

# Northern Ireland Productivity Dashboard 2023

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On behalf of the Northern Ireland Productivity Forum. View last year's [NI Dashboard](#).

**89.4%** NI's productivity relative to UK average

**7th** of the UK's twelve regions for productivity performance

Category	Driver of productivity	Relative to UK average	Change over time	
			Short-term	Long-term
<b>Business performance &amp; characteristics</b>	Exports as % of GDP			
	R&D per job			
	Innovation active businesses*			
	% of SMEs where finance is a major obstacle			
	Business births as % of all active enterprises			
<b>Skills &amp; training</b>	% of population with tertiary education (RQF 4+)			
	% of population with no or low skills (below RQF 1)			
	% of employers providing training in past 12 months			
	% of vacancies which are skill shortage vacancies			
<b>Policy &amp; institutions</b>	% of SMEs where political uncertainty & government policy is a major obstacle			
	% of SMEs where legislation & regulation is a major obstacle			
<b>Health &amp; wellbeing</b>	Economic inactivity rate			
	% of economic inactivity due to long-term ill health			
	% of population aged 16-64			
<b>Investment, infrastructure &amp; connectivity</b>	FDI per job			
	Gross fixed capital formation per job*			
	Access to Gigabit-capable internet services			
	5G mobile coverage			

**Key**

- Better than UK average
- Improvement over time
- Data unavailable
- Equal to UK average, or Lower than UK average but above median
- No change over time
- Worsening over time
- \* No new data since 2022 Dashboard

# Northern Ireland's productivity puzzle?

Productivity measures the total value of output produced in the economy for a given amount of work. Higher productivity means higher wages and better living standards. It can also mean more money available to invest in public services.

The most recent data shows productivity in Northern Ireland (NI) is 11% below the UK average (Figure 1). NI also lags behind the Republic of Ireland, where productivity is around 8% higher than the UK average.

Despite the majority of the productivity drivers on our dashboard being red, NI saw a rapid improvement in its ranking between 2020 and 2021, moving up to 7th place from previously being last of the UK's twelve regions. This was due to the highest productivity growth of any UK region, at 6.7% in real terms.

This meant NI's gap to the UK closed significantly, shrinking by 5 percentage points. This gap has previously remained relatively stable, at between 15% and 20%. NI's improved performance means the gap is now at its lowest recorded level.

This sudden improvement in productivity can be attributed to two changes that have occurred since the beginning of the Covid-19 pandemic (Figure 2).

Between 2019 and 2021, NI saw the largest decrease in the number of hours worked of any region, falling by 10%. It also saw the smallest decrease in the total real value of output (GVA), falling by only 1%. Together, these had a large positive effect on NI's productivity growth.

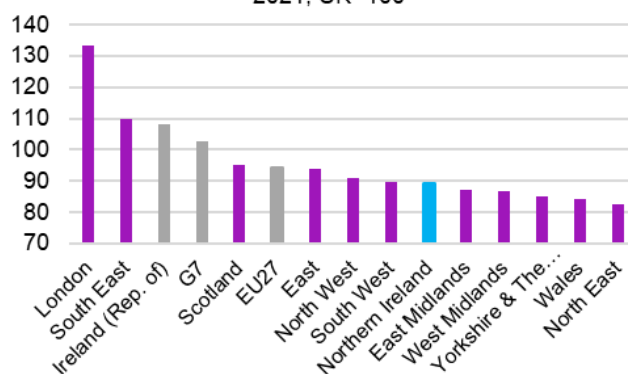
Can we expect this improvement in NI's productivity to persist? Or is this a temporary improvement, reflecting both Covid-19 restrictions during 2021, and the issues this caused for measuring economic activity?

Our productivity dashboard provides an insight into this puzzle, and whether the foundations are in place for a continued improvement in NI's productivity. It shows that NI continues to possess weaknesses across key areas that drive long-term growth in productivity. This suggests the recent improvement in productivity was predominately a result of the Covid-19 pandemic, and is unlikely to be maintained into the future.

14 of the dashboard's 18 drivers are red and below the UK average, an increase from 11 drivers in last year's dashboard. Only 2 drivers are green and better than the UK average, while 2 drivers are either equal to the UK average, or below this but above the UK median.

There is some good news amongst these drivers. Despite being below the UK average, exports, R&D, and business births have all seen short and long-term improvements. Similarly, most drivers within the category of investment, infrastructure and connectivity have seen short-term

Figure 1: Value of output per hour worked in 2021, UK=100



Sources: UK regional comparison uses [ONS \(2023\)](#). International comparison uses: GNI for G7 & EU27, [OECD \(2023\)](#); modified GNI for Rep. of Ireland, [CSO \(2023\)](#); GNI for UK, [ONS \(2023\)](#); hours worked, [OECD \(2023\)](#); in USD, current PPPs, current prices.

Figure 2: Contribution to productivity growth, 2019-2021



Note: Sign for percentage change in hours worked has been reversed to show positive contribution to productivity growth. GVA adjusted for inflation using GDP deflator ([HM Treasury, 2023](#)). Sources: Productivity hours worked per week: [ONS \(2023\)](#). GVA: [ONS \(2023\)](#).

improvements. Long-term improvements continue to be seen in levels of tertiary education and those with no skills. There has also been a welcome short-term reduction in economic inactivity, although this still remains the highest rate of any UK region.

In contrast, there are drivers where Northern Ireland continues to perform poorly. 6 drivers have seen both short and long-term deterioration: access to finance, employer training, skills shortage vacancies, political uncertainty, legislation & regulation, and economic inactivity due to long-term ill health. The percentage of population aged 16-64 also continues to decline. Finally, two drivers have no new data available.

Further detail on how the dashboard is constructed, and discussion of NI's performance across each driver of productivity, is provided in the attached Annex.

# Northern Ireland Productivity Dashboard 2023

## ANNEX

### Background

In 2022, we published the first [NI Productivity Dashboard](#), inspired by a similar undertaking for Scotland, [The CBI/KPMG Scottish Productivity Index](#). We constructed our dashboard based on the factors affecting productivity identified in our 2021 Insights Paper, '[Northern Ireland's Productivity Challenge: Exploring the issues](#)'. The dashboard measures how Northern Ireland performs across key drivers of productivity, relative to the UK average and other regions, and over time. It highlights where barriers to productivity growth exist, their severity, and whether progress is being made to address them.

On the dashboard, Northern Ireland's performance for each driver is compared against the UK average, and whether it is better (green), worse (red), or equal to this value/worse but above the UK median (orange). Performance across the short-term (1-year) and long-term (approx. 5-years) is also displayed, to show whether there has been an improvement (green), worsening (red), or no change (orange) over time.

The sections below provide a description of each productivity driver, using the most recently available data.

### Business performance & characteristics

#### Exports as % of GDP

Increasing the export intensity of local firms is important. As highlighted in a [recent report for the Department for the Economy](#), there is a strong, positive link between exporting, innovation, and productivity, with this particularly important for small economies. Northern Ireland's foreign exports as a percentage of GDP was 25.6% in 2021. This was below the UK level of 28.7%, and placed Northern Ireland 8th amongst the UK's twelve regions. Most UK regions experienced an increase between 2020 and 2021, likely reflecting a recovery from the immediate effects of the Covid-19 pandemic. Over the long-term, this measure has remained relatively stable for Northern Ireland, rising slightly since 2016.

Sources: [ONS \(2023\) Subnational trade in goods](#); [ONS \(2023\) Subnational trade in services](#); [ONS \(2023\) Regional gross domestic product](#); [NISRA \(2023\) Northern Ireland Economic Trade Statistics](#)

#### R&D per job

[DFE's 10X Delivery Plan](#) aims to increase total expenditure on R&D in Northern Ireland by 2030, and increase the number of R&D active businesses. Historically, expenditure on R&D has remained low in Northern Ireland in comparison to the other UK regions. However, when adjusted to be measured per job in the local economy, it performs better than the North of England and Wales. In 2021, R&D per job was £1,113 (in 2022 prices), compared to the UK average of £1,469 per job. There has been continued growth in R&D expenditure over time, increasing from £942 per job in 2020, and £889 per job in 2018. How these figures are broken down by UK region has recently changed, with England's results now only disaggregated into three regions, rather than the previous nine.

Source: [ONS \(2022\) Business enterprise research and development, UK](#)

#### Innovation active businesses

No new data has been released for innovation active business since the publication of our 2022 dashboard. Being innovation active measures businesses' approach to continual improvement, which is an important driver of productivity growth. This measure of innovation includes: introducing a new or significantly improved product or process; engaging in innovation projects; improving organisational structures, practices, and strategy; and/or generating or acquiring knowledge or equipment linked to innovation activities. Between 2018 and 2020, 38.4% of businesses with 10 or more employees in Northern Ireland were innovation active. This was lower than the UK

average of 44.9%, placing Northern Ireland last amongst the UK's twelve regions. In the short-term, there was an improvement in the level for Northern Ireland compared to 2016-2018, when only 32.1% were innovation active. In the long-term, the level was unchanged relative to 2014-2016, although Northern Ireland moved closer to the UK average.

Sources: *BEIS UK Innovation Survey*, [2017](#), [2019](#), [2021](#)

#### % of SMEs where finance is a major obstacle

Access to finance can place a constraint on firm growth, creating a barrier to improving productivity. For SMEs in Northern Ireland during 2022, 11% rated access to external finance as a major obstacle to running their business over the next 12 months. This was significantly above the UK average of 6%, and placed Northern Ireland 11th amongst UK regions, only ahead of the West Midlands. There was a slight short-term deterioration for Northern Ireland, increasing from 10% in 2021. Over the long-term the situation has worsened, more than doubling since 2017, when only 5% found access to external finance a major obstacle, which at the time was equal to the UK average.

Source: [BVA BDRC \(2023\) SME Finance Monitor 2022 Annual Report](#)

#### Business births as % of all active enterprises

The rate of new enterprises being created is an indicator of the level of entrepreneurial activity in the local economy. Northern Ireland saw a business birth rate of 10.3% in 2021. This is lower than the UK average of 12.4%, with Northern Ireland consistently having one of the lowest business birth rates, placing it 12th in 2021. This performance was an improvement from 9.1% in 2020, although there was a similar increase for other regions. Over the long-term, business births have seen a slight improvement since 2016 (10.0%). A recent [UUEPC report](#) analysing business dynamism in Northern Ireland found that business births in Northern Ireland have increased over the past decade, but the highest business birth rates are generally found in low productivity sectors.

Source: [ONS \(2022\) Business demography, UK](#)

### **Skills & training**

#### % of population with tertiary education (RQF 4+)

There has been a notable long-term increase in the percentage of the population educated to tertiary level and above, from 32.0% in 2017 (NVQ 4+), to 38.8% in 2022 (RQF 4+). In the short-term, there was a slight decrease from 41.6% in 2021, although this change was within the confidence intervals of the survey. It should also be noted that the recording of qualifications has changed, with NVQs being replaced by RQFs for 2022 data. Only two other regions have a lower proportion of those with tertiary education, the North East and East Midlands. A possible reason for the low level of tertiary educated population is out-migration, known as the '[brain drain](#)'.

Source: [Nomis \(2023\) Annual Population Survey](#)

#### % of population with no or only entry level skills (below RQF 1)

Northern Ireland has persistently had the highest rate of individuals with no or low-level qualifications, with 13.6% in 2022, almost double the UK average of 7.0%, and the highest of the UK's twelve regions. Improvements have been made over the long-term, as this proportion was previously 16.3% in 2017. There was a slight short-term worsening relative to 11.8% in 2021, although this change is within the survey's confidence intervals. Continued improvements are important, as a failure to further close the attainment gap will severely hamper attempts to improve productivity. As the recording of qualifications has changed, with NVQs being replaced by RQFs for 2022 data, our measure for no and low skills has changed slightly since the 2022 Dashboard, as this category previously included those with NVQ 1 qualifications. Source: [Nomis \(2023\) Annual Population Survey](#)

### % of employers providing training in past 12 months

Only 58% of employers in Northern Ireland provided training within the last 12 months in 2022. This is below the figures for England (60%), Wales (60%) and Scotland (64%). Only the East Midlands (57%) saw a lower share in 2022. Northern Ireland has declined over time, from 59% in the previous 2019 survey, and 63% in 2017. These figures suggest more needs to be done to ensure employees receive ongoing training to develop skills, which are crucial for raising productivity and maximising employees' potential.

Source: [DfE\(UK\) \(2023\) Employer Skills Survey](#)

### % of vacancies which are skill shortage vacancies

The proportion of vacancies which are skill shortage vacancies in 2022 was 35% for Northern Ireland. This was slightly lower than England (36%), but worse than Scotland (31%) and joint 5<sup>th</sup> overall, equal to Wales and the South West. Northern Ireland's short-term situation notably worsened, up from 22% in the previous 2019 survey. Over the long-term, skills shortage vacancies in Northern Ireland have increased, from only 21% of total vacancies in 2017, which at that time was below the UK average of 22%. The highest proportion of skill-shortage vacancies was within the transport sector in Northern Ireland (60%).

Source: [DfE\(UK\) \(2023\) Employer Skills Survey](#)

## **Policy & institutions**

### % of SMEs where political uncertainty & government policy is a major obstacle

In 2022, 31% of SMEs in Northern Ireland rated political uncertainty and government policy as a major obstacle in running their business as they would wish in the next 12 months. This was higher than the UK average of 27% and placed Northern Ireland 11th out of the UK's twelve regions. This was significantly higher than the previous year (19%), which was equal to the UK average. Northern Ireland has also seen an increase over the long-term, with only 15% of SMEs rating this as a major obstacle in 2017, which was only slightly above the UK average of 14%.

Source: [BVA BDRC \(2023\) SME Finance Monitor 2022 Annual Report](#)

### % of SMEs where legislation & regulation is a major obstacle

Around one-quarter (26%) of SMEs in Northern Ireland rated legislation and regulation as a major obstacle in running their business as they would wish in the next 12 months in 2022. This was higher than the UK average of 18%, and placed Northern Ireland joint bottom of the UK's twelve regions, alongside the North West. There has been a short- and long-term increase in SMEs viewing legislation and regulations as barriers to running their business in the last 12 months, compared to 24% in 2021 and 21% in 2017.

Source: [BVA BDRC \(2023\) SME Finance Monitor 2022 Annual Report](#)

## **Health & wellbeing**

### Economic inactivity rate

High rates of economic inactivity remain a persistent feature of the local economy, and can mean labour is not allocated efficiently within the local economy, creating a barrier to productivity growth. For those in the working age population (aged 16-64), 26.9% were economically inactive in Northern Ireland for May-July 2023, compared to only 21.1% for the UK. This was the worst performance of any UK region. In more positive news, Northern Ireland's inactivity rate has fallen slightly over time, from 28.2% in 2022, but has seen little long-term change from 27.1% in 2018.

Source: [Nomis \(2023\) Labour Force Survey](#)

### % of economic inactivity due to long-term ill health

Long-term ill health accounted for 35.4% of economic inactivity in Northern Ireland in 2022. This is significantly higher than the UK rate of 26.1%, with Northern Ireland consistently the worst performing UK region. Northern Ireland's performance has also worsened over both the short and long-term, rising from 30.7% in 2021, and 29.6% in 2017. A [UUEPC report](#) highlighted the relatively poorer labour market outcomes for people with disabilities in Northern Ireland compared with the rest of the UK. This reinforces the need to ensure those who have a long-term health condition or disability are being appropriately supported to work and help maximise their potential. Waiting lists in Northern Ireland's health service are also the [longest in the UK](#), with this situation existing before the Covid-19 pandemic, and exacerbated by the [current funding crisis](#). If this situation persists, it has the potential to further contribute to the number of individuals unable to fully participate in the workforce, harming productivity.

Source: [Nomis \(2023\) Labour Force Survey](#)

### % of population aged 16-64

Those aged 16-64 currently account for around 62.3% of Northern Ireland's population, just below the UK average of 62.9%, a figure which is primarily driven by the large working age population in London. Northern Ireland therefore performs well relative to other UK regions, being 4<sup>th</sup> equal, alongside the East Midlands and Yorkshire & The Humber. There has been a [continued slowdown in the growth of Northern Ireland's working age population over the last decade](#). This means productivity growth will become an increasingly important source of future economic growth, particularly in order to fund the increases in demand on public services and finances generated by an ageing population.

Source: [Nomis \(2023\) ONS Population Estimates](#)

## Investment, infrastructure & connectivity

### FDI per job

Northern Ireland had the fourth lowest level of total inward foreign direct investment amongst the UK's twelve regions in 2021, at £24,228 per job (calculated as total inward FDI position divided by the total number of jobs in the local economy, in 2022 prices). This compares to the UK figure of £62,681 per job, although this average includes FDI which is not allocated to a region, and is also skewed by London, which is one of only two regions above the average. The North East was immediately ahead of Northern Ireland, with £25,377 per job, while Yorkshire & the Humber was in last place, with £14,989 per job. There was a short-term improvement for Northern Ireland relative to 2020, contributing to Northern Ireland's movement up from 11<sup>th</sup> to 9<sup>th</sup> place. However, FDI levels in Northern Ireland have fallen in real terms since 2016, which suggests increasing the relative intensity of inward FDI remains a priority.

Source: [ONS \(2023\) Foreign direct investment involving UK companies by UK country and region: inward](#)

### Gross fixed capital formation per job

No new data has been released for gross fixed capital formation (GFCF) since the publication of our 2022 dashboard. GFCF measures the total amount of investment into tangible and intangible assets, such as buildings, structures, roads, transport equipment, machinery, ICT equipment, and intellectual property products. In 2020, Northern Ireland saw GFCF per job of £11,094 (in 2022 prices), slightly below the UK average of £11,480. This placed Northern Ireland 4<sup>th</sup> amongst the UK's twelve regions. In both the short and long-term, Northern Ireland has seen a fall in GFCF per job, which remains a concern for the local economy's future performance, as investment is a key driver of future productivity growth. Other measures of infrastructure tell a similar story.

There is 6km of motorway in Northern Ireland per 100,000 people, placing it 6<sup>th</sup> amongst the UK's regions. However, only 5% of Northern Ireland's A-roads are motorways, in comparison with the UK figure of 11%. Northern Ireland also has the lowest amount of railway track per 1000km<sup>2</sup> of the UK's four nations, at 23.7km, which is less than half the UK figure of 65.4km. Even when this is adjusted by population, there is only 17.8km of railway per 100,000 people in Northern Ireland, which is below the UK figure of 24.3km, and again below England, Scotland, and Wales.

Source: [ONS \(2022\) Experimental regional gross fixed capital formation \(GFCF\) estimates by asset type: Dfl\(NI\) \(2021\) Northern Ireland Transport Statistics 2020-21](#)

#### Access to Gigabit-capable internet services

In May 2023, 91% of premises in Northern Ireland had access to Gigabit capable services. This is higher than the UK average of 75%, and the highest proportion of the UK's four nations: England is next highest (76%), followed by Scotland (69%), and Wales (60%). Access to full fibre broadband is also higher in Northern Ireland (90%), compared to the UK average (52%). For businesses, Northern Ireland has seen a continued improvement for SME Superfast broadband coverage (93%), as a result of Project Stratum. It is now only slightly behind the UK average (95%), and it has overtaken both Wales (92%) and Scotland (91%) since the 2022 dashboard.

Sources: [Ofcom \(2023\) Connected Nations update: Summer 2023](#); [Ofcom \(2023\) Connected Nations: Spring 2023 update](#)

#### 5G mobile coverage

In April 2023, between 54%-60% of premises in Northern Ireland could receive outdoor 5G coverage from at least one operator, compared to 76%-85% for the UK. This is the lowest proportion of the UK's four nations: England has the best coverage, with 79%-88%; Scotland is next with 66%-76%; followed by Wales, with 53%-65%. However, Northern Ireland has seen a significant improvement over the past year, with coverage almost doubling, narrowing the gap with the rest of the UK. Northern Ireland's tendency to lag behind in the adoption of new technology is reflected across other types of infrastructure. Northern Ireland is the worst performing region for public electric vehicle charging devices, with only 20 per 100,000 people in April 2023, compared to the next lowest region, the North West with 33, and the UK average of 60. Again, Northern Ireland has seen an improvement since our last dashboard, but a continued slower rate of adoption of new technology in Northern Ireland may create further barriers to productivity growth.

Source: [Ofcom \(2023\) Connected Nations update: Summer 2023](#); [DfT\(UK\) Electric vehicle charging device statistics: April 2023](#)