

Northern Ireland Quarterly Index of Production

Quarter 4 (October – December) 2019

Theme: Economy

Frequency: Quarterly

Geographical Area: Northern Ireland

Date: 19 March 2020

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 IOP indices along with other published quarterly data and unpublished agricultural output data are used to generate the [Northern Ireland Composite Economic Index \(NICEI\)](#).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 increased by 0.6% over the quarter (October - December) and by 1.7% over the year.
- The UK IOP reported a decrease over the quarter (0.8%) and a decrease over the year (2.0%).
- The quarterly increase in production output of 0.6% has been driven by increases in three of the four main sectors: Manufacturing (0.7%); Water supply, sewerage and waste management (Inc. recycling) (3.1%); Electricity, gas, steam and air conditioning supply (0.3%) and offset by a decrease in Mining and quarrying (5.0%).
- The annual increase in NI production output of 1.7% was driven by increases in Manufacturing (2.1%) and Water supply, sewerage and waste management (Inc. recycling) (2.1%). This increase was partially offset by decreases in Mining and Quarrying (7.0%) and Electricity, gas, steam and air conditioning supply (3.6%).

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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.

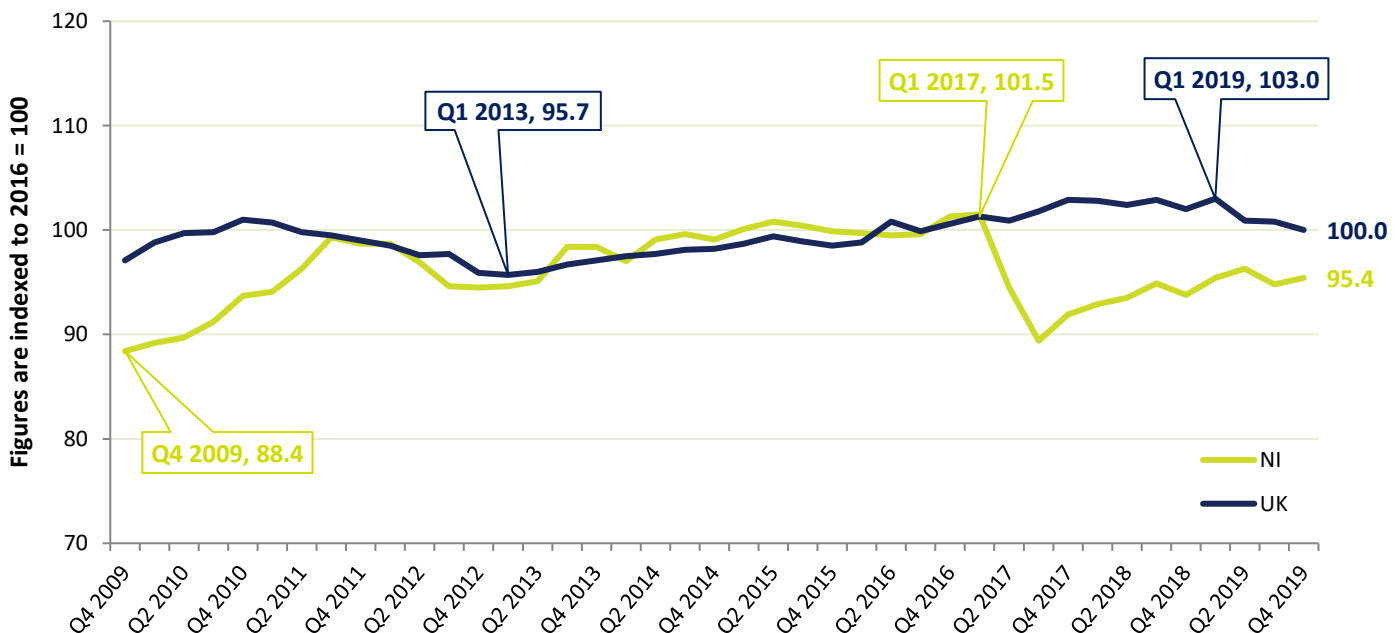
1 Summary of Index of Production

Change in IOP

The seasonally adjusted estimate for the NI IOP for Quarter 4 2019 showed:

- an increase of 0.6% over the quarter from the Quarter 3 2019 estimate;
- an increase of 1.7% over the year from the Quarter 4 2018 estimate;
- an increase of 1.8% when the most recent four quarters are compared to the previous four quarters.

Figure 1.1 IOP NI & UK (Q4 2009 – Q4 2019)



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Commentary

Output in the NI Production sector has increased in real terms by 0.6% over the fourth quarter of 2019. The UK Production sector has reported a decrease of 0.8% over the same period. NI showed an increase over the year (1.7%) whilst the UK reported a decrease (2.0%).

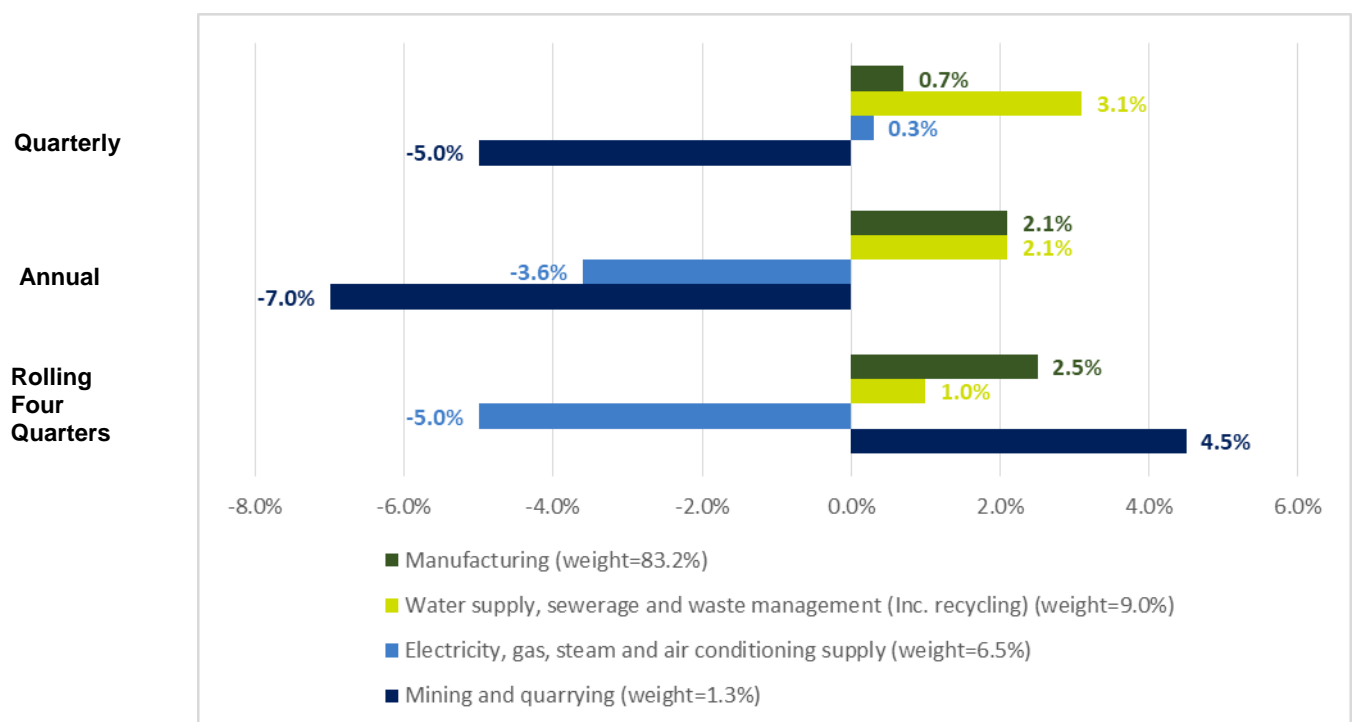
NI output has recovered 8.9% since the series low (Quarter 3 2009). In contrast the UK has recovered 3.8% over the same period. NI output remains 6.2% lower than its series high (Quarter 4 2007).

Comparing the seasonally adjusted NI IOP from Quarter 3 2019 to Quarter 4 2019; three of the four main sectors showed an increase, with the largest increase of 3.1% reported in the Water supply, sewerage and waste management (Inc. recycling) sector. Mining and Quarrying reported a decrease over the quarter of 5.0%.

Comparing the seasonally adjusted NI IOP from Quarter 4 2018 to Quarter 4 2019; two of the four sectors showed an increase, with both the Manufacturing sector and Water supply, sewerage and waste management (Inc. recycling) sectors reporting increases of 2.1%. The largest decrease of 7.0% was reported in Mining and Quarrying.

Comparing the seasonally adjusted NI IOP for Quarter 1 2019 to Quarter 4 2019 with Quarter 1 2018 to Quarter 4 2018; three of the four sectors showed an increase with the largest increase of 4.5% reported in the Mining and quarrying sector. The Electricity, gas, steam and air conditioning sector, however reported a decrease of 5.0%.

Figure 1.2 Quarterly, annual and rolling four quarters changes in IOP at sector level Quarter 4 2019¹



¹ For further information on weights see Regional GVA information on page 19

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 on the NISRA website.

The Department for the Economy (DfE) [Economic Commentary \(Winter 2019\)](#) 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; Water supply, sewerage and waste management (Inc. recycling); Electricity, gas, steam and air conditioning supply and 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 2019).

Comparative UK data, produced by the Office for National Statistics (ONS), are presented where these are available. The [latest UK IOP results](#) can be found on the ONS website.

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. Volatility also arises when businesses inform NISRA of SIC code changes via business surveys, ONS and HM Revenue & Customs (HMRC). This new information helps to improve the estimates of growth each quarter but also adds volatility to quarterly and annual changes. Only rarely are there avoidable 'errors' such as human or system failures, and such mistakes are made quite clear when they do occur.

2 Production output by sector

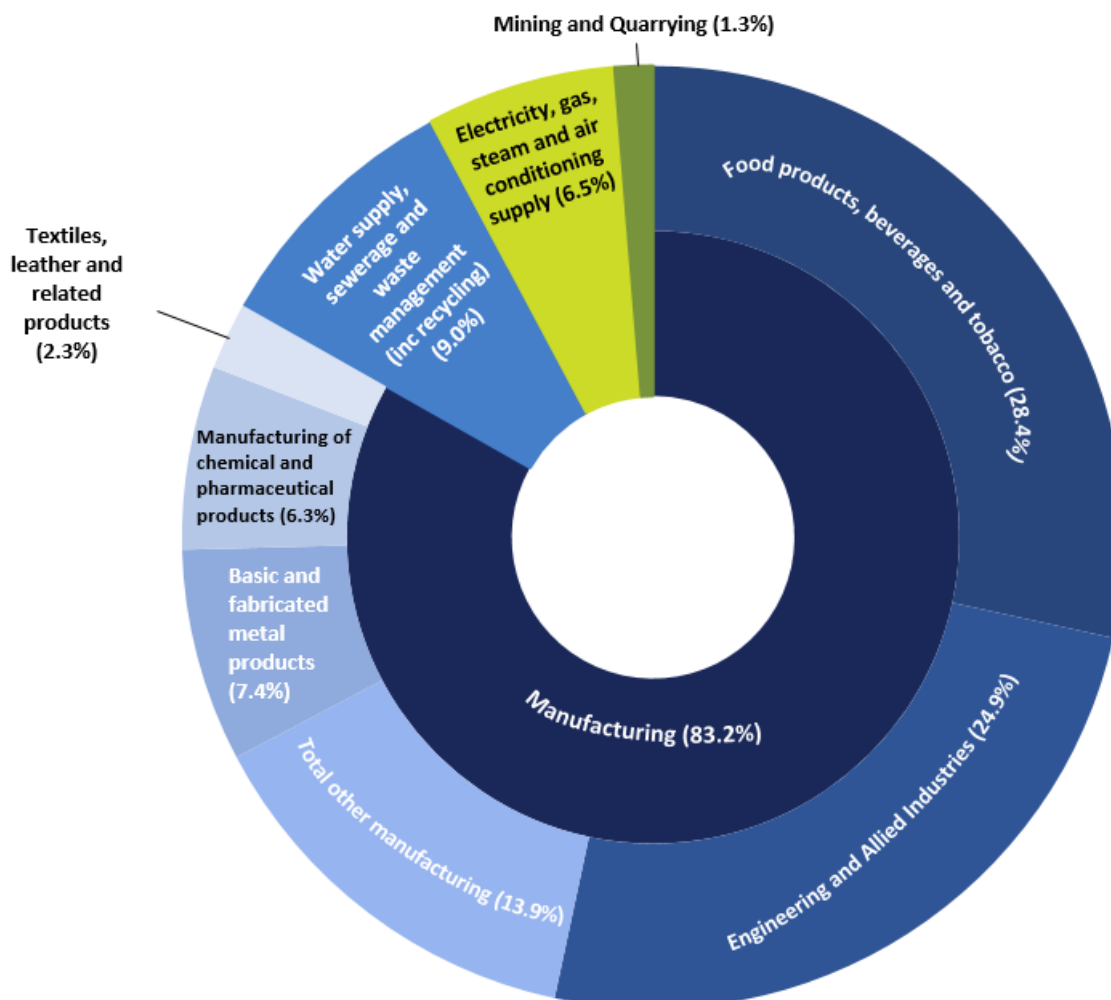
Output: Turnover, defined as the value of total sales generated from all NI based activity, excluding VAT. Turnover is rounded to the nearest thousand and is then deflated and seasonally adjusted.

2.1 Key findings

- The IOP increased by 0.6% over the quarter; 1.7% over the year and by 1.8% on a rolling four quarter basis.
- The quarterly increase in production output of 0.6% has been driven by increases in three of the four main sectors: Manufacturing (0.7%); Water supply, sewerage and waste management (Inc. recycling) (3.1%); Electricity, gas, steam and air conditioning supply (0.3%) and offset by a decrease in Mining and quarrying (5.0%).
- The annual increase in NI production output of 1.7% was driven by increases in Manufacturing (2.1%) and Water supply, sewerage and waste management (Inc. recycling) (2.1%). This increase was partially offset by decreases in Mining and Quarrying (7.0%) and Electricity, gas, steam and air conditioning supply (3.6%).

The Production sector is dominated by Manufacturing, which accounts for approximately 83.2% of total production Gross Value Added (GVA) at 2018 prices.

Figure 2.1 IOP sector split (based on 2018 GVA)



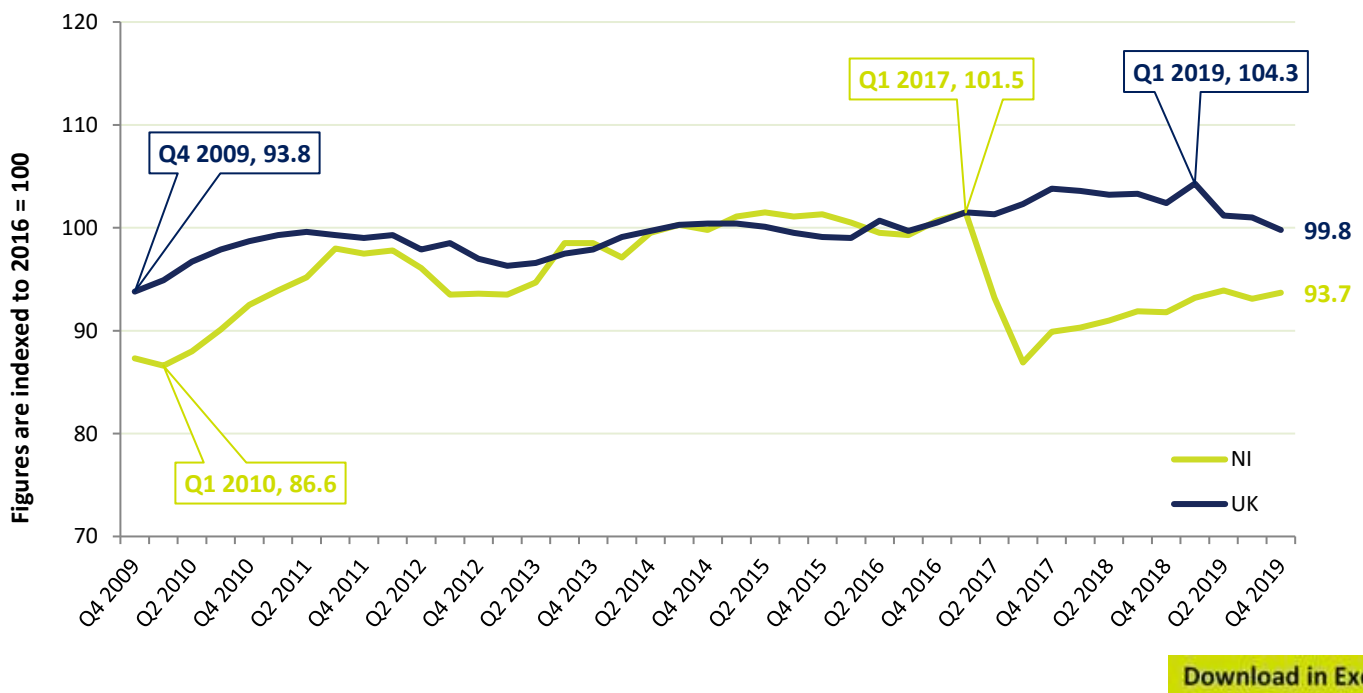
2.2 Manufacturing

Manufacturing sector (SIC07 Section C) - (weight = 83.2% of IOP): Manufacturing involves the transformation of materials into new products (outputs). It is comprised of six subsectors, as shown in Figure 2.1.

Key findings

- The NI seasonally adjusted figures show increases of 0.7% over the quarter, 2.1% over the year and 2.5% on a rolling four quarters basis.
- The UK seasonally adjusted figures show decreases of 1.2% over the quarter, 2.5% over the year and 1.5% on a rolling four quarters basis.
- NI output is 7.7% below its highest point recorded (Quarter 1 2017) over the ten year period.
- NI output is 8.2% above the ten year low (Quarter 1 2010).
- Within manufacturing three of the six broad subsectors (as shown in Figure 2.1) are increasing.

Figure 2.2 Manufacturing sector, NI & UK (Q4 2009–Q4 2019)



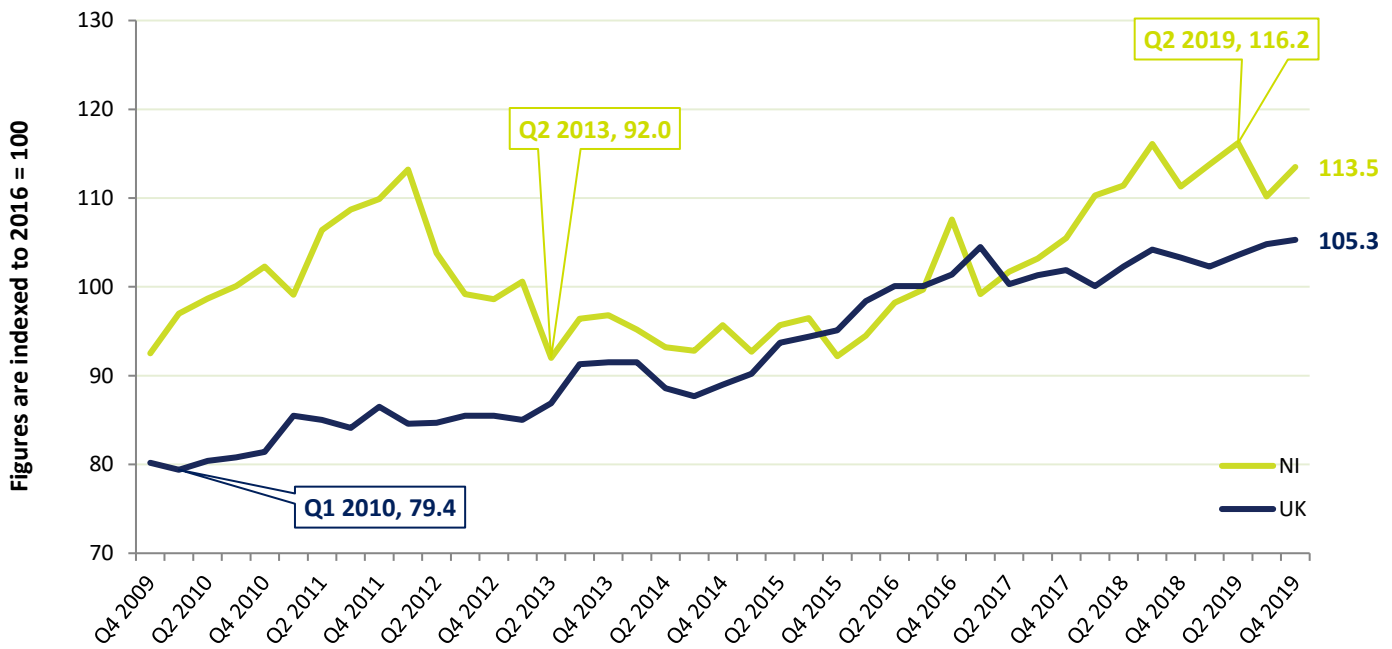
2.3 Water supply, sewerage and waste management (Inc recycling)

Water supply, sewerage, and waste management (Inc. recycling) (SIC07 Section E) (weight = 9.0% 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 increases of 3.1% over the quarter, 2.1% over the year and 1.0% on a rolling four quarters basis.
- The UK reports increases of 0.5% over the quarter, 1.9% over the year and 1.5% on a rolling four quarters basis. The UK has reached a series high in this sector.
- NI estimate is 2.3% below the series high recorded in Quarter 2 2019.
- NI output was observed to be 23.5% above the lowest point in ten years (Quarter 2 2013).

Figure 2.3 Water supply, sewerage and waste management (Inc. recycling), NI & UK (Q4 2009–Q4 2019)



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Both NI and the UK have generally shown an upward trend in Water supply, sewerage and waste management (Inc. recycling). NI has been performing better than the UK with the exception of the period between Quarter 4 2015 to Quarter 3 2016 and in Quarter 1 2017.

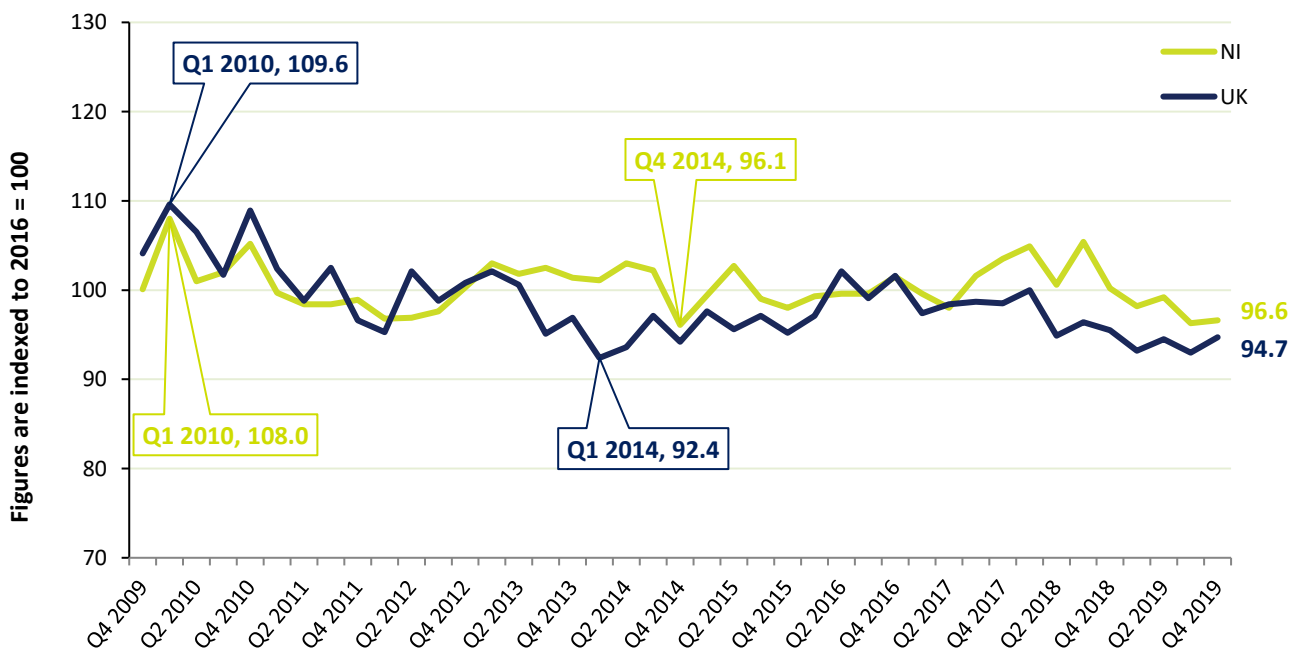
2.4 Electricity, gas, steam and air conditioning supply

Electricity, gas, steam and air conditioning supply (SIC07 Section D) (weight = 6.5% 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 an increase of 0.3% over the quarter, a decrease of 3.6% over the year and a decrease of 5.0% on a rolling four quarters basis.
- The seasonally adjusted figures for the UK show an increase of 1.8% over the quarter, a decrease of 0.8% over the year and a decrease of 2.9% on a rolling four quarters basis.
- NI estimate remains below (10.6%) the series high recorded in Quarter 1 2010.
- The NI index is observed to be 0.5% above the lowest point recorded (Quarter 4 2014) in the past ten years and 9.0% above the series low (Quarter 2 2007).

Figure 2.4 Electricity, gas, steam and air conditioning supply, NI & UK (Q4 2009–Q4 2019)



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NI and the UK have followed similar trends in the Electricity, gas, steam and air conditioning supply sector throughout the series.

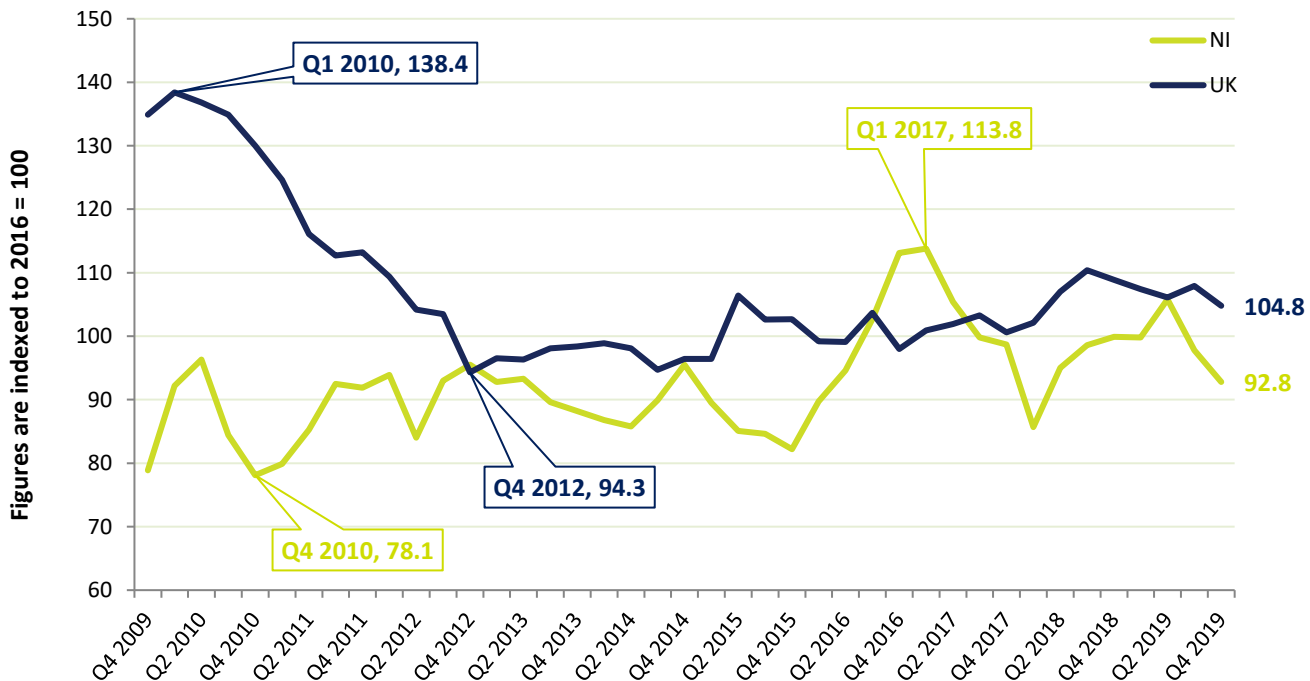
2.5 Mining and quarrying

Mining and quarrying (SIC07 Section B) (weight = 1.3% 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 5.0% over the quarter, a decrease of 7.0% over the year and a 4.5% increase on a rolling four quarters basis.
- The UK seasonally adjusted figures show decreases of 2.9% over the quarter, 3.8% over the year and 0.5% over a rolling four quarters basis.
- NI output is 18.4% below the series high (Quarter 1 2017).
- NI output is 18.8% above the lowest reported level (Quarter 4 2010) in the last decade.

Figure 2.5 Mining and quarrying, NI & UK (Q4 2009–Q4 2019)



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Both NI and the UK have shown volatility in the Mining and Quarrying sector. The UK has generally performed better over the series, with the exception of Quarter 4 2012 and the period between Quarter 4 2016 and Quarter 2 2017.

3 Manufacturing subsectors

3.1 Key findings

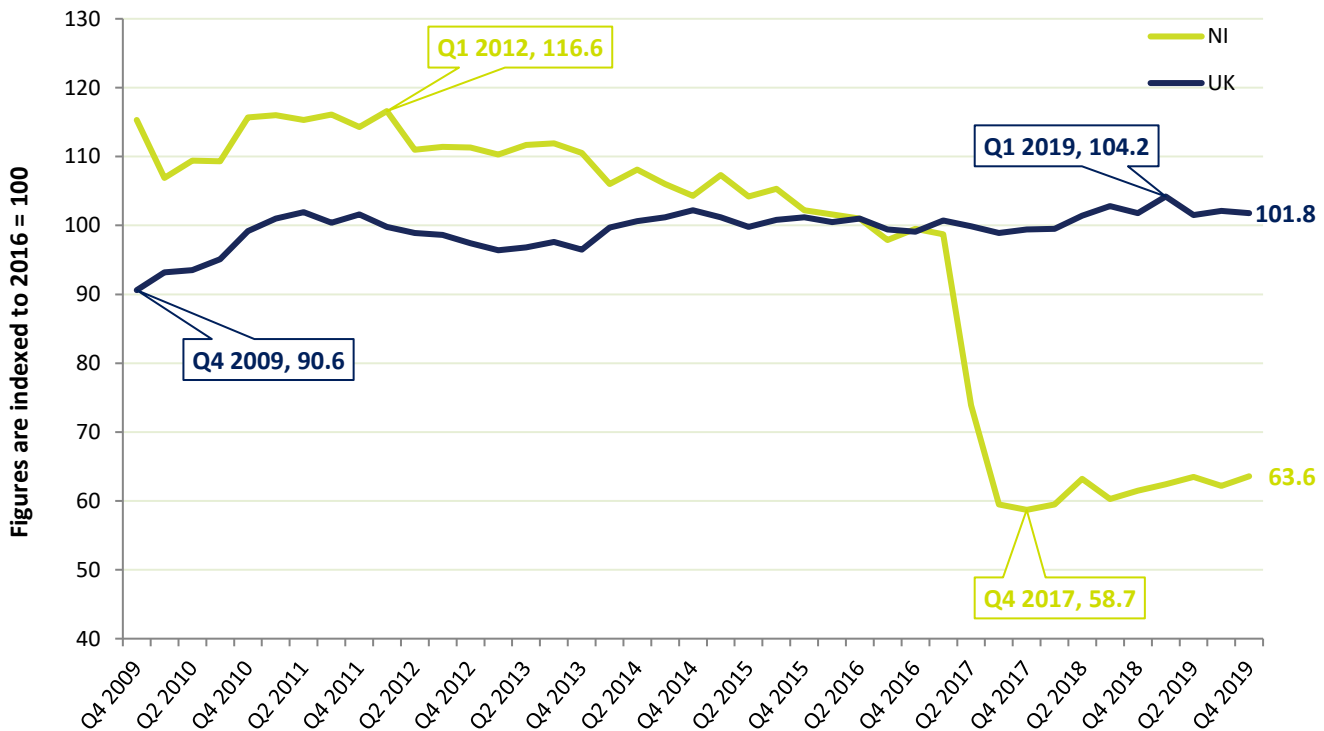
- The quarterly increase in manufacturing output was driven by increases from the Manufacture of chemical and pharmaceutical products (8.8%); Food products, beverages and tobacco (2.3%) and Total other manufacturing (0.6%) subsectors.
- This quarterly increase was partially offset by decreases in the Basic metals and fabricated metal products (2.8%); Engineering and allied industries (2.1%) and Manufacture of textiles, leather and related products (1.8%) subsectors.
- Over the year, the increase in Manufacturing is driven by increases in the Manufacture of textiles, leather and related products (32.5%); Manufacture of chemical and pharmaceutical products (17.1%); Basic metals and fabricated metal products (5.6%) and Food products, beverages and tobacco (3.5%) subsectors and is offset by decreases in the Engineering and allied industries (5.8%) and Total other manufacturing (0.6%) subsectors.

3.2 Food products, beverages and tobacco (Weight=28.4%)²

Key findings

- NI output increased by 2.3% from Quarter 3 2019, increased by 3.5% over the year and by 3.0% on a rolling four quarters basis.
- The UK estimated a decrease of 0.3% over the quarter, no change (0.0%) over the year and an increase of 1.0% on a rolling four quarters basis.
- NI output is estimated to be 8.4% above the series low (Quarter 4 2017).
- NI output remains 45.4% below its ten year high (Quarter 1 2012).

Figure 3.2 Food products, beverages and tobacco, NI & UK (Q4 2009–Q4 2019)



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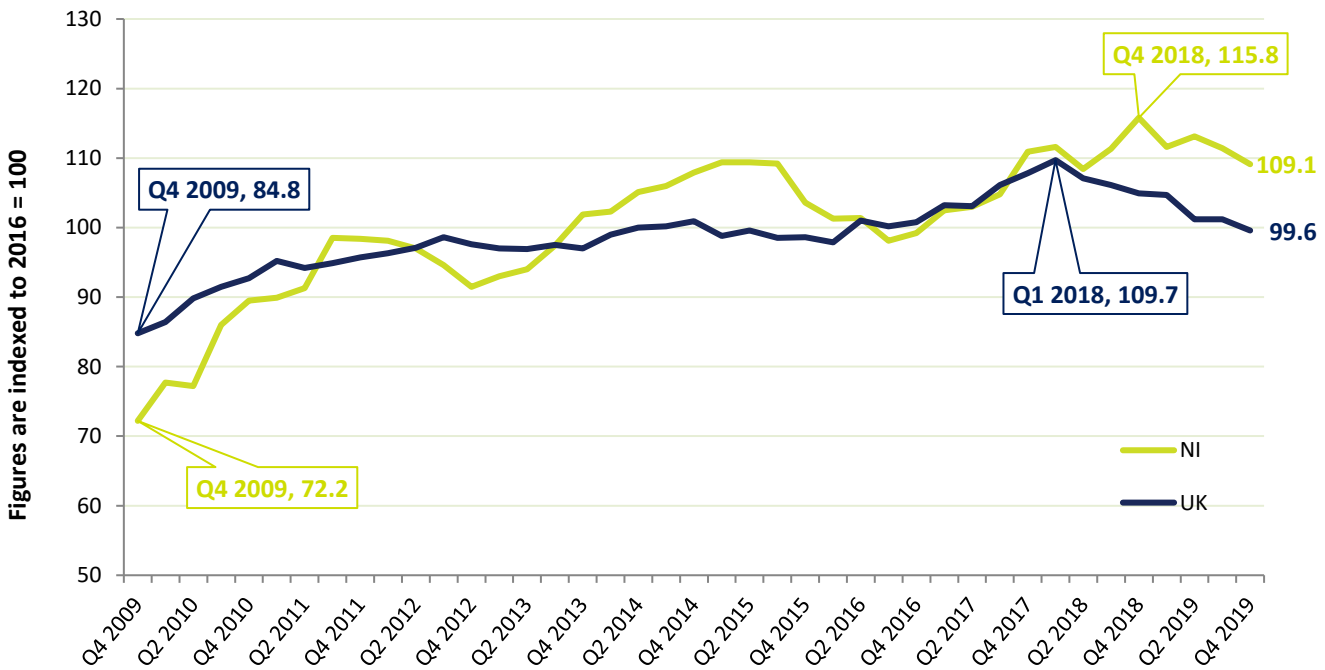
² Please note that estimates at subsector level can fluctuate due to sampling variability and also due to businesses moving industrial classification.

3.3 Engineering and allied industries (Weight=24.9%)³

Key findings

- NI seasonally adjusted figures show a decrease over the quarter of 2.1%, a decrease over the year (5.8%) and a decrease on a rolling four quarters basis (0.4%).
- The UK estimate shows decreases of 1.6% over the quarter, 5.1% over the year and 4.9% on a rolling four quarters basis.
- NI output is 5.8% below its highest point recorded (Quarter 4 2018).
- NI output is 51.1% above the series low recorded (Quarter 3 2009).

Figure 3.3 Engineering and allied industries NI & UK (Q4 2009–Q4 2019)



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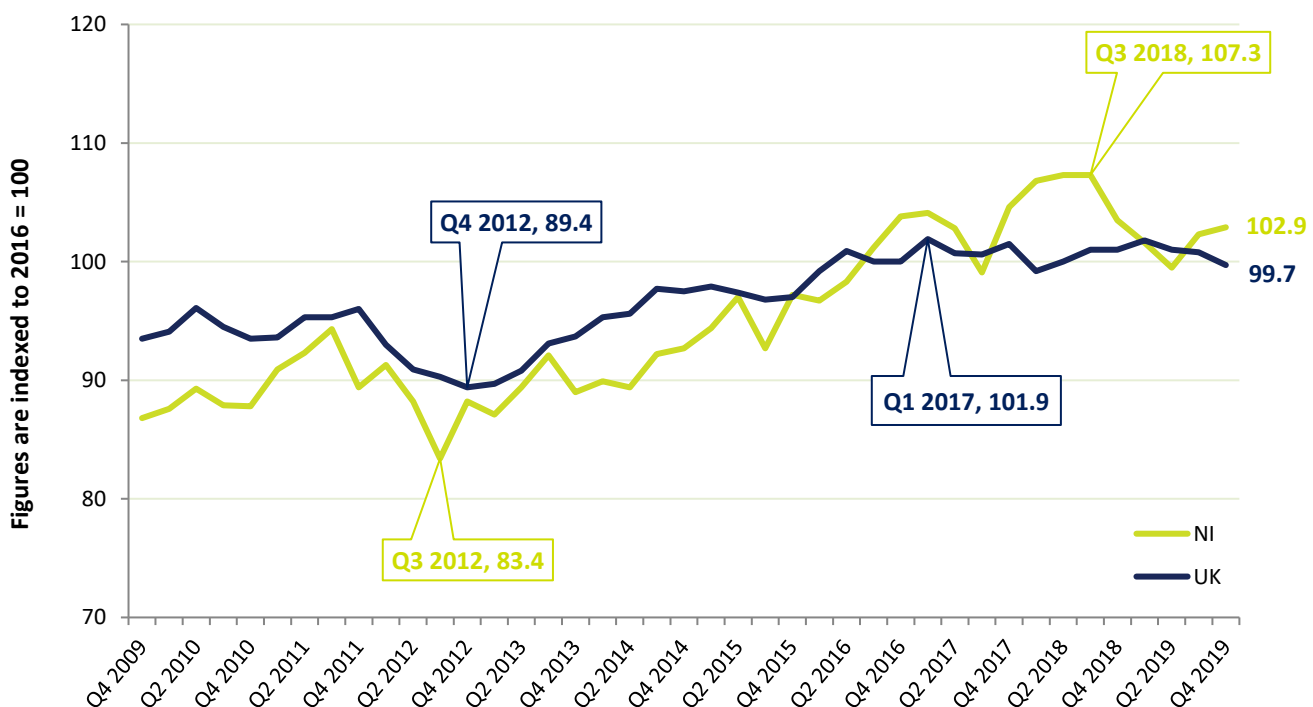
³ Please note that estimates at subsector level can fluctuate due to sampling variability and also due to businesses moving industrial classification.

3.4 Total Other Manufacturing (Weight=13.9%)⁴

Key findings

- Seasonally adjusted figures show an increase of 0.6% over the quarter. There was a decrease over the year (0.6%) and a decrease on a rolling four quarters basis (4.4%).
- The UK had a decreases over the quarter (1.1%), over the year (1.3%) and an increase on a rolling four quarters basis (0.5%).
- NI output is estimated to be 4.1% below the highest point of the past ten years (Quarter 3 2018).
- NI output is estimated to be 23.4% above its series low (Quarter 3 2012).

Figure 3.4 Total Other manufacturing, NI & UK (Q4 2009–Q4 2019)



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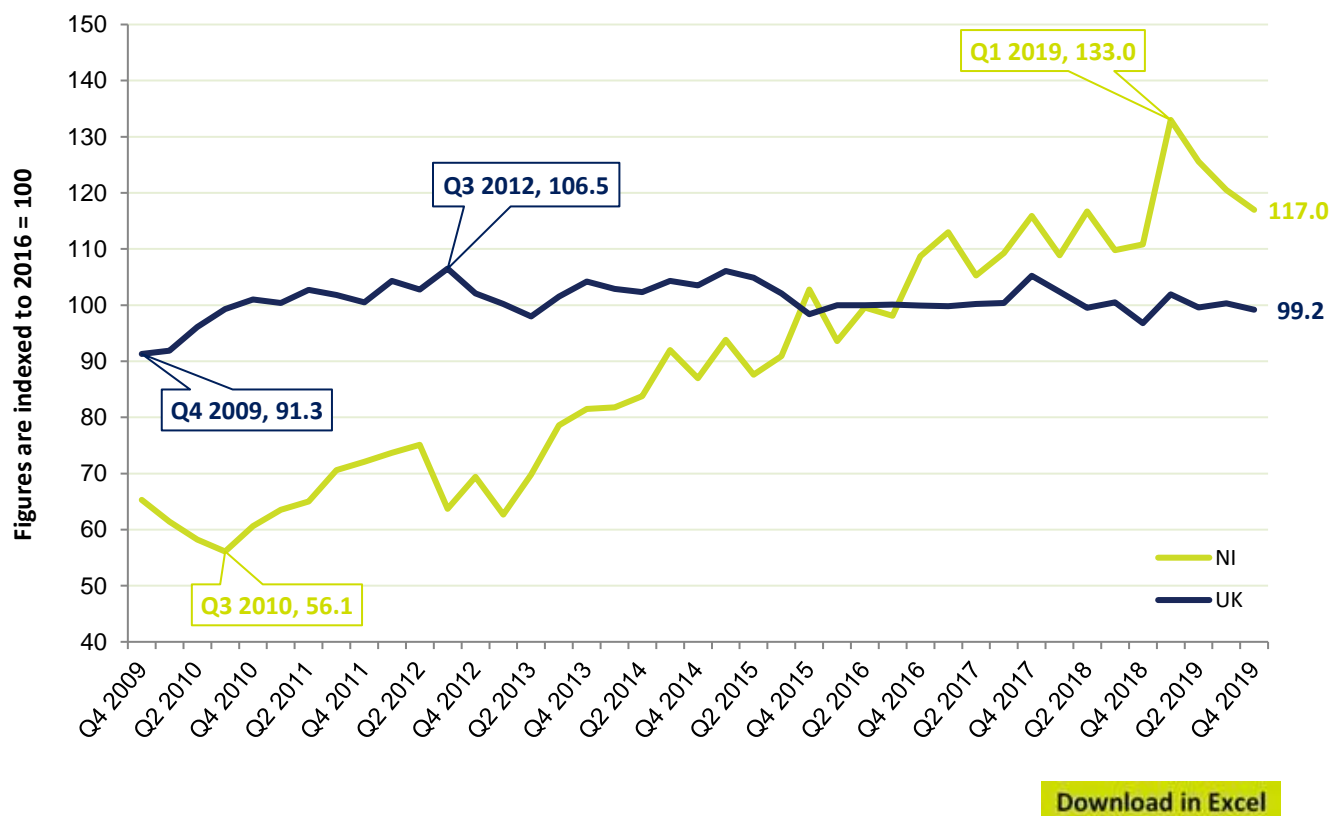
⁴ Please note that estimates at subsector level can fluctuate due to sampling variability and also due to businesses moving industrial classification.

3.5 Basic and fabricated metal products (Weight=7.4%)⁵

Key findings

- The NI seasonally adjusted figures show a decrease of 2.8% over the quarter, an increase of 5.6% over the year and an increase of 11.2% on a rolling four quarters basis.
- UK seasonally adjusted figures show a decrease of 1.1% over the quarter, and increases of 2.5% over the year and 0.5% on a rolling four quarters basis.
- NI output has fallen 12.0% below its peak (Quarter 1 2019).
- NI output is 108.4% above the series low (Quarter 3 2010).

Figure 3.5 Basic and fabricated metal products, NI & UK (Q4 2009–Q4 2019)



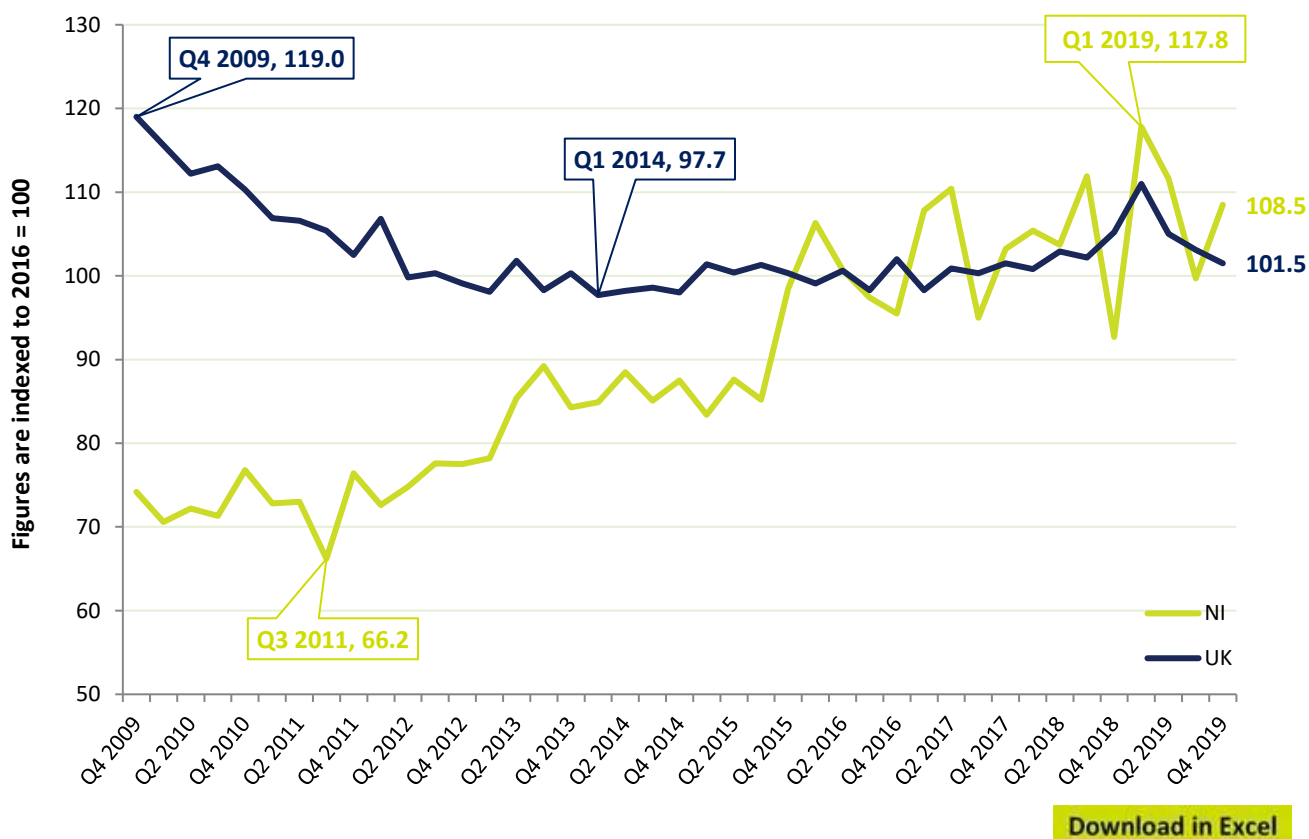
⁵ Please note that estimates at subsector level can fluctuate due to sampling variability and also due to businesses moving industrial classification.

3.6 Manufacturing of chemical and pharmaceutical products (Weight=6.3%)⁶

Key findings

- The NI non-seasonally adjusted figures show increases of 8.8% over the quarter, 17.1% over the year and 5.8% on a rolling four quarters basis.
- The UK figures show decreases of 1.6% over the quarter, 3.5% over the year and an increase of 2.3% on a rolling four quarters basis.
- NI output is 7.8% below its highest point recorded (Quarter 1 2019).
- NI output is 64.0% above the ten year low point (Quarter 3 2011).

Figure 3.6 Manufacturing of chemical and pharmaceutical products, NI & UK (Q4 2009–Q4 2019)



⁶ Please note that estimates at subsector level can fluctuate due to sampling variability and also due to businesses moving industrial classification.

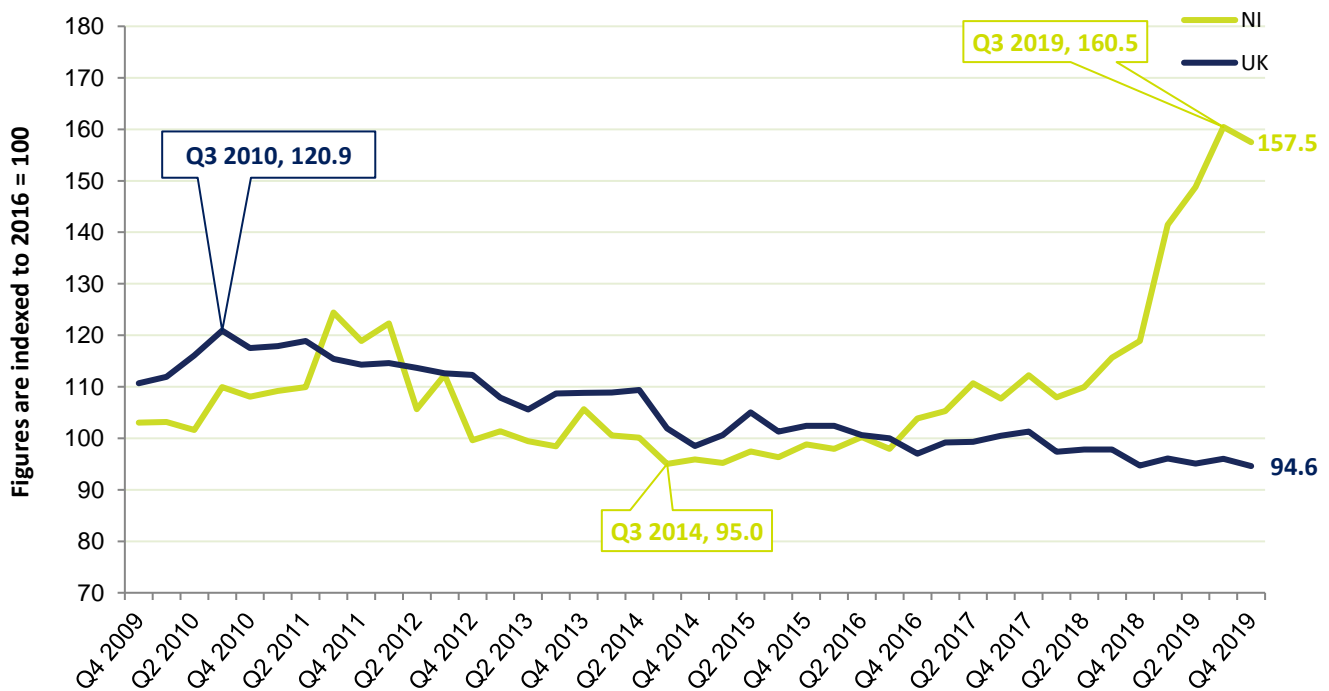
The Manufacturing of chemical and pharmaceutical products subsector has not been seasonally adjusted as this subsector shows no evidence of seasonality. The UK data has been seasonally adjusted.

3.7 Textiles, leather and related products (Weight=2.3%)⁷

Key findings

- The NI seasonally adjusted figures show a decrease over the quarter (1.8%), an increase over the year (32.5%) and an increase on a rolling four quarters basis (34.5%).
- UK seasonally adjusted figures show decreases over the quarter (1.5%), over the year (0.1%) and on a rolling four quarters basis (1.5%). The UK is currently experiencing a series low in this subsector.
- NI output is 1.8% below its series high (Quarter 3 2019).
- NI output is 65.9% above the ten year low (Quarter 3 2014).

Figure 3.7 Textiles, leather and related products, NI & UK (Q4 2009–Q4 2019)



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⁷ Please note that estimates at subsector level can fluctuate due to sampling variability and also due to businesses moving industrial classification.

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 2018 these production industries accounted for 18% of Regional GVA. For further information please see the [Methodology for the NI Index of Production \(IOP\)](#).

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 2018 GVA which became available on 19th December 2019.

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 9th March 2020. Details on the changes to the [ONS deflators methodology](#) can be found on the ONS Website.

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. Further details on [this review and other methodological changes](#) implemented in March 2019 are available on the NISRA website.

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 18 June 2020.

The [ELMS publication schedule](#) is available on the NISRA website.

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