A Year in the Life. The UK Labour Markets and the Coronavirus Pandemic

Jonathan Wadsworth

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

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Recessions usually happen when people or firms stop demanding things

While this is no ordinary downturn

- the primary cause of the recession is still a fall in demand

- because of restrictions on mobility caused by the lockdown(s)

(though supply of goods was also constrained by the lockdown)

No matter the cause, recessions are usually accompanied by some combination of job loss, hiring freezes, wage cuts or hours reductions

Y = WL + rK

Since capital likely fixed in the short run,

firms more likely to adapt to a (expected short run) shock by adjusting labour inputs

 $L = N^*H$

= [(Hiring-Layoffs)+Stayers]*(Overtime+Marginal+Core)

Hiring Firing Weekly Hours Wages

Or some combination of all 4

(Some) workers also have the option to withdraw/postpone labour supply in a downturn subject to non-labour income constraints – income of other family members, college grants

Government/Country institutions often influence these outcomes The last 3 recessions in the UK have responded in very different ways

1980 - jobs 1990 – jobs/hours 2008 – jobs/wages 2020/21 ?

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 (LFS) is tracked for several labour market outcomes from the first week of 2020 and onward as the Covid-19 crisis evolves.

The innovation in this paper is to present the indicators in "excess" form to gauge how far the 2020/21 week-by-week incidence of a particular outcome differs from its (5-year) weekly norm and to excess the cumulative loss (or gain) since lockdown.

And to compare with evolution of labour market in earlier recessions

Measuring Excess

LFS households are sampled throughout the year. There are LFS indicator variables for the week the household was sampled in

The outcomes presented below are then estimated for each week

There are around 4000 individuals of working age sampled each week

The performance of each labour market indicator over the crisis is measured relative to a fixed benchmark.

Benchmark: The average (median) weekly values for a given labour market indicator Y_i at week w over the last 5 years is used as the norm

(but could use past recessions as a norm)

 $\bar{Y}_{iw} = \{(n+1) \div 2\}$ th value

Excess

The distance from this norm in any week w to the five-yearly average is one measure of the "excess" in a labour market outcome i

 $Excess_w = Y_{iw} - \overline{Y}_{iw}$

Excess = $0 \rightarrow$ no difference from the weekly norm. Excess > $0 \rightarrow$ higher rates than the norm. Excess > $0 \rightarrow$ lower rates than the norm.

The excess statistics are *units per week* (eg people, person hours, %points) - depend on the units of measurement of any given indicator

Using rates nets out any changes in population over time that might otherwise obscure any trends

Confidence Intervals

The minima and maxima of this 5 year range effectively take the place of sampling confidence intervals

- they are very close to the 95% confidence intervals estimated using sample proportions.

(Given a typical weekly LFS sample of 4000, a typical weekly 95% sample confidence interval of a proportion is between 1 and 1.5 percentage points)

Cumulative Excess

The sum of the excess observed from a given starting week t* to any week T in the future is an estimate of the cumulative total excess population.¹

$$CExcess_w = \sum_{w=t^*}^T (Excess_w) = \sum_{w=t^*}^T (Y_{iw} - \overline{Y}_{iw})$$

Useful to estimate total loss (or gain) over a period

Can put "bounds" on this estimate

by estimating minimum distance and maximum distance gaps (rather than relative to median – take min/max 5 year range)

$$Excess_{w}^{Upper} = Max\left((Y_{iw} - Y_{iw}^{max}), (Y_{iw} - Y_{iw}^{min})\right)$$
$$Excess_{w}^{Lower} = Min\left((Y_{iw} - Y_{iw}^{max}), (Y_{iw} - Y_{iw}^{min})\right)$$

¹ Any weekly variation in estimates will also be influenced by both the sample populations and the grossing weights in any week which are, by construction around 1/13 the sample size of the regular quarterly survey. While in a randomly sampled population the grossing weights in each week of any survey should be representative of the total population, in practice the grossed populations in the LFS vary from week to week (but are similar).

Bunching

Some indicators may show excess over the Covid-19 period but this reflects bunching of outcomes that might have taken place later in the year if no pandemic

Eg. Layoffs may be brought forward when would ordinarily have been later in year.

If so, the excess measures taken over the Corona period will be over-estimates of the excess brought on by the crisis and there will be a dip in the labour market indicator **below** the weekly norm some time later.

Cumulative Excess should account for this over a longer time window The extent to which any layoffs, or quits, or any other indicator bunch prematurely can be assessed as subsequent data is released.

Data currently run from 1st week of January 2020 to 1st week of March 2021

Can also do this for earlier downturns (well 2008-2009) to compare outcomes as the downturn evolves week by week



An example: % Employed but Not at Work in 2020

Looking at weekly performance of any indicator reveals any seasonality 5-year average shows work absences are typically higher at Christmas and summer

But absences from work in 2020/21 outside these seasonal peaks are way above recent norms

This did not happen in the previous downturn



Same seasonal patterns - but little sign of work absences

The cumulative excess of work absences over the 2020/21 period



Central estimate - relative to median – cumulative absences 450 % points over recent norms²

Given an employed population of 31.6 million in Spring 2020 suggests around 142 million personweek absences (31.6*4.50)

Or entire workforce doing nothing for 4.5 weeks

² Upper bound is relative to maximum gap in last 5 years. Lower bound is relative to minimum gap in last 5 years

There now follows a quick summary of COVID effect on UK labour market week by week so far...

- Not really job or wage loss downturn, more like an hours loss/ hiring freeze downturn

COVID Restrictions on mobility cause the dynamic aspects of the labour market to slow down

The UK Furlough Scheme³

March 2020: Government announces that all employees can be "stood down" – **not** in work but still on payroll – government will pay 80% of labour costs including pensions and National Insurance contributions (up to a maximum of gross wage of £2,500 a month)

9.6 million employees (1/3 of all employees) covered in first 4 months of scheme

Self-employed given a grant based on their previous monthly earnings over the last three years, worth up to 80% of earnings and capped at £2,500 a month

August 2020: Employees can return to work part-time – government covers 80% of wages for hours NOT worked.

September 2020: Employers must also pay 10% of cost of hours NOT worked

October 2020: Employers must also pay 20% of cost of hours NOT worked

November 2020: Government reverts to original 80%

March 2021: Furlough scheme(s) extended until September 2021

³ The Coronavirus Job Retention Scheme (CJRS) Evaluation Plan (publishing.service.gov.uk)

Ironically, sickness absence at historical lows (despite pandemic)



Little significant rise in unemployment over the pandemic



(can also see - from weekly norms – that unemployment typically lower in run up to Christmas)

Usually expect unemployment response to negative GDP change



No immediate response in unemployment to fall in GDP (furlough scheme)

- reset clock to 0 in 1st month of -ve GDP change (week 8 in 2020)

Rose around months furlough was uncertain (around week 35 here) - but not sustained outside recent norms

In contrast, unemployment in 2008 began to rise –significantly above recent norms - at almost the same point as GDP growth went negative (week 27 in 2008 – reset to week 0)

Little sign of rising unemployment among younger workers (16-24)...



But youth unemployment did rise about 15 weeks of start of 2008 downturn



Youth (16-24) NEET rate in 2020/21 also not out of line with recent norms



Or labour force participation



Or staying on rates in education



Real (consumer) wages growing significantly over the pandemic



But also didn't see much real wage falls in early stages of previous downturn (came later)



So wages and jobs not the initial casualties of the downturn

But ... Total Hours Worked did fall a lot

(for those not away from job - in addition to workplace absence)

2nd and 3rd lockdowns hours fall is less than in 1st lockdown



Again this didn't happen in 2008 (if anything hours rose over downturn in 2008)



Cumulative excess hours



If the average week =1000 million hours, then a cumulative (-ve) excess estimate of 4200 million hours in 2020/21 = 4.2 weeks of lost output.

This is in addition to the 4.5 weeks lost from workplace absence. (8.7 weeks is around 17% of one year's labour input)

The more conservative cumulative excess estimate, based on deviation from the weekly 5-year minimum, is 2000 million hours, some 2 weeks of lost working.

Also no-one hiring (job tenure<=1 month)



Seasonal hiring peak is Autumn

But cumulative hires some 14% points down on recent norms 31.6 million employed multiplied by the 14 percentage point cumulative excess (7 points lower bound) is around 4.7 (2.2) million

A weekly average hiring rate of 0.8% of the workforce means that cumulative hiring around 20% down on recent norms

Again – didn't see this until much later in 2008/9 downturn



Layoffs peaked as furlough wound down (and stopped once furlough restored)



Layoff rate lower than in 2008/9

But may be more concentrated than in 2008





The cumulative excess layoffs is similar - though the timings are different (bunching)

But no-one leaving (quitting) jobs - largely because no-one hiring



Happened much earlier than in last downturn

And this will reduce the flow into unemployment somewhat



Part-Time Working fallen (most of layoffs)



Temporary jobs not so much



Full-Time work grown (re-ordering?)



Residential Mobility also fallen





ps. something different happening to immigration this time

So possible that emigration took up some of the slack?

Conclusions

Looking at weekly movements in a rapidly changing crisis can undoubtedly help

In addition can look to see how far these weekly estimates area away from recent norms

Can help calibrate "damage" done during the crisis that simply graphing weekly estimates does not.

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 9 weeks of lost working for the whole workforce, allied to a notable stalling of hiring that had already begun several weeks before lockdown.

More dynamic aspects of labour market stalled – hiring, quits and household mobility

Appendix: Corona Timeline in the UK

The weeks in the graphs and Tables that follow run from 1 January, 8 January onward to the end of the calendar year

The first case of coronavirus in the UK was confirmed on 31 January 2020 (week 5)

The first officially confirmed death in the UK from the virus was on 5 March (week 9)

Partly in response to rapidly declining stock markets and commodity prices, the Bank of England cut interest rates from 0.75% to 0.25% on 11 March (week 10).

Self-isolation recommendations were issued on 12 March (week 10) but the UK did not go officially into lockdown until 23 March 2020 (week 12)

The government announced that it was to introduce a job furlough scheme alongside support to the self-employed on 20 March (week 12).⁴

The stay at home guidelines are relaxed 11 May (week 19) when people are asked instead to go to work if possible and to "stay alert".

On 1 June (week 22) a phased reopening of schools begins along with outdoor non-food markets and sports activities.

15th June (week 24). More businesses allowed to reopen

⁴ The scheme was not officially opened until April 20, but claims back to 1 March were allowed.

4th July (week 27) Restaurants and bars allowed to reopen

15th July (week 28) VAT on hospitality sector reduced from 20% to 5%

1st August (week 30) Eat "Out to Help Out" scheme begins. Furlough scheme begins to unwind (firms obliged to pay NI and pensions)

1st September (week 35). Firms obliged to pay a larger proportion (10%) of furloughed wages

12th October: UK classifies regions into 1 of 3 Tiers – different restrictions apply in each Tier

21st October: Wales imposes 3-week lockdown

5th November: England enters 4-week lockdown

19th December: English regions in Tier 4 lockdown

4th January: Scotland enters 2nd national lockdown 5th January: England enters 3rd national lockdown

Data Appendix

All data used in this paper are taken from the UK LFS 2020 q1-q3 and the Annual Population Survey for 2015-2019

The variable definitions used (with names of the LFS variables in brackets) are as follows:

Unemployment Rate: % of the labour force aged 16-64 who are not in work in the survey week and actively looking for work on ILO/OECD definition (inecaca)

Employment Rate: % of the labour force aged 16-64 who are in work in the survey week on ILO/OECD definition (inecaca)

Real Weekly Wage: Gross weekly wage (Grsswk) deflated by Retail Prices Index for month in which the survey takes place

Ill: % absent from work due to illness in survey week (illwrk=1)

Away: % of employed who report being in work but away from workplace (*jbaway*) in survey week

Fewer: % of working employed (*wrking=1*) who report fewer hours than usual (*tothrs<totus*)

Fewer Hours: difference between usual working hours (with overtime if applicable) and actual hours worked in survey week (totus-tothrs if Fewer=1)

More: % of working employed (*wrking=1*) who report fewer hours than usual (*tothrs>totus*)

Hired: Job tenure of 1 month or less derived using difference between interview date and length of job tenure (*refwkm, refwkyr, conmpy, consey and conmon*)

Layoff: Individual dismissed, made redundant, taken voluntary redundancy or temporary job ended in last three months (redylft3)

Quit: anyone who left work because of resignation, health, retirement, for education purposes, family reasons or other (redylft3)

2020/21

5 year average

Employment Rate not moved over the pandemic