

Northern Ireland Quarterly Index of Production

Quarter 4 (October-December) 2018

Date: 21st March 2019

Geographical Area: Northern Ireland

Theme: Economy

Frequency: Quarterly

Introduction

The quarterly Index of Production (IOP) provides a timely indicator of growth in the output of the production industries in Northern Ireland. IOP indices along with other published quarterly indices and unpublished agricultural output data are used to generate the Northern Ireland Composite Economic Index (NICEI). NICEI provides a proxy measure of total economic output in the NI economy on a quarterly basis.

Key Points

Output estimates are calculated from the IOP aspect of the Quarterly Business Survey (QBS). The IOP has a sample size of approximately 1,100, covering all production businesses with 40 or more employees and a representative sample of smaller businesses.

- The NI IOP has decreased 0.7% over the quarter (October-December) and increased 2.4% over the year. This is the first quarterly decrease in five quarters.
- The UK IOP reported a fall in output over both the quarter (by 1.1%) and the year (by 1.0%).
- The quarterly decrease in production output of 0.7% has been driven by decreases from all four main sectors - Manufacturing (0.5%), Electricity, gas, steam and air conditioning supply (2.6%), Water supply, sewerage and waste management (Inc. recycling) (3.7%) and Mining and quarrying (0.4%).
- The annual increase in NI production output of 2.4% was driven by increases in Manufacturing (2.4%), Water supply, sewerage and waste management (Inc. recycling) (5.5%) and Mining and Quarrying (1.5%). This increase was partially offset by a fall in Electricity, gas, steam and air conditioning supply (0.7%)

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NATIONAL STATISTICS STATUS

National Statistics status means that our statistics meet the highest standards of trustworthiness, quality and public value, and it is our responsibility to maintain compliance with these standards.

These statistics were designated as National Statistics on 5th August 2011 following a full [assessment](#) against the [Code of Practice](#).

Since the assessment by the UK Statistics Authority, we have continued to comply with the Code of Practice for Statistics, and have made the following improvements:

- Removed pre-release access to enhance trustworthiness and also brought the publication date forward as a result;
- Reduced [business burden](#) by offering the option of online data returns.

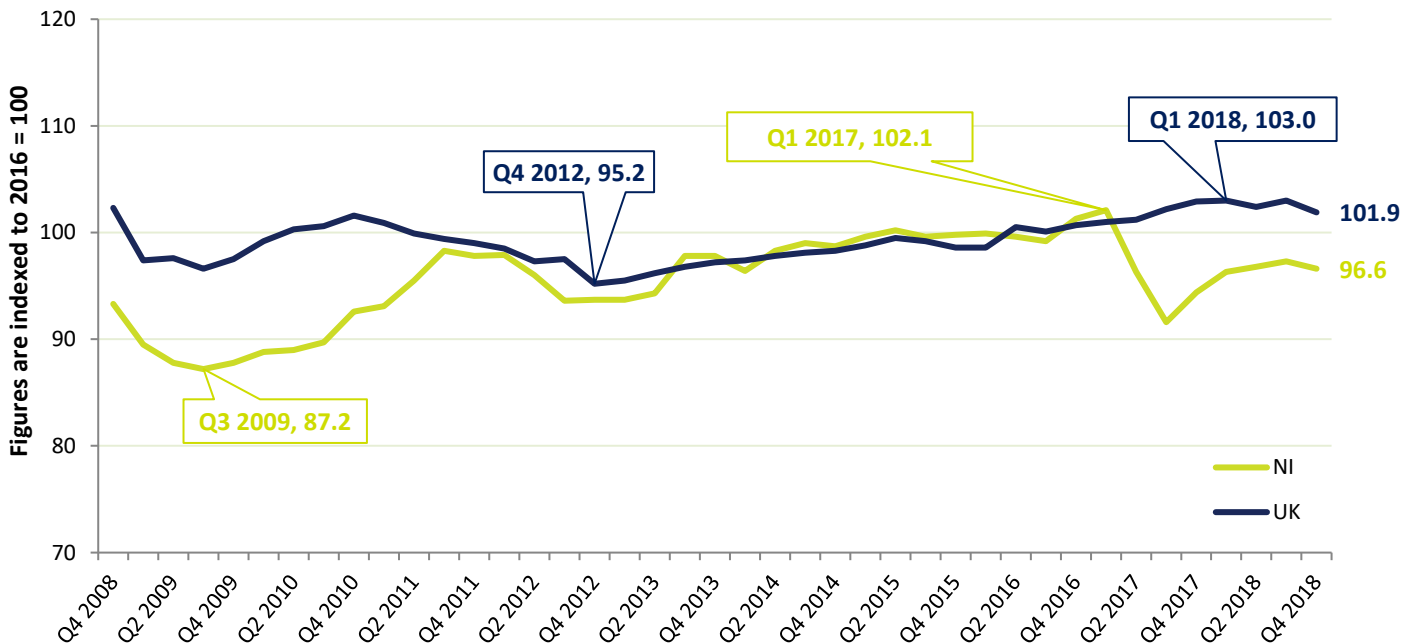
1 Summary of Index of Production

1.1 Change in IOP

The seasonally adjusted estimate for the NI IOP for Quarter 4 2018 showed:

- a decrease of 0.7% over the quarter from the Quarter 3 2018 estimate.
- an increase of 2.4% over the year from the Quarter 4 2017 estimate.
- an increase of 0.6% when the most recent four quarters are compared to the previous four quarters.

Figure 1.1 IOP NI & UK (Q4 2008 – Q4 2018)

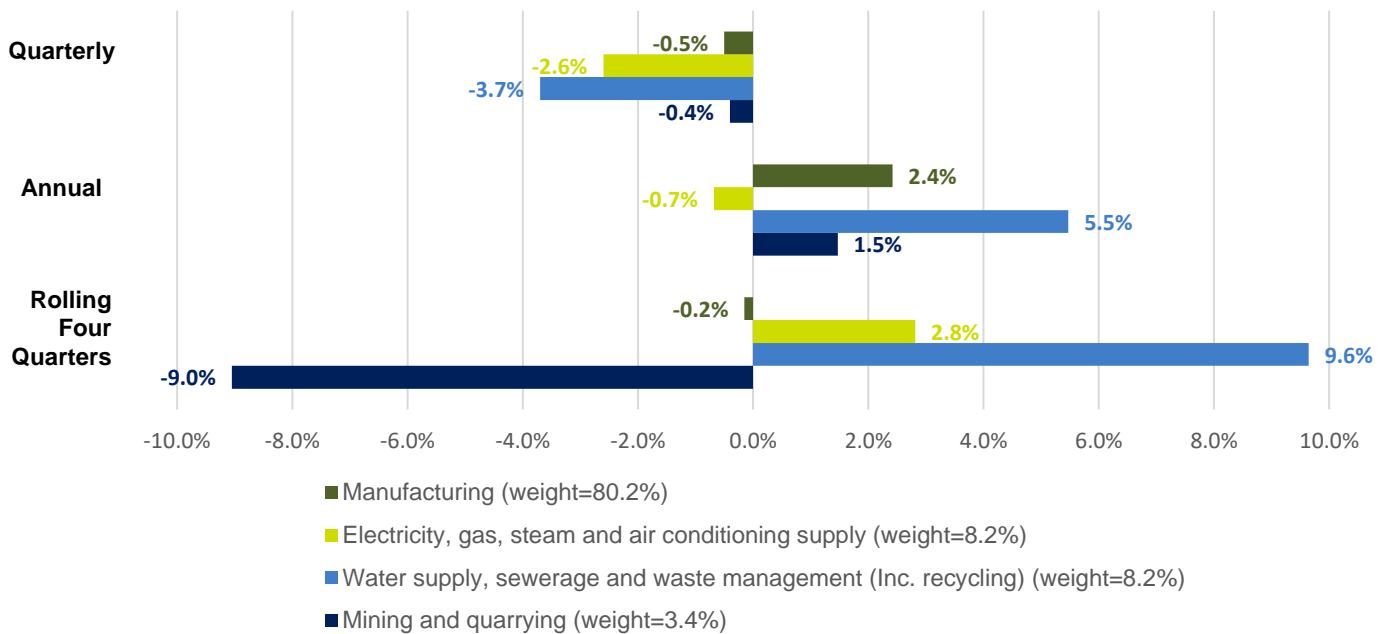


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Commentary

Output in the NI Production sector has decreased in real terms by 0.7% over the fourth quarter of 2018. NI output remains 5.4% lower than its series high (Quarter 1 (January – March) 2017). NI showed growth over the year (2.4%) whilst the UK showed a decrease (1.0%). NI output has recovered 10.7% since the series low (Quarter 3 (July – September) 2009). In contrast the UK has recovered 5.5% over the same period.

Figure 1.2 Quarterly, annual and rolling four quarters changes in IOP at sector level Quarter 4 2018¹



Changes over the quarter

Comparing the seasonally adjusted NI IOP from Quarter 3 2018 (July-September) to Quarter 4 2018 (October-December) all sectors showed the following decreases:

- a decrease in Manufacturing output by 0.5%;
- a decrease in Water supply, sewerage and waste management (Inc. recycling) output by 3.7%;
- a decrease in Electricity, gas, steam and air conditioning supply output by 2.6%; and,
- a decrease in Mining and quarrying output by 0.4%.

Changes over the year

Comparing the seasonally adjusted NI IOP from Quarter 4 2017 to Quarter 4 2018 showed:

- an increase in Manufacturing output by 2.4%;
- an increase in Water supply, sewerage and waste management (Inc. recycling) output by 5.5%;
- an increase in Mining and quarrying output by 1.5%; and,
- a decrease in Electricity, gas, steam and air conditioning supply output by 0.7%.

¹ For further information on weights see page 7

Changes over a rolling four quarters basis

Comparing the seasonally adjusted NI IOP for Quarter 1 2018–Quarter 4 2018 to Quarter 1 2017–Quarter 4 2017 showed:

- an increase in Water supply, sewerage and waste management (Inc. recycling) output by 9.6%;
- an increase in Electricity, gas, steam and air conditioning supply output by 2.8%;
- a decrease in Manufacturing output by 0.2%; and,
- a decrease in Mining and quarrying output by 9.0%.

1.2 Context

The IOP is an important short-term measure of change in the output of the production sector of the economy. The contents of this report will be of interest to government policymakers, Members of the Legislative Assembly, the business community, economic commentators, academics and members of the general public with an interest in the NI economy. A summary of recent uses is available [here](#).

The Department for the Economy (DfE) [Economic Commentary \(Winter 2018/19\)](#) provides an overview of the NI economy, setting it in context with the UK and Republic of Ireland.

The most up-to-date official statistics on the economy and labour market are available on the [Economic Overview section](#) of the [Economic and Labour Market Statistics \(ELMS\) section of the NISRA website](#).

The IOP is published on a Standard Industrial Classification 2007 (SIC07) basis. IOP data prior to Quarter 2 2011 were collected on a SIC03 basis and have been converted to approximate the SIC07 coverage.

The background notes (section 4) provide information on the methodology used to produce the statistics as well as information on the quality and accuracy of the data. This bulletin contains results for the production sector as a whole, for Manufacturing, for Electricity, gas, steam and air conditioning supply, for Water supply, sewerage and waste management (Inc. recycling) and for Mining and quarrying sectors. Production sector series are seasonally adjusted (unless otherwise stated) on a 2016=100 basis, using X-13 ARIMA SEATS, giving data up to the most recent available quarter (Quarter 4 2018).

Comparative UK data, produced by the Office for National Statistics (ONS), are presented where these are available. Click [here](#) to see the latest UK IOP results.

This publication provides three measures of growth for the index.

1. The quarter-on-quarter change provides the most recent measure of how the sector is changing. It is appropriate to compare consecutive quarters as the indices are seasonally adjusted to remove the effects of changes in output as a result of the time of the year;
2. Comparisons with the same quarter one year ago; and
3. A comparison of the most recent twelve months with the twelve months before. The quarterly comparison over the year provides an additional control on the seasonal effects. The comparison of the rolling annual average is useful for identifying changes in output over a longer time period than the other two approaches.

Revisions

Results are provisional and subject to revision, which can be made for a variety of reasons. The most common include late responses to surveys, estimates being replaced by actual data, revisions to seasonal adjustment factors, methodological changes and changes to business classifications.

2 Production output by sector

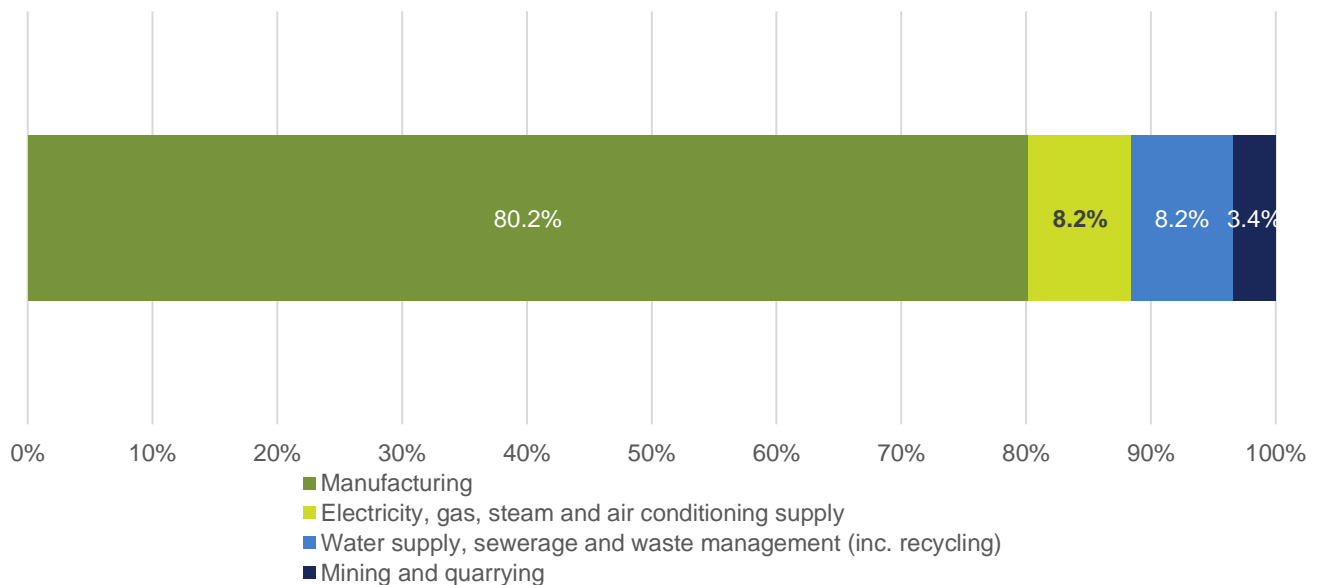
Output: Turnover, defined as the value of total sales generated from all NI based activity, excluding VAT. Turnover is rounded to the nearest thousand and is then deflated and seasonally adjusted.

2.1 Key findings

- The IOP decreased 0.7% over the quarter, increased 2.4% over the year and increased 0.6% on a rolling four quarter basis.
- This is the first quarterly decrease in five quarters.
- The quarterly decrease in production output has been driven by decreases in all four sectors - Manufacturing (0.5%), Electricity, gas, steam and air conditioning supply (2.6%), Water supply, sewerage and waste management (Inc. recycling) (3.7%) and Mining and quarrying (0.4%).
- The annual increase in NI production output of 2.4% was supported by increases in Manufacturing (2.4%), Mining and Quarrying (1.5%) and Water supply, sewerage and waste management (Inc. recycling) (5.5%). This increase was partially offset by a decrease in Electricity, gas, steam and air conditioning supply (0.7%)

The Production sector is composed of four sectors but is dominated by Manufacturing, which accounts for approximately 80.2% of total production Gross Value Added (GVA) at 2017. The sectors are listed in order of the importance of their contribution made to the overall IOP.

Figure 2.1 IOP sector split (based on 2017 GVA)



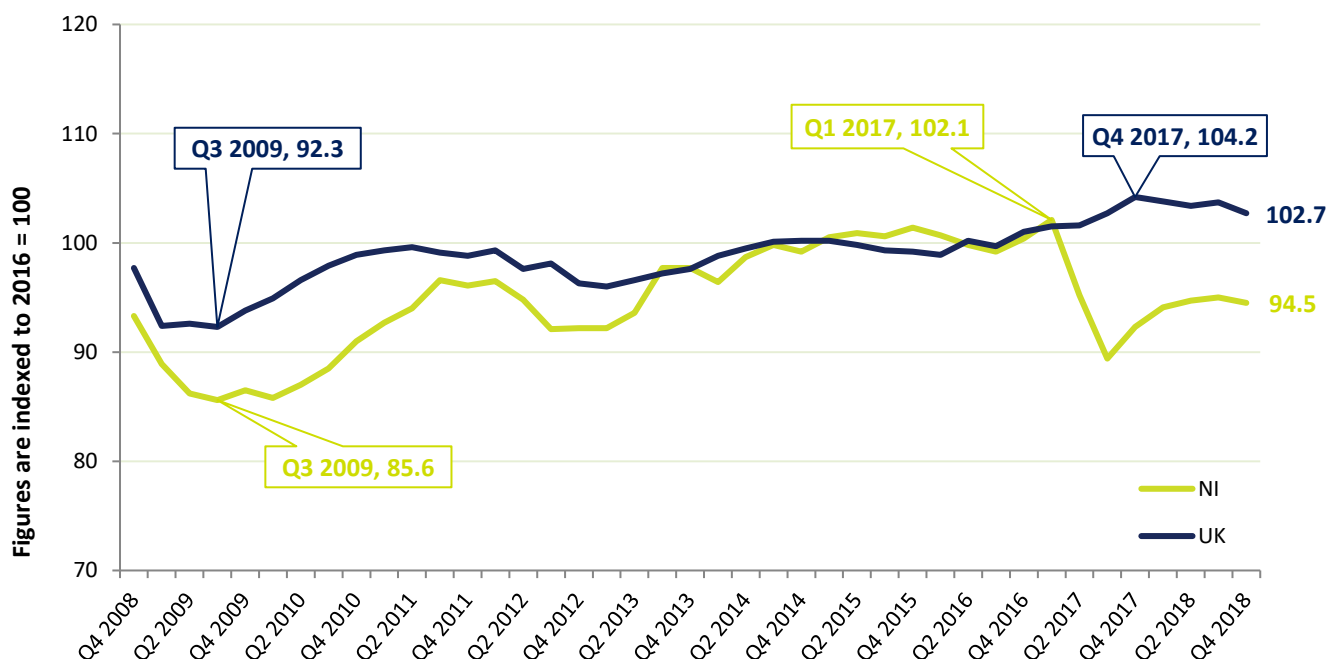
2.2 Manufacturing

Manufacturing sector (SIC07 Section C) - (weight = 80.2% of IOP): Manufacturing involves the transformation of materials into new products (outputs). It is comprised of six subsectors. Subsectors are defined and presented in order of the importance of their contribution towards manufacturing in Section 3.

Key findings

- The NI seasonally adjusted figures show a decrease of 0.5% over the quarter, an increase of 2.4% over the year and a decrease of 0.2% on a rolling four quarters basis.
- The UK seasonally adjusted figures show a decrease of 1.0% over the quarter, a decrease of 1.4% over the year and an increase of 0.9% on a rolling four quarter basis.
- NI output is 7.4% below its highest point recorded (Quarter 1 2017) over the ten year period Q4 2008–Q4 2018.
- NI output is 10.4% above the series low (Quarter 3 2009).
- Within manufacturing two of the six broad subsectors ([as reported in section 3](#)) are increasing. Of interest, one of these subsectors has reached a series high (Engineering and Allied Industries) and none have reached a ten year high.
- Within manufacturing five of the ten manufacturing subsectors (as reported in table 5.15) are increasing. Of interest, two of these subsectors has reached a series high (Manufacture of machinery and equipment not elsewhere classified; and Manufacture of transport equipment) and one has reached a ten year high (Manufacture of wood and paper products and printing and reproduction of recorded media).

Figure 2.2 Manufacturing sector, NI & UK (Q4 2008–Q4 2018)



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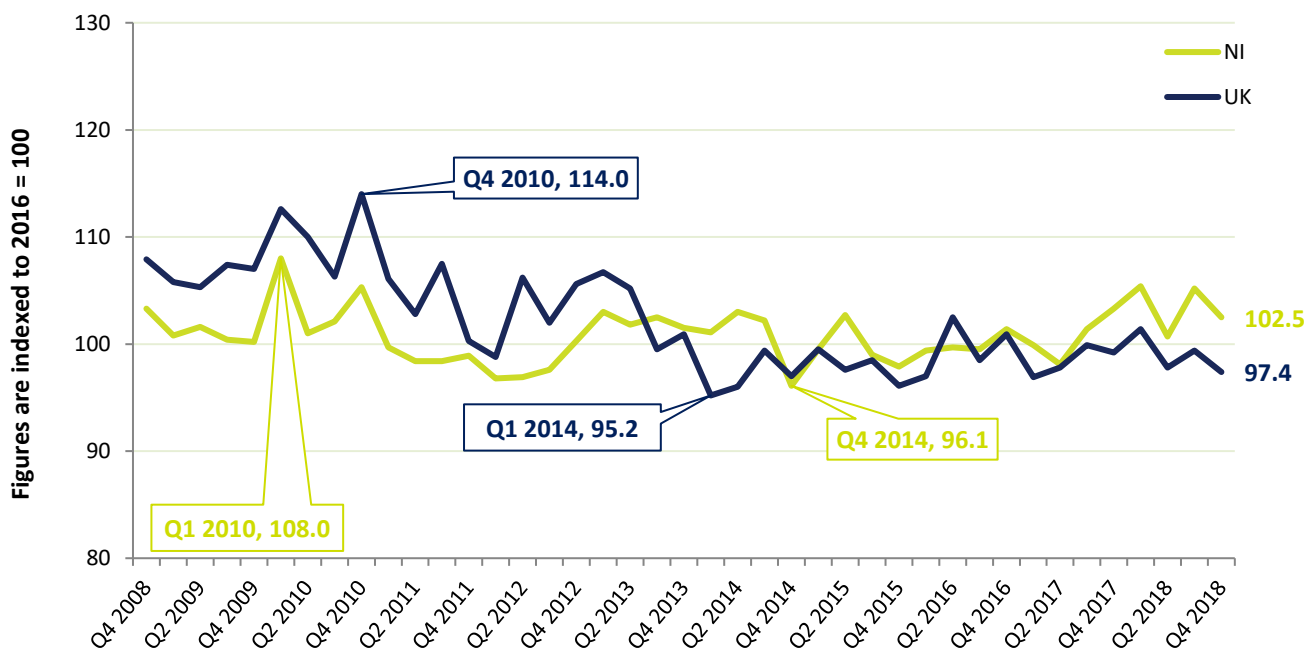
2.3 Electricity, gas, steam and air conditioning supply

Electricity, gas, steam and air conditioning supply (SIC07 Section D) (weight = 8.2% of IOP): This sector includes the activity of providing electric power, natural gas, steam, hot water and the like through a permanent infrastructure (network) of lines, mains and pipes. Also included is its distribution in industrial parks or residential buildings. Therefore, the operation of electric and gas utilities are included.

Key findings

- The NI seasonally adjusted figures show a decrease of 2.6% over the quarter, a decrease of 0.7% over the year and an increase of 2.8% on a rolling four quarters basis.
- The seasonally adjusted figures for the UK show a weaker decrease of 2.0% on the quarter, a decrease of 1.8% over the year and an increase of 0.6% on a rolling four quarter basis.
- NI estimate remains below (5.0%) the series high recorded in Quarter 1 2010.
- The NI index is observed to be 6.7% above its lowest point recorded (Quarter 4 2014) in the past ten years and 15.8% above the series low (Quarter 2 2007).

Figure 2.3 Electricity, gas, steam and air conditioning supply, NI & UK (Q4 2008–Q4 2018)



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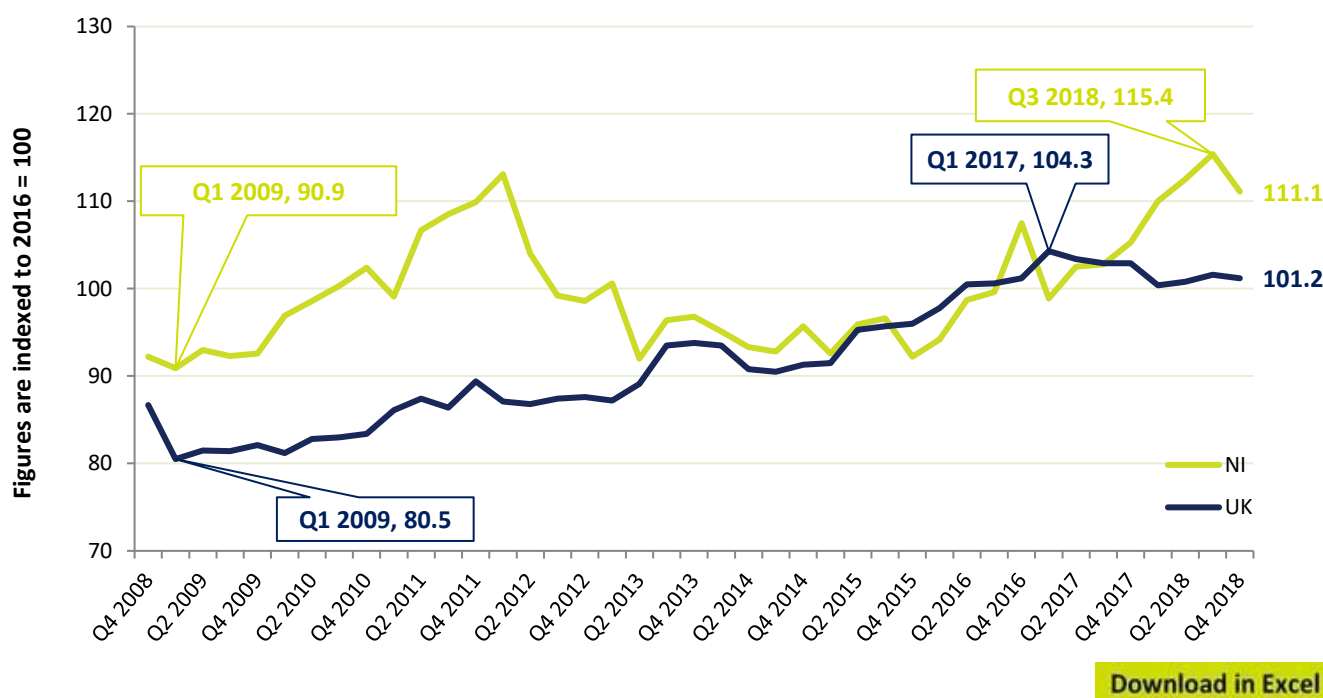
2.4 Water supply, sewerage and waste management (Inc recycling)

Water supply, sewerage, and waste management (Inc. recycling) (SIC07 Section E) (weight = 8.2% of IOP): This section covers activities related to the management (including collection, treatment and disposal) of various forms of waste, such as solid or non-solid industrial or household waste, as well as contaminated sites. Activities of water supply are also grouped in this section since they are often carried out in connection with, or by units also engaged in, the treatment of sewage.

Key findings

- The NI seasonally adjusted figures show a decrease of 3.7% over the quarter, an increase of 5.5% over the year and an increase of 9.6% on a rolling four quarters basis.
- The UK reports decreases of 0.4% over the quarter, 1.7% over the year and 2.3% on a rolling four quarters basis.
- NI output was observed to be 3.7% below its highest point recorded (Quarter 3 2018).
- NI output was observed to be 22.2% above its lowest point recorded (Quarter 1 2009) in ten years.

Figure 2.4 Water supply, sewerage and waste management (Inc. recycling), NI & UK (Q4 2008–Q4 2018)



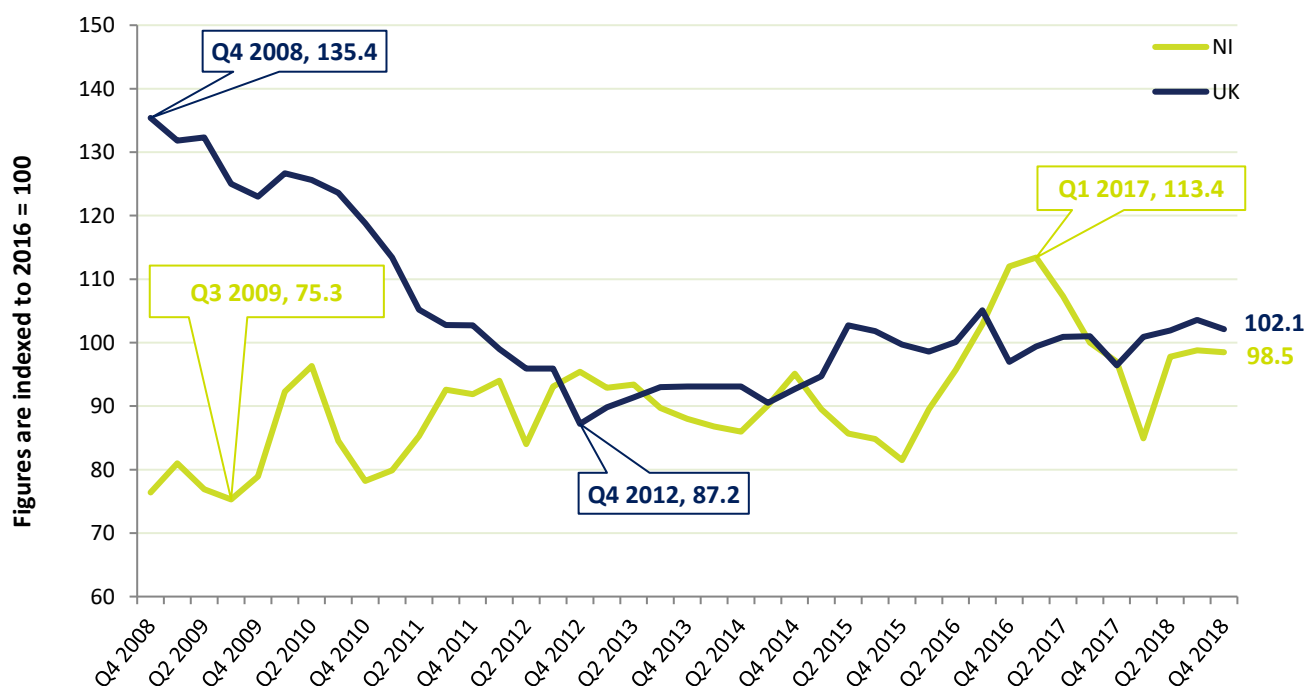
2.5 Mining and quarrying

Mining and quarrying (SIC07 Section B) (weight = 3.4% of IOP): This section covers the extraction of minerals occurring naturally as solids (coal and ores), liquids (petroleum) or gases (natural gas). Extraction can be achieved by different methods such as underground or surface mining, well operation, seabed mining, etc.

Key findings

- The NI seasonally adjusted figures show a decrease of 0.4% over the quarter and a 9.0% decrease on a rolling four quarters basis. In annual terms, output increased over the year (1.5%).
- The UK seasonally adjusted figures show a greater decrease over the quarter (1.4%), an increase over the year (5.9%) and an increase of 2.7% over a rolling four quarter basis.
- NI output is 13.1% below the series high (Quarter 1 2017).
- NI output is 30.8% above the lowest reported level (Quarter 3 2009) in the last decade.

Figure 2.5 Mining and quarrying, NI & UK (Q4 2008–Q4 2018)

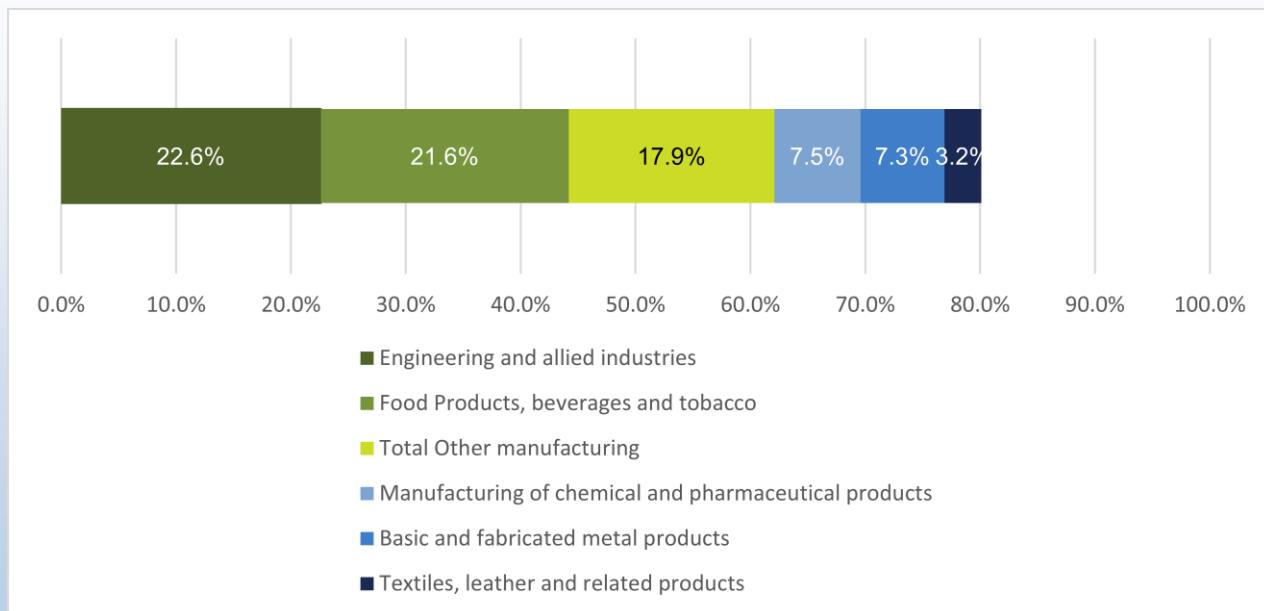


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3 Manufacturing subsectors

Manufacturing subsectors: Manufacturing is comprised of six subsectors. Figure 3.1 shows the contribution of each to the Production sector. The six subsectors make up 80.2% of the Production sector.

Figure 3.1 Manufacturing subsectors



*Total Other includes Manufacture of wood, paper products & printing and Rubber, plastic products & non-metallic mineral products

3.1 Key findings

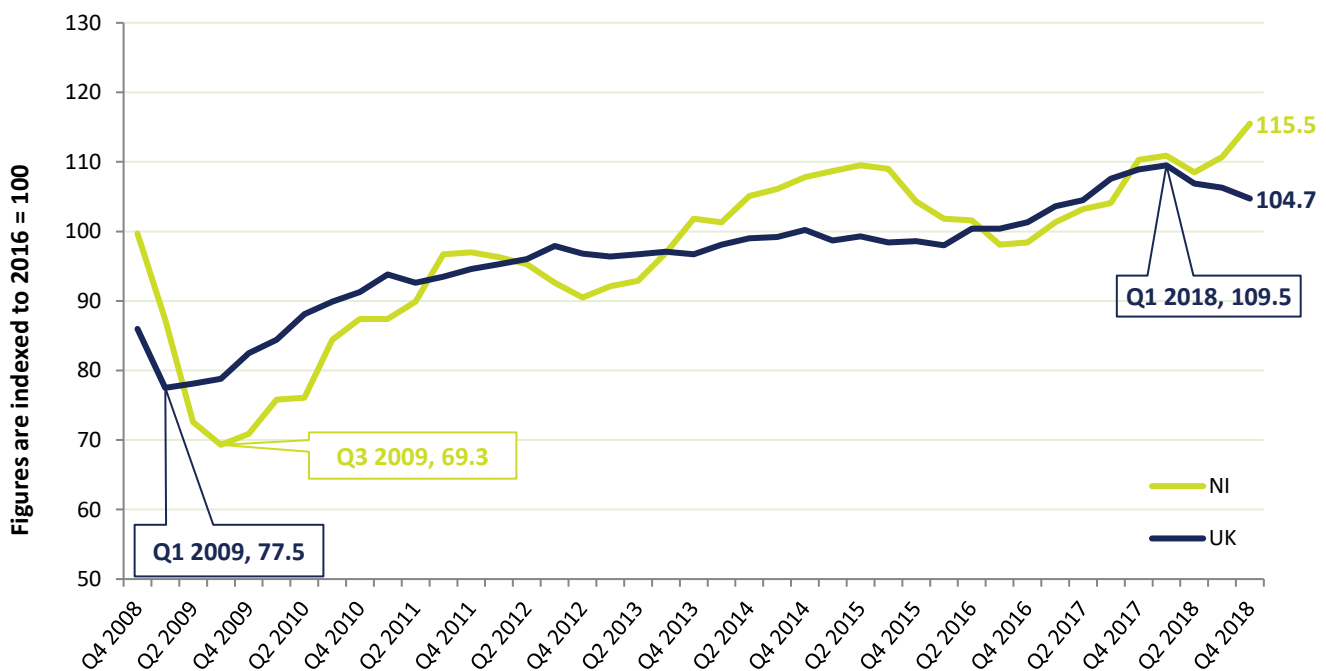
- The quarterly decrease in Manufacturing output was driven by decreases from the Manufacture of chemical and pharmaceutical products (17.5%), Total other manufacturing (1.4%) Manufacture of textiles, leather and related products (1.0%) and Basic and fabricated metal products (0.7%) subsectors.
- This decrease was partially offset by the increases from the Engineering and allied industries (4.4%) and Food Products, beverages and tobacco (2.5%) subsectors.
- Over the year, the increase in Manufacturing is supported by increases in Engineering and allied industries (4.7%), Manufacture of textiles, leather and related products (4.4%), Food products, beverages and tobacco (4.2%) and Total other manufacturing (3.9%) and is offset by decreases in the Manufacture of chemical and pharmaceutical products (10.5%) and Basic and fabricated metal products (3.0%) subsectors.

3.2 Engineering and allied industries

Key findings

- NI seasonally adjusted figures show an increase over the quarter of 4.4% and stronger increases over the year (4.7%) and on a rolling four quarters basis (6.4%).
- The UK estimated a decrease of 1.5% over the quarter, a decrease of 3.9% over the year and an increase of 0.7% on a rolling four quarters basis.
- NI experienced stronger growth this quarter in comparison to UK across all comparable time periods.
- NI output for this sector has reached a series high. This broad subsector has experienced quarterly growth in eight of the last nine quarters. This is contributing to the annual increase in the Manufacturing sector and the overall IOP. In contrast the UK reported a quarterly decline in this subsector in the last three quarters.
- NI output is 66.6% above the series low recorded (Quarter 3 2009).

Figure 3.2 Engineering and allied industries NI & UK (Q4 2008–Q4 2018)



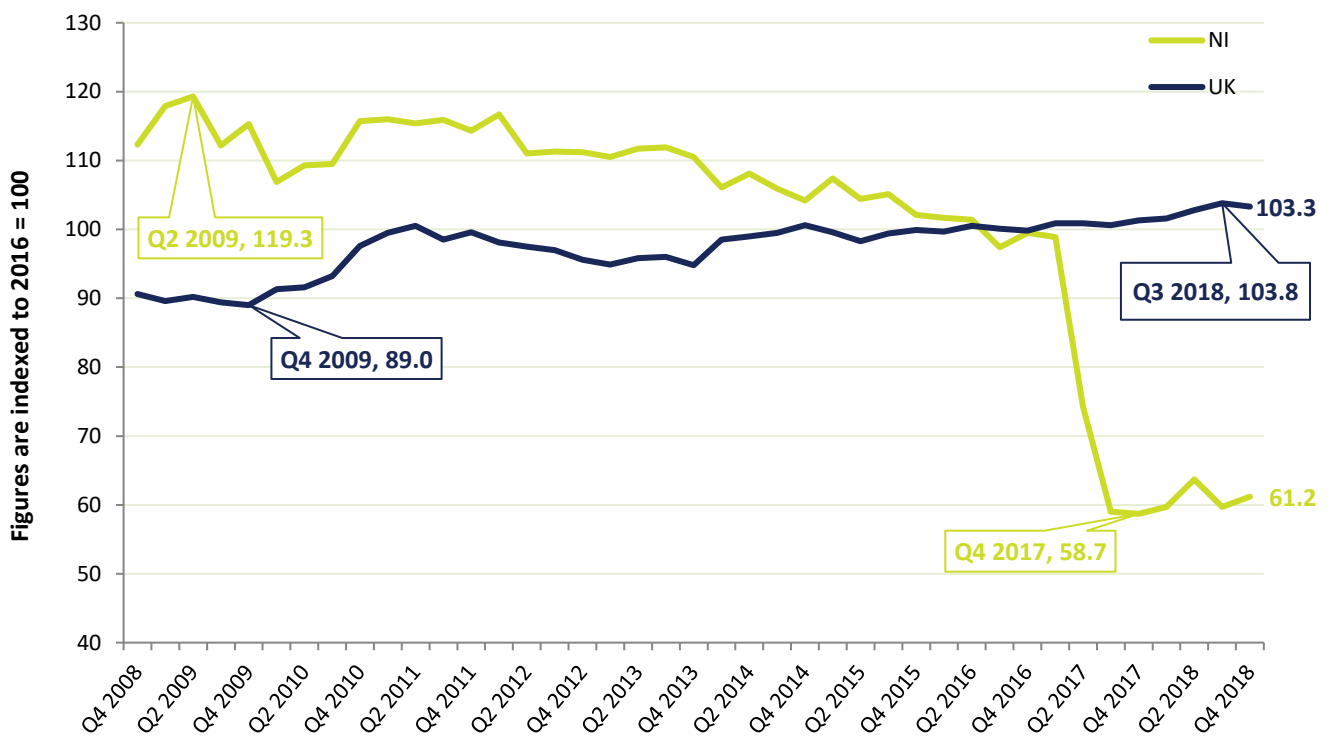
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3.3 Food products, beverages and tobacco

Key findings

- NI output increased by 2.5% from Quarter 3 2018.
- Seasonally adjusted figures show an increase over the year (4.2%) with a decrease of 16.1% on a rolling four quarters basis.
- The UK estimated a decrease of 0.5% over the quarter, an increase of 2.0% over the year and an increase of 1.9% on a rolling four quarters basis.
- NI output is estimated to be 4.2% above the series low (Quarter 4 2017).
- NI output has fallen 48.7% below its peak (Quarter 2 2009).

Figure 3.3 Food products, beverages and tobacco, NI & UK (Q4 2008–Q4 2018)



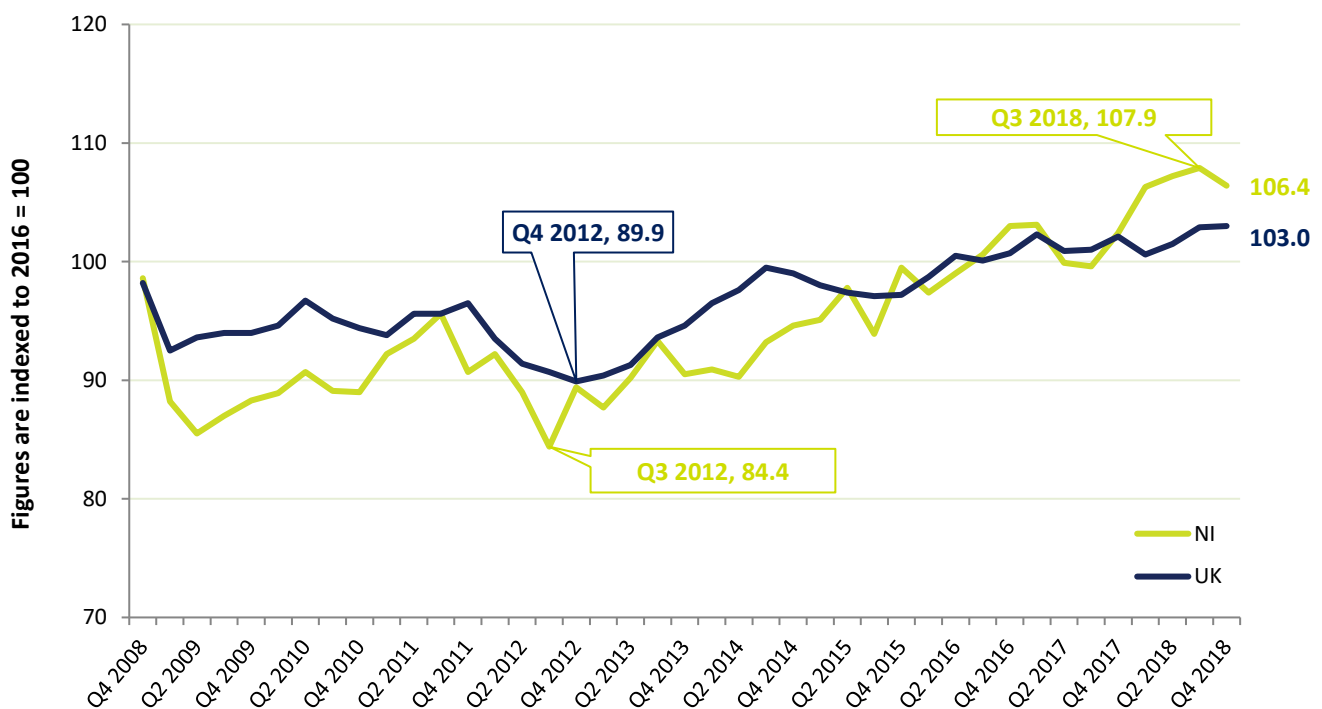
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3.4 Total Other Manufacturing

Key findings

- Seasonally adjusted figures show a decrease of 1.4% over the quarter. There were increases over the year (3.9%) and on a rolling four quarters basis (5.6%).
- The UK had weak increases over the quarter (0.1%), over the year (0.9%) and on a rolling four quarters basis (0.4%).
- NI output is estimated to be 1.4% below the highest point of the past ten years (Quarter 3 2018).
- NI output is estimated to be 26.1% above its series low (Quarter 3 2012).

Figure 3.4 Total Other manufacturing, NI & UK (Q4 2008–Q4 2018)



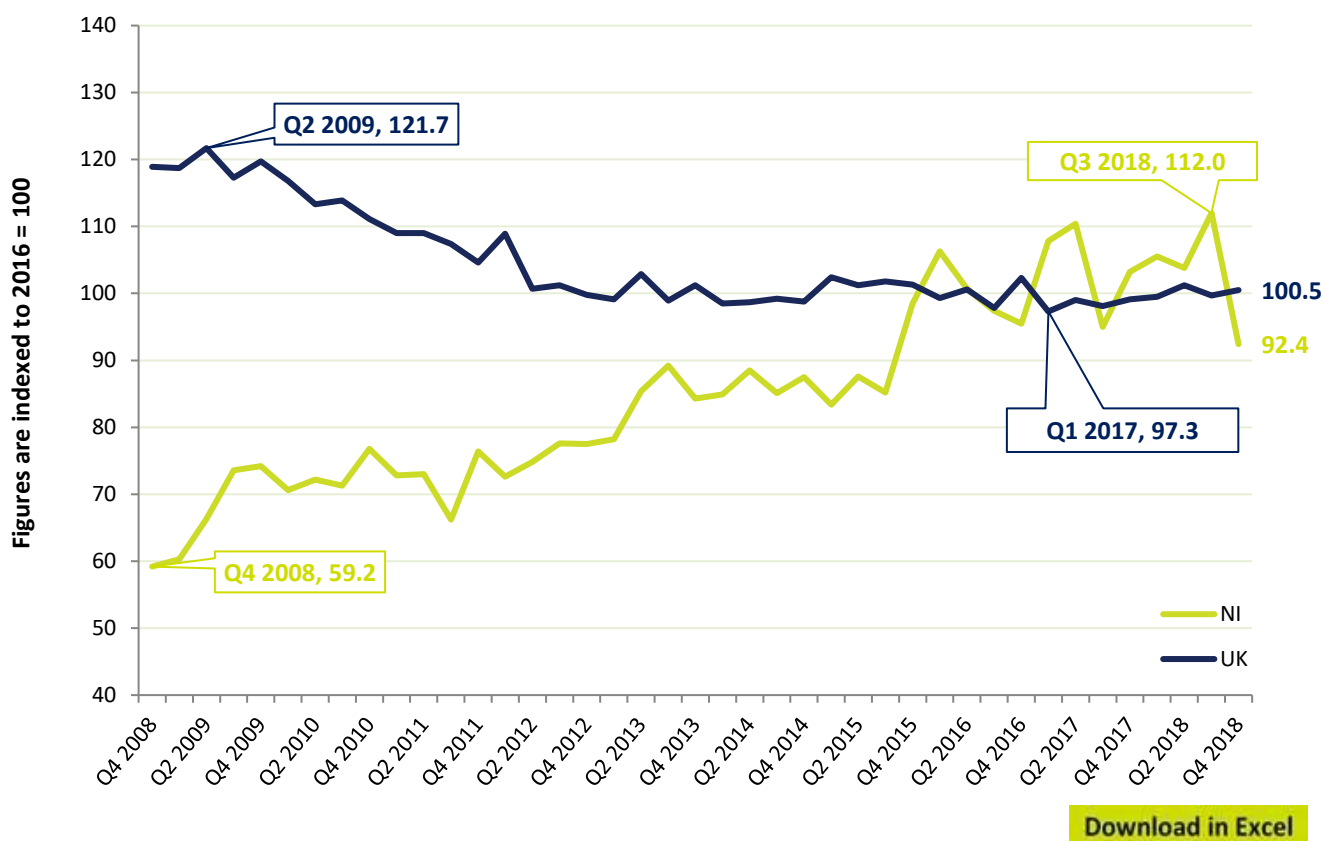
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3.5 Manufacturing of chemical and pharmaceutical products²

Key findings

- The NI non-seasonally adjusted figures show decreases of 17.5% over the quarter, 10.5% over the year and 0.7% on a rolling four quarters basis.
- The UK figures show an increase of 0.8% over the quarter, and slightly stronger increases of 1.4% over the year, and of 1.9% on a rolling four quarters basis.
- NI output is estimated to be 17.5% below the series high (Quarter 3 2018).
- NI output is 56.2% above the ten year low point (Quarter 4 2008).

Figure 3.5 Manufacturing of chemical and pharmaceutical products, NI & UK (Q4 2008–Q4 2018)



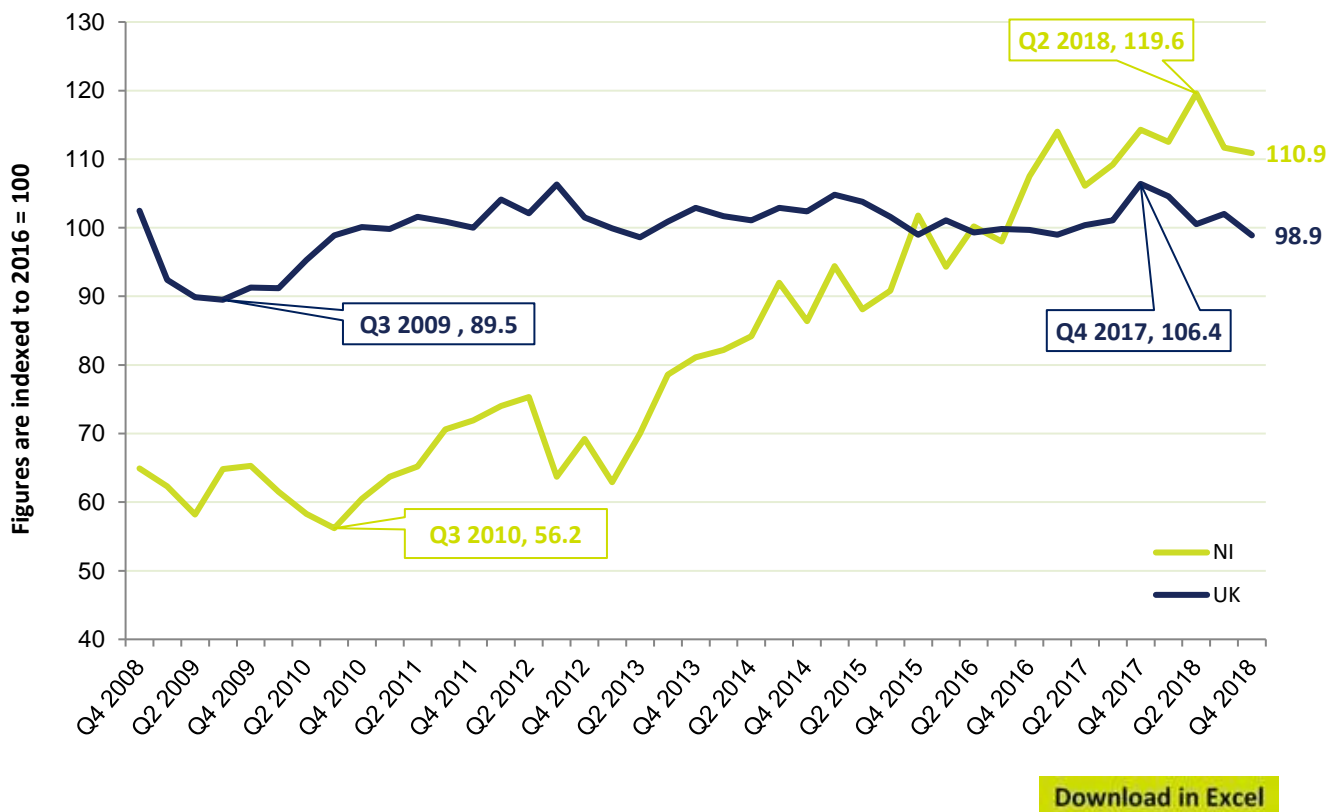
² The Manufacturing of chemical and pharmaceutical products subsector has not been seasonally adjusted.

3.6 Basic and fabricated metal products

Key findings

- The NI seasonally adjusted figures show a decrease of 0.7% over the quarter, a decrease of 3.0% over the year and an increase of 2.5% on a rolling four quarters basis.
- UK seasonally adjusted figures show decreases of 3.0% over the quarter, 7.0% over the year and 0.2% on a rolling four quarters basis.
- NI output is 7.3% below the series high (Quarter 2 2018).
- NI output is 97.4% above the series low (Quarter 3 2010).

Figure 3.6 Basic and fabricated metal products, NI & UK (Q4 2008–Q4 2018)

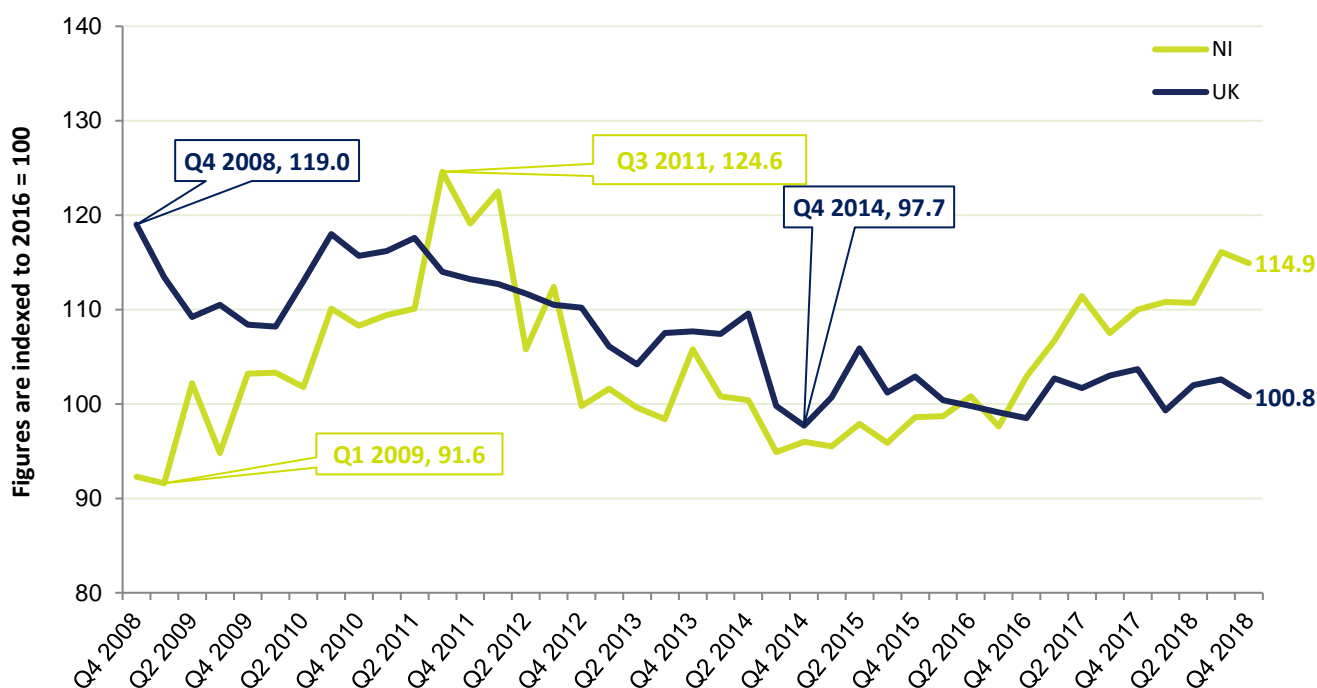


3.7 Textiles, leather and related products

Key findings

- The NI seasonally adjusted figures show a decrease over the quarter (1.0%), and increases over the year (4.4%), and on a rolling four quarters basis (3.9%).
- UK seasonally adjusted figures show decreases of 1.8% over the quarter, 2.8% over the year and 1.6% on a rolling four quarters basis.
- NI output is 7.8% below its highest point recorded in ten years (Quarter 3 2011).
- NI output is 25.4% above the series low (Quarter 1 2009).

Figure 3.7 Textiles, leather and related products, NI & UK (Q4 2008–Q4 2018)



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3.8 Other notable trends in manufacturing

This section summarises any notable trends in manufacturing sectors that are not reported elsewhere in this bulletin, but are reported on within the IOP tables. Table references for each of these are noted below.

The following subsectors are at a series high:

- Manufacture of machinery and equipment not elsewhere classified ([table 5.15](#)). This subsector has experienced quarterly growth in ten of the last eleven quarters. This is contributing to the annual increase in the Manufacturing sector and the overall IOP. In contrast the UK reported a quarterly decline in this subsector in the last three quarters.
- Manufacture of transport equipment ([table 5.15](#)). This subsector has experienced quarterly growth in six of the last eight quarters. This is contributing to the annual increase in the Manufacturing sector and the overall IOP. In contrast the UK reported a quarterly decline in this subsector in two of the last three quarters.
- Investment goods (within NI market sector goods - [figure 4.1](#)). This subsector has experienced quarterly growth in seven of the last eight quarters. This is contributing to the annual increase in the overall IOP.

The following subsector is at a ten year high:

- Manufacture of wood and paper products and printing and reproduction of recorded media ([table 5.15](#)) (still 13.9% below series high from Q1 2007). This subsector has experienced quarterly growth in twelve of the last fifteen quarters. This is contributing to the annual increase in the Manufacturing sector and the overall IOP. The UK reported quarterly increases in this subsector in the last three quarters.

4 Background notes

Background

The quarterly IOP provides a measure of change in the output of the production industries in NI (this is defined as SIC07 sections B to E). In 2017 these production industries accounted for 17% of Regional GVA. For further information please see the [Methodology for the NI Index of Production \(IOP\)](#).

Background

The IOP is a statutory survey with an average response rate of 79%.

Gross Value Added (GVA)

From Quarter 4 2017, weighting has been carried out using the balanced GVA approach which balances the income and production approaches to measuring the economy into a single estimate. For more information please see [Regional GVA information](#). Figures in this publication are weighted using 2017 GVA which became available on 12th December 2018.

Deflation

All series, unless otherwise quoted, are measured at a constant market price (2016 = 100). Deflators adjust the value series to take out the effect of price change to give the volume series. The deflators used in this bulletin were sent directly by ONS on 5th March 2019. Details on the changes to the ONS deflators methodology can be found [here](#).

Seasonal adjustment Review

Following the annual seasonal adjustment review conducted in November 2018 changes have been made to some regressors and models used to seasonally adjust (where applicable) time series using X13 ARIMA SEATS. This improves the reliability of results.

Productivity

The NI Index of Manufacturing Productivity has been removed from the Index of Production report. We are currently reviewing the methodology as part of a wider review of productivity.

Publications policy

All ELMS publications are available to download free of charge from the [ELMS section of the NISRA website](#).

The IOP bulletin and tables from the current publication, which includes all the data from the start of the series in 2005, are available in Excel and Open Document format to download free of charge from the [IOP section of the NISRA website](#).

Future IOP publications are due to be published on the same day as the Index of Services in March, June, September and December of each year.

Next publication

The next bulletin is due to be published on 13th June 2019.

The ELMS publication schedule is available [here](#).

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