

COVID-19 AND THE NORTHERN IRELAND ECONOMY MACROECONOMIC & SECTORAL ASSESSMENT

ASSESSMENT AS OF 30 JUNE 2020 ANALYTICAL SERVICES DIVISION: DEPARTMENT FOR THE ECONOMY

Summary

- The first case of Coronavirus was confirmed in the UK on 31 January 2020. The first
 case in Northern Ireland was verified by the Public Health Agency on 27 February 2020.
 In response to the outbreak worsening, the Prime Minister stated on 23 March 2020 that
 non-essential businesses were to close and social distancing measures to be
 ratcheted-up.
- Following agreement by the NI Executive, the Department of Health made The Health Protection (Coronavirus, Restrictions) Regulations (Northern Ireland) 2020. These regulations were created to help the NI Executive to implement restrictions to slow the spread of the coronavirus, help the Health and Social Care system deal with the situation and ultimately save lives.
- Although only around 100 days since the lockdown began, the economic cost to Northern Ireland has been severe. Output was reduced by 25-30%, with all sectors of the local economy affected. Around 212,000 workers have been furloughed under the HMRC Job Retention Scheme and almost 70,000 under the Self-Employed Income Support Scheme. The Claimant Count increased by over 35,000 people in just two months.
- Fiscal and monetary measures were announced UK-wide in response to the
 deteriorating economic outlook, as well as support introduced by the NI Executive.
 These measures will have mitigated some of the adverse impact and will help allow
 many businesses to be in a place to restart production and services.
- A five-stage plan for slowly moving out of lockdown has been published by the NI Executive. Some restrictions to business have been lifted already and more measures to ease restrictions have been announced for the coming weeks.
- A swift economic recovery is critical to ensure a fair and inclusive society and to seek to avoid a more permanent 'scarring' impact on the economy and on wider society.

Background

The outbreak of coronavirus disease (Covid-19) was first reported from Wuhan, China, on 31 December 2019, ¹ but the World Health Organisation (WHO) does highlight that some individuals may have shown symptoms before this date.² As of June 2020, thousands of people in Northern Ireland have been diagnosed with Coronavirus and hundreds of people have tragically lost their lives (see Annex A).

More is now known about Covid-19 and how best to contain the virus than at the onset of this outbreak. Some of the worst scenarios have been averted as is evidenced by the ability to stand down the Belfast City Hospital Tower Block designated as a Nightingale Hospital for the first wave.³ Hospital admissions with Covid-19 across the nation have fallen steadily.

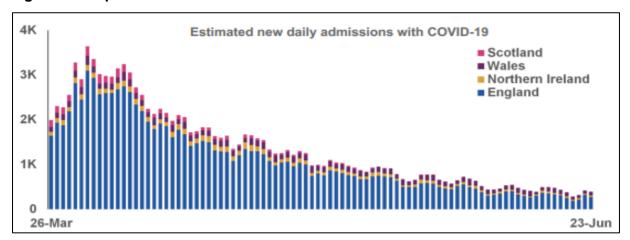


Figure 1: Hospital Admissions with Covid-19 across the UK⁴

It has only been a number of months since the outbreak began in Northern Ireland, but it is apparent that the virus will have a devastating impact on economic activity here. All sectors have been affected by the efforts to contain coronavirus, although some industries continued to operate on a limited basis, by mobilising contingency plans and enabling working from home etc. As a result of the good work in tackling the health implications of the virus, the NI Executive is currently relaxing some restrictions, but only after considering the most up-to-date scientific evidence, the ability of the health service to cope and the wider impacts on our health, society and the economy.

Assessing the precise economic impact can be difficult ordinarily, but especially problematic in these fluid situations. At the time of writing, it appears that coronavirus cases are on a downward path, but it is difficult to be certain at this stage as to how quickly all restrictions will be eased. It is also difficult to judge the behavioural response by businesses and consumers and therefore the shape of the recovery. Whether the economic shock has created any more permanent 'scarring' effects is also not known at this stage, but is likely.

This paper is focussed solely on economic impacts of Covid-19, drawing on the information produced elsewhere by Government and others to make an informed economic assessment. In doing so it looks into the current Global, European, UK and Northern Ireland economic impact of coronavirus and the potential for economic recovery.

Global Impact

The global economy is now experiencing the deepest recession since the Great Depression in the 1930s, with GDP declines of more than 20% in many countries during shutdowns and a surge in unemployment. The longer the outbreak and its containment measures continue, the more severe the economic damage. The OECD (Organisation for Economic Cooperation and Development), calculates that in a 'double hit' scenario, in which a second outbreak occurs in all economies by the end of 2020, global GDP will decline by 7.6% this year and remain well short of its pre-crisis level at the end of 2021. However, in a "single-hit" scenario, world GDP is projected to decline by 6% this year, but will have almost regained the pre-crisis level at the end of 2021. ⁵ The IMF (International Monetary Fund) has projected a global decline in output of 4.9% in 2020, with the pandemic having a more negative impact on output than initially anticipated. ⁶

Annex B presents the latest economic output forecasts produced by the OECD and the IMF.

In the U.S. the outbreak has brought the longest economic expansion on record to a halt. The Congressional Budget Office (CBO) has predicted that the pandemic will haunt the US economy for a decade. In a recent letter to lawmakers, CBO director Phillip Swagel projects that, by 2030, economic output will be \$7.9 trillion (3%) less than the agency projected in January⁷. Department of Labor figures indicate that more than 40 million Americans have lost their jobs since the outbreak began.⁸ According to OECD estimates, GDP is expected to fall by over 8% in 2020 in the case of another virus outbreak later in the year, while the more optimistic scenario of further lockdowns being avoided will impact annual growth by a percentage point less. Similarly, the IMF has predicted US output to fall by 8%.

According to the main preliminary results by the National Bureau of Statistics of China, GDP fell in the first quarter of 2020 in China, by 6.8%. This was driven mainly by plummeting output in industry and tourism-related services. Following this collapse, the OECD expects that GDP will fall by around 3.7% in 2020 if there is a second virus outbreak later in the year, and by a percentage point less if a further outbreak is avoided, before rebounding in 2021.

European Impact

The Euro Area is facing an economic contraction of a magnitude and speed that is unprecedented in peacetime. Measures to contain the spread of the coronavirus largely halted economic activity in all the Euro Area countries, though economies are now beginning the process of reopening. The IMF has indicated that Europe will see the biggest contraction in economic activity in 2020, with output expected to decline by 10.2%.

The European Central Bank (ECB) similarly suggests that Euro Area GDP could fall by between 5% and 12% this year. The OECD, meanwhile, estimates that GDP will contract between 9% and 11.5% depending on whether a second wave occurs. In the first quarter of 2020, which was only partially affected by the spread of the coronavirus, Euro Area real GDP decreased by 3.8%, quarter on quarter, reflecting the impact of lockdown measures in the final weeks of March.¹⁰

France's GDP dropped 5.8% in the first quarter of 2020, according to the INSEE official statistics agency, the biggest fall since records began in 1949. The IMF expects France's GDP to fall 12.5% in 2020. The Spanish government is expecting GDP to decline by 9.2% in 2020 (following a decline of 5.2% in the first quarter), while the Bank of Spain is expecting an annual contraction of between 9% and 11.6%.¹¹

In Germany, containment measures have been shorter and less stringent than in other major European economies, thanks to widespread testing and high health sector capacity. As a result, the IMF expects output in Germany to decline by 7.8%, a lower figure relative to its European counterparts. In the case of a single-hit scenario, OECD projects GDP to decline by 6.6% in 2020, while a decline of 8.8% is projected in a double-hit scenario. According to figures published by Germany's Labour Office, the unemployment rate jumped to 6.3% in May, up from pre-crisis levels of 5%. ¹²

For the Republic of Ireland, the OECD estimates that, if a further outbreak is avoided, GDP would fall by almost 7% in 2020. However, a second wave of the virus would entail additional business closures and job losses, delaying the recovery and threatening to entrench long-term unemployment and risk aversion by firms. If this were to occur, annual GDP would decline by almost 9% in 2020 with virtually no recovery until 2021.

United Kingdom / Northern Ireland Impact

The coronavirus outbreak and associated public health interventions affect economic activity through a number of channels – by harming demand, supply chains, exports, cash flows, consumer confidence, labour supply and investment. Many businesses were closed for a number of weeks, while some are still closed. Some businesses may never reopen and a number of workers have been laid off or had hours reduced.

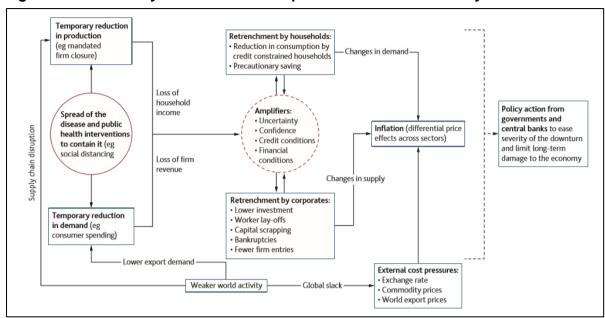


Figure 2: Channels by which Covid-19 Impacts on Economic Activity 13

While intervention by HM Government, the Bank of England and NI Executive can help mitigate some of the impact, and stimulate an economic recovery, at best economic policy at times like these can only limit the damage.

In terms of sectors impacted, the collapse in spending on goods and services that were heavily affected by the lockdown, such as transport, restaurants, housing goods, hotels and entertainment, represents a big blow to the economy because those items add up to around 50% of family expenditure. This is shown in the Bank of England illustration below.

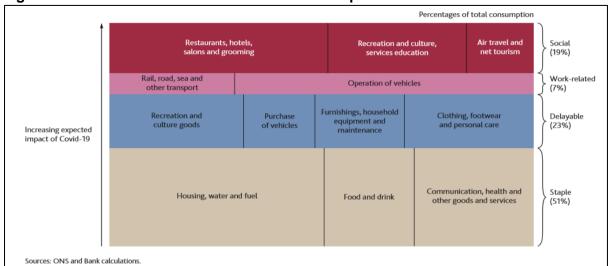


Figure 3: Share of Annual UK Household Consumption in 2019 14

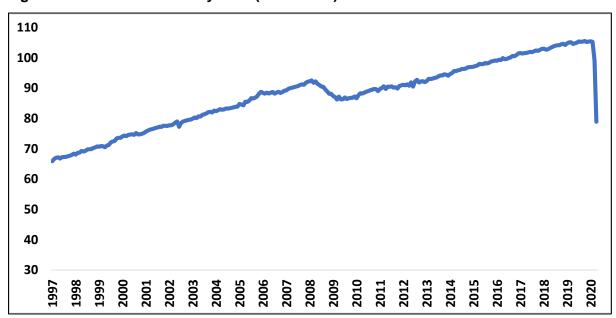
GDP data from ONS shows the UK's economy shrank by 20.4% in April - the largest monthly contraction on record - as the country spent its first full month in lockdown. ¹⁵ Virtually all areas of activity were affected with pubs, education, health and car sales all providing the biggest contributions to this historic fall. ¹⁶ The contraction is three times greater than the decline seen during the whole of the 2008 to 2009 economic downturn. ¹⁷

Table 1: Change in UK Monthly GDP (%) 18

	February to March 2020	March to April 2020	February to April 2020
Agriculture	-0.2	-5.5	-5.6
Production	-4.2	-4.2 -20.3	
Construction	-5.9	-40.1	-43.6
Services	-6.2	-19.0	-24.0
Whole economy	-5.8	-20.4	-25.1

In April, the economy was around 25% smaller than in February.¹⁹ However, it is considered that April is likely to be the worst month, as the government began easing the lockdown in May. Some activity (such as home improvements) may not be picked up in the GDP data.

Figure 4: Index of UK Monthly GDP (2016 = 100) 20



The Fraser of Allander Institute at the University of Strathclyde has been working on a research project examining the impact of the current coronavirus pandemic on the Northern Ireland economy, on behalf of the Department for the Economy. This project uses data from NISRA in the form of detailed GDP methodology and the Input-Output tables to model sectoral and regional effects, as well as providing more tools for use by the DfE in future.

The Fraser of Allander Institute were provided with the detailed weights and sources used to build the short-term indicator for Northern Ireland, and also examined the methodology used for the new GDP measure. Following the publication of UK GDP for April, the researchers have undertaken an initial analysis on the likely impact of on the Northern Ireland economy,

given the differential weights in the economy. This initial analysis suggests that the economy in Northern Ireland could have contracted slightly more than the UK average, by 21.5% in April compared to 20.4% in the UK.

This is due to:

- Larger shares of public sector and wholesale/retail in the NI economy. This is offset slightly by the smaller service sector overall;
- A bigger manufacturing sector, which experienced a substantial contraction in April (of 24%):
- A larger share of construction, which has contracted by 40% in April;
- Agriculture being more dominant here. This experienced a much smaller contraction.

It should be noted that this only represents initial findings from the research and more finalised conclusions can be drawn as the research progresses.

Google mobility data illustrates the scale of the decrease in activities across the UK, particularly in retail and recreation, which soon after lockdown were down around 80% on figures from early March 2020. However, mobility levels have experienced some recovery in May and June, albeit still down on baseline levels.

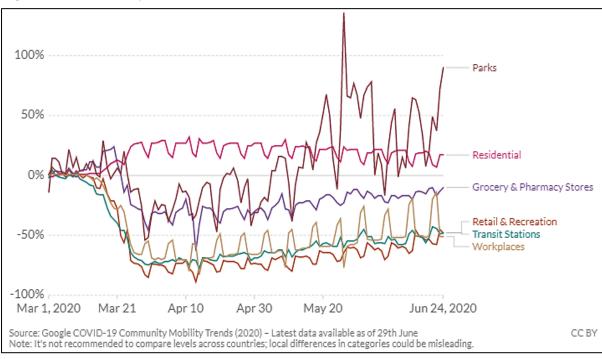


Figure 5: UK Mobility Data for Places of Work, Travel and Leisure²¹

A summary of recent economic forecasts for the UK and for Northern Ireland is provided in the graph below. It should be noted that these forecasts are assumptions-based, with many factoring a recovery towards the end of the year. Danske Bank have forecast growth of -7.5% for the Northern Ireland economy in 2020. However, this is conditional on the shock being concentrated into the first half of 2020, with an expectation that activity will begin to recover gradually in the second half of this year and into 2021, with government policy measures supporting the recovery. The forecasts anticipating the most severe recession for the 2020 year are typically some of the most recent (OECD, Bank of England etc).

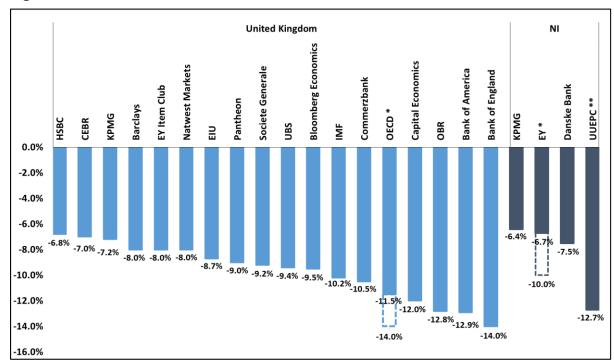


Figure 6: Recent Estimates of UK and NI Economic Growth for 2020 22

The Ulster University Economic Policy Centre (UUEPC) have estimated the impact on economic output (GVA), which they expect to reduce by 12.7% in annual terms. Using the Nominal GVA figure for 2018, this would equate to a £5.4 billion fall in GVA in one year.²³ Mid Ulster, Newry, Mourne & Down, Causeway Coast & Glens and Mid & East Antrim are expected to see the greatest impacts proportionally in their local economies in terms of GVA. This reflects the sectoral concentrations of Construction, many parts of Manufacturing, Accommodation and/or Retail in these areas.

At a company level, monthly insolvency statistics for Northern Ireland show there were no new compulsory liquidations in Northern Ireland in April and May 2020. This was as a result of the lockdown measures being implemented by the Northern Ireland Executive which resulted in the Closure of the Courts and Insolvency Service offices. There was a small number of new creditors' voluntary liquidations and company voluntary arrangements in April and May however. ²⁴

At an individual level, insolvencies again were very low, affected by the Closure of the Courts and Insolvency Service offices, however, there were a number of Debt Relief Orders (DROs) and Bankruptcies.

In terms of business creation, Wales, Northern Ireland and Scotland have suffered the largest declines across all the twelve UK regions, relative to the same period last year. Company registrations from 23 March 2020 to 31 May 2020 in Northern Ireland were down over 30% from the same period last year.²⁵

UK-wide, business creation is down 25% across all major industrial sectors. The retail sector is suffering the worst, whilst mining and agriculture are more resilient.

^{*} Also includes alternative, more pessimistic forecasts (dotted lines).

^{**} This estimate takes account of the impact of the restrictions in Q2 and also the impact of easing of restrictions in Q3.

Monetary and Fiscal Response

In March 2020, the Bank of England cut interest rates from 0.75% to 0.10%. Interest rates are now at the lowest ever in its 325-year history. The Bank said it would also free up billions of pounds of extra lending power to help banks support firms. ²⁶ On 17 June the Monetary Policy Committee voted for the Bank to continue with the existing (QE) programme of £200bn of UK government bond and sterling non-financial investment-grade corporate bond purchases, and to increase the stock of purchases of UK government bonds, financed by central bank reserves, by an additional £100bn, to take the total stock of asset purchases to £745bn. ²⁷

In terms of fiscal response, the UK Government put in place a substantial set of economic support measures, including 5% of GDP in discretionary spending, to support business and households. The Coronavirus Job Retention Scheme provides companies with 80% of furloughed workers' salaries. In addition, self-employed receive a taxable grant of up to 80% of their previous earnings over the past three years. The £330bn Covid Corporate Financing Facility, run jointly with the Bank of England, and the Coronavirus Business Interruption Loan Scheme provides state loans and guarantees for businesses affected by the crisis. ²⁸

In Northern Ireland, public spending will increase substantially, with Departmental increases (including additional money for the Department of Health) and increases in benefits payments. The Department for the Economy has been allocated £410m in totality (£225m in 2019/20:£185m in 2020/21) to assist, by way of grants, businesses in managing the immediate impact of Covid-19. Businesses in Northern Ireland could access a number of schemes, with details available on the NI Business Info website.

£270m (£225m in 2019/20:£45m in 2020/21) was allocated for a £10,000 Small Business Support Grant Scheme. This one-off grant is available to eligible businesses that are in receipt of Small Business Rate Relief and small industrial businesses currently in receipt of Industrial Derating Relief, which have a Total Net Annual Value (NAV) of less than £15,000.

£100m was allocated for a one-off grant of £25,000 to eligible businesses that have a Total Net Annual Value of between £15,001 and £51,000 within the retail, hospitality, tourism and leisure sectors, subject to some exclusions. As of 30 June 2020, 2,940 payments (totalling over £70 million) were approved across Northern Ireland, according to data on NI Business Info. A breakdown of this by Parliamentary Constituency is provided in the graph below.²⁹

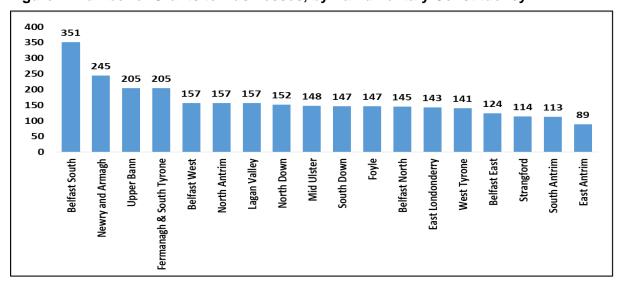


Figure 7: Number of Grants to Businesses, by Parliamentary Constituency

Registration for the £10,000 Small Business Support Grant and the £25,000 Retail, Hospitality, Tourism and Leisure Grant closed at 23.59 on Wednesday 20 May 2020.³⁰

£40m was allocated for a Northern Ireland Micro-business Hardship Fund. This Fund has been developed to respond quickly and proportionately through the provision of funding to micro-businesses and qualifying social enterprises that are facing immediate cash flow difficulties due to the impact of Covid-19. The Hardship Fund was open to all micro-businesses (1-9 employees) that had not qualified for other regional and national support measures and meet the eligibility criteria.³¹ The scheme closed on 12 June 2020.

Further to this, the Department of Finance enabled some new exemptions to rates that would be worth £213m to businesses and brings total support from rates relief and grants to more than £700m in budget allocations. Hospitality, tourism, leisure and childcare businesses in Northern Ireland will not have to pay rates this year. Most retailers, aside from larger supermarkets and off licences, will also be exempt. Businesses in other sectors will have their current three-month exemption (from April through to June) extended by another month.³²

A summary of support of business is provided in Annex C. As noted above, there is a limit to what economic policy can do - the most realistic outcome is for some form of damage limitation.

Impacts on the Northern Ireland Labour Market

The shutdown of many industries in Northern Ireland has resulted in the widespread furloughing of workers. Figures from HMRC (Her Majesty's Revenue & Customs) released on 11 June 2020 stated that 8.7m employmees across the UK were availing of the Coronavirus Job Retention Scheme (CJRS) as of 31 May 2020. The number using the scheme in Northern Ireland at that date was 211,700. It should be noted that figures released after this by HMRC stated that the UK-wide figure had increased to 8.9m as of 7 June 2020, meaning the Northern Ireland numbers may also have increased slightly on those provided by HMRC on 11 June 2020.

Table 2: CJRS Furloughed Employments by Country / Region (31 May 2020) 33

Country / Region	Total number of employments furloughed
England	6,445,800
North East	282,500
North West	828,900
Yorkshire And The Humber	603,600
East Midlands	559,100
West Midlands	697,100
East	709,600
London	1,074,900
South East	1,035,400
South West	654,800
Wales	316,500
Scotland	628,200
Northern Ireland	211,700
Unknown	1,093,700
Total	8,696,000

HMRC also have provided data at a sub-regional level. Figures by Parliamentary Constituency show that Mid-Ulster has the highest number of claims at 14,800, followed by Upper Bann (14,400), South Down and North Antrim (both with 13,600 each). Foyle and North Down had the lowest number of claims, with both constituencies having 9,200. It should be noted however, that while Parliamentary Constituencies are of similar population levels, there are some variations in the population and employment numbers within each area.

In addition to the Job Retention Scheme there has been a number of workers in Northern Ireland who have availed of the Self-Employment Income Support Scheme (SEISS), also paid for and administered by HMRC. As of 31 May 2020, there were 2.4 million claims made UK-wide and 69,000 of these claims were made in Northern Ireland out of 96,000 eligible for the scheme.

The take-up rate in Northern Ireland of 73% made it one of the highest regions in the UK, however, it should be stressed that this was only slightly above the UK-average of 70% and most regions were along similar proportions. Of the 2.4 million self-employed claims UK-wide, 0.8 million related to the Construction sector. An estimate of Northern Ireland's furlough claims by industry is shown in Annex D.

Table 3: HMRC Statistics on Self-Employed Income Support Scheme by UK Region³⁴

Government Office Region	Total potentially eligible population ¹ (000s)	Total no. of claims made to 31/5/20 ² (000s)	Take-Up Rate⁵	
England⁴	2,942	2,056	70%	
North East	94	67	72%	
North West	312	224	72%	
Yorkshire and the Humber	241	172	72%	
East Midlands	218	153	70%	
West Midlands	262	185	70%	
East of England	349	247	71%	
London	649	433	67%	
South East	501	352	70%	
South West	317	224	71%	
Wales	140	102	73%	
Scotland	207	146	70%	
Northern Ireland	96	69	73%	
Unknown ³	12	7	54%	
United Kingdom⁴	3,397	2,380	70%	

Table Notes

- 1. Total potentially eligible population when the scheme opened. Includes error and rejected cases. Includes some individuals whose businesses have not been adversely affected by Coronavirus.
- 2. Includes individuals that have applied and are awaiting payment or have been paid. Excludes error and rejected cases.
- 3. Includes addresses listed in the Channel Islands, Isle of Man, foreign addresses or missing and eligible Loan Charge cases who are yet to file their 2018/19 Self-Assessment Return.
- 4. Components may not sum to UK or England totals due to rounding.
- 5. Take-up is based on total number of claims to date (excludes error and rejected cases) over total potentially eligible population (includes error and rejected cases).

Department for Communities (DoC) data indicates that the number of people claiming Universal Credit in Northern Ireland has almost doubled from 70,000 on 1 March to 134,000 on 31 May. The majority of this increase in Universal Credit claims came at the beginning of the crisis, with week beginning 23 March (the first week of lockdown in Northern Ireland) seeing 20,300 new claimants. However, it is important to note that not all of these figures account for workers being made unemployed – for example some may have seen their hours reduced.

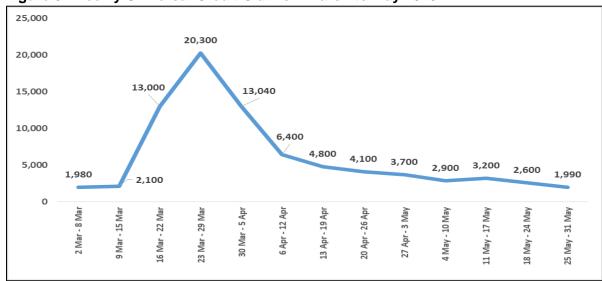


Figure 8: Weekly Universal Credit Claims - March to May 2020

Annex E provides Universal Credit claims at a sub-regional level. Every Jobs and Benefits Office has seen its caseload increase by at least 50%, with Ballynahinch registering the highest increase, of 149%.

According to the latest data, the Claimant Count in Northern Ireland has more than doubled in the three months since the outbreak reached Northern Ireland. Figures from NISRA indicate that the Claimant Count increased from 29,642 in February to 65,151 in May. The increase of around 5,700 from April to May was less dramatic than the jump of almost 30,000 from March to April. However, the Claimant Count is now above its most recent peak in February 2013 when it hit 64,800, thereby effectively erasing all of the labour market recovery that took many years to achieve following the financial crisis.

Over the February to May period, male Claimant Count levels increased by 136%, from 18,546 to 43,815. Female Claimant Count levels, meanwhile, jumped 92% to 21,336.

Table 4: Claimant Count Levels and Change, by Gender

	Men	Women	People					
January 2020	18,491	11,123	29,614					
February 2020	18,546	11,096	29,642					
March 2020	18,636	11,138	29,774					
April 2020 (revised)	39,118	20,312	59,430					
May 2020 (provisional)	43,815	21,336	65,151					
Increase (Feb to May)	25,269	10,240	35,509					
% Change (Feb to May)	+136%	+92%	+120%					

People = Men + Women

Over the same period, workers under 50 years old saw their Claimant Count levels rise by 129%, as opposed to a rise of 80% for those over the age of 50. The 25-49 age group is the largest category of claimants, and they had the largest absolute increase in numbers.

Sub-regionally, in terms of the change in Claimant Count levels over the year, the largest rises were reported in South Down (181%); Mid Ulster (171%); and Newry & Armagh (168%). The chart below indicates how each parliamentary constituency in Northern Ireland has seen its Claimant Count levels rise over the year to May 2020.

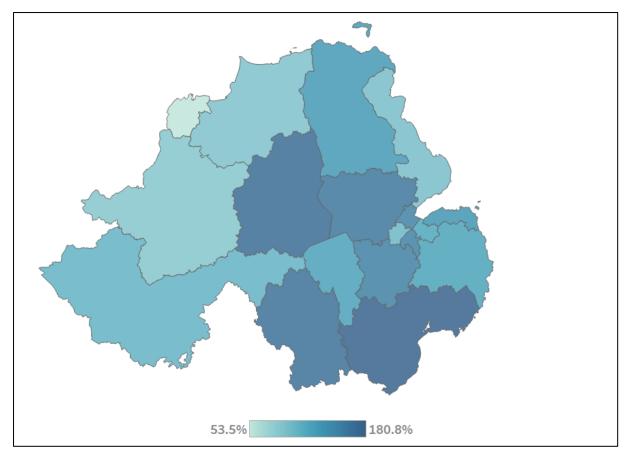


Figure 9: Increase (%) in Claimant Count by Parliamentary Constituency 35

A more detailed breakdown, at Electoral Ward level, is available at Annex F and this shows that some coastal and border areas have seen dramatic increases in the Claimant Count, as well as parts of Belfast.

Sectoral Impacts

Initial assessments put the overall output within the NI economy at around 25% to 30% below normal. UK-wide, Gross Value Added (GVA) figures from ONS for March and April show that nearly all sectors of the economy have been affected by the Social Distancing measures.

Accommodation & Food Service activities was the most affected sector, with output reducing by almost 92%. Other Services (-51.6%), Arts, Entertainment & Recreation (-47%), Construction (-43.5%), Education (-43.2%), Transport & Storage (-38.3%) all experienced substantially lower levels of output when compared to the more normal levels in February 2020.

Graphs of sectoral changes each month for UK GVA are available at Annex G.

Table 5: Change in UK Gross Value Added (GVA) February to April 2020, by Sector ³⁶

		Feb to Mar 2020 % change	Mar to Apr 2020 % change	Feb to Apr 2020 % change
Agriculture	Α	-0.2	-5.4	-5.6
Mining & Quarrying	В	-11.4	-12.3	-22.3
Manufacturing	С	-4.6	-24.3	-27.8
Electricity, Gas, Steam and air	D	-1.5	-9.5	-10.9
Water supply, sewerage, etc	Ε	-0.6	-5.3	-5.9
Construction	F	-5.9	-40.0	-43.5
Wholesale and retail: repair of motor vehicles and motorcycles	G	-9.4	-27.0	-33.9
Transport and storage	Н	-13.3	-28.8	-38.3
Accommodation and food service activities	1	-31.2	-88.1	-91.8
Information and Communication	J	-2.2	-13.0	-14.9
Financial and Insurance activities	К	-0.5	-5.3	-5.8
Real estate activities	L	-0.2	-2.4	-2.6
Professional, scientific and technical activities	М	-1.6	-20.0	-21.3
Administrative and support service activities	N	-10.5	-28.1	-35.6
Public Administration and defence	o	0.2	0.0	0.2
Education	Р	-14.5	-33.6	-43.2
Human health and social work activities	Q	-3.2	-21.0	-23.5
Arts, entertainment and recreation	R	-12.2	-39.7	-47.0
Other Service activities	S	-18.1	-40.9	-51.6
Activities of households as employers, undifferentiated goods and services	т	-4.7	-22.9	-26.5
Whole Economy		-5.9	-20.4	-25.1

Many sectors such as tourism and the associated travel industry have been badly affected, with airlines cutting flights and customers cancelling business trips and holidays. This came straight after the collapse of FlyBe in early 2020 which greatly affected Belfast City Airport given that around 80% of its flights were by that airline alone. ³⁷

Using Civil Aviation Authority (CAA) data, the graph below shows that air passenger numbers in March 2020 were down substantially on the same month in 2019, reflecting both the Coronavirus and Flybe's collapse. Passenger numbers in April and May 2020 were very low, although the CAA may not have included some figures.³⁸ As would be expected, air passenger

numbers tend to be quite high during the summer months, but expectations for the summer of 2020 are gloomy. Some airlines have started to take bookings again however.

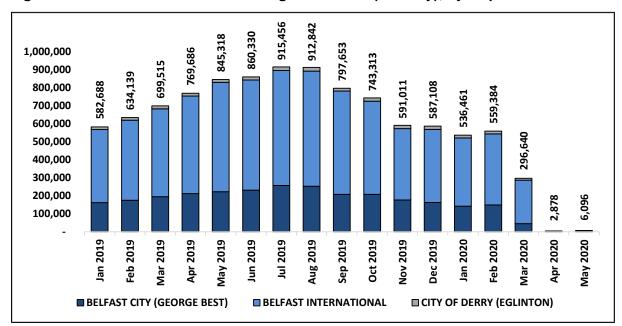


Figure 10: Northern Ireland Air Passenger Numbers (Monthly), by Airport and Totals³⁹

The coronavirus outbreak resulted in all flights being suspended, apart from two London services operating from Belfast City and City of Derry airports. In response to the reduction in air connectivity, the government announced (on 1 May 2020) a £5.7m support package to maintain the last two air passenger services operating from Northern Ireland. The financial aid was jointly funded by the NI Executive and the Department for Transport, assisting the two airports and also airlines in keeping Northern Ireland's passenger links with Great Britain open during the Covid-19 emergency.⁴⁰

The **tourism** sector was one of the first to be impacted by the crisis and along with aviation, one of the hardest hit. A recent survey by Tourism NI⁴¹ has determined that 79% of businesses believe Covid-19 would have a severe impact on their business in the short term (0-3 months) and 63% stated it would be severe in the longer term (4 months +) demonstrating a perceived worsening of the situation since March.

Manufacturing is largely an intermediary sector and serves business to business demands across the economy. Production had effectively shut down in many firms, although there are indications that many companies are starting to reopen and 'unfurlough' staff. A number of redundancy announcements have been made however, and more may materialise in the coming months.

For the **chemicals, pharma and plastics** sector there has been an unprecedented surge in demand for perspex screens.⁴² As many businesses look to reopen after the Covid-19 lockdown, they are trying to find the safest precautions for staff and customers. For many, plastic screens could be the key and across Northern Ireland, manufacturers and suppliers are working around the clock to satisfy a massive increase in orders. One major manufacturer of the polycarbon or acrylic sheets in Northern Ireland had been so busy it had shifts running 24 hours a day, seven days a week. ⁴³

The **hospitality** sector, like the aviation and tourism sectors, was one of the earliest and hardest hit and is expected to be one of last to fully recover, as most businesses won't be able to reopen until social distancing measures, including travel, are lifted. Hotels and restaurants have some of the highest furlough take-up rates under HMRC's Job Retention Scheme. Northern Ireland's hotels, bars, restaurants and cafes can reopen from 3 July 2020.

Only 24 **new cars** were sold in Northern Ireland in April, and 144 in May, according to figures compiled by the Society of Motor Manufacturers and Traders (SMMT).⁴⁴ Car show rooms were closed during April and May as a result of coronavirus, meaning sales collapsed by more than 99% when compared to the 4,060 new cars sold in the same month last year.⁴⁵ From June 2020, the NI Executive has permitted the opening of outdoor non-food retailers, including new and used car retailers; retailers of light motor vehicles, lorries/trailers; retailers of caravans or motorhomes, and retailers of agricultural or other large machinery.⁴⁶

The **retail** sector more generally has experienced mixed fortunes. Supermarkets, convenience stores and corner shops have been able to operate since late March. However, many non-food retail shops were closed during April and May, and online sales have increased markedly. The NI Executive have now permitted the opening of clothes and electronics shops.

Within the **Life Sciences** sector, Crumlin-based Randox Laboratories and Biopanda Reagents in Belfast have both developed quick and cost-effective testing kits for the virus.⁴⁷ Randox is investing £30m and creating 200 jobs in a specialised Covid-19 testing lab.⁴⁸ The company is part of the UK-wide testing programme and is investing in new facilities at its science park in Antrim.

The total impact of the pandemic on the **maritime** sector is yet to be determined, but what can be seen already in the early figures is that international trade and EU markets activity has declined significantly.⁴⁹ A multi-million-pound government scheme to help ensure critical freight could continue to move into and across the union was then announced in April.⁵⁰ The package, worth up to £17 million, is being funded by the UK government and the Northern Ireland Executive and has been made available to operators so that they can continue running freight services on five sea routes between Great Britain and Northern Ireland during the Covid-19 pandemic.

For the **aerospace** sector, travel and quarantine restrictions implemented by countries as part of national lockdowns have resulted in the virtual grounding of scheduled international passenger flights during the second quarter.⁵¹ This international outlook has impacted on many well-known aerospace related firms in Northern Ireland, with announcements that hundreds of people are set to lose their jobs. ⁵² ⁵³

Construction activity has been severely affected with Construction Information Services (CIS) figures showing that the social distancing restrictions prevented the construction of some 5,000 houses and 1,500 apartments in Northern Ireland.⁵⁴ Many workers have been furloughed under the Job Retention Scheme and the Self-Employed Income Support Scheme. However, construction has since re-entered a slow drip back to normality with the gradual reopening of building suppliers and construction sites in Northern Ireland from early May. ⁵⁵

Healthcare has seen strong demand relating to its dealings with coronavirus. Even in the **health sector** however, there has been a substantial hit to output in some of its activities - from cancelled appointments and operations etc. Dental services were suspended during lockdown primarily due to the close proximity between dentist and patient during appointments

and the concern about how the virus could spread with the use of aerosol-generating procedures (AGPs)⁵⁶.

In the **financial services** sector, the Bank of England is to probe how long banks can survive the lockdown as the UK's biggest lenders set aside £3.4bn to cover defaults on loans.⁵⁷ The results of the tests are expected to inform the Government's strategy on how quickly to reboot the economy. Many finance staff in Northern Ireland worked from home.

Within the **agri-food** sector, job losses were feared in the earliest stages of the pandemic and the Agriculture Minister reported that 40% of the agri-food market in food services "had closed overnight".⁵⁸ Some distortions in the market occurred, for example in the red meat sector, the higher value cuts of meat for restaurants were not able to be sold, whilst the milk sector has had seen demand reduced. Subsequently in May, Northern Ireland's Department of Finance made £25 million emergency Covid-19 funding available to help address the problems the pandemic had brought to the sector.⁵⁹

The **transport and logistics** sector has been under extreme pressure during the crisis with an industry body noting that haulage firms in the region were close to collapse, adding that firms "are particularly vulnerable due to the reduction in ferry services limiting their access to Great Britain and the loss of outbound/return loads⁶⁰."

Demand for some **public services** increased at a rapid rate during the crisis, for example, the number of people claiming Universal Credit in Northern Ireland has almost doubled, from 70,000 on 1 March 2020 to 134,000 on 31 May 2020 ⁶¹. When non-essential businesses closed in mid-March, applications rose ten-fold, said the Department for Communities. Elsewhere, Northern Ireland's public transport network, Translink, is to get funding of £30m to address pressures caused by the Covid-19 pandemic.⁶² It is facing a shortfall of more than £100m due to the lockdown, with a large reduction in passenger numbers. Local councils will also get emergency Covid-19 funding of £20.3m from the NI Executive.⁶³ Local government officials have said councils are facing a "financial cliff-edge", losing £10.5m a month in income⁶⁴.

With the **education** sector effectively shut down from March 2020 there were far reaching implications for pupils, parents and teachers. Parents had to adapt to home schooling schedules and for some this was to be done alongside working full time from home. Teachers in Northern Ireland moved to predict the grades they anticipated pupils would have achieved in cancelled GCSE, AS and A-Level exams⁶⁵. Both Queen's University Belfast and Ulster University had lectures and exams severely affected, with graduation ceremonies cancelled, or to take place 'virtually'.

In the **real estate** sector almost all activity in the housing market locally had stopped during lockdown, however the Coronavirus Regulations were amended to permit house moves for the sale of homes from 15 June 2020.⁶⁶

Northern Ireland's **arts** sector has been severely impacted. In response, the Communities Minister announced funding of £1.5m to support individuals and organisations in the Arts Sector on 27 April 2020. The Creative Support Fund provides support to individual artists and creative practitioners, who have lost their work as a result of Covid-19, they can apply for funding of up to £5,000 to take new and innovative approaches in continuing to provide their talents and services to audiences, particularly those facing barriers to the arts. Small and medium sized organisations are able to apply for maximum funding of £25,000 to help them

develop new projects or programmes or re-arrange events which have had to be cancelled during the Covid-19 period. The **sports and live events** sector effectively ceased operations following the imposition of lockdown measures in March.

Problems on food production lines and the closure of many food service businesses, such as, restaurants, hotels and coffee shops have had a knock-on impact on the **agriculture**, **forestry and fishing** sector. £25 million emergency funding was released to help the industry cope with Covid-19 market disruption.⁶⁷ Additional support has come in the form of a self-employment scheme that can offer farmers a taxable grant, worth 80% of trading profits, capped at £2,500 a month⁶⁸ whilst the Agriculture Minister also provided a £1.5 million support package for the fishing industry.⁶⁹

When compared to retail or hospitality, the **utilities** of gas, electricity and water have seen less dramatic effects, but the shutdown of many factories and offices has had an impact nonetheless. Analysis by SONI engineers revealed a drop in electricity demand which was described as significant, running at between 10% and 20% over the course of the day.⁷⁰

Recent figures by ONS show that 41.1% of adults in employment in Great Britain have been working from home with 32.9% stating that they were unable to (Source: Opinions and Lifestyle Survey (Covid-19 module), 28 to 31 May 2020).⁷¹ By way of comparison, in mid-April, 49.2% of adults in employment said they were working from home, ⁷² so this may indicate that workforces are gradually returning to their normal place of work.

The feasibility of working productively from home varies across industries and jobs. Jobs that necessarily involve working with machinery, close contacts with customers or working outside will not be amenable to home working. On the other hand, many desk-based occupations such as legal work, management and computer programming may be. It is estimated that 41% of Northern Ireland's workforce are in occupations that could be done at home. Some research also indicates however, that working from home is not optimal for many industries / tasks and may not be as productive. However, the capability of being able to work from home may have offered some protection from job loss during the lockdown, especially for those employees who have a Degree, according to the Pew Research Centre in the US.

Working from home highlights the importance of good broadband infrastructure. According to ONS data from September 2019, only 1.1% of residential properties in Belfast did not have access to services above 30Mbit/s from fixed broadband, which places it amongst the best areas in the UK. 30.9% of residential properties in Fermangh & Omagh did not have access to services above 30Mbit/s from fixed broadband and 22.7% in Mid-Ulster. Further information on the role of broadband can be found within the Ulster University's paper on Broadband Infrastructure & Boosting Economic Recovery.

Access to high speed broadband is considered a key advantage to Northern Ireland for the growth of high tech industry and to encourage and attract Foreign Direct Investment. Northern Ireland was one of the first regions to operate high speed, next-generation services with a 100-gigabyte per second transatlantic and terrestrial telecommunications link between Northern Ireland, North America and Europe. Project Stratum aims to further improve broadband connectivity by extending Next Generation Access (NGA) broadband infrastructure to approximately 79,000 premises across Northern Ireland that cannot yet access NGA broadband services. The project is at mid-procurement stage and contract award is anticipated in late September 2020.

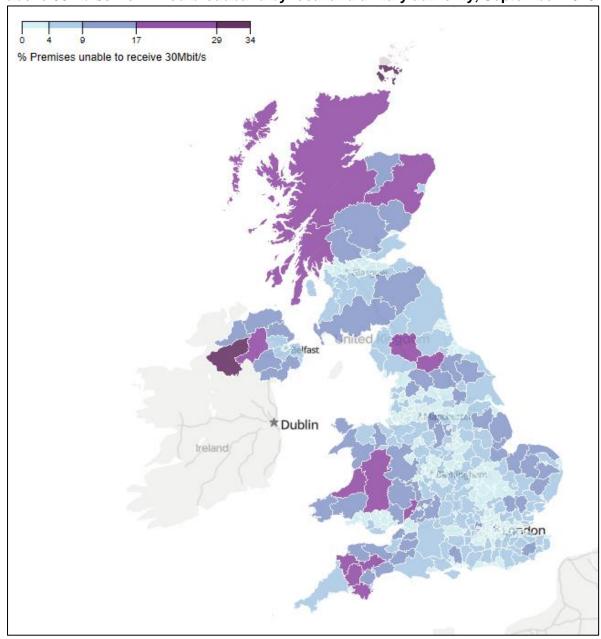


Figure 11: Proportion of UK residential properties that do not have access to services above 30Mbit/s from fixed broadband by local and unitary authority, September 2019

In considering the latest output data at UK level and furlough data at UK-wide and Northern Ireland level, along with anecdotal evidence (as summarised above), we can build up a picture of the sectoral impact locally.

Many sectors experienced a supply impact because non-essential businesses closed, many staff were encouraged to work from home and workers were asked to self-isolate if they experienced any coronavirus symptoms. There was also supply chain disruption, nationally and internationally as a result of the impact of the virus. In addition to this, demand fell for many goods and services during the lockdown, although there was evidence of a spike in the purchases of some products in March. Contact-intensive sectors suffered most. Demand itself can also be affected by knock-on impacts from supply issues, for example, demand for indoor sportswear may suffer if gyms are closed, and consumers who cannot go to hotels may spend less on new luggage for example. ⁸⁰

All of these factors culminated in substantial reductions in output for many sectors during lockdown, and many businesses furloughed staff. The illustration below provides an indication of those sectors which were most affected by the Social Distancing measures, with Accommodation & food service activities (I), Construction (F), and Arts, entertainment & recreation (R) seeing some of the greatest percentage falls in output and the highest proportions of staff furloughed across the UK.

Some sectors, such as Real estate activities (L) and Agriculture, forestry & fishing (A) experienced relatively high furlough rates, compared to the relatively small reduction in GVA. Conversely, Education (P) experienced a sharp reduction in output, but many staff worked from home and were not furloughed.

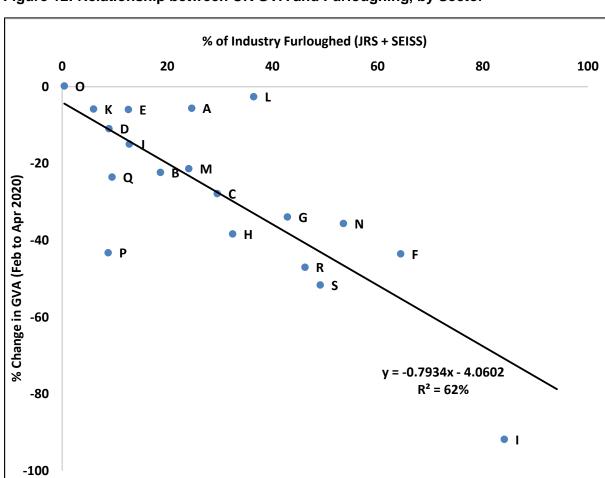


Figure 12: Relationship between UK GVA and Furloughing, by Sector

A = Agriculture, forestry & fishing

B = Mining & quarrying

C = Manufacturing

D = Elec, gas, steam & air conditioning supply

E = Water supply; sewerage & waste

F = Construction

G = Wholesale & retail trade; repair of vehicles

H = Transportation & storage

I = Accommodation & food service activities

J = Information & communication

K = Financial & insurance activities

L = Real estate activities

M = Professional, scientific & technical activities

N = Administrative & support service activities

O = Public administration & defence

P = Education

Q = Human health & social work activities

R = Arts, entertainment & recreation

S = Other service activities

To estimate what the potential impact may have been on the various industries in Northern Ireland we have assessed the most up-to-date sectoral output data (April 2020) and furlough information (May 2020) at UK level and have applied this to Northern Ireland.

The largest economic sectors in Northern Ireland are Human health & social work activities (Q), Wholesale & retail trade; repair of vehicles (G), Manufacturing (C) and Education (P), both in terms of GVA and jobs. While Real estate activities (L) is a very important sector in terms of output, it does not employ as many people as some other sectors. The graph below (blue markers) shows Northern Ireland's economic sectors in terms of importance of output and employment during 'normal times'. This was undertaken by dividing annual GVA by twelve, to get a rough estimate of monthly output - this is obviously very simplistic given that many sectors will have seasonal variations (Christmas shopping, summer holidays etc).

The illustration also shows how output may have changed in each sector, while also showing the estimated change in staff utilised (red markers) in April 2020. While Accommodation & food service activities (I), and Arts, entertainment & recreation (R) have seen substantial falls in percentage terms, it was Wholesale & retail trade; repair of vehicles (G), Manufacturing (C) and Construction (F) which had the biggest economic impact in absolute terms.

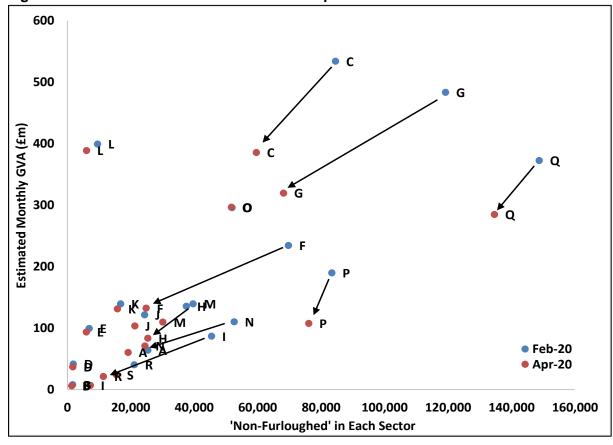


Figure 13: Illustration of Potential Sectoral Impact in Northern Ireland

In charting a course for the economy, the Department for the Economy has set a path for the gradual and safe reopening of sectors and industries. Permitting businesses in non-food retail to reopen in early June 2020 should help ensure that both output and employment can return for numerous businesses within this relatively large sector alone. In addition, there is evidence of the reopening of a number of manufacturing plants and construction sites and the 'unfurloughing' of workers in these sectors. More sectors are to reopen in July.

Trade and Investment

Official trade statistics from ONS for the period to the end of March 2020⁸¹ are showing the beginnings of the impact of Covid-19 on UK trade. UK exports were down £7.1bn (-12.9%) compared with February 2020 with services down £5.5bn (-20.2%) and goods down £1.6bn (-5.8%). Import data⁸² indicates a decline of £2.0bn (-3.5%) in March 2020 compared to February 2020.

A new ONS business survey⁸³ reflected that businesses in all sectors reported an impact on imports and exports, with Transportation and Storage businesses most likely to be exporting less than normal (87%). The same survey shows that Scotland had the highest proportion of businesses reporting that they were exporting less than normal (81%), and Northern Ireland had the highest proportion of businesses reporting that they were importing less than normal (70%).

A recent report from the OECD⁸⁴ assesses the current situation for FDI flows and considers scenarios for the impact of the pandemic in the medium term. In an optimistic scenario where treatments are identified and economic policy interventions prevent serious structural damage to the economy, FDI flows will decline by 30% to 40% in 2020, before returning to pre-crisis levels in 2021. However, in a pessimistic scenario FDI flows will drop by more than 40% in 2020 and could be flat until the end of 2021.

Ulster University's Economic Policy Centre (UUEPC) estimated in some provisional analysis that investment represents approximately 15% of Northern Ireland's total economic output. They stated that levels of investment in the NI economy (and UK more generally) has been a long-term issue and were already at low levels before the Covid-19 outbreak, which might suggest that scope for further significant reduction would be relatively limited. In their calculations, UUEPC have assumed that were will be substantial declines in all categories of Gross Fixed Capital Formation in Northern Ireland, at least in the second quarter.⁸⁵

According to EY, in the medium-term Northern Ireland could still be in a "strong position" to continue to attract international businesses to invest here despite the global impact of coronavirus.⁸⁶ In a piece of good news, in June 2020 Invest NI announced that GB investor Firefly Learning Ltd was creating 52 new jobs in Northern Ireland. ⁸⁷

Impact on Skills

UUEPC recently completed analysis on the labour market implications of Covid-19 and how the restrictions on work brought about by the pandemic have impacted different types of workers in Northern Ireland. One of the most striking impacts from their analysis was the disproportionate impact on the young. ⁸⁸

The coming months will see a wave of education qualifiers seeking to enter the labour market. However, with reduced demand for entry level positions many students from HE and FE will face difficulties transitioning from their part-time job to their chosen careers. This underemployment of graduate skills will depress intra-labour market flows and reduce vacancies available for lower qualified young people.

Whilst Ulster University estimate the Northern Ireland unemployment rate will rise to approximately 12% this year, the effect on the 16-24 rate is forecast to be much more pronounced. Youth unemployment could increase significantly from a current rate of 8% to

26% - representing the highest youth unemployment rate on record (since the series began in 1995). 89

Special targeted measures suggested to deal with this severe negative impact include encouraging education leavers to delay entering the labour market, and instead undertake a qualification on the next rung of the qualifications ladder. This would help to avoid the long-term scarring effects associated with entering the labour market during an economic downturn, and make a significant contribution towards narrowing the gap in the unemployment rate between young people and the rest of the labour market.

An additional benefit over the long term of having a higher proportion of people progressing to higher level study is the associated positive contributions to the regions competitiveness. The proportion of the 16-64 population with a degree in NI is 23%, which lags the UK at 26%90. A narrowing of this gap must be considered as a positive with regard to Northern Ireland's competitiveness, and attractiveness as a location for FDI.

Stimulating employer demand for young people in the short-term will be much more difficult. In the aftermath of the 2008/09 recession employers rushed to cut their entry level recruitment schemes, which contributed to rapidly rising youth unemployment⁹¹. Around a quarter of graduate employers (27%) say that they will be recruiting fewer graduates. What is more, reductions in hiring may be even more marked in SMEs where around 34% of the graduate population typically work.

The unprecedented economic upheaval brought by the Covid-19 pandemic raises several concerns for the functioning of the apprenticeship system, particularly in light of recent figures highlighting that applications to Northern Ireland's six further education (FE) colleges are down by 40% in some areas. ⁹² The six colleges teach 61,000 students, many taking vocational and technical qualifications (VTQs) in areas such as plumbing or childcare. Demand from employers to recruit apprentices from FE colleges is also estimated to have fallen by more than 50%. ⁹³

Many apprenticeships are currently suspended as learners are furloughed or prevented from travelling to training and working facilities. Unlike other forms of learning, most apprenticeships cannot effectively be moved online.

It would be highly desirable to include a training guarantee for all existing apprentices and measures to ensure that enough high-quality apprenticeships will remain available in the immediate future. Particularly when Centre for Vocational Education Research has shown that apprenticeships yield good average returns in the medium-run, especially for young men.⁹⁴

Apprenticeships, crucially rely on firms' availability to employ and train apprentices. This crisis comes at a time when the apprenticeship system was starting to grow in credibility and popularity. Preventing learners from completing their apprenticeships would not only directly harm their labour market prospects but may damage the reputation of apprenticeships and reduce their attractiveness for future school-leavers.⁹⁵

Analysis has highlighted how those in Northern Ireland with higher level qualifications have been relatively sheltered from the crisis, with a much higher proportion of people able to undertake their work remotely. Those in production and customer facing activities have been less fortunate, and these workers also tend to have lower level qualifications. A worker towards

the tail of the earnings distribution is much more likely to have been furloughed or laid off compared to those in the top earning deciles in the NI labour market.⁹⁶

Although all groups in society face challenges in the short to medium term future, the most significant labour market barriers are faced by those with lower-level qualifications. Demand will not be returning in the immediate future to many sectors and occupations categorised into a typology of high employment, low productivity, low wage and low growth (prior to the pandemic).⁹⁷

There will need to be a movement away from an active labour market policy based upon interventions focussing on CV development and interview skills. Those who are newly unemployed will benefit more from accredited training courses focussing on technical skills, designed and delivered in partnership with the education sector and employers. The ultimate aim should be to equip workers with the ability to transition from declining occupations to ones which are more viable. Covid-19 has accelerated the adoption of fully digitized approaches to re-create the best of in-person learning through live video and social sharing. This transformation makes it possible to scale learning efforts in a more cost effective way and permits greater personalization for learner, in turn greater effectiveness.

On 12 June 2020, DfE announced an investment of £1.7million for a range of online skills interventions to upskill and retrain people whose jobs have been impacted by Covid-19. This initiative will create almost 2,000 free places on short courses, delivered by the local further education colleges and universities. These courses are fully accredited and include opportunities from entry to postgraduate levels, focussing on skills identified by industry, including digital skills, essential skills, employability skills, and leadership and management. In addition, a range of courses aligned to work in the health and social care sector have been funded. This is in direct response to the demands placed on this sector throughout the public health emergency. ⁹⁸

Even before the current crisis, changing technologies and new ways of working were disrupting jobs and the skills employees needed to do them, as highlighted in the Ulster University Economic Policy Centre's research report on automation in Northern Ireland.⁹⁹

According to McKinsey, educational institutions cannot be held responsible for all skill developments and qualification attainments. Companies share part of this responsibility and therefore should craft a talent strategy that develops employees' critical, digital and cognitive capabilities, their social and emotional skills, and their adaptability and resilience. Covid-19 has provided the opportunity and incentive for companies to do so and commit to reskilling.¹⁰⁰

Recovery, Risk and Uncertainty

The region has avoided the outcomes as set out in the Reasonable Worst Case scenario, where around the time the Regulations were made, the scientific modelling work suggested, the projected number of cumulative Covid-19 deaths in Northern Ireland over 20 weeks of the epidemic would be 3,000. ¹⁰¹

As noted in the sections above, the economic and social cost of controlling the virus has been high. However, it is currently unclear at this stage just how long the economic consequences will last. The Resolution Foundation has undertaken the graphic below to illustrate how the economic impact of the virus interacts with measures to stop its spread.¹⁰²

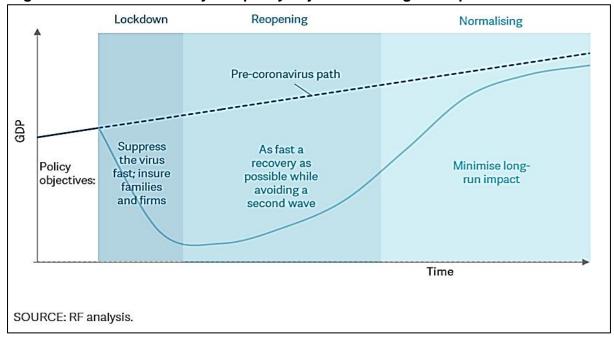


Figure 14: Economic activity and policy objectives during the impact of Covid-19

As illustrated in the graphic above, Economists (for example, from Ricardo Reis) tend to think of three distinct phases of the crisis:

- **1. The initial lockdown**. In this phase, the shutting down of many non-essential businesses leads to sharp falls in economic activity.
- 2. The reopening phase. This when the lockdown measures are eased. At this point, the economy starts to rebound, but GDP remains somewhat depressed. The key is trying to facilitate a return to economic activity, but, crucially, without pushing the reproduction rate of the virus above one and risking a second wave of infections.
- **3. A normalising phase.** This is where the health emergency has passed, and the economy is returning to its long-run path.¹⁰³

From May 2020, the Northern Ireland economy began its re-opening phase, with restrictions lifted on garden centres and household waste recycling centres. Retailing has also now opened and the NI Executive has agreed that caravan parks, camping sites and self-catering tourist accommodation will be permitted to open from 26 June 2020. 104 See Annex H for further details.

Despite the major shock to the Northern Ireland economy and the disruption to livelihoods, there are tentative signs of recovery in economic output. However, exactly how fast and how complete this recovery will be, is still uncertain. While it may be fair to say that the consensus at the outset of this virus was for a short, sharp shock, followed by immediate recovery, many forecasters are now tending to be more wary of this assumption.

Indications are that June 2020 is seeing more traffic, more businesses open and more footfall than in the early days of the lockdown at the end of March and start of April 2020. Google mobility data for Northern Ireland is showing that people movements are lower than baseline levels for retail & recreation, transit stations, workplaces, grocery and pharmacy, however, they reflect a pronounced uptick on levels from a month or two ago (see Annex I). Indications are that some firms have begun to 'unfurlough' staff and a number of manufacturing plants and construction sites have resumed activity.

While these indications of emerging recovery are welcome, a key risk still remains around the 'tapering' and then eventual ending of furlough schemes by the UK Chancellor during 2020. Some businesses have argued that this will mean having to make a decision whether or not to let some staff go. Other businesses may go into administration and face permanent closure.

The recent Claimant Count numbers show that while the furlough schemes have been successful in limiting unemployment to some degree, there are still record rises being seen in Northern Ireland during the 'initial wave'. Back in April, the UK Chancellor Rishi Sunak reinforced this sentiment himself, warning:

"In spite of what are unprecedented measures in scale and scope, I can't stand here and say I can save every single job, protect every single business or indeed every single charity......'That's just simply not possible." 105

As noted above, in Northern Ireland around 212,000 workers have been furloughed under the HMRC Job Retention Scheme and almost 70,000 under the Self-Employed Income Support Scheme. The Claimant Count increased by over 35,000 people in just two months. This gives a total of around 317,000 – equivalent to over one-third of the region's workforce.

These are substantial labour market risks, and even a small or moderate proportion of those risk crystallising would be very damaging for the labour market. In assessing the risks to the tapering of the furlough schemes and the risks to businesses operating in various sectors, a gauge can be made of the possible future job losses still to come. Those employees and self-employed who were not furloughed are also susceptible, as demonstrated in the first wave of job losses, up to May 2020. In addition, a large number of leavers from education are about to enter a distressed labour market and add further to official unemployment. It is our assessment that the balance of the risk lies towards further significant permanent losses across the workforce (including employees and self-employed). The majority of these losses could be concentrated in the retail, accommodation and food, and construction sectors.

Given that the Claimant Count currently stands at 65,151 in Northern Ireland, this scenario of job losses, and upcoming outflow of education leavers, would mean that the Claimant Count could plausibly exceed 100,000 before the end of 2020 or shortly afterwards. By way of context, anything above 106,000 has not been witnessed since the 1980s.

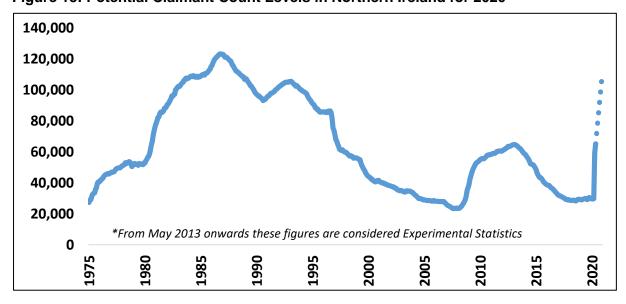


Figure 15: Potential Claimant Count Levels in Northern Ireland for 2020 *

Unemployment is generally seen as a lagging indicator, where in previous recessions job losses continued for a time, even as output stabilised. There can also be a tendency for firms to be risk averse about rehiring staff, therefore leading to a slow recovery in the job market – in an ideal scenario, unemployment would fall sharply as demand recovers. This risk of a slow jobs recovery is ongoing and in line with precedent.

An additional risk is a more extreme scenario, of a chain reaction of wave after wave job losses, with a potential further slump in demand and consumer confidence in the form of a negative feedback loop. This is perhaps less likely than the first two risks, but still a possibility.

On 18 June 2020, the Monetary Policy Committee at the Bank of England has set out its view on the outlook for the labour market, stating "There is a risk of higher and more persistent unemployment in the United Kingdom. Even with the relaxation of some Covid-related restrictions on economic activity, a degree of precautionary behaviour by households and businesses is likely to persist. The economy, and especially the labour market, will therefore take some time to recover towards its previous path." ¹⁰⁶

According to Jonathan Portes, Professor of Economics and Public Policy, King's College London, the potential medium- to long-term impact of mass unemployment is the most obvious form of scarring resulting from a 'traditional' demand deficiency recession. It refers to the potential adverse impact of short-term unemployment on future labour market prospects, via human capital depreciation. When people are unemployed, their skills may atrophy, their labour market attachment may diminish, and – given the well-known association between unemployment and wellbeing – their mental health may suffer. All of these reduce their future employment and wage prospects. The quantitative impacts are significant and the impacts are particularly severe for young people, and the impacts increase non-linearly with the length of unemployment.¹⁰⁷

Dr Esmond Birnie (Ulster University) and Dr Graham Brownlow (Queen's University Belfast) consider that 'scarring' damage produced as a result of the Covid-19 recession is very likely to be concentrated in the labour market. They also note that Northern Ireland starts from a position of disadvantage due to its relatively high economic inactivity rate.¹⁰⁸

Those graduating this year can expect to find it harder to source employment and, especially, harder to find well-paid employment than their immediate predecessors, and they can expect to earn less than they might have expected for a considerable period of time.¹⁰⁹

In addition to the primary risk to the state of the labour market, the deep recessions associated with the current pandemic are likely to leave more permanent economic scars than typical recessions. According to the World Bank, this is because of lasting effects of the pandemic and related mitigation policies on the behaviour of households and firms—effects that will be exacerbated in many countries by pre-existing vulnerabilities.

The key longer-term dangers and risks to growth and possible economic 'scarring' may include the following:

• **Weak confidence.** Persistently weak confidence could result in a build-up of precautionary savings by households and also more cautious spending by firms, markedly reducing aggregate demand and supply.

- Changing consumption patterns. There could be long-lasting changes in consumption patterns, with habits formed during the lockdown months. Families may change activities, motivated by the aim of lowering infection risks. 110
- Erosion of human capital. The learning disruptions associated with widespread school and university closures, as well as income losses, may cause lasting setbacks to human capital accumulation.
- Delay of investment in physical capital. According to the Bank of England, lower demand has caused firms to cut investment.¹¹¹ Investment is a key determinant of long-term economic performance.
- Possible missteps in macroeconomic policy management. Governments in many
 countries have taken fiscal and monetary policy action on unprecedented scales in
 response to the pandemic to support demand and activity. Great care will need to be
 taken when withdrawing this support, as multiple objectives will need to be served.

However, there may exist some upside risks as a result of the crisis. These include the relatively low oil prices, the generous fiscal and monetary policy, and the possibility of some pent-up demand materialising, especially in light of the increased savings by some households during lockdown.

It is fair to say that much of the economic recovery depends on the virus outbreak and whether the downward trajectory in cases can be maintained. Arguably the biggest challenge that government faces is restoring consumer confidence which plummeted as a result of the pandemic. As the economy begins to reopen, it will be critical that consumers feel safe and certain about resuming activities.

Surveys by Morning Consult in the U.S. track consumers' comfort level with returning to the public sphere for pastimes, such as going to the movies or to the gym. They have shown that although confidence is returning, not everyone is comfortable venturing out just yet. The share of U.S. adults who said they're currently comfortable going out to eat has increased from 18% on 29-30 April 2020 to 41% on 9-11 June 2020. The proportion of respondents who said they would be comfortable going on vacation, to a shopping mall, movies, gym, concert all saw increases also, but it must be stressed that some of these were from a very low base.¹¹²

In the UK, surveys by McKinsey show that pessimism about an economic recovery had grown, with a majority feeling that the economy will be impacted for 6-12 months or longer and will stagnate or show slow growth thereafter. In surveys from 18-21 June 2020, consumers are expecting to cut back on spending across many categories, except for groceries. Many consumers have switched retailers and shopped new websites. Possibly of concern for many sectors who have already been badly hit by the virus (travel, car sales, housing etc) and for other sectors less impacted, 37% of consumers said they were delaying some purchases they had planned to make, given their current economic situation.¹¹³

In Northern Ireland, not surprisingly, the coronavirus pandemic led to a sharp fall in consumer confidence in the first quarter of 2020. The Danske Bank Northern Ireland Consumer Confidence Index fell to 119 in the first quarter of 2020, down from 129 in the fourth quarter of 2019 and significantly below the reading of 139 posted in the first quarter of 2019. The first quarter of 2020 index reading was the lowest since 2013. It should be noted that the survey was carried out during March and only partly captures the impact of the lockdown measures on sentiment levels. ¹¹⁴

Although low consumer confidence can be transitory and temporary and may improve if the effects of the virus continues to fade, it can be a reason for concern as low consumer confidence can have somewhat of a self-fulfilling effect on aggregate income in the medium term.

Societal Impact

Government needs to do all it can to ensure that any downturn is as shallow and short as possible. Recessions can cause economic 'scarring' which can last a generation. Many of these can have a significant detrimental impact and so finding a way to safely ease the extent or severity of the current lockdown will serve to ease or release some of those pressures that are accumulating.

Queen's University Belfast, in partnership with other organisations, have assisted The Mental Health Foundation in undertaking research on The Covid-19 Pandemic, Financial Inequality and Mental Health. The Report states that employment is one of the most strongly evidenced determinants of mental health. Lack of access to either employment or good quality employment can decrease quality of life, social status, self-esteem and achievement of life goals. In the Mental Health Foundation's survey across the UK in 2017, 28% of people who identified as unemployed reported current experience of negative mental health, compared to 13% of people in paid employment, 20% of people in full-time education and only 9% of people who had retired.

Mental health is a highly complex area and it may be over-simplistic to attribute changes in survey data to one particular factor or event and there may be issues of causality. According to the ONS lockdown affected everyone, but responses on loneliness differed. During the first month, the equivalent of 7.4 million people said their well-being was affected through feeling lonely. ¹¹⁶

Recessions generally bring pressure onto the housing market, mortgage payments and house prices, and these can be particularly destabilising for the relationships of young couples with low family income, high mortgage debt and dependent children. Child poverty rates may increase if the downturn is severe and / or protracted.

According to the Centre for Economic Performance and the London School of Economics & Political Science, evidence from unexpected temporary school closures and reduced instruction time suggests school closures will reduce educational achievement, both in the short and long term. Children from disadvantaged backgrounds are likely to be affected more than others by school closures, with fewer family resources and less access to online learning resources to offset lost instruction time.¹¹⁷

Public services have also been impacted, those include a variety of health services with many operations cancelled and vital services like dentistry stopped, and this too will have consequences. Potential patients staying away from hospitals risk storing up long-term problems for the future if not being diagnosed.

Scars from recessions can last for decades, as exemplified by former mining towns and villages in areas such as South Wales which still have poor economic indicators, a generation on from pit closures seen in the UK in the 1980s and 1990s. There is a need to ensure that for this current generation, and those about to leave education and seek work, we do not repeat the period seen in the 1980s. 118

Conclusion

It should be noted that this paper is an economic assessment of the impact from an ever evolving outbreak and may be revised as more information becomes available. Either way, the economic impact is becoming increasingly evident and, unfortunately, it is in line with our expectations of an unprecedented economic shock the likes of which few, if any, of us have ever witnessed.

We continue to assess that the NI economy was running about 25% to 30% below normal during much of the crisis and the April figures for UK GDP only strengthen that. This reinforces the fundamental importance of getting the economy reopened again (both public and private sector components), and for that to occur as quickly as is feasible when safe to do. The longer that shutdowns persist, the greater the economic risks and damage for the longer term.

The scope for a quick rebound looks to have faded and this does not bode well for the labour market. Within the space of two months all the labour market gains since the financial crisis have disappeared. But the prospects for a further wave of jobs losses looks high as the labour market risks over the next few months remain highly elevated with returns to work from furlough far from guaranteed for many people. Already we are seeing evidence of an increase in redundancies, a pattern that has been more visible in English data. In addition this year's annual cohort of leavers from education are about to enter a very different labour market.

All this points to a further round of unemployment and job losses, potentially spread over a longer period. It is far from impossible that our labour market statistics could soon look like those from another era. Labour market policies, and the priority attached to them, are going to be hugely important in the coming months, to limit the early damage, but they are also likely to be hugely important for years to come given the scale of the damage, and the potential for lasting effects.

SUPPORTING DOCUMENTATION TO THE PAPER

Background Notes

Despite a trend of growth in the past decade in Northern Ireland, the latest figures of both ONS GVA figures and NISRA's Northern Ireland Composite Economic Index (NICEI) signal quite poor performance output-wise in the past year or two.¹¹⁹ Annex J provides further information, however, NICEI indicates that Northern Ireland had not yet recovered all of its output (in real terms) since the 2008 recession.

NISRA acknowledge that the trends presented by the NICEI and other NISRA sources such as the NI Annual Business Inquiry (ABI) do not align with the new experimental annual Regional GDP figures for NI published by the ONS in December 2019. This is due to methodological differences. At a high level, the NISRA statistics are produced on a bottom-up basis whereas the ONS figures are produced on a top-down basis whereby UK level GVA and GDP figures are apportioned to regions using various apportionment methods. NISRA are engaging with ONS to better understand the differences and the drivers behind their figures.¹²⁰

It should be noted there is a moderate time-lag (14-16 weeks) in Northern Ireland between NICEI figures on output being published and the period they represent. For example, NICEI estimates for the first and second quarters of 2020 won't be available until the second half of this year. It should also be noted that NICEI data itself, whilst prepared in line with best practice, is categorised as 'experimental'.

NISRA's Release Schedule for the NICEI

Year	Release Date	NICEI Quarterly Estimate
2020	Jan	Q3 2019
	Feb	
	Mar	
	Apr	Q4 2019
	May	
	Jun	
	Jul	Q1 2020
	Aug	
	Sep	
	Oct	Q2 2020
	Nov	
	Dec	
2021	Jan	Q3 2020
	Feb	
	Mar	
	Apr	Q4 2020
	May	
	Jun	
	July	Q1 2021
	Aug	
	Sep	
	Oct	Q2 2021
	Nov	
	Dec	

Quarterly and Annual Output

During periods of moderate and steady economic expansion (+1% to +3%), interpreting output growth levels can be relatively straightforward. However, during a severe economic shock, there can be odd differences between quarterly and annual output. This may be particularly the case for this virus, as there may be large negative and positive quarterly swings in output. Firstly, as sharp reductions in output as the outbreak has an effect and then a bounce-back as Government social distancing measures get relaxed, allowing the economy to recover and pent-up demand to materialise. The main ways of how growth rates are reported is explained in the table and narrative below.

Hypothetical Quarterly and Annual GDP

	YR 1				YR 2			YR 3				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Quarterly GDP (£bn)	100.00	100.25	101.75	102.00	104.00	95.00	83.00	90.00	95.00	100.00	102.00	104.00
Q on Q Change (%)		+0.2%	+1.5%	+0.2%	+2.0%	-8.7%	-12.6%	+8.4%	+5.6%	+5.3%	+2.0%	+2.0%
Annual GDP (£bn)				404				372				401
Annual Change (%)								-8%				+8%

In annual terms (per calendar year), the **yearly growth rate** is worked out by firstly adding the quarters for the year. For example, for Year 2 this is 104+95+83+90 = £372. This is then compared with the previous year's total (372/404) - 1 = -8%. Annual GDP will normally fluctuate less than quarterly GDP (i.e. has a smoother profile).

For an example of quarterly growth, consider the hypothetical seasonally adjusted time series above. For Year 2 Q4:

- The quarter-on-quarter (Q4 / Q3) growth rate is (90/83) 1 = +8.4%
- The **year-on-year** (Q4 / Q4) growth rate is (90/102) 1 = -11.8%
- The annualised growth rate (US approach) is $((90/83)^4-1) = +38.2\%$

The US quarterly national accounts figures are published at **annualised growth rates** (a quarterly per cent change at an annualised rate shows what the per cent change would be if the quarterly rate continued for four quarters). Annualising quarterly growth rates is an attempt to combine both advantages in a single growth rate. This advantage however comes at the price of sometimes dramatic volatility.

Practical Challenges in Measuring GDP

The circular flow of income, captures the three approaches to measuring GDP. In theory, these are equivalent to one another. The three approaches are:

- **production:** this is the value of the output of goods and services that are produced, less the intermediate inputs used in their production, plus any taxes net of subsidies on those products
- **income:** this records the value of income that is generated by the sales of production of goods and services, plus any taxes net of subsidies on production and products
- **expenditure:** this is the value of the sum of all final expenditures (less imports) within an economy

However, as may be expected, it is difficult for economic forecasters to accurately assess the impact of the coronavirus, given present uncertainty. Two sectors stand out as being particularly problematic for measurement during the current economic situation – namely the sectors of health and education. According to the ONS¹²¹:

"The impact of COVID-19 on total healthcare output is likely to be complicated. The rise in the number of critical care cases is likely to increase healthcare output, as this is among some of the most high-cost care provided by the health service. The increase in patient cases will push up aggregate healthcare output. Similarly, the increase in the number of calls to telephony and visits to online services such as NHS 111 will also have an impact, albeit to a much smaller extent because of their relatively lower cost. However, these upwards pressures are likely to be offset by reductions in activity elsewhere in the healthcare system that were introduced in part to limit the spread of COVID-19 and in part to create spare capacity to prepare for a wave of further cases. For example, the suspension of dental and ophthalmic activities (almost 6% of healthcare output), the cancellation and postponement of outpatient activities (13% of healthcare output), and elective procedures (19% of healthcare output) will likely weigh heavily on our activity figures."

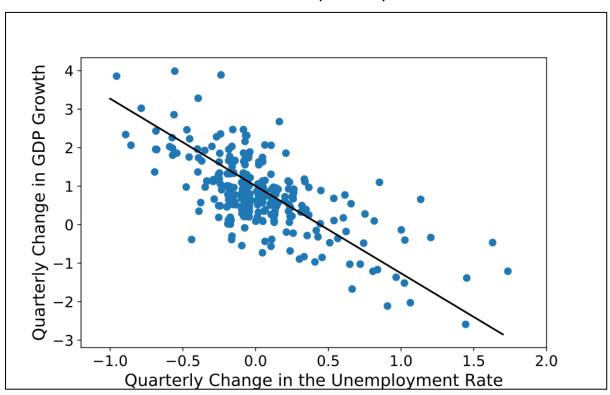
The closure of schools across the UK as part of the policy response to the COVID-19 pandemic also presents several conceptual and practical challenges for the ONS' measurement approach. The activity measures – the number of students in different settings – have been significantly affected. In "normal" times, estimates of student numbers are provided by the school censuses in England, Scotland, Wales and Northern Ireland, generally once per year. However, by only capturing the fall in the number of students attending schools, this will overstate the fall in education services provided because of the way that schools have moved to provide remote instruction.

The empirical impact of this change in approach is likely to be shaped by two offsetting factors. First, to the extent that instruction can be provided remotely, the "true" volume of education services will be higher than measured by traditional activity indicators. Classes that are taught remotely, instruction that is provided online, and work that is set and marked remotely – in some settings, particularly for older students – may adequately substitute for more normal arrangements. Secondly, international guidance makes it clear that instruction provided by parents or guardians in the home – such as formal homeschooling – sits outside the production boundary. As such, these contribute to household production, not to GDP. This means that some remote instruction – where it is dependent on parental delivery or support – should not be counted towards estimates of education output.

Potential for Job Losses

Okun's Law suggests that there is an inverse relationship between unemployment and output. However, scepticism about Okun's Law has grown in the wake of the 2008-09 recession, where some have questioned its correlation across countries when there are decreases in output and increases in unemployment. While there may be some exceptions to any rule, it is logical to consider on an *a priori* basis that output and unemployment are correlated, albeit sometimes with a lag / delay.

Okun's Law (US data)

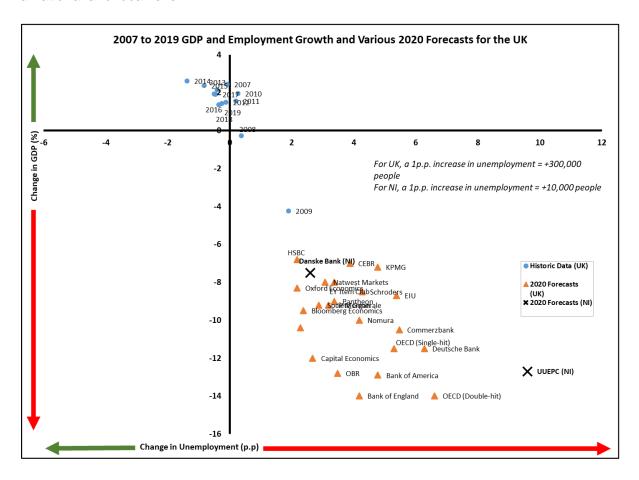


It is difficult to forecast job losses in the current crisis. Indications are that the Job Retention Scheme introduced by the Government may be having its intended effect. Initial data feeding through seems to suggest that an initial wave of unemployment hit Northern Ireland in late March and early April, however, it may be safe to assume this would have been much higher if the furlough schemes were not announced and made operational.

In terms of magnitude of any fall in the level of those in employment in Northern Ireland, the following provides some context and element of triangulation:

- There has been over 35,000 people added to the Claimant Count in the two months to May 2020, to take it to a total of 65,151.
- An assessment of additional permanent losses to employment suggests that the Claimant Count could plausibly exceed 100,000 before the end of 2020 or shortly afterwards.
- UUEPC have estimated that the unemployment rate could reach 12% in 2020.¹²³ Given that the unemployment rate in early 2020 was 2.4%, around 20,000 people, we calculate that this could mean a Claimant Count which exceeds 100,000. UUEPC estimated 10% to 20% of furloughed workers could ultimately end up unemployed.¹²⁴

Making an assessment of job losses is especially difficult in this highly uncertain environment, but the illustrations below allow for a form of triangulation, with a comparison of estimates at a national and local level.

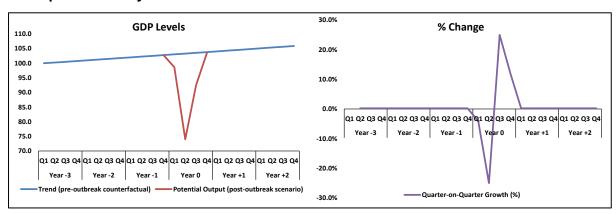


Potential Recovery Profiles

To assess the possible shape of any recovery we have illustrated some stylised scenarios in the graphs below. In Northern Ireland, the past decade has mostly seen moderate growth in output. It should be stressed, that although GDP and GVA can see some quarter-on-quarter volatility, the general trend has been gradually upwards. However, according to the Northern Ireland Composite Economic Index (NICEI), the region at the end of 2019 had not yet recovered all its output (in real terms) from the position before the 2008 recession.

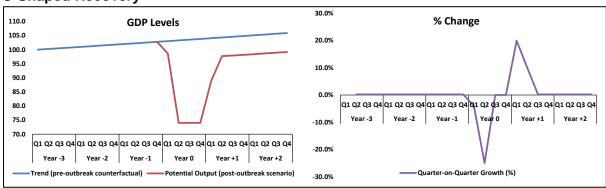
To show how actual output (in red) can differ from the pre-crisis trend, we extend the blue line of GDP forwards in time. It should be noted that this pre-crisis trend is based (in a stylised way) on a few years of GDP growth only. In reality, a trend line would normally fit between both positive and negative years i.e. take into account both recessions and periods of growth (full business cycles) within the trend. The output gap is a measure of the difference between actual GDP and potential GDP. Sometimes after recessions, during the recovery phase, the economy experiences a short period of high growth in which the output gap is eliminated and the growth path returns to its potential. If an economy experiences a shock, but keeps its productive capacity, recovery can be swift once the reason for the shock no longer applies. This best case scenario assumes that Covid-19 plays out as a short sharp shock to the global economy, which is followed by a burst of activity as pent-up demand materialises and the economy rebounds to pre-crisis levels of activity.

V-Shaped Recovery



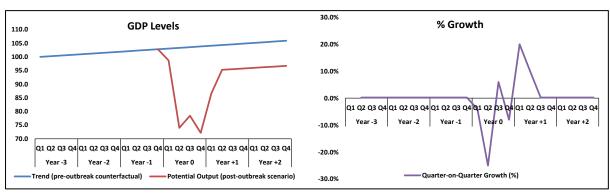
Another potential scenario centres around the large fall in output being sustained for a number of quarters, perhaps if lockdown were to continue, this results in a delay to the recovery. However, under this scenario, economic shocks can have permanent effects, or 'scars' on output, referred to as hysteresis. This may mean that output does not automatically recover to its pre-crisis trend as scars reduce productive capacity, below its potential.

U-Shaped Recovery



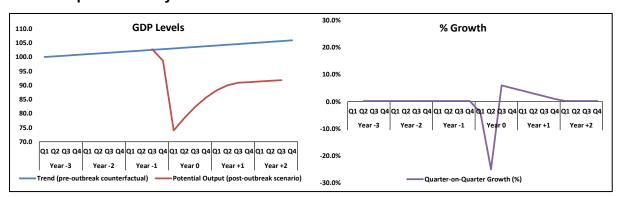
Many economic recessions and recoveries do not follow neatly into fall and then sustained growth phases; in addition, a further outbreak of the virus may lead to a double-hit scenario, which could mean that the recovery takes the form of a W-shape.

W-Shaped Recovery



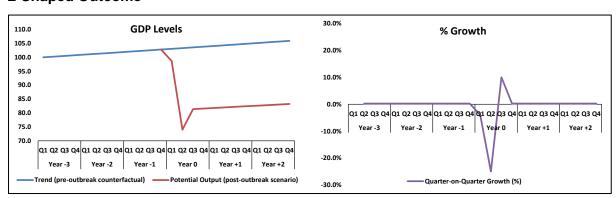
A so-called 'Tick-Shaped' recovery scenario might result if there is a slow and gradual recovery. This may occur if consumer confidence takes a number of quarters to improve from its current cautious state. In addition, output may be down for some industries (airlines, tourism etc) on a more protracted basis if the effects of the virus linger and modify behaviour long-term, perhaps meaning a change to the structural composition of output.

'Tick' Shaped Recovery



The most economically harmful scenario would be if the recovery continued to stall on a protracted basis. Hysteresis is when an event in the economy that persists into the future, even after the factors that led to that event have been removed. A single disturbance can affect the course of an economy. Unemployment staying persistently high, sovereign debt crises, banking crises, negative feedback loops etc are all potential consequences.

L-Shaped Outcome



Endnotes / Sources

- ¹ WHO Coronavirus disease (COVID-19) pandemic
- ² WHO Novel Coronavirus China
- ³ Department of Health update on Covid-19 critical care surge plan (May 2020)
- ⁴ COBR COVID-19 Press Conference Slides (26 June 2020)
- ⁵ OECD Economic Outlook (Volume 2020 Issue 1 : Preliminary Version)
- ⁶ IMF World Economic Outlook Update (June 2020)
- ⁷ CBO Gross Domestic Project projections (May 2020)
- ⁸ The Guardian US job losses pass 40m
- ⁹ National Bureau of Statistics of Chine Preliminary Accounting Results of GDP for the First Quarter of 2020
- ¹⁰ ECB Update on economic and monetary developments
- ¹¹ El Pais Spain's economy shrank 34% in the first two weeks of the coronavirus lockdown
- ¹² Germany Unemployment Rate
- ¹³ Bank of England Monetary Policy Report (May 2020)
- ¹⁴ Bank of England Monetary Policy Report (May 2020)
- ¹⁵ BBC Bank of England 'ready to act' as economy shrinks record 20%
- ¹⁶ BBC Bank of England 'ready to act' as economy shrinks record 20%
- ¹⁷ BBC Bank of England 'ready to act' as economy shrinks record 20%
- ¹⁸ ONS Monthly GDP and main sectors
- ¹⁹ BBC Bank of England 'ready to act' as economy shrinks record 20%
- ²⁰ ONS Monthly GDP and main sectors
- ²¹ Our World in Data Covid Mobility Trends
- ²² Gov.uk Forecasts for the UK Economy
- ²³ UUEPC Potential Economic Consequences of COVID-19 in Northern Ireland (May 2020)
- ²⁴ Gov.uk Monthly Insolvency Statistics (May 2020)
- ²⁵ Missing Firm Creation in the UK During the Covid-19 Lockdown (May 2020)
- ²⁶ Bank of England measures to respond to the economic shock from Covid-19
- ²⁷ Asset Purchase Facility: Gilt Purchases Market Notice (18 June 2020)
- ²⁸ OECD Economic Outlook (June 2020)
- ²⁹ NI Business Info Grant Scheme Analysis
- ³⁰ NI Business Info Business Support Grants
- ³¹ Department for the Economy Covid-19 Response Business Plan 2020-21
- ³² BBC Coronavirus in NI (19 May 2020)
- ³³ Coronavirus Job Retention Scheme statistics (June 2020)
- ³⁴ Self-Employment Income Support Scheme statistics (June 2020)
- ³⁵ NISRA Claimant Count Tables
- ³⁶ ONS Gross Domestic Product by Gross Value Added (June 2020)
- ³⁷ BBC Two food outlets temporarily close after Flybe collapse
- 38 CAA Airport Data (April 2020)
- 39 CAA UK Airport Data
- ⁴⁰ Executive Office Initiatives to deal with Coronavirus (1 May 2020)
- ⁴¹ Tourism NI Business Survey
- ⁴² BBC Surge in demand for plastic screens in NI
- ⁴³ BBC Surge in demand for plastic screens in NI
- ⁴⁴ BBC New cars sales in Northern Ireland down 97% in May
- ⁴⁵ BBC NI new car sales plunge by 99%
- ⁴⁶ NI Direct Coronavirus regulations, guidance and what they mean for you
- ⁴⁷ Belfast Telegraph Two Northern Ireland firms are selling Covid-19 tests around the world but no orders from NHS
- ⁴⁸ Randox 30m investment Covid-19 lab
- ⁴⁹ British Ports Association How are UK ports faring during the Covid-19 outbreak?
- ⁵⁰ £17m government package to protect freight routes to Northern Ireland
- ⁵¹ Flight Global The story of the coronavirus impact on airlines in numbers
- 52 BBC Bombardier cuts 600 jobs in Northern Ireland
- 53 BBC Thompson Aero Seating: 500 jobs at risk of redundancy

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<sup>54</sup> The Planner - Work stalls on developments in Northern Ireland
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- 55 News Letter Construction begins a 'slow drip back to normality' in NI
- ⁵⁶ BBC What dental services will reopen in NI on Monday?
- ⁵⁷ This is Money Bank of England probes long banks survive lockdown
- ⁵⁸ Belfast Telegraph Coronavirus threat to 10,000 jobs in Northern Ireland's agri-food industry
- ⁵⁹ ITV £25 million funding for beef and dairy farmers 'a lifeline'
- ⁶⁰ Global Cold Chain News Help NI Hauliers before it's too late
- 61 BBC Universal credit claims almost double in NI
- 62 Belfast Telegraph Stormont to bail out Translink as it faces big losses
- 63 BBC Translink and NI councils to get emergency funding
- ⁶⁴ Belfast Telegraph NI councils' cash crisis
- 65 BBC Predicted grades leave 'many questions unanswered'
- ⁶⁶ The Negotiator Northern Ireland property market to reopen on Monday
- ⁶⁷ Agri Land Minister Poots to begin work to divvy up £25 million Covid fund
- ⁶⁸ Northern Slant The Impact of Covid-19 on Farming and Food Production
- ⁶⁹ DAERA Poots announces £1.5m support package for fishing industry
- ⁷⁰ SONI Manages Changes in Electricity Consumption Caused by Covid-19 Pandemic
- ⁷¹ ONS Coronavirus and the social impacts on Great Britain (June 2020)
- ⁷² ONS Coronavirus, the UK economy and society, faster indicators (23 April 2020)
- 73 Institute for Fiscal Studies Getting people back into work
- ⁷⁴ CNBC How working from home boosts and hurts productivity creativity
- 75 Teleworking COVID-19 Downturn Pew Research Centre
- ⁷⁶ ONS Technology intensity and homeworking in the UK
- ⁷⁷ UUEPC Broadband infrastructure and boosting economic recovery (June 2020
- ⁷⁸ Invest NI Advanced Infrastructure
- ⁷⁹ Department for the Economy Project Stratum
- ⁸⁰ VOX EU Lack of demand during the coronavirus crisis
- 81 ONS UK Trade (March 2020)
- 82 ONS UK Trade (March 2020)
- 83 ONS Coronavirus and the latest indicators for the UK economy and society (4 June 2020)
- 84 OECD Foreign direct investment flows in the time of COVID-19
- 85 <u>UUEPC Economic consequences of COVID-19 in Northern Ireland (April 2020)</u>
- ⁸⁶ Belfast Telegraph NI will still be an attractive proposition for businesses worldwide, says research
- ⁸⁷ Invest NI Dodds announces 52 new jobs in a first-time investment by education platform provider Firefly
- 88 <u>UUEPC Labour Market Implications of Covid-19 (June 2020)</u>
- 89 <u>UUEPC Labour Market Implications of Covid-19 (June 2020)</u>
- ⁹⁰ UUEPC Labour Market Implications of Covid-19 (June 2020)
- 91 UUEPC Labour Market Implications of Covid-19 (June 2020)
- 92 BBC Applications to FE colleges 'down by 40%'
- 93 BBC Applications to FE colleges 'down by 40%'
- 94 Centre for Vocational Education Research Do Apprenticeships Pay? Evidence for England
- ⁹⁵ LSE The Future of apprenticeships is in the balance
- ⁹⁶ UUEPC Labour Market Implications of Covid-19 (June 2020)
- ⁹⁷ UUEPC Labour Market Implications of Covid-19 (June 2020)
- ⁹⁸ Department for the Economy Economy Minister announces £1.7m to support online learning for people impacted by Covid-19
- ⁹⁹ Intelligent Futures impact of automation on Northern Ireland Economy (March 2020)
- ¹⁰⁰ McKinsey and Company Companies should start reskilling their workforces now
- ¹⁰¹ Minister highlights key findings of NI Covid-19 modelling Department of Health
- ¹⁰² Resolution Foundation Macroeconomic Policy Outlook (May 2020)
- ¹⁰³ Resolution Foundation Macroeconomic Policy Outlook (May 2020)
- 104 NI Direct Coronavirus regulations, guidance and what they mean for you
- ¹⁰⁵ Daily Mail Chancellor Rishi Sunak warns ministers 'can NOT save every UK job'
- ¹⁰⁶ Bank of England Monetary Policy Summary and minutes (June 2020)
- ¹⁰⁷ VOX EU The lasting scars of the Covid-19 crisis
- ¹⁰⁸ How will Covid-19 affect Northern Ireland's economy?
- ¹⁰⁹ Institute for Fiscal Studies A bad time to graduate

- ¹¹⁰ Resolution Foundation Macroeconomic Policy Outlook (Quarter 2 2020)
- ¹¹¹ Bank of England Monetary Policy Report (May 2020)
- ¹¹² Morning Consult When Will Consumers Feel Safe Again?
- 113 McKinsey and Company UK consumer sentiment during the coronavirus crisis
- Danske Bank Consumer Confidence Index (Quarter 1 2020)
- ¹¹⁵ Mental Health Foundation The COVID-19 Pandemic, Financial Inequality and Mental Health
- ¹¹⁶ Coronavirus and Loneliness, Great Britain: 3 April to 3 May 2020 ONS
- ¹¹⁷ Centre for Economic Performance Covid-19 school shutdowns: What will they do to our children's education?
- ¹¹⁸ The State of the Coalfields 2019
- ¹¹⁹ NISRA NICEI publication and tables (Quarter 4 2019)
- ¹²⁰ NISRA NICEI publication and tables (Quarter 3 2019)
- ¹²¹ ONS Coronavirus and the effects on UK GDP
- 122 ResearchGate The Validity of Okun's Law
- 123 <u>UUEPC Potential economic consequences of COVID19 in Northern Ireland (May 2020)</u>
- ¹²⁴ NI Scheme Planned to Help Thousands of Jobless Retrain