aims:

First, the initial survey was conducted in the early stages of the pandemic, and we now aim to better understand how it has affected academics' working lives using evidence from a matched sample of participants. While there is an increasing understanding of how academics were affected in the immediate aftermath of the pandemic, considerably less is known about what is emerging now a 'new normal' has occurred; where face-to-face delivery to students has begun again in most institutions in the 2021/2022 academic year, albeit often alongside a blend of digitally delivered synchronous and asynchronous content, and with some regional variation for institutions based in Scotland, Wales, and Northern Ireland, and prior to the identification of the COVID-19 Omicron variant.

Second, the Brexit process, initiated following the referendum vote on June 23rd 2016, was finally ratified in January 29th 2021. Given this, it was considered that sufficient time had passed to enable participants to be able to provide a considered assessment of many of the ramifications Brexit had had on academics working lives. Thus while the consequences of Brexit remain debated, detailed assessments of the impact on academia are at this point rare and thus there is considerable value added in this research space.

In summary, the survey examined five issues:

1. How academics perceive **Brexit** and its potential impacts on the academic labour market?
2. How much more are academics **Working from Home** and why?
3. How academics' ability to effectively perform and disseminate their **research** has altered as face-to-face activity returns?
4. Has academics ability to perform their **teaching** role been permanently altered' by their experience of the pandemic? and,
5. How have academics' levels of **engagement** evolved over the pandemic?

Key initial findings from the report relating to each of the five themes of the survey are:

1. **Brexit -**
   o was widely viewed as having a *negative* impact on individuals, the institutions they work for, and for the wider UK economy.
   o Overall, more than two thirds of participants considered that Brexit has made them "feel less comfortable about living in the UK" (with only 11% of those who were not born in the UK and 6% of those born in the UK disagreeing with the statement).
   o Over half those surveyed felt that Britain's exit from the EU had "led them to consider whether they would continue living in the UK", and three quarters of those surveyed considered that Brexit limited their international mobility.
   o Less than 20% considered that Brexit had been the "right thing for the UK".

2. **Working from Home (WFH)**
   o Around half of participants reported that their institutions encourage them to WFH while a third encourage office work.
   o Compared to the pre-COVID levels the proportion of time WFH has risen by a third to about two thirds for staff who choose to work from home outside mandatory face-to-face activities at their institutions.

3. **COVID-19 and Research**
   o Experience of *on-line conferences* over the pandemic has led participants to consider that they are a poor substitute for face-to-face events. This is coupled with scholars' ability to *collaborate with co-authors and colleagues outside the UK* deteriorating between the first lockdown and Autumn teaching term. Both findings suggest that geography continues to play an important role in the generation and dissemination of research.
   o *Research methodology* remains important. Those employing quantitative methodologies continue to be less affected than those using qualitative ones (such as ethnographic and archival research). Entrenched resource access issues may be potentially damaging effects on multidisciplinary research.
   o Not surprisingly, participants are less concerned that the pandemic may be crowding out *research income and grant funding* to other important research projects by

shifting research efforts away from other debates that researchers would like to contribute to, however they remain concerned that the pandemic has shifted research efforts away from other debates that researchers would like to contribute to.

o   The amount of *time* that is being devoted to teaching, assessment and administration has risen, even compared to the early pandemic period, with negative implications on the amount of time available for research.

4. COVID-19 and Teaching

a. More than 80% of respondents report that teaching online makes it *more difficult to understand whether the students engage in learning and understand what is being taught* in the Autumn survey; this number rose from 70% during the first UK lockdown.

b. As was the case during the first lockdown, about four out of five participants considered that online teaching was *a lot more time consuming to prepare*.

c. More encouragingly while only 14% considered that online delivery *enabled them to plan and prepare their delivery more carefully and provide a better teaching experience;* the proportion had risen to one third by Autumn 2021.

d. However, overall, less than 16% prefer on-line to face-to-face teaching with over 60% preferring face-to-face delivery.

5. COVID-19 and Work Engagement

a. time pressures are unevenly distributed, but have typically risen in teaching, assessment, and administration in relation to work, as well as due to increased demands at the home (office) particularly *parental pressures*.

b. academics exhibited **less** *dedication to their work*, and suffered the *same tendency to work longer hours*, than they did either prior to the pandemic, or during the first lockdown.

c. respondents *struggled to maintain the levels of mental resilience and energy* during the lockdown, but this element of work engagement has marginally improved.

The survey and sample

This research is based on data collected through a questionnaire administered to academics working in business schools and economics departments who agreed to be contacted following a first wave conducted a month after the first complete UK lockdown between 23rd March and 15th April 2020. This first wave was complemented by additional data from more participants added to our contact list, completed by 1st May 2020. The survey that this report discusses ran between 26th October and 17th November 2021.

The survey examined substantive topics – three of which align to the earlier lock-down study (which we term Study 1) and thus provided matched data – and two which were new. Specifically,

    1. Perceptions of how Brexit has influenced on working lives

Questions concerning the effects on how Brexit shaped working lives were asked at the 1. individual; 2. institutional, and 3. national levels. We were interested in taking a multi-level view given the likelihood that participants views were likely to be conditioned by their institutional environment and conceptions of the wide influence of Brexit.

A core focus of the survey provided input on the impact of Brexit on migration feeding into wider literature on the 'brain drain' (and whether, or not, Brexit will reverse this). To that end information on citizenship of participants, when it was acquired and their views on whether Brexit had led them to consider migration were included. The survey was targeted at individuals working in the UK, however we did have some input from staff who had moved outside the UK and have updated the database of individuals' rank, gender, administrative role (where relevant), where they have moved, when they did so and to what institution to contextualise future analysis meaningfully.

    2. Has there been a shift in work patterns?

To enrich the evidence-base for policy on flexible working we expanded the survey to explicitly incorporate a series of rationales, both positive and negative, underlying preference to Work from Home (WFH) for an occupational group that has enjoyed considerable ability to WFH in the past looking at actual behaviours rather than relying upon individuals' self-assessment.

    3. What are the effects of the pandemic on research activity?

In examining the longer run effects of how the pandemic impetus to researching 'from home' we capture a large set of potential factors that may have both positive impacts (e.g., 'more time to write

up potential articles') and negative impacts (e.g., 'inability to conduct field work', 'difficulties in collaboration with co-authors and colleagues'). We capture a rich set of factors such as research grants, time allocation and publication records.

4. *How have instructors' perceptions of on-line delivery changed over the course of the pandemic?*

On-line teaching has both advocates and critics, and has long lineage in business learning. Adaptors see virtual delivery as 'the future' for HE, while those who are warier argue that on-line delivery is a poor substitute for face-to-face learning. In our earlier survey we develop a set of rationales for teaching (e.g. 'it is a lot more time-consuming to prepare', 'it makes it difficult to measure whether the students understand what is being taught'). The data sources enable us to capture other potentially important elements associated with employment status, rank, experience in academia and time pressures.

5. *How has work engagement changed over as universities have returned to a new 'normal'?*

We utilise an extensively validated 9-item-version of the Utrecht Work Engagement Scale (Schaufeli, Bakker and Salanova, 2006). Informed by the literature, we collect data on a selection of factors that impact the ability to undertake work, and on factors affecting engagement with work. We consider parenthood and extent of support, perceptions of job security and employability, gender, contract type and academic status. The variables will potentially influence individuals' quality of working life, particularly mandatory remote work (Fontinha et al., 2018, 2019), and will focus upon how engagement has evolved over the course of the pandemic.

Data collection

The development of the updated survey was envisioned prior to the administering of the initial survey in March 2020 but commenced in January 2021 with several interactions and reviews being conducted over the course of the year. The initial survey was piloted with eight scholars in the pre-test phase. Inconsistencies that emerged in the pilot phase were addressed. The survey was administered exclusively online and was designed using an online tool. Recipients were sent an email explaining the purpose of the study, the ethical compliance, inviting them to participate and including a link to the survey.

We were careful to explain that the research project was not subject to any editorial control by any external body. The sample frame was much reduced than the initial Consultation on COVID-19

which included over 13,000 participants as it included only those who had agreed to participate further in the project. Participants were sent three sets of reminders, issued in the names of the research team leaders, sent on the 2nd, 11th and 18th November with the survey being concluded on 19th November 2021. To maximise sample size we provided a modest financial inducement providing a payment to UNICEF of £1 per completed survey. However, we received a small number of objections to making a UNICEF donation and were careful to remove payment for those who preferred not to. We therefore altered the survey to enable participants receiving reminders to choose whether they wished donations to be made. Overall, we received a response from 481 participants. Given that the total population for the survey was 1,148, once those who had left the sample, the response rate was over 40%. Of that response 446 provided usable responses (38%).

The survey includes scholars from all ranks. The bulk of the population, over 80%, are captured by the standard academic ranks of Lecturer/ Assistant Professor, Associate Professor/ Reader/ Senior Lecturer and Professor/ Chair. As with the first survey run in 2020, there is a close mapping between the survey frame and the total numbers of survey participants in each category. There is also a close mapping between the proportion of individuals who are based in Russell Group universities with the survey capturing a roughly 2% lower proportion. Again, as it was the case with the initial survey, and other research on academics over the COVID-19 period, there are however some differences in gender with the participant group including a higher proportion of women than the sample frame.

Five sets of findings

1. Perceptions of how Brexit has impacted on working lives

While Britain's exit from the European Union has been a reality since the outcome of the 2016 referendum, the withdrawal agreement came into force on 31st January 2020. The long time-horizon, and that some of the potential impacts of COVID-19 could be conflated with Brexit, has meant that it has taken some time for the effects of the withdrawal from the European Union to feed through into individuals working lives (where it has done so). It is also the case that while Brexit remains under researched in the literature, recent work has pointed out that future research may also seek to better capture the lived experience of migration using surveys, interviews, and ethnographic accounts of migrants' experience (Breschi et al., 2020).

With respect to international migrants, EU citizens make up about 8% of the total UK labour force as of February 2020 while non-EU, non-British residents account for 4.6% (ONS, 2020). As well as the sizable quantity of migrants coming from the EU, there is an uneven concentration of employment with EU citizen's as well as providing skills that contribute to disproportionately specific of professional and manually skilled occupations. Higher Education is an internationalised and mobile area whose proportion of EU citizens is more than double that of the national average. Within the Higher Education sector this survey's focused on economics and business and management. Economists who work outside business schools were also included to enable the study to capture two distinct, but overlapping, work environments where economists play their trade. And business schools are of course also home to a broad umbrella of other fields that work in business schools.

Economics and Econometrics is a particularly poignant field to examine in the context of European migration even that is highlighted. This is because Economics and Econometrics having the highest proportion of EU nationals than any other at 36%, as compared with 33% UK citizens.[1] By comparison, the proportion of EU Business and Management scholars is close to the national average of 17%. However, while the proportion of EU citizens is around the average in HE, Business and Management has a higher proportion of overseas nationals from outside the EU (22% as opposed to a national average of 17%).

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[1] Data derived from HESA (2021).

In examining perceptions of Brexit we took a multi-level approach. The first series of questions focused upon how participants perceived Brexit has influenced their working life across six dimensions. The findings, summarised in Table 1, illustrate marked differences in perceptions across each dimension. The majority did not consider that Brexit had *"reduced the diversity of views and contributions in the classroom"* with less than 40% considering this was the case. Nor was there shift toward a more domestically focused research agenda for the majority. However, about a quarter of those surveyed had altered their research topics – arguably quite a large proportion of the sample. At the other end of the spectrum there was greatly reduced optimism in applying for EU grants, although this was perhaps not a terribly surprising finding given the considerable debate and uncertainty surrounding EU research funding (e.g. Morgan, 2021). More surprising was finding that two in three participants considered that Brexit has *"has made them (me) feel less comfortable about living in the UK"*. While it is tempting to pre-emptively conclude that the finding was driven by the high proportion of EU citizens in the data, an initial examination of the data suggests significant interest from many born in the UK and those who are from outside the EU or UK. It was also the case in answer to the question *"Have you considered whether you would continue living in the UK?"* where over half the sample answered in the affirmative. More broadly mobility was determined by a variety of factors and the authors have been at pains to capture many of these. A second interesting finding, particularly the disruptive context of the COVID-19 pandemic, was that *"collaboration with co-authors and colleagues inside the European Union (EU) was more difficult"* was considered to have been adversely affected by almost half the sample (47%).

Table 1: Individual views of how Brexit has influenced or will influence your working life.

	Disagree/Strongly Disagree	Neither agree nor disagree	Agree/Strongly Agree
* Has made my collaboration with co-authors and colleagues inside the European Union (EU) more difficult.	20.4	33.0	46.7
* Has led me to focus my research mostly on topics that relate to the UK economy and society.	47.9	27.3	24.8
* Has reduced the diversity of views and contributions in the classroom.	33.8	28.1	38.1
* Has made me feel less comfortable about living in the UK.	21.2	11.2	67.6
* Limits my mobility and career opportunities outside of the UK.	21.7	25.6	52.7
* Undermined my confidence in applying for EU grants.	7.8	19.5	72.7

The second set of questions focused upon the views of how Brexit has influenced, or will influence, the institution where participants work along several dimensions. Two questions related to the effects of *collaboration*. The first asked whether there were "greater challenges" to collaboration with

colleagues in EU, while the second was more specific and grant focused asking whether the *"willingness to include international researchers from the EU in major UK-funded projects or grant bids has decreased"*. Three questions aligned to migratory movements along three lines – *"The restricted inflow and outflow of academics between the EU and the UK has had a negative impact on personal careers"*, *"The quality of UK scholarship will be negatively impacted by restricted movement of academics from the EU"* and *"My institution will face increased social/ professional isolation due to migration restrictions"*. There was agreement in most instances that Brexit would have a negative impact with clearest concern being that the '*quality of scholarship*' would be negatively impacted with 75% of participants agreeing, or strongly agreeing, that this would be the case.

Table 2: Views of how Brexit has influenced or will influence the institution where participants work

	Disagree/Strongly Disagree	Neither agree nor disagree	Agree/Strongly Agree
* We have experienced greater challenges in collaborating with colleagues in the EU.	12.3	36.5	51.1
* Willingness to include international researchers from the EU in major UK-funded projects or grant bids has decreased.	15.2	47.8	37.0
* The restricted inflow and outflow of academics between the EU and the UK has had a negative impact on personal careers.	11.5	27.5	61.0
* My institution aims to focus on stronger student recruitment from outside the EU.	7.8	31.1	61.1
* The quality of UK scholarship will be negatively impacted by restricted movement of academics from the EU.	12.1	12.6	75.3
* My institution will face increased social/ professional isolation due to migration restrictions.	14.9	28.5	56.6

The third set of questions broaden the analysis to national level looking at several factors relating to whether Brexit would *strengthen social services*, *weaken employment regulation*, *strengthen environmental regulation*, *reduce trade*, *attract qualified migrants* and *lead to labour shortages of manual migrants*, and the *enhance diversity of the population*, and finally the most general question of whether Brexit '*Has been the right thing for the UK*'. The bulk of participants did not see Brexit leading to positive outcome. Indeed, only 8.7% of those surveyed considered Brexit had been 'the right thing to do'. The finding is only partly driven by whether, or not, participants were born in the UK or outside the UK – 11% of UK born participants considering Brexit was the right thing, compared 6% of those born outside the UK.

Table 3: Views of how Brexit effects the UK: Brexit is likely to….

	Disagree/Strongly Disagree	Neither agree nor disagree	Agree/Strongly Agree
* Strengthen social services.	75.7	18.1	6.2
* Weaken employment regulation.	13.5	17.9	68.6
* Strengthen environmental regulation.	71.8	20.2	8.0
* Reduce UK international trade.	12.6	10.1	77.3
* Attract qualified migrants to the UK.	71.2	10.5	18.3
* Lead to major labour shortages in manual jobs.	6.7	6.2	87.1
* Lead to increased diversity of the population.	72.2	16.7	11.0
* Has been the right thing for the UK.	83.5	7.8	8.7

Putting the descriptive finding from the three levels in a comparative perspective, overall the tables suggest that the greater the degree of aggregation the greater the perception was that, on average, Brexit was undermining. For example, on average more than 75% considered that the national consequences would not be positive.

2. 'Working from Home'

There are substantial literature examining Working from Home (WFH), and COVID-19 has ushered in considerable interest in this form of flexible work arrangement (e.g. Barrino et al., 2021; Taneja et al., 2021). Academics are an unusual group in that they traditionally have considerable flexibility with respect to where they do much of their work and many had the potential and were WFH . While the advantages of WFH can translate into large productivity gains (Chaudry et al., 2021; Laker & Rotulet, 2019), some academics did partially work from home before, often on research, most teaching and administration was done *in loco*. Pandemic containment measures created a context where WFH became mandatory almost instantaneously with little or no planning in the first survey round leading to differential effects across society (Biroli et al., 2021). In the period covered by the second survey there have been different policies put in place within the sector as universities have opted for different policies. There have also been some regional differences in policy setting with Northern Ireland, Scotland and Wales taking more conservative approaches. These differences in institutional and regional approach to WFH are reflected in our finding that 46% of participants were encouraged to 'work at home some of the time' while a third were positively encouraged to work in the office.

Unlike most current studies that focus on what individuals intend to do in the future, or what their employer has suggested in a year's hence, we ask about *actual* behaviour comparing this against data obtained during the first COVID-19 lockdown in Survey 1 (both on extent of WFH pre-pandemic and extent of WFH in March to May 2020). We found marked differences with respect in the extent of Work from Home prior to, and after the relaxation of lockdown measures and a broad shift to providing face-to-face and online delivery. Participants were spending 67% of their time at home, with this figure dropping to 62% if we exclude those who work in institutions that encourage faculty to work from home. This contrasts with the results of Survey 1 which indicated that prior to the pandemic those sampled spent 39% of their time at home. To put the findings in context, in the most recent wave, in response to the question "***after COVID, in 2022 and later***, how often is your employer planning for you to work from home?", our findings suggested that 20% of full workdays will be supplied from home after the pandemic ends, compared with just 5% before (Barrino et al., 2021; Taneja et al., 2021).

Turning to the rationales for WFH vs. Working from the Office, the survey asked several questions enabling participants to provide their views of WFH vs. Working from the Office. Specifically, they were asked to indicate their level of agreement with the following negative statements drawn from the literature being asked to focus 'beyond mandatory face-to-face activities in your institution' to avoid conflating period where there is genuine potential to WFM (although we do capture time spend on delivering teaching and other measure of time use): *"Working from home enables me to improve my work-life balance"* (Felstead and Henseke, 2017); *"I value the schedule flexibility that working from home allows me"* (e.g. CIPD, 2021; Hackman and Overton, 1976); *"Working from home allows me to undertake other activities during the time saved on commuting"* (e.g. de Vos, Meijers and van Ham, 2018; Peters and van der Lippe, 2007, Thompson et al., 2021); *"I have a greater ability to focus while working from home"* (e.g. Lapierre and Allen, 2012). To provide a balanced view and also to ensure that respondents did not tick down the list, participants were also asked about their level of agreement with several positives in relation to Working from the Office – *"While working from home I am missing important networking opportunities in the office"* (Yang et al., 2021); *"Working from home blurs the boundaries between home and office"* (e.g. Kossek et al., 2012; Park et al., 2011; Vieten, Wöhrmann and Michel, 2021); and *"Working from home negatively impacts my career"* (e.g. Baruch, 2020; Bourdeau et al., 2019, Cooper and Kurland, 2002; Williams et al, 2013) [using a five-point scale listing 1. 'Strongly Disagree', 2. 'Strongly Disagree', 3. 'Neither agree nor disagree' 4. 'Agree', 5. 'Strongly agree']. We have, once again, compressed the five-point scale into three to ease discussion.

Table 4 summarises the responses to the set of questions. With respect to the positive questions relating to Working from Home top of the list in terms of agreement 'flexibility' (86%) followed by 'time used for other activities save by not commuting' (77%), while just over half felt they could focus better when working from home. However, four out of five participants considered 'working from home blurs the boundaries between home and office; and 71% felt 'missing important networking opportunities in the office', although it is not clear that all such opportunities were career related as a much lower proportion considered that "working from home negatively impacts their (my) career". The findings make clear that the decision of whether to WFH is a complex and multifaceted one with the findings suggesting that positives are outweighing the negatives.

Table 4. Advantages and disadvantages of working from home

	Disagree/Strongly Disagree	Neither agree nor disagree	Agree/Strongly Agree
1. Working from home enables me to improve my work-life balance	19.6	12.2	68.2
2. While working from home I am missing important networking opportunities in the office	16.4	12.4	71.2
3. I value the schedule flexibility that working from home allows me	4.1	9.9	85.9
4. Working from home blurs the boundaries between home and office	10.9	8.1	81.0
5. Working from home allows me to undertake other activities during the time saved on commuting	11.1	11.5	77.4
6. Working from home negatively impacts my career	43.6	36.3	20.1
7. I have a greater ability to focus while working from home	23.5	25.8	50.7

3. COVID-19 and Research

A core interest of the longitudinal phase of the project was in examining how COVID-19 has impacted on individual academic's research through a variety of mechanisms. A summary of the distribution of these views and how they differed between Survey 1 and Survey 2 is summarised in Table 2 which collapses a five-point scale into three categories for clarity.

What is clear, is that since the pandemic induced lockdown has been in place differential impacts for different individuals occurred and remain highly embedded. Indeed, Table 5, that compares the findings between Survey 1 and Survey 2 show that in relation to the majority of questions – aligned to 'access to resources', 'domestic collaboration', 'time available for research' and 'whether has shifted research efforts away from other debates that researchers would like to contribute'

the response remained remarkably consistent and within statistical margins of error over time. These findings are in some ways surprising and indicate that factors, like *research methodology* remain important with potentially substantive effects upon different fields and upon multidisciplinary research. Not surprisingly, there is a substantial fall in those whose confidence in applying for grants that are not focused on COVID-19 given grant call has shifted towards climate related topics.

Table 5: Views on how COVID-19 has impacted on research [comparing responses between Survey 1 - conducted during lockdown in 2020, and Survey 2 - conducted in the Autumn teaching term 2021]

	Disagree/Strongly Disagree		Neither agree nor disagree		Agree/Strongly Agree	
	Survey 1	Survey 2	Survey 1	Survey 2	Survey 1	Survey 2
* Has not affected my ability to access resources such as literature or data	28.1	29.1	5.7	7.4	66.2	63.4
* Has made collaboration with co-authors and colleagues in the UK more difficult	42.3	38.0	19.0	22.0	38.6	40.0
* Has made collaboration with co-authors and colleagues outside the UK more difficult	53.3	33.6	19.7	21.0	27.1	45.4
* Has provided more time to redraft work	43.9	42.3	19.7	27.7	36.5	30.0
* Has shifted research efforts away from other debates that researchers would like to contribute to	23.3	25.5	32.7	32.1	44.0	42.4
* Has undermined my confidence in applying for grants that are not focused on Covid-19	25.4	24.7	46.9	33.2	61.7	42.0
* Has led me to take on new projects that have expanded my intellectual horizons.	NA	41.0	NA	24.4	NA	34.7

The one area where there was a substantive shift was in scholars' ability to *collaborate with co-authors and colleagues outside the UK* has deteriorated substantially between the first lockdown and Autumn term with roughly a twenty percent rise in the number of individuals who considered that collaboration with colleagues outside the UK had been made more difficult. Along with online teaching, the ability to conduct and disseminate research through remote collaboration is arguably one of the pivotal potential elements where remote work could enhance productivity for research activity, as well as potentially bestowing other benefits, such as reducing carbon footprint. Certainly, a more rigorous analysis of this finding merits further investigation. One line of enquiry relates to how scholars have found their experience of on-line conferencing to bridge the gap. The survey asked whether participants found online conferences/ workshops they attended were as effective as similar events they had participated in the past in person in both survey rounds. The findings, summarised in Table 6, show that the pandemic has led participants to consider that they are poor substitutes for face-to-face events with 20% more disagreeing that online conferences were as effective.

Table 6: Responses to the question "Did you find these online conferences/ workshops you attended were as effective as similar events you have participated in the past in person?" [comparing responses between Survey 1 – conducted during lockdown in 2020, and Survey 2 – conducted in the Autumn teaching term 2021]

	Disagree/ Strongly Disagree		Sometimes		Agree/ Strongly Agree	
	Survey 1	Survey 2	Survey 1	Survey 2	Survey 1	Survey 2
Did you find these on-line events were as effective as similar events you have participated in in the past?	64.9	45.9	12.9	27.1	22.3	27.1

4. COVID and teaching

A key question relating to the pandemic is the extent to which the great involuntary "work from home experiment" translates into permanent voluntary change. While there is research evidence that on-line learning is just as effective as classroom learning, a bias toward face-to-face delivery exists (Marshall, 2018, Redpath, 2012, Williamson, 2020; Watermeier et al., 2021). Table 7 summarises, in the top panel, the view of participants to rationales relating to teaching comparing the two rounds of the survey for three questions and adding a fourth more general question relating to whether, or not, faculty preferred "online teaching to face-to-face teaching". With respect to the benefits of planning associated to teaching, it was still the case that a greater number did not agree that delivery benefited from on-line participation with 40% disagreeing, but there was a substantial 20% rise in the those who perceived benefits. Changes in relation to whether academics agreed that it "makes it difficult to understand whether the students understand what is being taught increased marginally to over 80%, while there was a marginal drop in those considering that online "is a lot more time consuming to prepare".

While the lockdown experience may have the potential to enhance the shift to on-line delivery, our findings do not suggest that academics were enamoured with the experience which may lead to greater resistance to on-line delivery in the absence of investment and adequate resourcing institutions and could lead to lower quality outcomes, undermining the confidence of students and academics. The findings suggest some progress with respect to benefits to preparation, but the vast majority did not consider that online delivery made it easier to understand what was taught and remained convinced that the amount of time required to prepare for online delivery was substantial.

The majority preferred face-to-face delivery and there is little indication that the experience of online delivery has ultimately led to faculty 'learning to love' on-line teaching. The findings do not necessarily imply that on-line delivery cannot be harnessed to enable the sector to be more resilient and productive. They perhaps suggest there is a middle ground to be found where blended learning provides benefits to a wider set of students than was the case prior to the pandemic when students were able to be taught once again *in situ* but that the balance be more focused towards face-to-face interactions.

Table 7: Views on how COVID-19 has impacted on teaching [comparing responses between Survey 1 - conducted during lockdown in 2020, and Survey 2 - conducted in the Autumn teaching term 2021]

	Disagree/ Strongly Disagree		Sometimes		Agree/ Strongly Agree	
	Survey 1	Survey 2	Survey 1	Survey 2	Survey 1	Survey 2
* Enables me to plan my delivery more carefully and provide a better teaching experience	61.6	40.3	24.0	26.4	14.4	33.3
* Makes it difficult to understand whether the students understand what is being taught	10.5	10.3	9.6	7.0	79.9	82.7
* is a lot more time consuming to prepare	9.9	12.2	12.6	13.0	77.5	74.9
* I prefer online teaching to face-to-face teaching.	NA	60.1	NA	23.3	NA	16.6

5. COVID and work engagement

Perhaps the most complex questions of the survey looked to examine how the pandemic is affecting individuals' engagement in their work. The complexity relates to the very different experiences that the study uncovers as driving engagement. Some issues are practical ones, such as care (qualitative commentaries in particular highlighted issues here extensively as an element that reduced the capacity to work at the same levels), leading in some cases to an individual simply focusing on demand-driven teaching and assessment requirements.

Time is certainly a factor since, as we have noted above, teaching demands have typically expanded. The pressures are likely to have been exacerbated since, as Table 5 illustrates, we also found that the amount of time associated with administrative tasks has expanded for the majority of faculty. Demands in terms of time and care is one factor, but previous work has highlighted that engagement is also likely to be tied to job security, contract type and other factors, given the widely

publicised economic issues besetting the economy and the sector (e.g. Fontinha et al. 2018, 2019). This was particularly the case for universities in the UK who had grown accustomed to large international flows of overseas fee income particularly from China. However, university finances were not as adversely affected. Indeed, there was a "whopping" 161 per cent increase in the issue of sponsored study visas which pushed new student numbers around one-third higher than in pre-COVID days (Times Higher Education, 2021).

Table 8 highlights these issues. A significant proportion of the sample had fears for their position. While the negative impacts of low levels of perceived job security can be buffered by high employability levels (Silla et al., 2009), that is not the case given the context of the pandemic. Many felt that finding another position would be difficult and the vast majority did not see an opportunity to 'trade up'. About 25% of the participants in the study found the time to make often detailed accounts of their circumstances. While childcare was top of the list of circumstances commented on, many comments were focused on job insecurity. By contrast, there was a marked shift in perceptions of job insecurity following in the post lockdown period with a 20% drop in those who "felt (feel) insecure about the future of their (my) job)" and smaller, but clear falls in relation to applicant's ability to find alternative employment.

Table 8: Job insecurity during the pandemic [comparing responses between Survey 1 - conducted during lockdown in 2020, and Survey 2 - conducted in the Autumn teaching term 2021]

	Disagree/Strongly Disagree		Sometimes		Often/Very Often/Always	
	Survey 1	Survey 2	Survey 1	Survey 2	Survey 1	Survey 2
I feel insecure about the future of my job	30.2	50.7	20.3	19.8	49.5	29.5
I feel that if I lose this job, I would easily find another job	51.5	38.8	24.8	27.4	23.7	33.8
I feel that if I lose this job, I would easily find a better job	61.8	48.3	30.8	36.9	7.4	14.8

We use the seven-point Utrecht Work Engagement Scale (Schaufeli, et al., 2006). Engagement is captured by three concepts in that scale – dedication, vigour and absorption. Dedication reflects the degree of enthusiasm, pride and significance that individual feels about their work. Vigour captures the amount of energy and mental resilience that is maintained whilst working. Finally, absorption is characterised by the extent that an individual can remain ensconced in their work.

Table 9 summarises responses relating to the question. The first three columns of numbers summarise the seven-point scale into three categories, while the fourth provides the mean response of the sample to each question. Following the distribution of responses, mean levels of dedication and absorption remain high, but level of vigour was considerably lower. That academics have remained as dedicated to their work as they have and continue to work long hours is not something that will surprise many. Indeed, earlier work has illustrated HE teaching professionals record the second highest number of hours worked on average, behind physicians (Walker et al., 2010). It would seem plausible that mental resilience and energy would be difficult to maintain in the face of difficulties on the scale of a global pandemic, and the findings echo the qualitative comments of a number of survey participants. But while these engagement estimates appear reasonable, it is also the case that prior studies have found quite varying mean responses across different contexts.

Despite some abatement of concerns about job security, academics exhibited less dedication to their work, than they did prior to the pandemic or during the first lockdown. It was also the case that respondents struggled to maintain the levels of mental resilience and energy during the lockdown, but this element of work engagement has improved.

Table 7: Comparing engagement during a lockdown and after lockdown [comparing responses between Survey 1 - conducted during lockdown in 2020, and Survey 2 - conducted in the Autumn teaching term 2021]

	Never/Almost never/Rarely		Sometimes		Often/Very Often/Always	
	Survey 1	Survey 2	Survey 1	Survey 2	Survey 1	Survey 2
Dedication	7.1	7.9	19.9	29.2	72.9	62.9
Vigour	22.3	24.4	29.0	39.2	30.1	36.5
Absorption	14.1	15.5	24.0	32.9	61.9	51.6

Implications

The UK has been hit by two substantive shocks in the form of its exit from the European Union and the COVID-19 pandemic. We have undertaken two studies – one during the UK's first lockdown and the second following the lockdown when a 'new normal' has occurred whereby a face-to-face delivery to students has begun again in most institutions in the 2021/2022 academic year in order to examine the longer-term impacts of the pandemic with a matched sample.

The HE sector is a major driver of education, research, and innovation in the UK economy, which moved swiftly into an on-line mode. It therefore provides a rich case study with potential lessons for sectors where education, training and research have significant roles. We have examined the determinants of work engagement, research, teaching and WFH in the HE sector, using a survey of key actors to provide a rich evidence base for policy on flexible working.

At this early stage of the analysis, it is difficult to draw strong implications about the results of the survey. It is, however, clear that both Brexit and the COVID-19 pandemic have had a highly differential experience on academics. While the COVID-19 pandemic put many under increased, and in many cases considerably increased, pressure, others have been able to maintain their work and for a minority of others, from a work perspective at least, a lower time pressure has presented the opportunity to engage in research. This time pressure needs to be put in context within the sector, but it should also be acknowledged that academics traditionally have longer work hours, with earlier work showing that HE teaching professionals record the second highest number of hours worked on average, behind physicians (Walker et al. 2010).

The findings of the survey also have important direct implications for policy and practices. The following tentative and non-exhaustive list of suggestions flow from the survey findings.

1. Given the mobility of quality faculty and the higher proportion of individuals who have considered moving to EU countries, institutions need to consider how to support staff if they wish to be able maintain the quality of teaching and research.
2. *Scepticism of remote teaching delivery has grown over the pandemic*. While staff are one side of the equation, they are a significant one with studies at levels of education highlighting the fundamental importance of teachers. If institutions wish to compete in an increasingly crowded 'distance learning market' they will need to find innovative ways to engage faculty.

3. *Scepticism of remote research has also grown* with both remote research collaboration and the remote dissemination of work being increasingly problematic in the eyes of the majority. Enabling researchers, and particularly ECRs who are in the process of developing their research networks, to engage in face-to-face conferences and research meeting, may be of assistance.

4. Probation and promotion committees should explicitly account for COVID-19 related circumstances and appreciate that those effects may be more long lasting then initially conceived.

5. Future research evaluations, such as the Research Excellence Framework, should also be conscious of the differential effects the pandemic has had on some individuals' circumstances and that these may be long lived.

In future research, we will explore in greater detail:

1. What are the effects of Brexit on the UK labour market and those working within it?
2. What are the longer run effects of the pandemic on research activity?
3. How have instructors' experiences of on-line delivery and assessment evolved?
4. How has work engagement evolved over the pandemic?
5. What is driving preferences to work from home or from the office?

And in the future, we will look to examine:

6. Whether the lockdown will potentially damage effects on multidisciplinary research by reinforcing a mono-culture of research based around quantitative work?
7. Whether the trend toward flexible employment might be accelerated by the crisis as copious commentary is suggesting; or will the change be more subtle?

Methodologically, we will look to expand the project to engage of detailed in-depth interviews led by Washika Haak-Saheem to provide a more nuanced understanding of each of these research questions.

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