The Labour Market Impact of Covid-19 and Employer Demand for Skills in Cheshire and Warrington

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This Presentation

- The Current Impact of Covid-19 on the Labour Market
- Employer Demand for Labour and Skills
- Example Occupation and Industry Sector Profiles

The Current Impact of Covid-19 on the Labour Market

Forecasts for big falls in UK GDP and increases to unemployment. Most forecasts predate the JSS and 2nd wave announcements

	Percent	age change a	on a year ea	rlier, unless o	otherwise sta	ted
		<u> </u>	Scer	nario period		
	2019	2020	2021	2022	2023	2024
Central scenario						
Gross domestic product (GDP)	1.4	-12.4	8.7	4.5	2.1	1.9
CPI inflation	1.8	0.7	1.3	1.9	2.0	2.0
Employment (million)	32.8	31.3	30.9	32.2	32.6	33.0
Unemployment (million)	1.3	3.0	3.5	2.4	2.1	1.9
Unemployment rate (per cent)	3.8	8.8	10.1	6.9	5.9	5.3
Upside scenario						
Gross domestic product (GDP)	1.4	-10.6	14.5	1.9	1.3	1.4
CPI inflation	1.8	0.7	1.3	1.9	2.0	2.0
Employment (million)	32.8	31.6	32.5	33.2	33.3	33.4
Unemployment (million)	1.3	2.7	1.9	1.4	1.4	1.4
Unemployment rate (per cent)	3.8	7.9	5.6	4.0	4.0	4.1
Downside scenario						
Gross domestic product (GDP)	1.4	-14.3	4.6	5.4	3.3	2.5
CPI inflation	1.8	0.7	1.3	1.9	2.0	2.0
Employment (million)	32.8	31.2	30.4	31.7	32.3	32.6
Unemployment (million)	1.3	3.1	4.0	2.8	2.4	2.2
Unemployment rate (per cent)	3.8	9.1	11.6	8.1	6.9	6.3

Source: OBR, July 2020

		Indepen	dent⁺		Average of new*	
	Avera	ages	Septe	ember	forecasts	
	September	August	Lowest	Highest	ion ecuses	
GDP growth (per cent)	-10.1	-10.0	-13.4	-6.6	-10.0	
Inflation rate (Q4: per cent)						
- CPI	0.6	0.5	-0.1	1.8	0.6	
- RPI	1.2	1.1	0.1	2.3	1.2	
LFS unemployment rate (Q4: %)	8.3	8.3	6.2	12.7	8.0	
Current account (£bn)	-60.3	-76.8	-103.0	-22.1	-56.8	
PSNB (2020-21: £bn)	326.6	322.2	239.1	385.0	323.6	

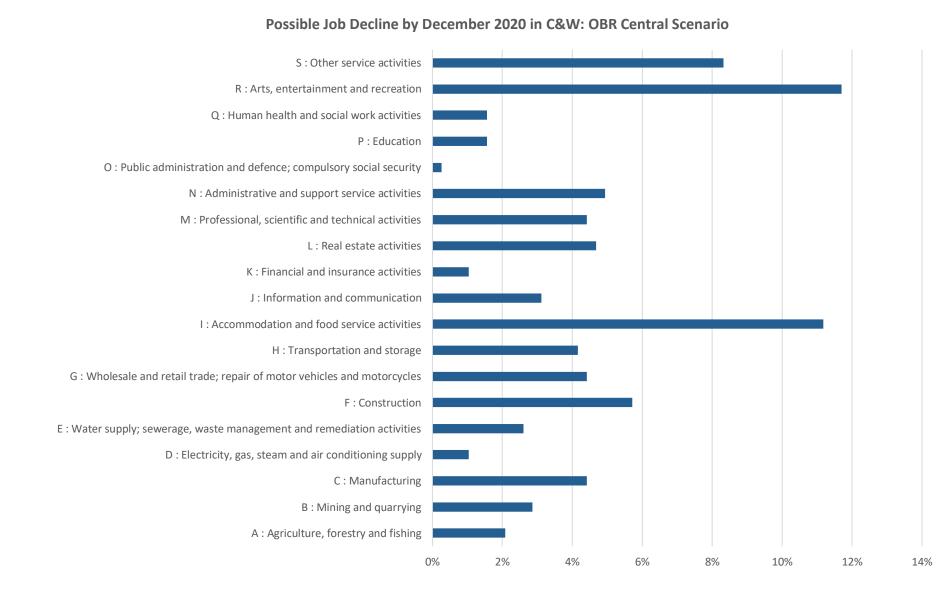
Source: HMT, "Forecasts for the UK economy: a comparison of independent forecasts", September 2020

In the OBR's view, the UK is on track to record the largest decline in annual GDP for 300 years, with output falling by more than 10 per cent in 2020 in all three of its July scenarios. In its central scenario, 2020 GDP declines by 12.4% and output recovers slowly, regaining its pre-virus peak by the end of 2022. Cumulative business investment is 6 per cent lower than in the March forecast over five years, while unemployment and business failures remain elevated. Real GDP is 3 per cent lower in the first quarter of 2025 than in the March OBR forecast.

The most recent stocktake of independent forecasts produced by HMT was published in mid-September. The table (above right) summarises the average and range of independent forecasts for 2020 and shows the average of September's new forecasts. The averages of the early September forecasts for 2020 were close to the OBR's upside scenario for 2020.

The above forecasts and scenarios predate the Governments "Winter Recovery Plan" (September 24th) and confirmation of the "Second Wave" (September 18th)

It is clear there will be job losses in Cheshire and Warrington. The volume of job losses is not clear



If 15% of those furloughed at the end of May become unemployed (OBR central scenario), the highest number of job losses in sectors by December in Cheshire and Warrington could be as follows:

More than 3,000 jobs lost

- Wholesale and retail trade; repair of motor vehicles and motorcycles
- Accommodation and food service activities

More than 2,000 jobs lost

- Professional, scientific and technical activities
- Administrative and support service activities

More than 1,000 jobs lost

- Construction
- Transportation and storage
- Arts, entertainment and recreation

The Bank of England's September outlook was more optimistic than in August but a marked rise in unemployment is expected

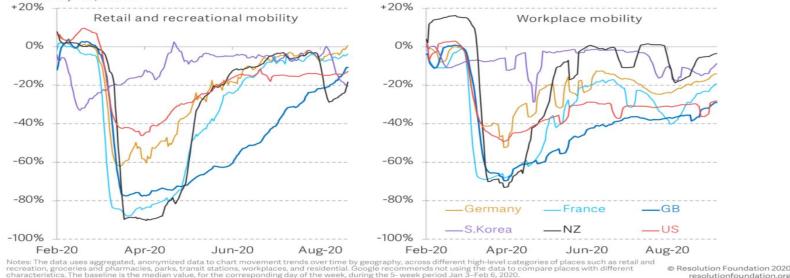
The Bank of England Monetary Policy Summary for September was published on September 17th, the day before the Government confirmed the UK had entered a second Covid-19 wave. Key points from the Summary included:

- The outlook for the economy remains unusually uncertain.
- UK GDP was projected to continue to recover, conditional on a) the direct impact of Covid-19 on the economy dissipating gradually; and b) an immediate, orderly move to a comprehensive free trade agreement with the European Union on 1 January 2021.
- The unemployment rate was projected to rise markedly and there remains a risk of a more persistent period of elevated unemployment than in the central projection.
- UK GDP in July was around 18½% above its trough in April and around 11½% below its 2019 Q4 level
- For 2020 Q3 as a whole, Bank staff expect GDP to be around 7% below its 2019 Q4
- Administrative data suggest that the number of paid employees has fallen by around 700,000 between February and August

The recession may not be "V" shaped

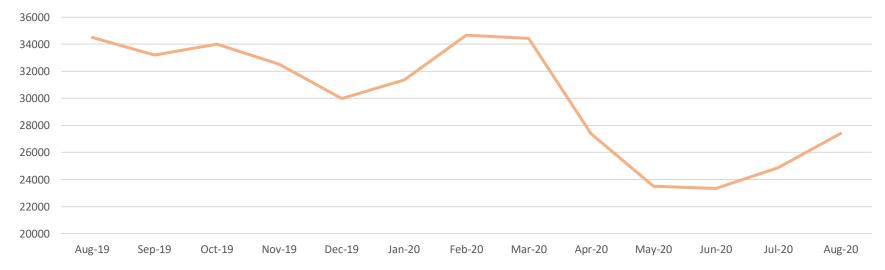
Figure 1 : Improvements in mobility had stalled even before social distancing restrictions were reintroduced





Source: RF analysis of Google, Community Mobility Reports.

Total Unique Job Postings Across All Occupations in Cheshire and Warrington Aug 2019 to Aug 2020



The Resolution Foundation has argued that despite fast rebounds of economic activity (output in July up nearly 20 per cent relative to its trough in April; overall retail sales recovering strongly; and the hospitality sector reportedly boosted by the Eat Out to Help Out), there will not be a "V shaped" recovery. In support of their argument, they cite recent Purchasing Manager Indices that show a slowing between September and August. They also argue that short-term activity indicators such as the Google mobility data (graphs opposite) – suggests that activity levels have stalled well short of previous norms.

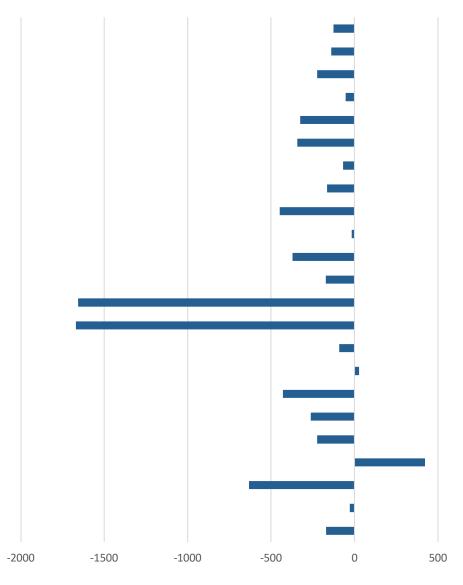
RF

Some economists are suggesting there may be a number of economic peaks and troughs. Only time will tell whether the recession is shaped V, W, U, L or something else.

The graph opposite illustrates EMSI data from August 2019 to August 2020 for all unique job postings in Cheshire and Warrington. Unique job postings declined by 33% between February 2020 and June 2020. Unique job postings fell by 21% between August 2019 and August 2020. The recovery in the demand for labour in Cheshire and Warrington suggests that there may not be a quick rebound to previous levels in Cheshire and Warrington.

Aug 2019 to Aug 2020, demand for labour has declined in every occupational area excepting health

Increase/Decrease in Unique Job Postings Aug 2019 to Aug 2020



Source: EMSI

Elementary Administration and Service Occupations Elementary Trades and Related Occupations Transport and Mobile Machine Drivers and Operatives Process, Plant and Machine Operatives Customer Service Occupations Sales Occupations Leisure, Travel and Related Personal Service Occupations Caring Personal Service Occupations Textiles, Printing and Other Skilled Trades Skilled Construction and Building Trades Skilled Metal, Electrical and Electronic Trades Secretarial and Related Occupations Administrative Occupations Business and Public Service Associate Professionals

Culture, Media and Sports Occupations

Teaching and Educational Professionals

Other Managers and Proprietors

Corporate Managers and Directors

Health Professionals

1000

Health and Social Care Associate Professionals

Business, Media and Public Service Professionals

Science, Engineering and Technology Associate Professionals

Science, Research, Engineering and Technology Professionals

With the exception of postings for Health Professionals and Health and Social Care Associated Professionals unique job postings have declined for every 2-digit occupational area in Cheshire and Warrington between August 2019 and August 2020.

The 2-digit occupational areas in Cheshire and Warrington where unique job posting declined by more than 21% (the average decline) are:

- Textiles, Printing and Other Skilled Trades
- Customer Service Occupations
- Administrative Occupations
- Sales Occupations
- Secretarial and Related Occupations
- Elementary Trades and Related Occupations
- Business and Public Service Associate Professionals
- Science, Engineering and Technology Associate Professionals
- Leisure, Travel and Related Personal Service Occupations
- Skilled Metal, Electrical and Electronic Trades

Government is intervening to mitigate the labour market downturn

Initial Labour Market Intervention

- Coronavirus Job Retention Scheme (furlough)
- Self Employment Income Support (SEIS)

Chancellor's July Statement – Labour Market Interventions

- Kickstart Scheme
- Payments for employers who hire new apprentices
- High value courses for school and college leavers
- Expanded Youth Offer
- Enhanced work search support
- Job finding support service
- Flexible Support Fund Increase
- New funding for sector-based work academies

Winter Recovery Plan – Labour Market Interventions

- Job Support Scheme
- Extension of SEIS

Partners are intervening to mitigate the labour market downturn

Workforce Recovery Programme

- Provision of information and help
- Support to get another job
- Into work board
- Working with employers, localities and sectors
- Enhanced start-up
- Skills and retraining

Skills and Employment Partners

- Reported increased recruitment of 16 and 18 yr olds
- Kickstart
- Accelerate

Tens of thousands still on furlough in C&W at end of July

S: Other service activities R : Arts, entertainment and recreation Q : Human health and social work activities P: Education O : Public administration and defence; compulsory social security N : Administrative and support service activities M : Professional, scientific and technical activities L : Real estate activities K : Financial and insurance activities J: Information and communication L: Accommodation and food service activities H : Transportation and storage G : Wholesale and retail trade; repair of motor vehicles and motorcycles F: Construction E : Water supply; sewerage, waste management and remediation activities D : Electricity, gas, steam and air conditioning supply C : Manufacturing B : Mining and quarrying A : Agriculture, forestry and fishing 0 2000 4000 6000 8000 10000 12000 14000

Estimated Furloughed Employments in C&W by Sector, July 31st

It is possible to apply the national

data on sectoral uptake of the

composition of Cheshire and

employments furloughed by

industry sector in Cheshire and

Warrington. These estimates are

presented in the graph opposite

for employments furloughed as of

July 31st 2020. It is estimated that

"Accommodation and food service

activities", "Wholesale and retail

trade; repair of motor vehicles"

and "Professional, scientific and

technical activities" all had more

than 10,000 employments

furloughed in Cheshire and

Warrington at this time.

16000

Warrington's industrial structure.

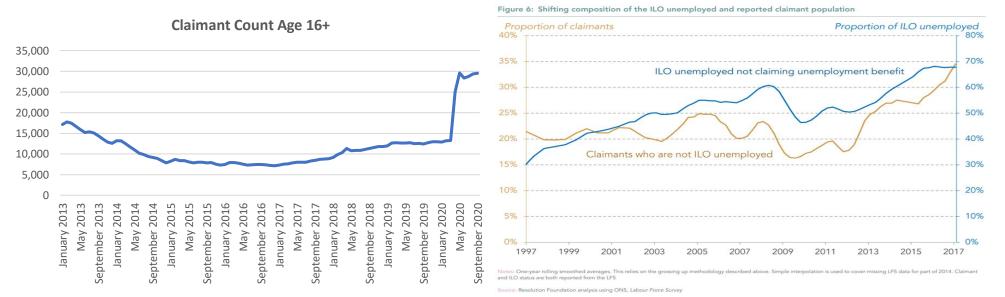
This allows for an estimate to be

furlough scheme to the

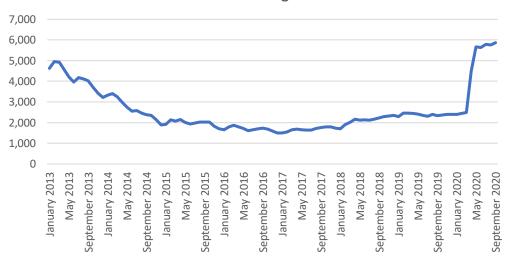
made of the number of

Source: HMRC CJRS Statistics

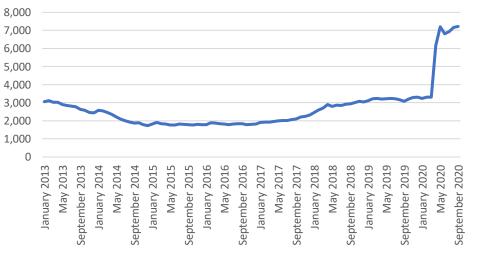
After a pause in July, the all-age, 16-24 and 50+ claimant count were at record levels in September









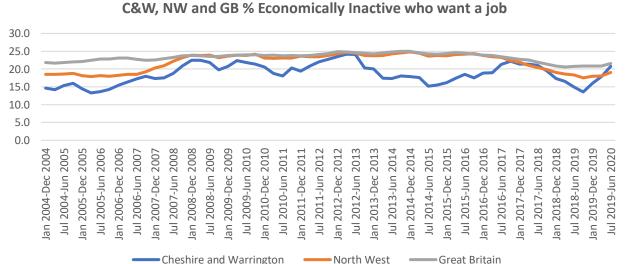


Not everyone counted in the claimant count is unemployed as defined by the International Labour Organisation (ILO), and not everyone who is ILO unemployed is a claimant. In 2017 just less than 70% of ILO unemployed were not claiming benefits and just less than 35% of claimants did not meet the definition of ILO unemployment (adjacent graph).

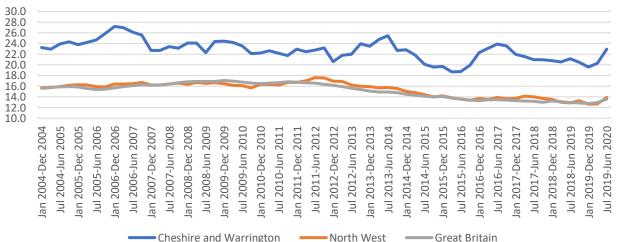
The Cheshire and Warrington 'All Age' claimant count was a whisker below 30,000 in September 2020, 138% higher than the September 2019 figure and was the second highest this century. The 16-24 claimant count was also the second highest this century and the 50+ claimant count was the highest on record.

Economic inactivity increasing in C&W. Proportions economically inactive 'wanting a job' and 'retired' increasing in C&W

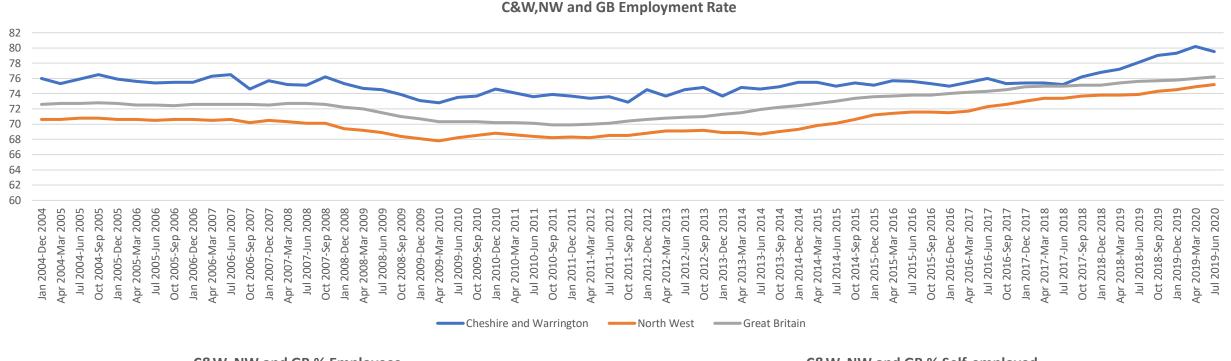
C&W, NW and GB % Economically Inactive 16-64 27.0 25.0 23.0 21.0 19.0 17.0 15.0 Oct 2015-Sep 2016 Apr 2018-Mar 2019 Apr 2019-Mar 2020 Jan 2004-Dec 2004 Apr 2004-Mar 2005 Oct 2004-Sep 2005 Apr 2005-Mar 2006 Jul 2005-Jun 2006 Oct 2005-Sep 2006 Jan 2006-Dec 2006 Apr 2007-Mar 2008 Jul 2007-Jun 2008 Oct 2007-Sep 2008 Jan 2008-Dec 2008 Oct 2008-Sep 2009 Apr 2009-Mar 2010 Jul 2009-Jun 2010 Oct 2009-Sep 2010 Jan 2010-Dec 2010 Jul 2013-Jun 2014 Apr 2014-Mar 2015 Jul 2014-Jun 2015 Oct 2014-Sep 2015 Jan 2015-Dec 2015 Apr 2015-Mar 2016 Jul 2015-Jun 2016 Jan 2016-Dec 2016 Apr 2017-Mar 2018 Jul 2017-Jun 2018 Oct 2017-Sep 2018 Jan 2018-Dec 2018 Jul 2018-Jun 2019 Oct 2018-Sep 2019 Jan 2019-Dec 2019 Jul 2019-Jun 2020 Jul 2004-Jun 2005 Jan 2005-Dec 2005 Apr 2006-Mar 2007 Oct 2006-Sep 2007 Jan 2007-Dec 2007 Apr 2008-Mar 2009 Jul 2008-Jun 2009 Jan 2009-Dec 2009 Apr 2010-Mar 2011 Jul 2010-Jun 2011 Oct 2010-Sep 2011 Jan 2011-Dec 2011 Apr 2011-Mar 2012 Jul 2011-Jun 2012 Oct 2011-Sep 2012 Jan 2012-Dec 2012 Apr 2012-Mar 2013 Jul 2012-Jun 2013 Oct 2012-Sep 2013 Jan 2013-Dec 2013 Apr 2013-Mar 2014 Oct 2013-Sep 2014 Jan 2014-Dec 2014 Apr 2016-Mar 2017 Jul 2016-Jun 2017 Oct 2016-Sep 2017 Jan 2017-Dec 2017 Jul 2006-Jun 2007 Cheshire and Warrington North West Great Britain

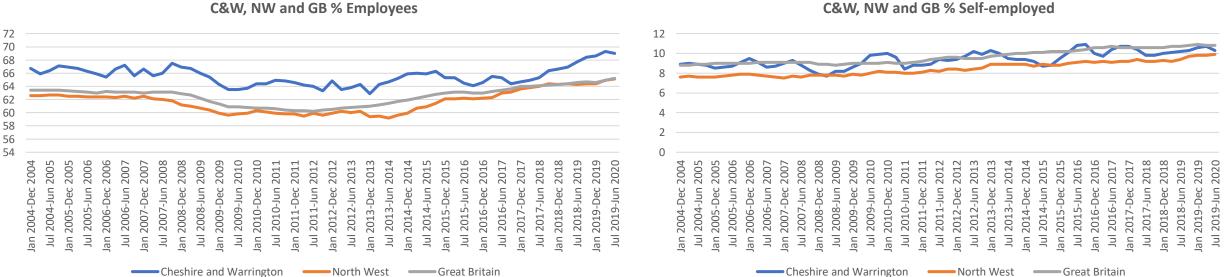






12 month employment rate declined in July 2020 compared to March 2020. Declines in both employment and self-employment

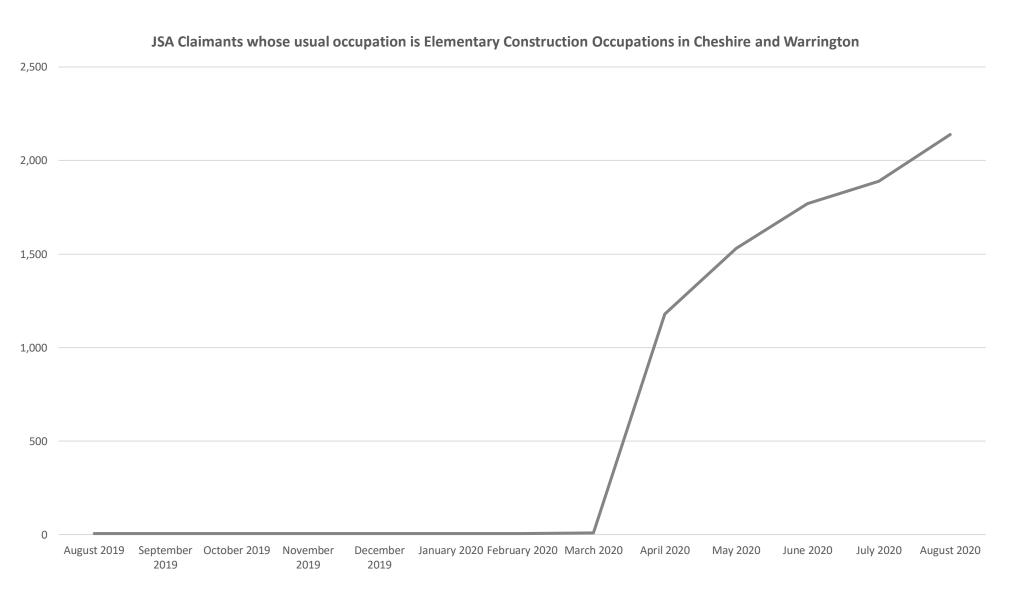




Great Britain

Great Britain

Very sharp rises in the number of JSA claimants citing "Elementary Construction Occupations" as their prior occupation



58% of JSA claimants in August 2020 gave their previous occupation as 'Elementary Construction Occupations'. In August 2019, less than 0.5% of JSA claimants gave a previous occupation of 'Elementary Construction Occupations'. The graph opposite shows that the number in this category was at 5 or 10 every month until April 2020 when the number increased from 10 to 1,180. The April 2020 figure had almost doubled by August 2020 to 2,140. This type of rise for this prior occupation has happened elsewhere

The Demand for Labour and Skills by Employers

Key Population and Jobs Indicators

Population

- In 2019 the total population of Cheshire and Warrington was 937,200.
- There was a 49%/51% male/female split.
- Between 2014 and 2019, Cheshire and Warrington's population increased by 2.0%.
- Population is expected to increase by a further 1.8% between 2019 and 2024.
- The proportion of C&W's population that is of working age is lower than both the North West and GB.
- The population of Cheshire and Warrington has an older profile than is to be found for GB and will further age.

Jobs

- Between 2010 and 2018 Jobs Density in Cheshire and Warrington increased from 0.84 to 1.
- Between 2014 to 2019, jobs increased by 8.7% in C&W compared to 8.4% national growth.
- In 2019, there were over 43,000 businesses in Cheshire and Warrington, employing 490,000 people.
- 45% of businesses were in Cheshire East, 33% in Cheshire West and Chester, and 22% in Warrington.
- 90% of businesses in Cheshire and Warrington employed fewer than 10 people.
- Only 0.4% of businesses employed more than 250 people.

Cheshire and Warrington has seen strong jobs growth in areas of sectoral strength

There are five sectors that have more than 40,000 jobs in Cheshire and Warrington. They are:

- Manufacturing
- Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles
- Professional, Scientific and Technical Activities
- Administrative and Support Service Activities
- Human Health and Social Work Activities

The sectors which added the most jobs between 2014 and 2019 are:

- Wholesale and retail trade; repair of motor vehicles and motorcycles (+13,000 jobs)
- Professional, scientific and technical activities (c18,000 jobs)

Sectoral strengths in the Cheshire and Warrington local economy (ie those sectors with the highest location quotients - LQs) include:

- Wholesale and retail trade; repair of motor vehicles and motorcycles (LQ of 1.18)
- Professional, scientific and technical activities (LQ of 1.51)
- Financial and insurance activities (LQ of 1.18)
- Water supply; sewerage, waste management and remediation activities (LQ of 1.19).

In the main, the fastest growing sectors in Cheshire and Warrington pay above average wages

The table opposite presents information on those 2-digit SIC industry sectors that have grown more than 10% between 2015 and 2020 and currently employ more than 3,000 people in Cheshire and Warrington, ranked by the average wages per job. Fourteen of these seventeen sectors have an average wage higher than the Cheshire and Warrington average of £28,7000

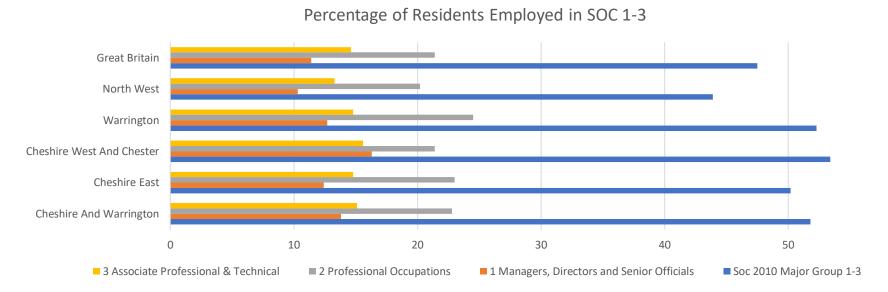
The high employment sectors with average wages above £40,000 are:

- Manufacture of chemicals and chemical products
- Scientific research and development
- Waste collection, treatment and disposal activities; materials recovery
- Activities auxiliary to financial services and insurance activities

This type of information can be used to inform discussions with young people about their career and learning choices

High Employment Sectors (2-digit SIC) with recent Gro	owth in Cheshire a	and Warr	ington
	Avg. Wages Per	2020	2015 - 2020 %
	Job (£)	Jobs	Change
Manufacture of chemicals and chemical products	47,160	4149	17%
Scientific research and development	45,213	4566	83%
Waste collection, treatment and disposal activities; materials recovery	45,180	3638	16%
Activities auxiliary to financial services and insurance activities	43,615	6006	27%
Architectural and engineering activities; technical testing and analysis	39,880	14804	33%
Activities of head offices; management consultancy activities	38,922	13679	30%
Financial service activities, except insurance and pension funding	36,652	12747	17%
Construction of buildings	34,981	7003	19%
Civil engineering	34,446	3983	16%
Wholesale trade, except of motor vehicles and motorcycles	30,964	22640	19%
Land transport and transport via pipelines	29,763	9736	24%
Legal and accounting activities	29,304	27698	95%
Specialised construction activities	29,187	11974	11%
Wholesale and retail trade and repair of motor vehicles and motorcycles	29,143	12339	45%
Manufacture of fabricated metal products, except machinery and equipment	28,438	5564	19%
Human health activities	28,390	33159	16%
Warehousing and support activities for transportation	27,801	11203	18%
Source: EMSI Analyst			

Residents of C&W have higher skills and more higher skilled occupations. Men are better paid, women aren't



The occupational profile for residents of Cheshire and Warrington and all three Local Authorities is skewed towards higher skilled occupations (graph opposite).

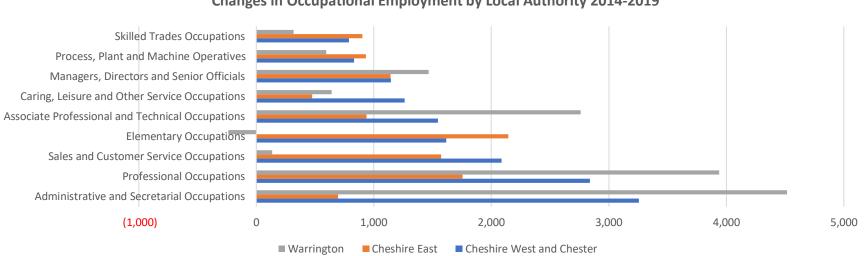
C&W has a higher proportion qualified at NVQ 4+ and a lower proportion with no qualifications (table bottom left).

60

The median Gross weekly pay for LEP residents was higher than that for the GB. However, there was a clear gender disparity. Whilst male full-time workers earned £55.50 a week more than their counterparts in Great Britain, female full-time workers resident in the LEP earned almost the same as those in Great Britain. Indeed, when hourly rates are considered, they were actually lower for female full-time workers in C&W (£13.90 for CWLEP compared to £13.99 for GB).

Earnings by place of residence (2019)						Qualifications (Jan 20	19-Dec 2019)							
	Cheshire And Warrington (Pounds)	Cheshire East (Pounds)	Cheshire West And Chester (Pounds)	Warrington (Pounds)	North West (Pounds)	Great Britain (Pounds)		Cheshire And Warrington (%)	Cheshire East (%)	Cheshire West And Chester	Warrington (%)	North West (%)	Great Britain (%)	v t E
Gross Weekly Pay										(%)				r
Full-Time Workers Male Full-Time	615.7 685.5	623.3 691.2	611.3 692.8	595.9 669.3	555.8 598.0	587.0 632.0	NVQ4 and Above	42.1	41.9	43.0	41.0	36.1	40.3	S
Workers	005.5	051.2	052.0	005.5	556.0	052.0	NVQ3 and Above	60.7	59.6	61.6	61.1	55.2	58.5	3
Female Full-Time	529.8	533.9	516.5	532.5	498.0	528.9								V
Workers							NVQ2 and Above	79.3	77.7	81.2	79.1	74.5	75.6	t
Hourly Pay - Excludi	0						NVQ1 and Above	88.2	86.8	89.7	88.2	85.0	85.6	ι
Full-Time Workers	15.59	16.02	15.55	15.34	13.95	14.88								f
Male Full-Time	16.64	16.95	16.75	15.80	14.56	15.44	Other Qualifications	5.4	6.8	3.7	5.9	6.3	6.7	
Workers Female Full-Time	13.90	14.38	13.68	14.00	13.16	13.99	No Qualifications	6.4	6.4	6.6	5.9	8.7	7.7	C
Workers	13.90	14.56	15.06	14.00	13.10	13.99	Source: ONS annual population survey. Numbers and % are for those of aged 16-64, % is a							
Source: ONS annual survey of hours and earnings - resident analysis, Notes: Median earnings in pounds for employees living in the area, figures for this table have been constructed on an Output Area basis														

All occupational areas have grown 2014-2019. Eight 4-digit SOC areas have grown by more than 1,000 jobs



Changes in Occupational Employment by Local Authority 2014-2019

Change in Job Numbers 2014-2019 (4 digit SOC)								
	2014	2019	Change	%				
	Jobs	Jobs		Change				
Book-keepers, payroll managers and wages clerks	8,755	13,489	4,734	54%				
Chartered and certified accountants	3,525	6,651	3,126	89%				
Sales and retail assistants	20,601	22,700	2,099	10%				
Cleaners and domestics	9,553	11,485	1,932	20%				
Elementary storage occupations	10,003	11,630	1,627	16%				
Other administrative occupations n.e.c.	11,108	12,250	1,142	10%				
Sales accounts and business development managers	7,948	9,069	1,121	14%				
Taxation experts	801	1,807	1,006	126%				
Source: EMSI Analyst								

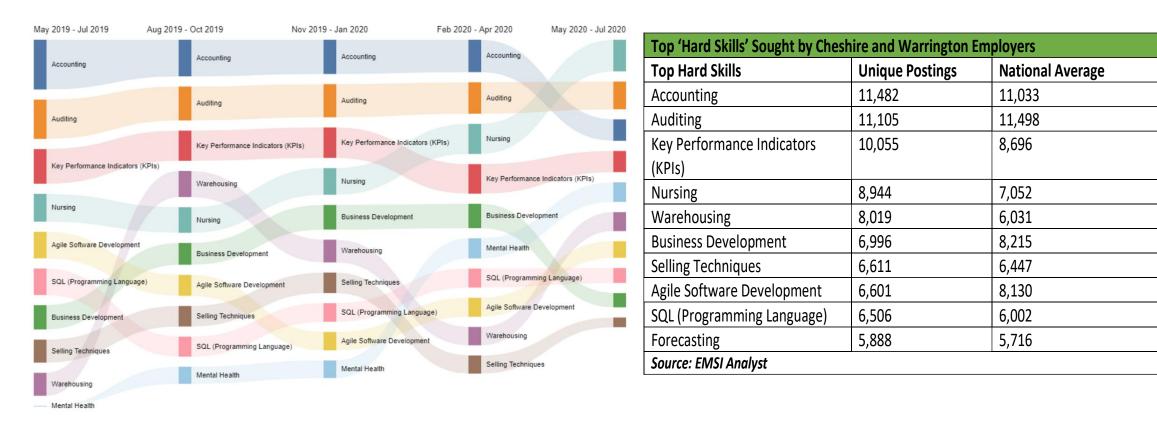
The Table opposite illustrates the change in employment, by occupational area, in Cheshire and Warrington local authorities between 2014 and 2019. In this time, every 1-digit SOC occupational area has grown in every local authority area with the single exception of "Elementary Occupations" in Warrington, which declined by 237 jobs.

The greatest increase in the number of 4-digit SOC jobs between 2014 and 2019 was for:

- Book-keepers, payroll • managers and wages clerks
- Chartered and certified • accountants
- Sales and retail assistants •

Each of these occupational areas grew by more than 2,000 jobs in this period.

Employer demand for skills in Nursing and Warehousing and, to a lesser extent, in Accounting and SQL is higher in C&W



The chart above, from EMSI, illustrates the demand for skills by employers, over time, in Cheshire and Warrington as expressed in online job postings. The impact of the pandemic is clear both in the overall decline in the demand for labour when comparing May-July 2020 with May-July 2019; and also in the relative ranking of skills sought – for example the requirement for Nursing skills moving from fourth to first in this time period.

The Table above sets out the top 'hard' skills sought be employers in job postings in Cheshire and Warrington. The demand for skills in Nursing and Warehousing and, to a lesser extent in Accounting and SQL are higher than might be expected if demand in Cheshire and Warrington were to mirror the national picture.

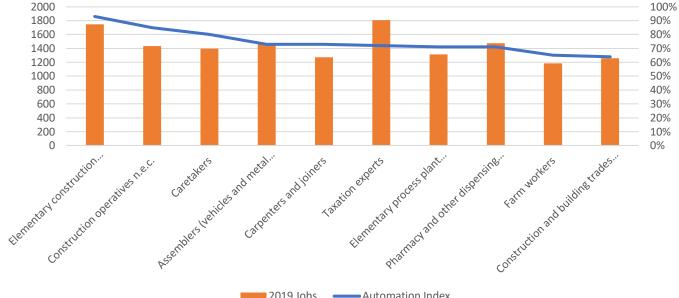
There are labour market failures where partners can take action

The table opposite sets out the 4-digit soc occupations which have had the highest 'average posting intensity' for vacancies between 2016 and 2020. For those roles with a high posting intensity and high current volumes, this suggests a market failure in the labour market that skills and employment partners should consider developing interventions to address. These interventions will vary from intensive vacancy-focussed support to individuals to longer-term highlevel skills programmes. On this basis, the following occupational areas should be considered priorities for action by skills and employment partners:

- Managers and directors in storage and warehousing
- Programmers and software development professionals
- IT business analysts, architects and systems designers
- Web design and development professionals
- Quantity surveyors
- IT user support technicians
- Book-keepers, payroll managers and wages clerks
- Customer service occupations n.e.c.

Occupation	Avg. Posting	Latest 30 Days	Latest 30 Days	Median
	Intensity (Jan	Unique	Unique Postings %	Annual
	2016 - Aug 2020)	Postings (Active)	Change (Active)	Wages
Caretakers	11:1	53	83%	20384
Managers and directors in storage and warehousing	10:1	278	13%	27747
Restaurant and catering establishment managers and proprietors	8:1	34	0%	23296
Programmers and software development professionals	8:1	898	10%	43555
Other skilled trades n.e.c.	8:1	10	-17%	23587
Travel agents	8:1	19	19%	19365
IT business analysts, architects and systems designers	7:1	167	-2%	44907
Web design and development professionals	7:1	364	9%	32406
Quantity surveyors	7:1	199	9%	45448
IT user support technicians	7:1	171	-1%	29120
Credit controllers	7:1	64	-25%	23816
Book-keepers, payroll managers and wages clerks	7:1	795	5%	25730
IT engineers	7:1	62	5%	31782
Customer service occupations n.e.c.	7:1	266	26%	20738
School midday and crossing patrol occupations	7:1	53	56%	18720

Automation will threaten some existing occupations and will leave some occupations largely untouched



IT user support technicians

Managers and directors in transport and distribution

Teaching and other educational professionals n.e.c.

tlei construct teri	nacy		CONSC
Colt pseed	phathach constructio		Caret
2019 Jobs ——Auto	omation Index		
Main Occupations in Cheshire and Warrington Least at	t Risk from Automation		By contra
	Automation Index	2019 Jobs	- information
Construction project managers and related professiona	ls 0%	1175	- informat
Production managers and directors in construction	0%	1988	that are a
Legal associate professionals	1%	1161	EMSI's A
Financial institution managers and directors	1%	1547	
Mechanical engineers	1%	1100	-
Design and development engineers	2%	1571	-
Quality assurance and regulatory professionals	2%	1326	-
Business and related associate professionals n.e.c.	2%	1912	-
Production and process engineers	2%	1653	-

2%

2%

2%

1240

1525

1429

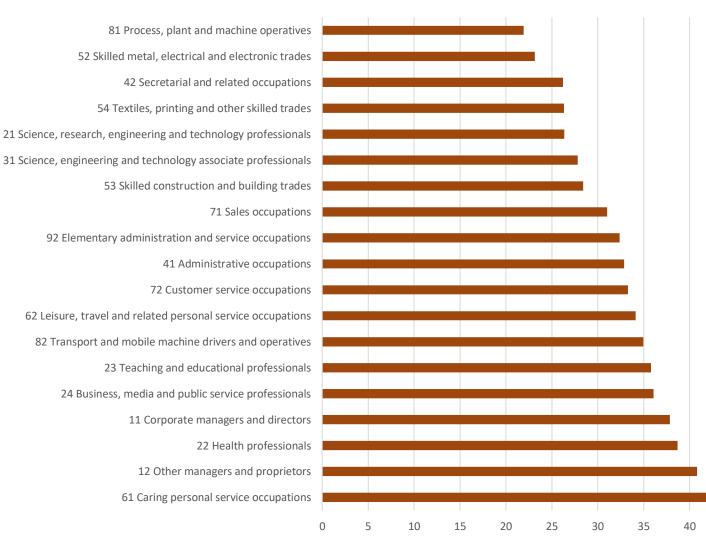
Main Occupations in C&W at Risk of Automation

The table opposite provides information on the top 10 4-digit SOC occupation types that employ more than 1,000 people in Cheshire and Warrington that can be considered at greatest risk from automation as measured by EMSI's Automation Index. The three most 'at risk' occupations are:

- Elementary construction occupations ٠
- Construction operatives n.e.c.
- etakers

rast, the table opposite provides tion about those 4-digit SOC occupations at least risk of automation as measured by Automation Index.

The Cheshire and Warrington labour market is forecast to experience significant levels of replacement demand to 2027



2017-2027 % Replacement Demand in C&W by 2-digit SOC

The chart below presents information on the percentage of the current workforce in each 2digit occupation it is forecast will need to be replaced because of replacement demand in that occupation. Levels of replacement demand are expected to vary significantly for different occupations, ranging from 22% to 42%. Occupational areas that are expected to experience replacement demand more than 35% are:

- Caring personal service occupations
- Other managers and proprietors
- Health professionals

45

- Corporate managers and directors
- Business, media and public service professionals
- Teaching and educational professionals
- Transport and mobile machine drivers and operatives

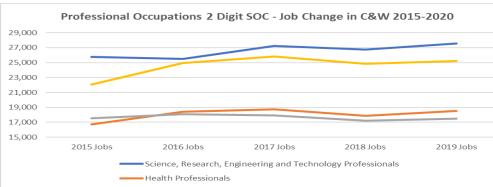
Only the last of these is exposed to high risk of automation.

Source: IER, Working Futures LEP Tables

Example Occupational and Industrial Profiles

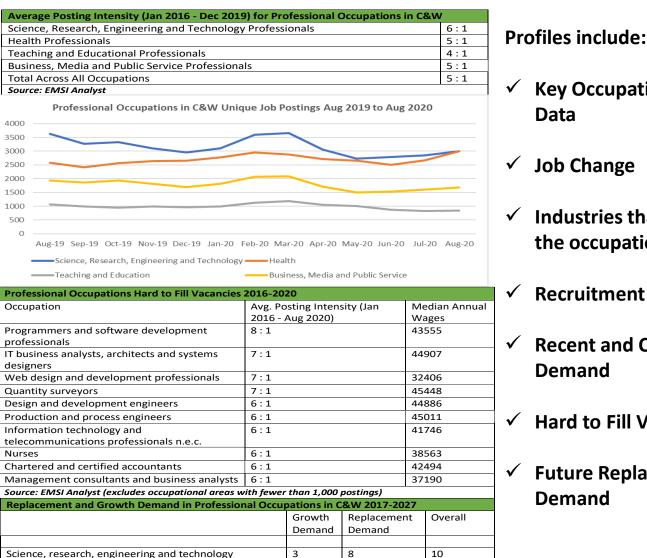
Nine Occupational Profiles (1-digit SOC/2- digit SOC)

Professional Occupations in C	&W Key Da	ta			
Description	2015 -	Automation	2020	2020 Jobs	Median
	2020 %	Index	Location		Wages
	Change		Quotient		
Science, Research,	8%	2.5%	1.08	27,778	£43,348.16
Engineering and Technology					
Professionals					
Health Professionals	11%	8.2%	0.88	18,581	£42,672.28
Teaching and Educational	(1%)	5.7%	0.79	17,447	£47,748.03
Professionals					
Business, Media and Public	16%	10.0%	1.02	25,540	£41,024.36
Service Professionals					
Source: EMSI Analyst					



Business, Media and Public Service Professionals

Industries that Employ Professional Occupations in Cheshire and Warrington							
industries that Employ Professiona		1					
	Occupation Group Jobs in Industry	% Change (2015 - 2020)	% of Occupation Group in	% of Total Jobs in Industry			
	(2020)		Industry (2019)	(2019)			
Hospital activities	12,926	17%	14.4%	53.5%			
Computer programming, consultancy and related activities	7,254	(2%)	8.2%	60.2%			
Primary education	6,702	(6%)	7.6%	43.4%			
Secondary education	6,553	(0%)	7.4%	54.5%			
Accounting, bookkeeping and auditing activities; tax consultancy	6,330	117%	6.8%	26.4%			
Architectural and engineering activities and related technical consultancy	5,825	31%	6.4%	45.4%			
Management consultancy activities	3,250	40%	3.5%	30.6%			
Research and experimental development on natural sciences and engineering	2,645	83%	2.9%	58.3%			
Temporary employment agency activities	2,404	(13%)	2.8%	20.0%			
Other human health activities	1,973	14%	2.2%	46.4%			
Source: EMSI Analyst							



3

3

4

7

9

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professionals Health professionals

Teaching and educational professionals

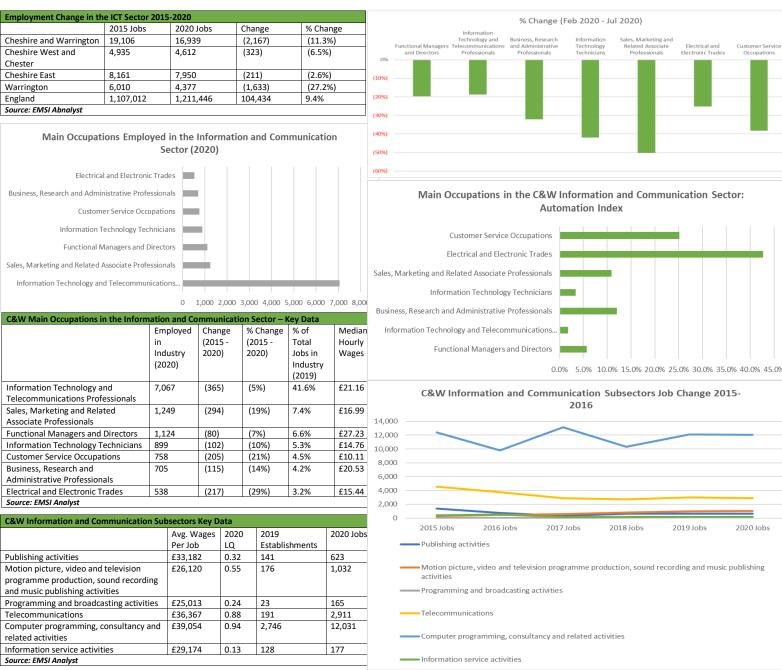
Business, media and public service professionals

Source: Working Futures 2017-2027, LEP Tables, IER

Key Occupational Sector Data Job Change Industries that employ

- the occupation
- **Recruitment data**
- **Recent and Current** Demand
- Hard to Fill Vacancies
- **Future Replacement** Demand

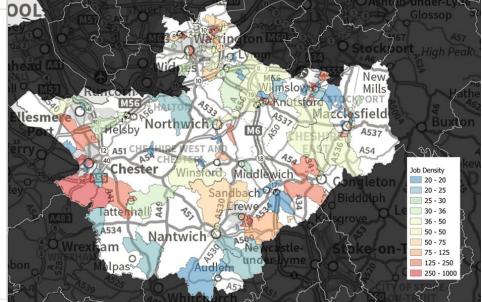
Thirteen Industry Sector Profiles (1-digit SIC/2-digit SIC)



Profiles include:

- Employment Change
- ✓ Main Occupations data
- ✓ Subsectors Key data and job change
- ✓ Exposure to Automation
- ✓ Location of Employment

LSOAs with more than 20 Jobs in the Information and Communication Sector in C&W



Map by Brennan Wilson Ltd in QGIS. Data from NOMIS BRES (open access) and OS