

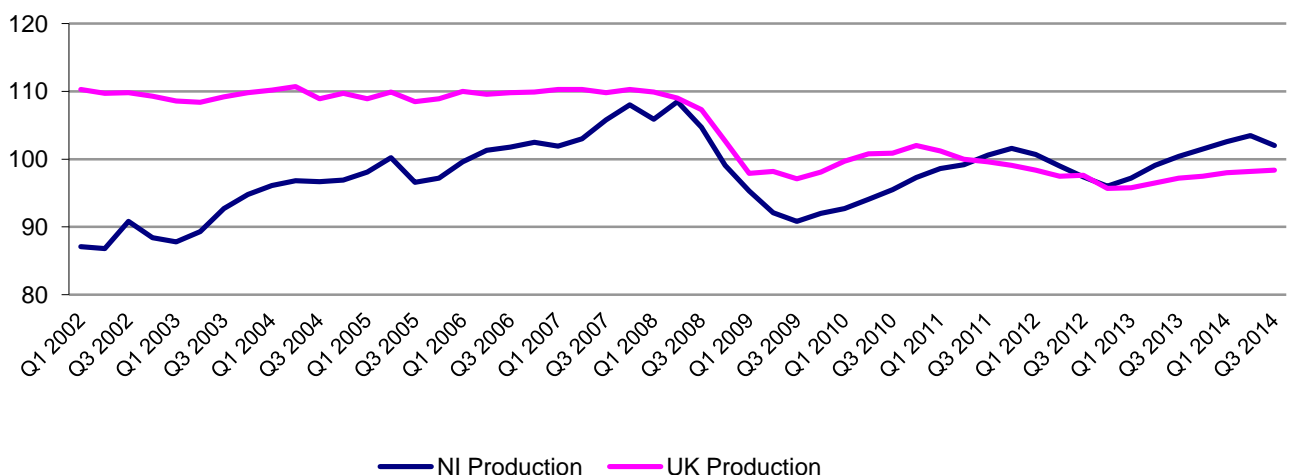
NORTHERN IRELAND INDEX OF PRODUCTION – QUARTER 3 2014

Published 17/12/14

The Index of Production is a quarterly survey of companies designed to provide a general measure of changes in the output of the Northern Ireland production sector industries in real terms. This publication contains seasonally adjusted NI Index of Production data on a 2011=100 basis. These data are provisional and may be subject to change.

- Provisional results from the Index of Production for the third quarter of 2014 showed that output in NI decreased by 1.4% over the quarter, whereas output in the UK as a whole increased by 0.2%.
- The decrease over the third quarter follows six consecutive quarterly increases in output. Over the year, the NI Production levels increased by 1.6% while the UK recorded a rise of 1.2%.
- The NI index remains some 6.0% below the peak recorded in Q2 2008 (108.5), whilst the UK index decreased by 9.7% over the same time period.

Index of Production in NI and UK (Seasonally Adjusted) (2011 = 100)



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National Statistics

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods, and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

Northern Ireland Statistics and Research Agency

From the 1st April 2011, the responsibility for the collection of data and production of official labour market and economic statistics transferred from the Department of Enterprise, Trade and Investment to the Northern Ireland Statistics and Research Agency (NISRA), an agency of the Department of Finance and Personnel (DFP). This transfer mirrored the position in Great Britain where most business surveys and labour market data collection and statistical production have been transferred from the departments with policy responsibilities to the Office for National Statistics (ONS). However, it is important to note that there are no planned changes to the production of economic and labour market statistical publications and outputs as a result of the transfer.

1: Context

Introduction

This bulletin provides provisional data from the Index of Production (IOP) for Northern Ireland (NI). The IOP is one of the earliest official indicators of the performance of Northern Ireland industry and, as such, represents an important short-term measure of change in a significant area of the economy. The contents of this report will be of interest to government policy makers, Members of the Legislative Assembly, the business community, economic commentators, academics and members of the general public with an interest in the state of the NI economy. A summary of uses is available on the website at <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production.htm>

The latest Department of Enterprise, Trade and Investment Economic Commentary (December 2014) provides an overview of the state of the Northern Ireland economy, setting it in context with the UK and Republic of Ireland. This can be found at http://www.detini.gov.uk/index/what-we-do/deti-stats-index/deti-economic-briefing/economic_commentary.htm

The most up-to-date official statistics on the economy and labour market, including those published on the same day as the Northern Ireland Index of Services and Index of Production, are available on the Economic Overview page of the DETI website at <http://www.detini.gov.uk/deti-stats-index/deti-stats-index-2.htm>. However, the Index of Services for Quarter 3 2014 has been delayed to allow for additional quality assurance following increases to sample size. A revised publication date will be announced as soon as possible.

The Index of Production is published on a Standard Industrial Classification 2007 (SIC07) basis. This has an impact on the type of businesses classified as production sector. For example, publishing activities move from the production to the services sector and sewerage and waste disposal moves from services to the production sector. Within the production sector there are some new groupings of businesses. IOP data prior to Q2 2011 were collected on a SIC03 basis and it has been converted to approximate the SIC07 coverage. Further detail can be found in the background notes (section 7).

The background notes in Section 7 of this publication provide detailed information on the methodology used to produce the statistics as well as information on the quality and accuracy of the data. This bulletin contains detailed results for the Production Industries i.e. the Mining & quarrying, the Manufacturing, the Electricity, gas, steam and air conditioning supply and the Water supply, sewerage, waste management (inc. recycling) sectors on a 2011=100 basis, giving data up to the most recent available quarter (Quarter 3 2014).

Manufacturing is typically the main determinant of change in the production sector, representing 86% of the approximate Gross Value Added in the production industries. The other elements of the Index relate to Water supply, sewerage, waste management (inc. recycling) which represents around 7% of the Index; Electricity, gas, steam and air conditioning supply which represents around 6% and Mining and quarrying which represents around 1%.

Comparative UK data (produced by the Office for National Statistics) are presented where these are available. The latest ONS IOP results on a comparative 2011= 100 basis are available at: <http://www.ons.gov.uk/ons/rel/iop/index-of-production/october-2014/index.html>

Information on the manufacturing sub-sectors (e.g. Food, drink and tobacco) along with information by market sector (classifying production under one of three headings, according to the purpose for which output is intended i.e. Investment Goods, Intermediate Goods and Consumer Goods) are included in the publication.

This publication provides three measures of growth for the Index. 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, where appropriate, to remove the

effects of changes in output as a result of the time of the year. We also provide comparisons with the same quarter one year ago and a comparison of the most recent twelve months with the twelve months before. The quarterly comparison over the year provides an additional control on 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.

Northern Ireland Production

Revisions

Results, particularly for the most recent quarter, are provisional and subject to revision as more up-to-date data become available (e.g. through late returns). Figures can also change as a result of the seasonal adjustment process, methodological changes or changes to classifications.

The Production Index publication has published data on a 2011=100 basis to correlate with ONS publications. SIC07 deflators have also been revised to the base year 2010=100 and applied to the series from Q1 2001 to Q3 2014.

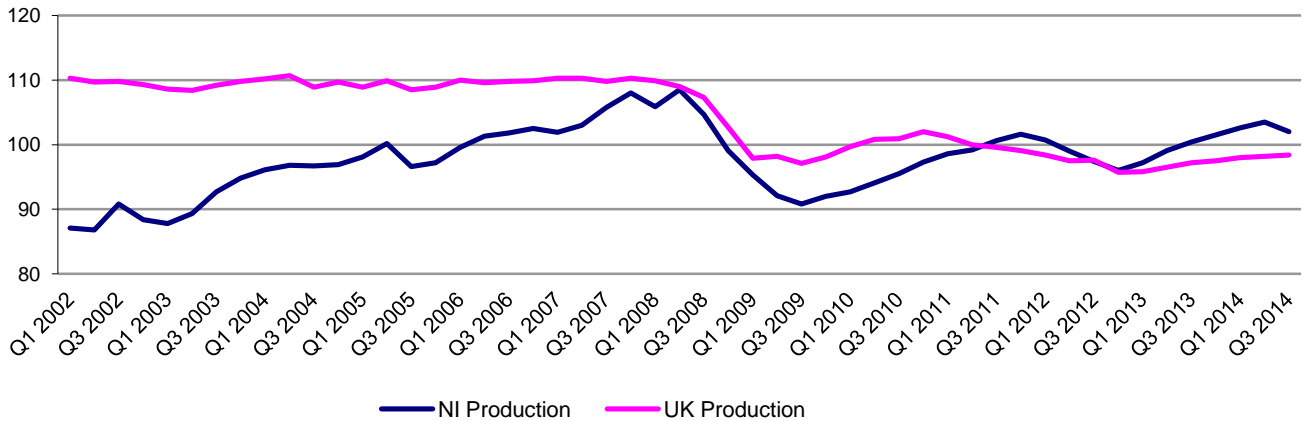
The IOP revisions policy can be found at:

<http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production/stats-newpage-4.htm>

2: Summary

Provisional results from the seasonally adjusted Index of Production for the third quarter (July to September) of 2014 show a decrease of 1.4% over the quarter, while output in the UK as a whole increased by 0.2%. The NI index remains some 6.0% below the peak recorded in Q2 2008 while the UK index fell by 9.7% in the same time period.

Figure 1: Index of Production in NI and UK (Seasonally Adjusted)
(2011 = 100)

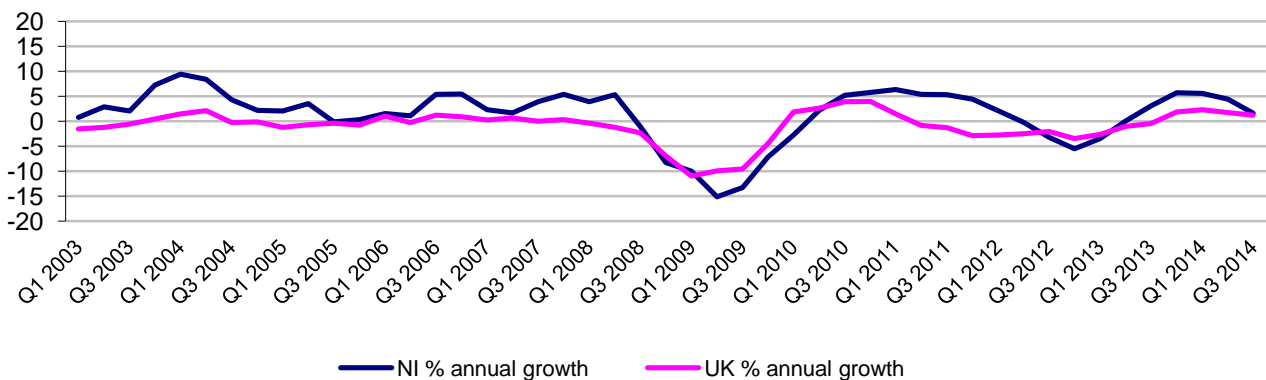


Production – growth trend

	NI	UK
Percentage change compared to previous quarter	-1.4	0.2
Percentage change compared to same quarter one year ago	1.6	1.2
Percentage change for most recent four quarters compared to previous four quarters	4.3	1.8

Figure 2 illustrates the annual percentage change in output in the production sector over time. Following the noticeable low reported in Q2 2009, annual growth was reported from Q2 2010 to Q1 2012 before falling until Q1 2013. It returned to positive growth in Q2 2013 which has continued until Q3 2014 where a rise of 1.6% was reported over the year.

Figure 2: Production - % change on a year earlier in NI and UK
(2011 = 100)



Manufacturing (Seasonally Adjusted)

Manufacturing comprises the main element (86%) of the production index and therefore the manufacturing index has a similar profile to the overall production index. The manufacturing index remains below (7.8%) the peak in Q4 2007.

- Manufacturing output levels decreased over the quarter by 1.2% (UK: 0.3%)
- Manufacturing output levels increased by 2.1% compared to the same quarter one year ago (UK: 2.5%)
- Manufacturing output levels rose by 5.0% over the most recent four quarters compared to the previous four quarters (UK: 2.3%)

Manufacturing Productivity (Seasonally Adjusted)

The index of manufacturing productivity (which provides a measure of the number of units of output produced per person per paid hour) recorded a fall (-2.9%) over the quarter and the year (-1.7%).

Other Production

Water supply, sewerage and waste management (unadjusted) decreased by 1.7% over the quarter and 2.8% over the year. The NI index is 15.1% below the recent peak recorded in Q1 2012, while the UK recorded a rise of 2.6% over the same time period.

The electricity, gas, steam and air conditioning supply index (seasonally adjusted) decreased by 1.0% compared to quarter 2 2014, but reported a slight rise (0.3%) over the year compared to the UK which increased by 1.2%. The NI index remains slightly below the peak recorded in Q3 2008 (4.3%), with the UK also falling over the same time period (6.8%).

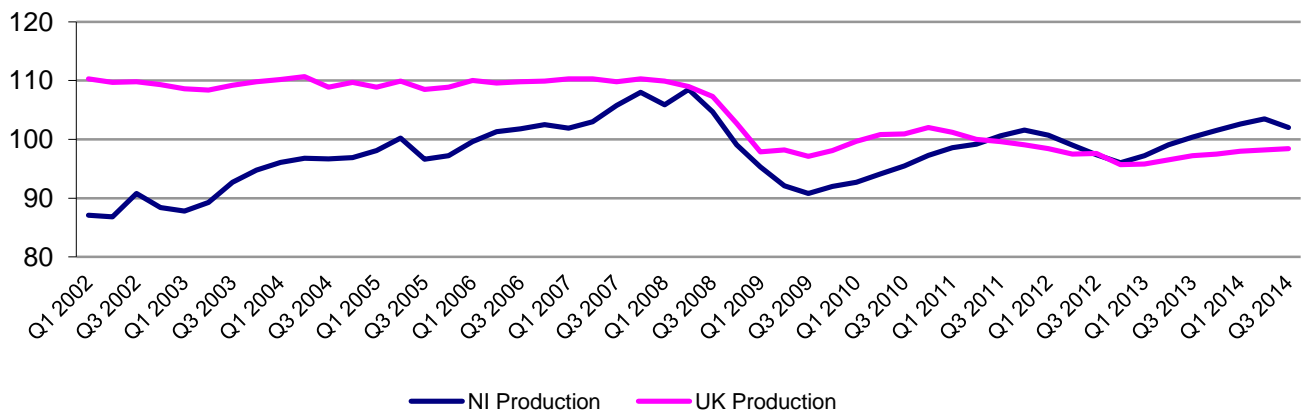
Mining and quarrying (unadjusted) decreased by 7.6% over the quarter and recorded a fall of 8.5% over the year. Recovery in this index remains slow and is some 39.3% below the peak reached in Q2 2007; the UK index fell by a similar proportion (by 39.4%) over the same period.

Date of Next Publication

The Northern Ireland Index of Production for Quarter 4 2014 will be published on 18th March 2015.

3: Output of the Production Industries

Figure 3: Index of Production in NI and UK (Seasonally Adjusted)
(2011 = 100)



	NI	UK
Percentage change compared to previous quarter	-1.4	0.2
Percentage change compared to same quarter one year ago	1.6	1.2
Percentage change for most recent four quarters compared to previous four quarters	4.3	1.8

Output from the overall production industries (seasonally adjusted) in Q3 2014 is currently 6.0% below the peak recorded in Q2 2008; the UK recorded a greater fall of 9.7% over the same period.

The next section focuses on the broad sectors within Production. Manufacturing is the main component of the production sector accounting for some 86% of Regional Accounts Gross Value Added (GVA) within the overall production sector.

Table 1: Northern Ireland Index of Production (2011 = 100)

Sector	Production Industries B+C+D+E Seasonally Adjusted	Manufacturing C Seasonally Adjusted	Water & Sewerage E Unadjusted	Electricity & Gas D Seasonally Adjusted	Mining & Quarrying B Unadjusted
weights	1000	859.2	66.7	63.7	10.5
2002	88	92	66	79	92
2003	91	94	76	87	106
2004	97	100	81	91	108
2005	98	101	80	100	113
2006	101	105	79	96	128
2007	105	109	84	92	144
2008	105	107	90	107	115
2009	93	92	91	102	107
2010	95	93	98	106	119
2011	100	100	100	100	100
2012	98	98	96	99	100
2013	100	100	88	104	99

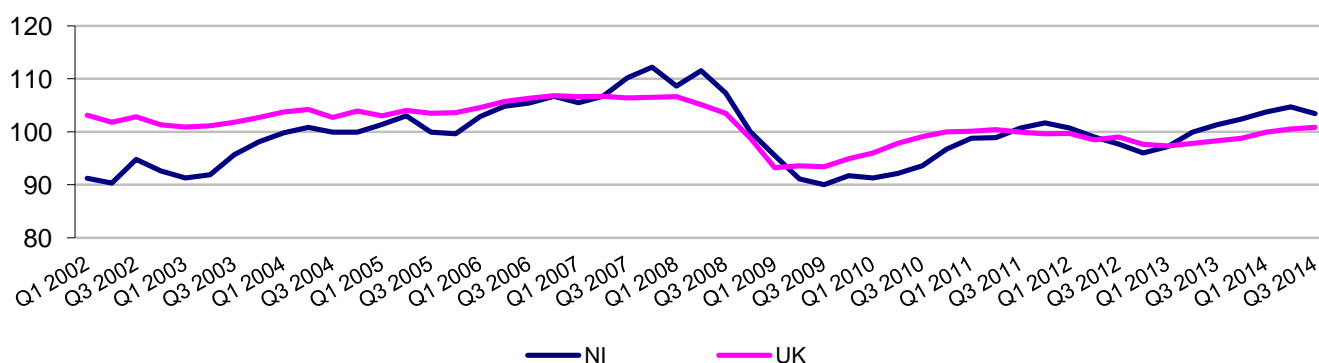
Table 1 (cont'd): Northern Ireland Index of Production (2011 = 100)

Sector	Production Industries B+C+D+E	Manufacturing C	Water & Sewerage E	Electricity & Gas D	Mining & Quarrying B
	Seasonally Adjusted	Seasonally Adjusted	Unadjusted	Seasonally Adjusted	Unadjusted
weights	1000.0	859.2	66.7	63.7	10.5
2002 1	87.1	91.2	64.9	78.1	93.1
2	86.8	90.3	65.5	77.9	88.4
3	90.8	94.8	66.5	78.9	90.6
4	88.4	92.6	68.6	81.2	97.4
2003 1	87.8	91.3	69.0	81.1	101.9
2	89.3	91.9	78.5	86.7	104.7
3	92.7	95.7	76.9	90.2	109.2
4	94.8	98.1	80.2	92.0	109.5
2004 1	96.1	99.8	78.2	91.6	105.4
2	96.8	100.8	84.9	81.1	110.4
3	96.7	99.9	79.9	97.0	105.1
4	96.9	99.9	82.8	94.9	109.9
2005 1	98.1	101.4	82.2	94.9	100.0
2	100.2	103.0	80.3	108.6	110.9
3	96.6	99.9	76.8	96.9	118.7
4	97.2	99.6	79.9	99.0	121.1
2006 1	99.6	102.9	80.6	99.8	116.5
2	101.3	104.8	78.9	97.8	128.2
3	101.8	105.4	77.5	93.5	137.1
4	102.5	106.7	77.0	93.4	131.9
2007 1	101.9	105.5	80.2	94.2	138.0
2	103.0	106.7	83.4	89.5	149.7
3	105.8	110.2	83.0	91.2	147.1
4	108.0	112.2	90.1	94.5	142.0
2008 1	105.9	108.6	85.9	103.1	126.2
2	108.5	111.5	90.2	108.3	122.5
3	104.7	107.3	93.0	109.4	108.7
4	99.1	100.0	90.5	106.8	101.5
2009 1	95.3	95.5	89.8	100.5	105.6
2	92.1	91.1	92.9	103.1	109.0
3	90.8	90.0	90.6	102.4	107.1
4	92.0	91.7	90.9	103.3	106.3
2010 1	92.7	91.3	95.9	107.6	121.5
2	94.1	92.1	98.5	102.8	131.7
3	95.5	93.6	98.1	103.8	116.3
4	97.3	96.7	100.7	108.2	107.2
2011 1	98.6	98.8	98.4	99.7	102.1
2	99.2	98.9	98.4	99.9	102.1
3	100.6	100.7	101.2	100.0	100.1
4	101.6	101.7	102.1	100.4	95.6
2012 1	100.7	100.7	103.4	98.1	101.6
2	99.0	99.0	97.2	98.5	99.6
3	97.4	97.7	91.5	99.2	99.2
4	96.0	96.0	90.2	101.7	101.3
2013 1	97.2	97.2	86.5	104.6	101.9
2	99.1	99.9	86.8	103.7	101.8
3	100.4	101.3	90.3	104.4	99.2
4	101.5	102.4	89.3	102.4	94.3
2014 1	102.6	103.7	85.9	103.5	95.3
2	103.5	104.7	89.3	105.8	98.3
3	102.0	103.4	87.8	104.7	90.8
Percentage change latest quarter on previous:					
quarter	-1.4	-1.2	-1.7	-1.0	-7.6
year	1.6	2.1	-2.8	0.3	-8.5
Rolling average	4.3	5.0	-0.4	0.5	-6.3

*The change in the rolling annual average measures the change in the average of the latest four quarters against the same four quarters one year previous.

Seasonally Adjusted Manufacturing Index SIC07 Section C (weight 85.9%)

Figure 4: Manufacturing in NI and UK
(2011=100)

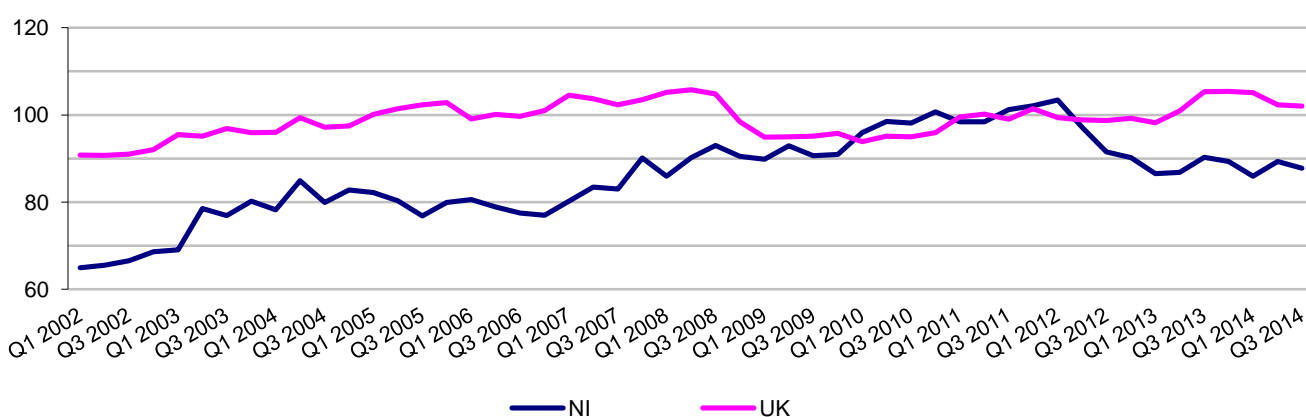


	NI	UK
Percentage change compared to previous quarter	-1.2	0.3
Percentage change compared to same quarter one year ago	2.1	2.5
Percentage change for most recent four quarters compared to previous four quarters	5.0	2.3

Manufacturing comprises the main element (86%) of the production index and therefore the manufacturing index has a similar profile to the overall production index. The manufacturing index is still some 7.8% below the peak reached in Q4 2007.

Unadjusted Water supply, sewerage and waste management (inc. recycling) Index SIC07 Section E (weight 6.7%)

Figure 5: Water & Sewerage in NI and UK
(2011=100)

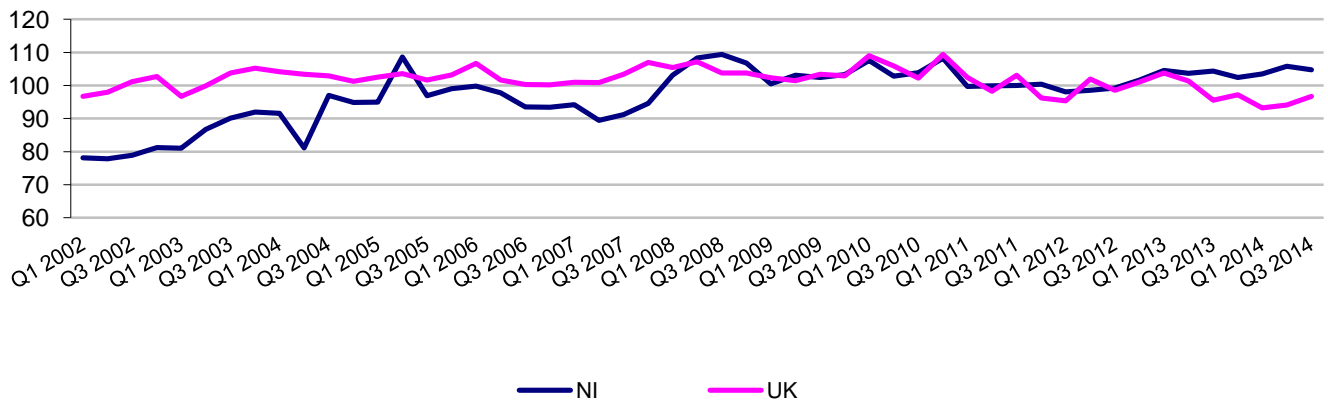


	NI	UK
Percentage change compared to previous quarter	-1.7	-0.3
Percentage change compared to same quarter one year ago	-2.8	-3.1
Percentage change for most recent four quarters compared to previous four quarters	-0.4	2.8

This sector is currently 15.1% below the recent peak reached in Q1 2012.

Seasonally Adjusted Electricity, gas, steam and air conditioning supply Index¹ SIC07 Section D (weight 6.4%)

Figure 6: Electricity, gas, steam and air conditioning supply in NI and UK
(2011=100)

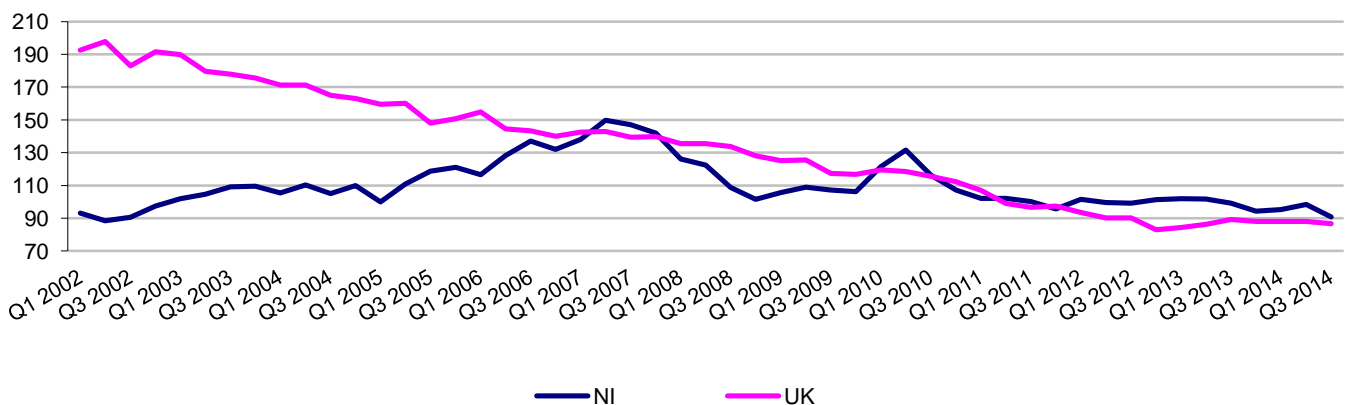


	NI	UK
Percentage change compared to previous quarter	-1.0	2.8
Percentage change compared to same quarter one year ago	0.3	1.2
Percentage change for most recent four quarters compared to previous four quarters	0.5	-5.2

This index has fallen 4.3% since the peak recorded in Q3 2008 (109.4), with the UK falling further over this same time period (-6.8%). The NI index has recovered 17.0% from the most recent minimum recorded in Q2 2007.

Unadjusted Mining and Quarrying Index SIC07 Section B (weight 1.0%)

Figure 7: Mining & Quarrying in NI and UK
(2011=100)



	NI	UK
Percentage change compared to previous quarter	-7.6	-1.7
Percentage change compared to same quarter one year ago	-8.5	-2.9
Percentage change for most recent four quarters compared to previous four quarters	-6.3	2.3

Recovery in this sector remains slow and the index is some 39.3% below the peak recorded in Q2 2007. The UK index fell by a similar proportion (39.4%) over the same period.

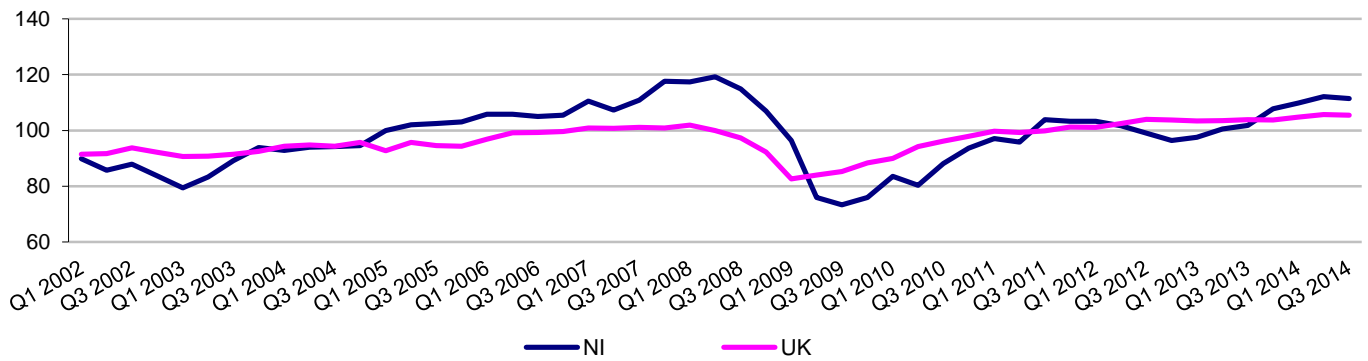
¹ The electricity, gas, steam and air conditioning supply sub-sector has been seasonally adjusted from Q2 2014 using X-13 ARIMA SEATS and previously smoothed companies with volatile returns are no longer smoothed.

4: Manufacturing Subsections

Full series of index numbers back to 2002 are provided for each sub-sector in tables at the end of this section.

Seasonally Adjusted Engineering & Allied Industries (weight 26.3%)

Figure 8: Engineering & Allied Industries in NI and UK
(2011=100)

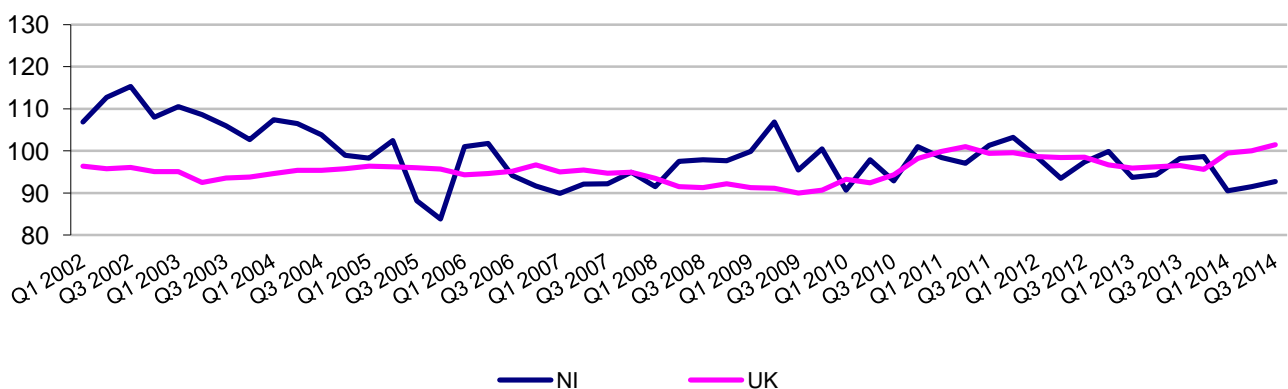


	NI	UK
Percentage change compared to previous quarter	-0.6	-0.2
Percentage change compared to same quarter one year ago	9.4	1.5
Percentage change for most recent four quarters compared to previous four quarters	11.3	1.3

This sector has fallen by 6.5% since its peak in Q2 2008. However, it has shown a significant recovery (52.0%) since its minimum value recorded in Q3 2009.

Unadjusted Food Products, Beverages & Tobacco (weight 23.4%)

Figure 9: Food Products, Beverages & Tobacco in NI and UK
(2011=100)

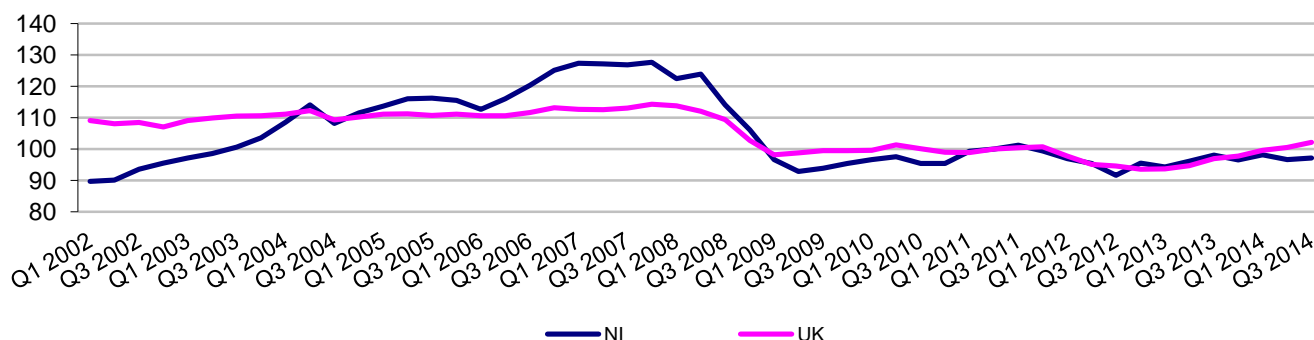


	NI	UK
Percentage change compared to previous quarter	1.3	1.5
Percentage change compared to same quarter one year ago	-5.6	5.2
Percentage change for most recent four quarters compared to previous four quarters	-3.3	2.9

This sector has increased by 1.3% since the previous quarter and has fallen by 13.3% from its most recent peak reached in Q2 2009.

Seasonally Adjusted Total Other Manufacturing (weight 17.5%)

Figure 10: Total Other Manufacturing in NI and UK
(2011=100)

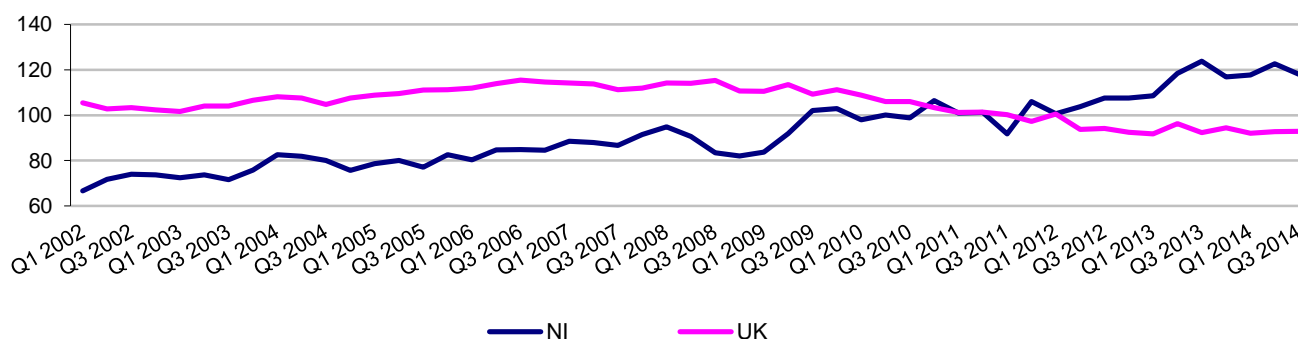


	NI	UK
Percentage change compared to previous quarter	0.5	1.7
Percentage change compared to same quarter one year ago	-0.9	5.4
Percentage change for most recent four quarters compared to previous four quarters	1.2	5.6

This sector has shown a considerable fall of 23.9% since its peak in Q4 2007.

Unadjusted Manufacturing of Chemical and Pharmaceutical Products (weight 8.6%)

Figure 11: Chemical & Pharmaceutical Products in NI and UK
(2011=100)

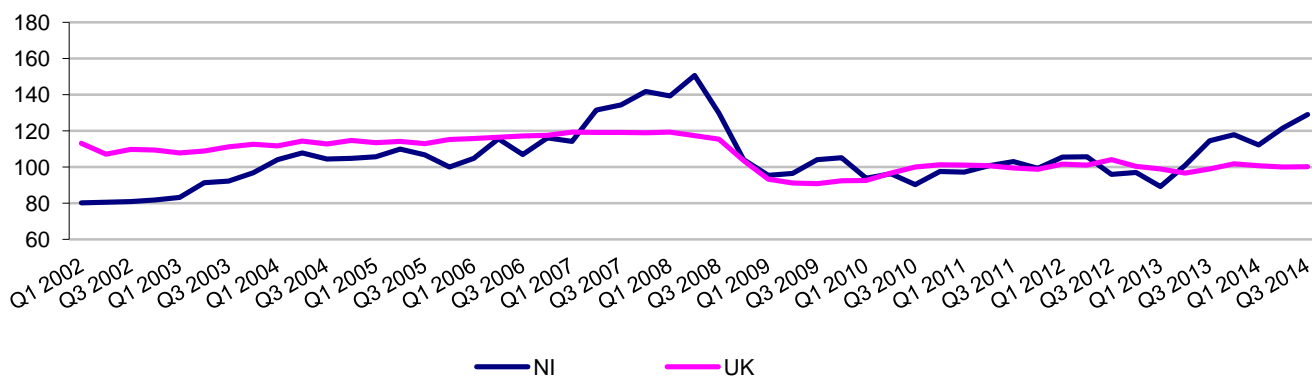


	NI	UK
Percentage change compared to previous quarter	-3.8	0.1
Percentage change compared to same quarter one year ago	-4.6	0.7
Percentage change for most recent four quarters compared to previous four quarters	3.7	-0.2

This index was mainly on an upward trend until Q3 2013 where it recorded a peak of 123.8. This sector has fallen slightly (-4.6%) since this peak.

Unadjusted Basic and Fabricated Metal Products (weight 6.8%)

Figure 12: Basic & Fabricated Metal Products in NI and UK
(2011=100)

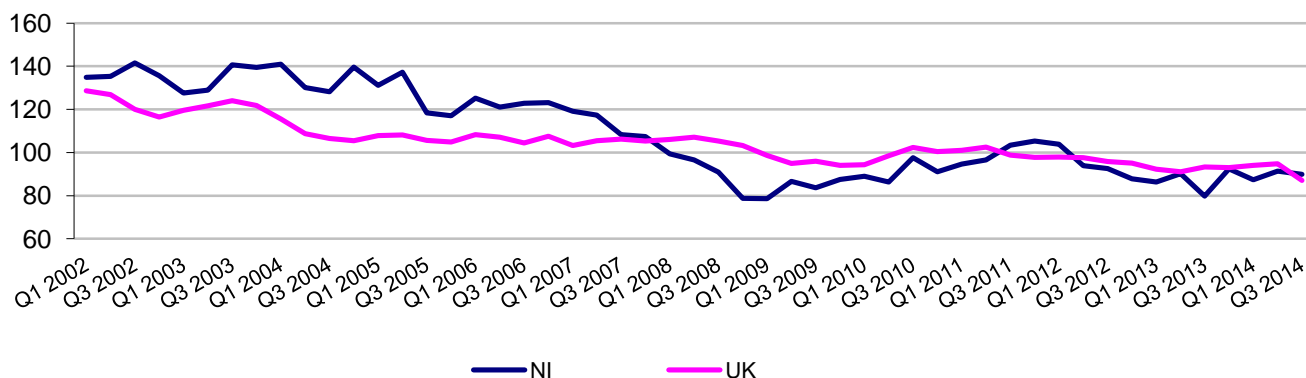


	NI	UK
Percentage change compared to previous quarter	6.2	0.2
Percentage change compared to same quarter one year ago	12.8	1.2
Percentage change for most recent four quarters compared to previous four quarters	19.8	2.0

This sector has shown a fall of 14.3% since its peak in Q2 2008.

Seasonally Adjusted Textiles, Leather & related products (weight 3.3%)

Figure 13: Textiles, Leather & related products in NI and UK
(2011=100)



	NI	UK
Percentage change compared to previous quarter	-1.6	-8.2
Percentage change compared to same quarter one year ago	12.8	-6.8
Percentage change for most recent four quarters compared to previous four quarters	5.0	-0.8

The downward trend in this sector started much earlier than in other sectors and the index has fallen 36.5% since its peak in Q3 2002.

Table 2: Northern Ireland Index of Production by Broad Manufacturing Subsectors

Sector	Engineering & Allied Industries (CI, CJ, CK, CL)	Food, Beverages & Tobacco (CA)	Total Other Manufacturing (CC, CD, CG, CM)	Chemical & Pharmaceutical Products (CE & CF)	Basic & Fabricated Metal Products (CH)	Textiles, Leather & related Products (CB)
	Seasonally Adjusted	Unadjusted	Seasonally Adjusted	Unadjusted	Unadjusted	Seasonally Adjusted
weights	263.0	234.1	174.7	86.0	68.0	33.4
2002 1	89.9	106.9	89.7	66.6	80.2	134.8
2	85.7	112.7	90.1	71.7	80.5	135.3
3	87.9	115.3	93.6	74.0	80.8	141.6
4	83.7	108.0	95.5	73.7	81.7	135.6
2003 1	79.4	110.5	97.2	72.4	83.1	127.6
2	83.3	108.6	98.6	73.7	91.3	129.0
3	89.1	106.0	100.6	71.6	92.1	140.6
4	93.9	102.7	103.6	75.8	96.9	139.4
2004 1	92.8	107.4	108.6	82.6	104.0	141.0
2	94.0	106.5	114.1	81.9	107.9	130.0
3	94.2	103.8	108.2	80.0	104.5	128.1
4	94.6	99.0	111.5	75.7	104.8	139.5
2005 1	100.0	98.3	113.7	78.7	105.6	131.2
2	102.0	102.5	116.0	80.0	110.0	137.2
3	102.5	88.2	116.2	77.1	106.8	118.4
4	103.1	83.8	115.5	82.6	100.0	117.0
2006 1	105.8	101.0	112.7	80.3	104.7	125.2
2	105.8	101.8	116.0	84.8	115.5	121.0
3	105.0	94.2	120.3	84.9	106.8	122.9
4	105.5	91.7	125.1	84.6	116.1	123.1
2007 1	110.5	89.9	127.4	88.5	114.2	119.1
2	107.3	92.1	127.1	87.9	131.5	117.3
3	110.9	92.2	126.8	86.7	134.4	108.3
4	117.6	94.9	127.7	91.5	141.8	107.4
2008 1	117.4	91.5	122.5	94.8	139.3	99.3
2	119.2	97.5	123.9	90.6	150.7	96.6
3	114.9	97.9	114.1	83.4	129.7	90.9
4	107.0	97.7	106.1	82.0	104.0	78.8
2009 1	96.4	99.9	96.7	83.7	95.4	78.6
2	75.9	106.9	92.9	91.9	96.4	86.7
3	73.3	95.5	93.9	102.1	104.1	83.7
4	75.9	100.5	95.4	102.9	105.2	87.5
2010 1	83.5	90.7	96.7	98.0	93.8	89.0
2	80.3	97.9	97.6	100.1	96.3	86.3
3	88.1	92.9	95.4	98.9	90.2	97.6
4	93.6	101.0	95.4	106.5	97.6	91.1
2011 1	97.1	98.4	99.3	101.0	97.1	94.6
2	95.8	97.1	100.0	101.3	100.7	96.5
3	103.8	101.3	101.3	91.8	103.0	103.5
4	103.3	103.2	99.4	106.0	99.2	105.4
2012 1	103.3	98.6	97.0	100.7	105.5	103.9
2	101.7	93.5	95.4	103.8	105.6	93.9
3	99.0	97.4	91.7	107.6	95.9	92.5
4	96.4	99.9	95.5	107.5	96.9	87.8
2013 1	97.5	93.7	94.3	108.5	89.2	86.3
2	100.5	94.3	96.2	118.5	100.8	90.2
3	101.8	98.2	98.1	123.8	114.4	79.8
4	107.7	98.7	96.6	116.9	117.9	92.5
2014 1	109.8	90.5	98.2	117.8	112.3	87.4
2	112.1	91.5	96.7	122.7	121.6	91.4
3	111.4	92.7	97.2	118.1	129.1	89.9

Table 2 cont'd : Northern Ireland Index of Production by Broad Manufacturing Subsectors

Sector	Engineering & Allied Industries (CI, CJ, CK, CL)	Food, Beverages & Tobacco (CA)	Total Other Manufacturing (CC, CD, CG, CM)	Chemical & Pharmaceutical Products (CE & CF)	Basic & Fabricated Metal Products (CH)	Textiles, Leather & related Products (CB)
	Seasonally Adjusted	Unadjusted	Seasonally Adjusted	Unadjusted	Unadjusted	Seasonally Adjusted
weights	263.0	234.1	174.7	86.0	68.0	33.4
Percentage change latest quarter on:						
previous qtr						
	-0.6	1.3	0.5	-3.8	6.2	-1.6
previous year						
	9.4	-5.6	-0.9	-4.6	12.8	12.8
rolling average*						
	11.3	-3.3	1.2	3.7	19.8	5.0

Figures are provisional and subject to revision to take account of more recent information and more up-to-date seasonal factors (see Background Notes). *The change in the rolling annual average measures the change in the average of the latest four quarters against the same four quarters one year previous.

5: Market Sector Analysis

Market sector analysis classifies production under one of three headings which are derived from the main SIC classification groups.

Investment Goods – also known as Capital Goods – are the plant, equipment and inventories used to produce goods for consumption. Companies will invest further in these kinds of goods when they are looking to expand their production or upgrade existing equipment.

Intermediate Goods are those purchased by industry as inputs into the final production of goods. This category would include the materials (such as cement, rubber, plastic, chemicals and electronics) which will ultimately be used to produce a good for consumption.

Consumer Goods are the final goods produced by industry which are intended for purchase by private consumers. These goods are consumed by the mass market rather than used in the production of another good, and are therefore closely linked to consumer demand and the factors which influence this.

It should be noted that these groups are for illustrative purposes as there can be overlap where manufacturer goods could be used as capital to produce another good but will also be used for consumption (e.g. motor vehicles).

Table 3: Index of Production by Market Sector Goods

Sector	Consumer Goods	Intermediate Goods	Investment Goods
	Unadjusted	Seasonally Adjusted	Unadjusted
weights	451.0	386.4	162.6
2002	109	82	96
2003	105	92	91
2004	102	101	95
2005	92	104	103
2006	96	106	107
2007	92	111	113
2008	95	112	113
2009	100	96	81
2010	95	100	87
2011	100	100	100
2012	96	98	100
2013	95	98	107

Table 3 cont'd: Index of Production by Market Sector Goods

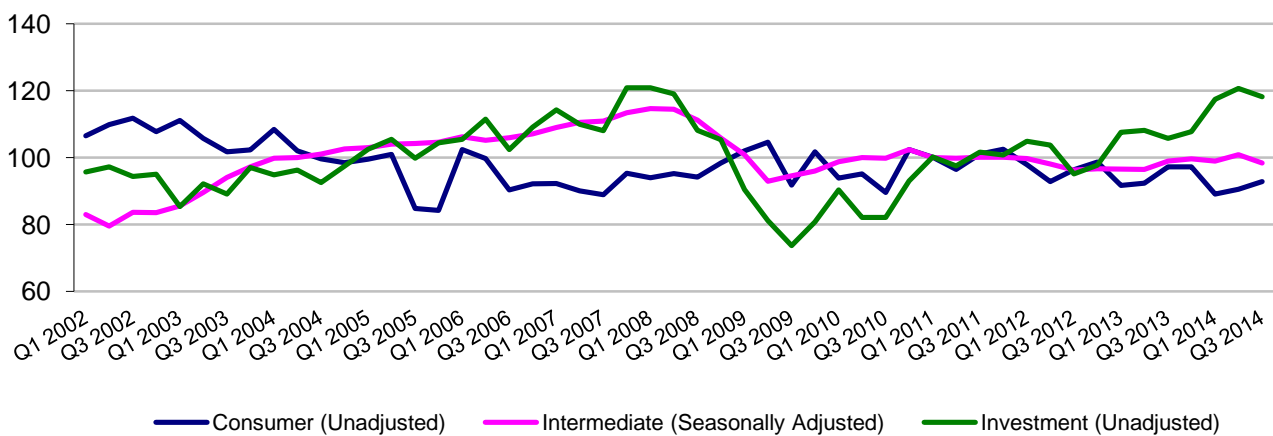
Sector	Consumer Goods	Intermediate Goods	Investment Goods
	Unadjusted	Seasonally Adjusted	Unadjusted
weights	451.0	386.4	162.6
2002 1	106.5	82.9	95.7
2	109.8	79.5	97.2
3	111.7	83.6	94.3
4	107.7	83.5	95.0
2003 1	111.1	85.5	85.3
2	105.7	89.5	92.1
3	101.7	94.0	89.1
4	102.3	97.2	97.0
2004 1	108.4	99.8	94.8
2	102.0	100.0	96.2
3	99.6	101.0	92.5
4	98.4	102.6	97.4
2005 1	99.5	102.9	102.5
2	100.9	104.0	105.4
3	84.8	104.2	99.8
4	84.2	104.6	104.4
2006 1	102.4	106.2	105.4
2	99.7	105.1	111.5
3	90.3	105.9	102.4
4	92.1	107.1	109.1
2007 1	92.2	109.0	114.2
2	90.0	110.5	109.9
3	88.9	110.9	108.0
4	95.3	113.4	120.8
2008 1	93.9	114.6	120.8
2	95.2	114.4	119.0
3	94.1	111.2	108.1
4	98.3	105.8	105.3
2009 1	102.0	100.8	90.4
2	104.6	92.9	81.1
3	91.7	94.5	73.7
4	101.7	96.0	80.7
2010 1	93.8	98.7	90.3
2	95.1	100.0	82.1
3	89.5	99.8	82.1
4	102.4	102.4	93.0
2011 1	100.1	100.0	100.2
2	96.4	99.8	97.5
3	101.0	100.1	101.6
4	102.5	100.1	100.7
2012 1	97.9	99.7	104.9
2	92.8	98.1	103.7
3	96.3	96.2	95.1
4	98.6	96.6	97.7
2013 1	91.6	96.5	107.5
2	92.3	96.4	108.1
3	97.2	98.9	105.7
4	97.2	99.6	107.7
2014 1	89.1	98.9	117.4
2	90.5	100.8	120.6
3	92.8	98.3	118.2

Table 3 cont'd: Index of Production by Market Sector Goods

Sector	Consumer Goods	Intermediate Goods	Investment Goods
	Unadjusted	Seasonally Adjusted	Unadjusted
weights	450.7	386.9	162.4
previous quarter	2.5	-2.5	-2.0
previous year	-4.5	-0.6	11.8
Rolling average*	-2.7	2.4	10.7

Figures are provisional and subject to revision to take account of more recent information and more up-to-date seasonal factors (see Background Notes). * The change in the rolling annual average measures the change in the average of the latest four quarters against the same four quarters one year previous.

Figure 14: Market Sector Goods
(2011 =100)



Unadjusted Consumer Goods (weight 45.1%)

This category has been relatively stable during the recession but remains changeable quarter on quarter. In Q3 2014 there was an increase (2.5%) in output of consumer goods.

Seasonally Adjusted Intermediate Goods (weight 38.6%)

After experiencing a sharp fall between 2008 and 2009, this category has remained steady with the index being in the region of 100 quarter on quarter. However, Q3 2014 is reporting a decrease of 2.5% over the quarter and 0.6% over the year.

Unadjusted Investment Goods (weight 16.3%)

The significant falls in output experienced from 2008 where the index fell 39.0% between Q1 2008 and Q3 2009 reflects the impact of the global recession on businesses, with many companies looking to survive as the economy contracted. The recent rises in output can be interpreted as firms recovering from the recession and investing to grow from 2011. In Q3 2014 Investment goods have seen a decline of 2.0% from the previous quarter, but have reported an increase of 11.8% from the same period one year earlier.

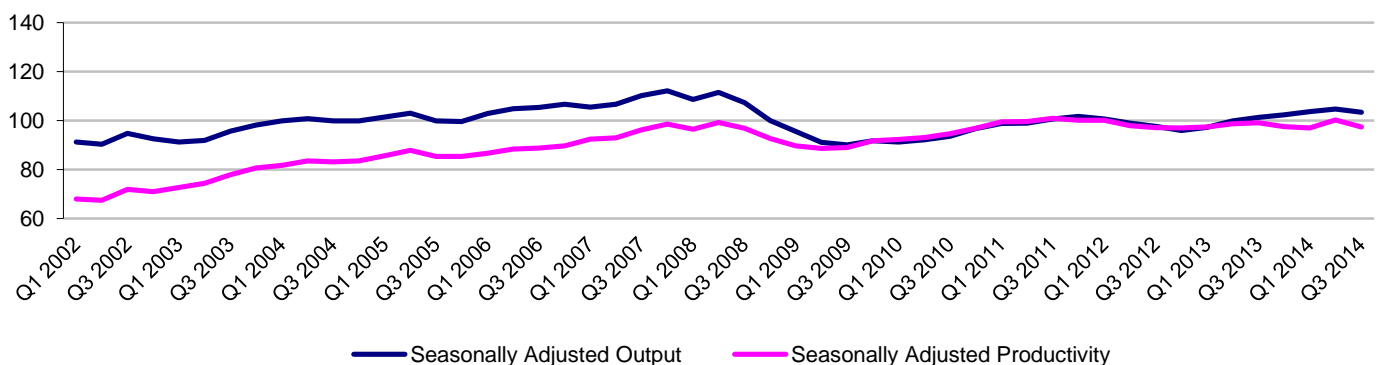
6: Seasonally Adjusted Index of Manufacturing Productivity

Manufacturing Productivity

The seasonally adjusted index of manufacturing productivity provides a measure of the number of units of output produced per person per paid hour. The index includes seasonally adjusted employees in employment, the seasonally adjusted manufacturing index and average weekly hours (based on hours worked for full-time adult manufacturing workers including overtime from the Annual Survey of Hours and Earnings).

The index of manufacturing productivity decreased over the quarter and the year, by 2.9% and 1.7% respectively. The index reported no change over the latest four quarters compared to the previous four quarters. Since mid-2009, output and productivity have been very similar. However, since the start of 2013, output has been greater than productivity.

Figure 15: Manufacturing Output & Productivity in NI
(2011 =100)



The most recently published Quarterly Employment Survey seasonally adjusted figures for September 2014 (based on the 2007 Standard Industrial Classification) reported an increase of 1.7% over the quarter in employee jobs in the manufacturing sector and a rise of 3.8% over the year.

Seasonally Adjusted Manufacturing Productivity Index									
Annual Averages		Quarterly series		Quarterly series		Quarterly series		Quarterly series	
2002	70	2002 1	67.9	2006 1	86.6	2010 1	92.3	2014 1	97.0
2003	76	2	67.5	2	88.4	2	93.0	2	100.2
2004	83	3	71.9	3	88.8	3	94.6	3	97.3
2005	86	4	71.0	4	89.7	4	96.8		
2006	88	2003 1	72.7	2007 1	92.4	2011 1	99.4		
2007	95	2	74.4	2	92.9	2	99.6		
2008	96	3	77.9	3	96.2	3	100.9		
2009	90	4	80.7	4	98.5	4	100.2		
2010	94	2004 1	81.8	2008 1	96.5	2012 1	100.1		
2011	100	2	83.5	2	99.2	2	97.9	% change latest qtr on:	
2012	98	3	83.2	3	96.8	3	97.1	Previous qtr	
2013	98	4	83.5	4	92.7	4	97.0		-2.9
		2005 1	85.6	2009 1	89.6	2013 1	97.4	Same qtr 1 yr ago	
		2	87.8	2	88.6	2	98.7		-1.7
		3	85.3	3	89.1	3	99.0	Rolling average	
		4	85.4	4	91.7	4	97.5		0.0

7: Background Notes

Background

The Northern Ireland Index of Production (IOP) has been produced since 1949 and figures are available in the current format back to 2002. It is published quarterly and is designed to provide a general measure of changes in the output of the production industries in Northern Ireland. (This is defined as Standard Industrial Classification 2007 sections B, C, D and E.) In 2011 these industries accounted for approximately 15% of regional Gross Value Added (GVA). See link to Regional GVA information.

<http://www.ons.gov.uk/ons/taxonomy/index.html?nscl=Regional+GVA>

Index numbers

An index number is a convenient form of expressing a series in a way that makes it easier to see changes in that series. The numbers in the series are expressed relatively, with one number in that series chosen to be the 'base' (usually expressed as 100) and other numbers being measured relative to that base. Index numbers have the advantage that they allow different types of data to be combined on a consistent basis, e.g. deflated current price data with volume data. The aim of the Index of Production is to provide a reliable indicator of short-term changes in the output of the production sector. Index numbers are a very good way of communicating this message. For example, the Index of Production Q3 2014 value of 102.0 means that the level of output was 2.0% higher than in 2011 which had a base year value of 100. The NI IOP is a Laspeyres volume index. The UK economic accounts are based on the European System of Accounts (ESA), which in turn is based on the UN System of Accounts (SNA). The ESA-preferred type of output indicator is one that measures deflated gross output (or turnover) for an industry. These use an approximate price change estimator to remove the effects of inflation. For this reason we, and the ONS, use a Laspeyres volume index (as opposed to Paasche, Lowe or Fisher indices). The ONS paper, link following, on the Methodology of the Monthly Index of Services (Annex A: Mathematical Formulation of the Index of Services) gives a good explanation of Index numbers theory.

<http://www.ons.gov.uk/ons/guide-method/user-guidance/index-of-services-methodology/index-construction/index.html>

Index sample

The IOP sample was refreshed for Q1 2014 and was drawn on a SIC07 basis. The sample was boosted from around 650 businesses and it is now approximately 1,000 companies. Due, in part, to the significant number of companies which fall into the census element, more than 60% of businesses in the new sample were also in the old sample. As a statutory survey the response rate is around 90%. The sample of production industries is selected directly from the Inter Departmental Business Register (IDBR), by stratifying companies by industry and company size. The sample consists of a census of dominant companies and a Neyman stratified random sample of the remaining companies. The census element consists of all companies employing 40 or more employees and those employing 0 to 39 employees and having a turnover of £10 million or more. This sample has been designed to give sufficiently accurate results, yet keep the total costs to businesses to a minimum.

Questionnaires were issued to both the new and existing businesses on each sample, for three quarters, as a means to calculate a link factor between the old sample (up to and including Q4 2013) and the new sample (from Q1 2014 onwards). With advice from Office for National Statistics Methodologists, as the result of a successful Quality Improvement Fund, a methodology has been developed in order to integrate the new samples without making significant changes to the back series data, thus giving a meaningful index.

Data collection, validation and Index calculation

The survey forms are issued quarterly, immediately after the period to which they relate. For example, forms are issued in October asking for information relating to July to September. Companies are asked to provide their turnover and exports. Historically a number of companies provided volume information rather than turnover data (e.g. litres of product rather than the turnover value of the product). From quarter 2, 2010 these companies were asked to also provide turnover data and from Q2 2011 the IOP estimates have solely been based on turnover. In response to user demand information is also collected on the value of exports. This will be used to produce a quarterly index in due course once a sufficient back series has been established.

Data validation is carried out ensuring that data fall within the expected limits, contacting the company where appropriate for clarification.

The overall Index of Production is calculated by weighting together industry level indices using relative shares of Accounts Gross Value Added (GVA) data from the most recent Regional Accounts, which is currently 2011. The IOP relative weights used to produce the aggregated industries are derived from the Regional GVA estimate, published annually by ONS. Figures in the IOP publication from Q3 2013 onwards reflect the move to using 2011 GVA, including a new ONS methodology for calculating sub-sectoral breakdowns of the GVA for Manufacturing, which became available on 11 December 2013.

Further information on the impact of the move to the 2011 GVA and the sub-sectoral breakdown of Manufacturing Sector can be found in a methodological note published at http://www.detini.gov.uk/deti-stats-index/economic_output_statistics/stats-index-of-production/stats_iop_background_information.htm.

For practically all series, the value of sales, deflated to allow for price changes, is used as the indicator. In the remaining cases, changes in the volume of production or the number of employees are used as a proxy measure.

From Q2 2014, the individual series have been seasonally adjusted using X-13 ARIMA SEATS, which introduces improvements to the models used for seasonal adjustment. Also, for the first time the electricity, gas, steam and air conditioning index is seasonally adjusted; prior to this a smoothing methodology had been applied to this series.

Further information on the methodology and impact of the seasonal adjustment changes can be found in the methodological note published at www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production/stats_iop_background_information.htm

It is also possible to aggregate all individual series to give indices by final use of goods produced. This is known as a market sector analysis and estimates are given in Section 5 of this bulletin. It distinguishes between unadjusted Consumer, unadjusted Investment and seasonally adjusted Intermediate Goods. The latter are described as intermediate because they include materials used to produce goods for consumption.

The Productivity index provides a measure of the number of units of output produced per person per paid hour. The productivity index is based on the seasonally adjusted manufacturing index, seasonally adjusted employees in employment and average weekly hours (based on hours worked for full-time adult manufacturing workers including overtime from the Annual Survey of Hours and Earnings). An index of total employee hours is calculated based on the number of employees in employment and average weekly hours. The seasonally adjusted index of manufacturing is divided by the index of total employee hours to produce the Index of Productivity.

The seasonally adjusted Northern Ireland Index of Production is annually chain-linked (chain-linking involves the linking of growth estimates between different time periods in order to produce a continuous time series) using GVA estimates derived from regional accounts using the fourth quarter of the preceding year as the link period. Inaccuracies caused by the assumption of a stable relationship between GVA and turnover are reduced using this methodology. When annual weights

are used the assumption only has to be maintained from one year to the next year. A paper on annual chain-linking from ONS is available at <http://www.ons.gov.uk/ons/rel/regional-accounts/regional-gross-value-added--income-approach-/december-2010/stb-regional-gva-dec-2011.html>

The standard method for linking two series (for example one based on a SIC03 sample and one based on SIC07 sample) is to calculate the index under the old and new circumstances over some link period, and then apply the growth of the subsequent new series to the old series. As the relationship of both samples to the IDBR was known, the IDBR was used to provide the link period. Thus the ratio of the IDBR turnover for Q1 2011 and Q2 2011 is known. We have the Q2 2011 value (SIC07) and the Q1 2011 value (converted from SIC03 to SIC07). We can therefore create the following link factor:

$$\text{link factor} = \frac{(\text{Q2 2011 sample estimate} * \text{IDBR Q1 2011 value})}{(\text{Q1 2011 sample estimate} * \text{IDBR Q2 2011 value})}$$

This can then be applied to the converted back series along with historic Q1 to Q2 fluctuations, thus retaining the previous growth rates and any seasonal effects.

For Q1 2014 and Q2 2014, questionnaires were issued to companies on both the existing sample and the new sample, thus allowing a link factor to be calculated based on the average percentage change between the two. This link factor was then applied to each of the quarterly turnover back series (grossed & deflated), in order to give a series of the same magnitude as the new sample series (from Q1 2014 onwards).

Deflation

All series, unless otherwise quoted, are measured at constant market price. Deflators adjust the value series to take out the effect of price change to give the volume series. Details on the changes to the ONS deflators methodology can be found at the following link <http://www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/national-accounts/methodology-and-articles/2011-present/index.html>

Seasonal adjustment

The index numbers in this statistical bulletin are seasonally adjusted, where appropriate. This aids interpretation by removing annually recurring fluctuations, for example due to holidays or other regular seasonal patterns. All IOP time series are checked using X-13 ARIMA SEATS for evidence of seasonality, and those series where seasonality is detected are adjusted using X-13 ARIMA SEATS in order to obtain a clear picture of the general trend. Unadjusted data are also available.

The figures presented in this publication are calculated using the X-13 ARIMA SEATS method of seasonal adjustment. The following is a link to an ONS Guide to seasonal adjustment with X-12 ARIMA (an updated guide for X-13 ARIMA SEATS is currently being finalised by ONS): <http://www.ons.gov.uk/ons/guide-method/method-quality/general-methodology/time-series-analysis/guide-to-seasonal-adjustment.pdf>

Quality reporting

One indicator of the reliability of the figures in this bulletin can be obtained by monitoring the size of revisions. The IOP revisions policy can be found at: <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production/stats-newpage-4.htm>

Summary quality report

The latest summary quality report for this publication can be found on the IOP Quality and Revisions page of the website at

<http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production/stats-newpage-4.htm>

Publication of results on a SIC07 basis

A Standard Industrial Classification (SIC) was first introduced into the UK in 1948 for use in classifying business establishments by the type of economic activity in which they are engaged. The UK is required by European legislation to revise the SIC in parallel with NACE (the statistical classification of economic activities in the European Communities) so that both systems are identical down to and including the four digit class level. This new SIC07 provides greater detail on the services sector, reflecting its growing importance in the economy. The new classification has a small impact on total IOP and Index of Services and a slightly bigger impact on manufacturing. In the new classification, sewerage and waste disposal have been moved from services to production and publishing has moved in the opposite direction. The changes also lead to differences in the behaviour of the IOP and IOS over time as the industries moving between the two sectors behave in quite different ways. There has also been a switch within the production sector between manufacturing caused by the new treatment of recycling, which moves out of manufacturing into the new section E – this reduces the size of manufacturing though production as a whole is unchanged. More information on SIC07 can be found at the following links:

<http://www.ons.gov.uk/ons/guide-method/classifications/current-standard-classifications/standard-industrial-classification/index.html>

<http://www.ons.gov.uk/ons/rel/naa2/second-estimate-of-gdp/q2-2011/art---bb11-improvements-to-gdp--ios--iop.html>

Status of figures in current bulletin

Results are published on a SIC07 basis in this bulletin and all indices are produced on a 2011=100 basis.

Turnover from newly registered businesses on IDBR from Q2 2011 to Q4 2013 have been included in the results.

All figures are published to one decimal place. Figures for annual averages and percentage changes over the previous quarter and year are based on unrounded figures and may not agree with the published constituent parts.

Results, particularly for the latest quarter, are provisional and subject to revision as more up to date information become available.

The overall IOP index has been produced using X-13 ARIMA SEATS seasonal adjustment. Some of the sectors and sub-sectors have also been seasonally adjusted, and those can be identified throughout the bulletin.

Comparisons between the Index of Production and the Annual Business Inquiry (ABI) may not necessarily match because of definitional and coverage differences.

Planned future revisions

The IOP revisions policy can be found at

<http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production/stats-newpage-4.htm>

Publications policy

All Economic and Labour Market Statistics Branch statistical publications are available to download free of charge from the website: <http://www.detini.gov.uk/deti-stats-index.htm>

The IOP bulletin is available at <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production.htm>

The tables from the current publication, which include data back to 2002, are available in Excel format to download free of charge from the IOP website at <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production.htm>

The IOP is normally published on the same day as the Index of Services (IOS) each quarter and the latest edition of the IOS can be accessed at http://www.detini.gov.uk/index/what-we-do/deti-stats-index/economic_output_statistics/index-of-services.htm. Note that the Index of Services for Quarter 3 2014 has been delayed to allow for additional quality assurance following increases to sample size. A revised publication date will be announced as soon as possible.

The Economic and Labour Market Statistics Branch statistics publication schedule is available at http://www.detini.gov.uk/index/what-we-do/deti-stats-index/stats_publications_2014_onwards.htm

The list of people given pre-release access to this publication is available at http://www.detini.gov.uk/elmsb_pre-release_publication_access_list_nov-14.pdf?rev=0

SIC 2007 Definitional Changes

Manufacturing – SIC07 Section C (weight 85.9%)

The boundaries of manufacturing and the other sectors of the classification system can be somewhat blurred. As a general rule, the activities in the manufacturing section involve the transformation of materials into new products. Their output is a new product.

SIC03 Division 37 (Recycling) within the SIC03 Manufacturing Section has moved to the SIC07 Section E. The publishing part of SIC03 Division 22 (Publishing, printing and reproduction of recorded media) within the SIC03 Manufacturing Section has moved to the new SIC07 Section J (Information and Communication).

Water supply, sewerage and waste management (inc. recycling) – SIC07 Section E (weight 6.7%)

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.

The majority of SIC03 Division 90 (Sewage and refuse disposal) within the SIC03 Section O (Other Community Services) has moved to SIC07 Section E. SIC03 Division 37 (Recycling) within the SIC03 Manufacturing Section has moved to SIC07 Section E.

Electricity, gas, steam and air conditioning supply – SIC07 Section D (weight 6.4%)

This section 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. This therefore includes the operation of electric and gas utilities.

In SIC03 Section E covered Electricity, gas and water supply. Water supply is now in the SIC07 Section E along with sewerage and refuse disposal and recycling.

Mining and Quarrying – SIC07 Section B (weight 1.0%)

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.

There are no significant changes between SIC03 Section C (Mining and Quarrying) and SIC07 Section B.

Next publication

The next bulletin will be published on 18th March 2015.

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