

## Labour Force and Annual Population Surveys User Conference

### Research paper abstracts

#### **1. The job quality of key worker employees: Analysis of the Labour Force Survey**

Matt Barnes, Nhlanhla Ndebele, and Eric Harrison, Department of Sociology, City, University of London

Key workers have emerged as being critical to the running of the country during the Covid-19 pandemic. The challenging circumstances key workers now face in doing their jobs has been well documented, particularly the health risks of frontline workers. This has led to discussion of how much society values these workers more generally, with many key workers being paid less than the average employee. But what is missing from the debate is a broader understanding of the usual working conditions of key workers - the security of their work, their work patterns, and their opportunities for progression - meaning that these issues can be discussed alongside calls for increased pay. This study analysed pooled Labour Force Survey data from 2016-2019 to explore the job quality of workers in certain key worker occupations. It shows that many key workers not only receive low pay but experience lower job quality than the average employee.

#### **2. Labour Markets in the Time of Coronavirus: Measuring Excess**

Jonathan Wadsworth, Economics, Royal Holloway University of London, Centre for Economic Performance, CReAM and IZA

No matter the cause, recessions are usually accompanied by some combination of job loss, hiring freezes, wage cuts or hours reductions. In a rapidly evolving economic crisis there is a need for timely information to assess labour market performance and develop strategies to address the problems that emerge. Household labour force surveys are not point-in-time data, but do offer the opportunity to analyse a broader range of outcomes not readily available in administrative data. They can also be utilised at higher frequencies than is normally associated with them. In what follows, the weekly information contained in the UK Labour Force Survey is tracked for several labour market outcomes from the first week of 2020 and onward as the Covid-19 crisis developed in spring 2020. The indicators are presented in “excess” form to gauge how far the 2020 incidence of a particular outcome differs from its weekly norm. It seems that the most common metrics of labour market performance, like unemployment or wage rates, show little departure from recent norms over the first few months of the crisis. The initial margins of adjustment were instead some cumulative 50 million more weekly workplace absences than usual during lockdown, notable hours reductions of up to 25% among the majority who carried on working, together equivalent to around 3 weeks of lost working for the whole workforce, allied to a notable stalling of hiring that had already begun several weeks before lockdown.

### **3. Onset of limiting illness and recovery from limiting illness; characteristics of illness dynamics from the Annual Population Survey: January to December 2017**

Tom Hennell, Matt Hennessey, and James Perry, Public Health England; Local Knowledge and Intelligence Service North West

We have analysed the annual individuals dataset from the Annual Population Survey for 2017, downloaded from the UK Data Service; and exploited health variables recorded for all respondents aged between 18 and 74 to identify persons who report onset of limiting illness in the last year (respondents who currently have a limiting illness, but who state that their reduced activity has lasted less than 12 months); and persons who report recovery from limiting illness (respondents who currently do not currently have a limiting illness, but indicate formerly having done so).

We have quantified the characteristics associated with differential onset and recovery from limiting illness through binomial logistic regression; and created 'fully adjusted' and 'parsimonious' explanatory models of illness onset and illness recovery for both males and females.

Our most striking finding is that there is now little or no evidence for continued regional inequalities in onset of limiting illness; but strong evidence for regional inequalities in access to recovery from limiting illness. The regional inequalities in access to recovery that we demonstrate in these data align closely with known regional inequalities in health outcomes, and with the inter-regional distributions of prevalence of limiting illness in the APS dataset.

### **4. To what degree? Recovering changes in the UK's graduate Skill Distribution**

Max Schroeder, Glasgow University

It is the dominant view, in economics that a university degree conveys (or signals) specific skills and abilities. Over the last 3 decades, university enrolment in the UK has been rapidly increasing, while at the same time evidence suggests that graduate-earnings inequality is sizeable and has been rising. To assess, whether this increasing earning dispersion is a sign of increasing within group skill differentials one needs an estimate of the latent graduate skill distribution.

In this paper I develop a model of occupational choice and wage determination for university graduates in the UK. Graduates differ with regards to three types of general skills: mathematical, verbal and interpersonal. Skills are allowed to vary between as well as within university subjects. I structurally estimate the model using data from the UK Labour Force Survey, to find evidence of changing multivariate skill distributions over time. To the best of my knowledge this paper is the first attempt at trying to find quantitative evidence for the actual distribution of multivariate skills of university graduates in the UK.

I find that between 1994 and 2011, the average graduate's level of mathematical skills increased, by 5%; verbal skills decreased by about 2% while interpersonal skills fell by about 9%. These aggregate numbers disguise significant trend variation between different university subjects. At the same time, the distribution of graduate's skills has undergone significant change: Mathematical skills inequality, as measured by the Gini coefficient

decreased from 30 to 26, verbal skill inequality dropped from 24 to 19 and interpersonal skill inequality fell from 24 to 23.

The results suggest that graduate skill inequality has on balance been reduced, which is reassuring for those who feared that the expansion of higher education might have created large inequalities in educational outcomes.

## **5. How does the return to a degree vary by class of award?**

Tej Nathwani, Higher Education Statistics Agency

Over the past few decades, participation in higher education has continued to expand. Simultaneously, the proportion of graduates being awarded at least an upper second class degree has also increased. This latter trend has resulted in a growing debate within the sector over the possibility of grade inflation and the subsequent impact this may have on the reliability of degree level qualifications. At present however, there is a paucity of evidence regarding the return by class of degree awarded. This paper aims to begin plugging this gap.

We begin by drawing upon two cohort studies – the British Cohort Study of 1970 (BCS) and Next Steps (which surveys those born around 1990), which we use to estimate the return to a degree by class of award using ordinary least squares. We find that over the two decades separating these cohorts, the average return to a degree has decreased by 7 percentage points. However, there has been a sharper decline of 11 percentage points in the return for those who were awarded a lower second class degree or below when compared to the fall (of 6 percentage points) for graduates with a first or upper second class award.

Additionally, using the birth cohort studies, alongside the LFS and Longitudinal Destinations of Leavers from Higher Education survey (LDLHE), we conduct an analysis of graduates only and look at the return using a more disaggregated version of degree classification (i.e. we separate those with a first from those with an upper second class award). We observe the return to a first (relative to an upper second class award) has fallen by up to 3 percentage points over the period, while the return to an upper second (relative to a lower second class award or below) has increased by 3-8 percentage points.

## **6. Is the social origin pay-gap is worse than we thought: Controlling for selective item non-response when analysing survey estimates of social class and earnings**

Kristinn Hermannsson, Jeanette Findlay, and Michael Vallely, University of Glasgow

A recent wave of empirical work has identified the existence of social origin pay gaps using a variety of datasets for the UK, US and other high-income countries. These are so-called unexplained pay gaps, i.e. they persist even when observable characteristics such as education have been controlled for and are analogous to similar pay gaps observed for women, ethnic minorities and disabled people. Social origin is identified using survey questions, where respondents are asked to recall the occupational status of their parents when they were young. This rests on an established tradition in social mobility research, but until relatively recently had not been used to analyse wage outcomes. We re-examine how

researchers have applied the social origin variable (SMSOC101) in the UK Quarterly Labour Force Survey to examine wages and argue that for social origin, item non-response is selective, which has resulted in an under-estimation of the social origin pay gap. Whilst item non-response may occur for a multitude of reasons, we argue that an implicit assumption underlying social origin questions is that the occupational identity of the parent household can be clearly understood. However, de-industrialisation has fragmented working class occupational identities and therefore it is plausible that non-responders are in fact an unidentified sub-population of the working classes coming from households with less structured occupational profiles. We explore this possibility through descriptive analyses and use selection models to estimate wage equations that are corrected for sample selection. Overall, this suggests the social origin pay gap has been underestimated, which further reinforces the urgency to “level-up” the labour market outcomes of those living in the UK.