

# NORTHERN IRELAND INDEX OF PRODUCTION QUARTER 1 2011

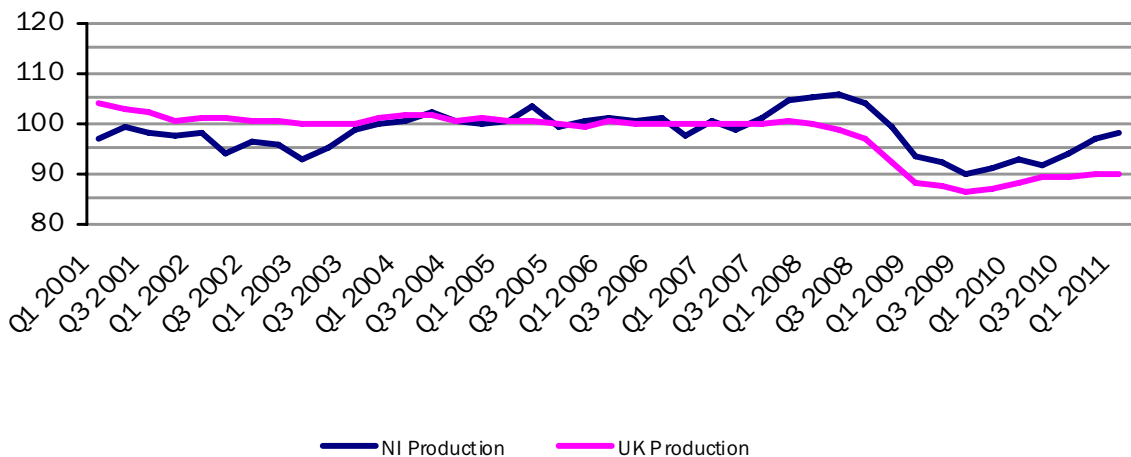
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The Northern Ireland Index of Production (IOP) is a quarterly survey designed to provide a general measure of change in real terms in the output of the Manufacturing, Electricity, Gas & Water and Mining & Quarrying industries. This publication contains seasonally adjusted NI Index of Production data on a 2006=100 basis. These data are provisional and may be subject to change.

- Results from the Index of Production for the first quarter of 2011 show output levels in Northern Ireland increased by 1.0% in real terms compared to Quarter 4 2010. This compares with a slight decrease (-0.1%) for the UK as a whole over the same period. The index has reported growth in five out of the last six quarters but is still 7.4% below the peak reached in Q2 2008. The UK index fell by 8.9% over the same time period.
- As such, Northern Ireland production output is showing evidence of a return to growth. However, it should be noted that the March 2011 Quarterly Employment Survey (published in June 2011) showed a slight decrease of 0.2% in seasonally adjusted employee jobs in the production sector over the latest quarter, although there was an increase of 1.6% over the year.

## Index of Production in NI and UK

(2006 =100)



## **A NATIONAL STATISTICS PUBLICATION**

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 & Research Agency (NISRA)

# Northern Ireland Index of Production Quarter 1 2011

July 2011

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.

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# Summary and Commentary

# 1

## 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 member 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 recently published Department of Enterprise, Trade and Investment Economic Commentary (June 2011) 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/deti-stats-index/deti-stats-index-4.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>

The Northern Ireland Index of Services (IOS) provides a general measure of changes in the output of the private sector services. Provisional figures for Quarter 1 2011 show that output fell for the fourth consecutive quarter out of the last six, in contrast to the UK as a whole which has recorded increases in five of the last six quarters. The full bulletin can be accessed at <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-ios.htm>

The background notes in Section 6 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 Manufacturing, Electricity, Gas & Water and Mining & Quarrying sectors on a 2006=100 basis giving data up to the most recent available quarter (Quarter 1 2011).

Manufacturing is typically the main determinant of change in the production sector, representing over 85% of the approximate Gross Value Added in the production industries. Data for the manufacturing sub-sectors (e.g. Food, drink and tobacco) is also published along with information by market sector. Market sector analysis classifies production under one of three headings, according to the purpose for which output is intended i.e. Investment Goods, Intermediate Goods and Consumer Goods.

The other elements of the Index relate to Electricity, Gas and Water, which represents around 12% of the index and Mining and Quarrying which represents 2%.

Comparative UK data (produced by the Office for National Statistics) are presented where these are available.

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 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 or methodological changes. There have been no significant revisions to recent quarter's figures.

Further information on revisions is provided in the background notes (section 6). This also provides a link to a spreadsheet providing measures of the revisions to all the data in this statistical bulletin.

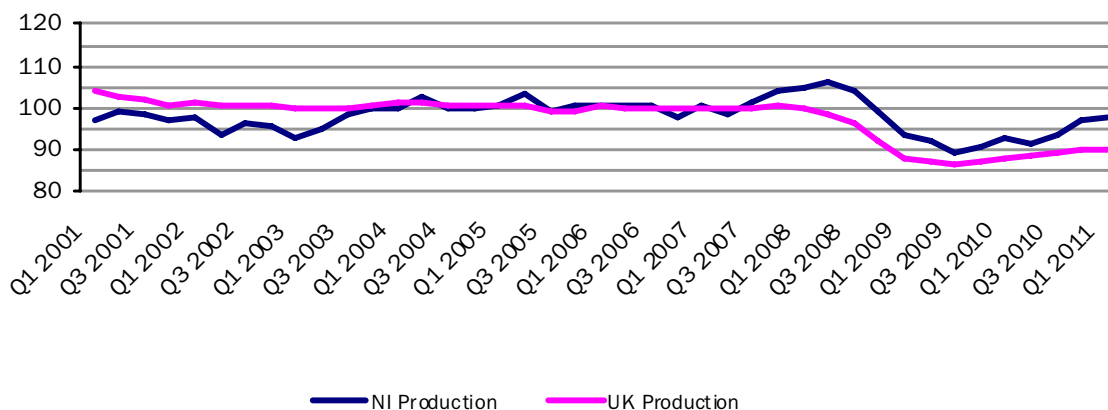
### Results

The Index of Production has reported growth in five out of the last six quarters but is still 7.4% below the peak reached in Q2 2008, with the UK index falling by 8.9% over the same time period. As such, Northern Ireland production output is showing evidence of a return to growth. However, it should be noted that the March 2011 Quarterly Employment Survey (published in June 2011) showed a slight decrease of 0.2% in seasonally adjusted employee jobs in the production sector over the latest quarter, although there was an increase of 1.6% over the year. This suggests growth in output is not yet translating into uninterrupted job growth. It is also of interest to note that most of the growth in output over the last year has been in investment goods, whereas the production of consumer goods has remained relatively flat in 2010/11 compared to the previous year.

- NI output levels increased over the previous quarter by 1.0%. (UK: -0.1%)
- NI output levels increased by 5.7% compared to the same quarter one year ago (UK: +1.9%)
- NI output levels increased by 4.2 % over the most recent four quarters compared to the previous four quarters (UK: +2.5%)
- However, the NI Production sector has declined by 7.4% from the peak recorded in Q2 2008, whilst the UK reported a decline of 8.9% over the same time period.

**Figure 1: Index of Production in NI and UK**

(2006 =100)

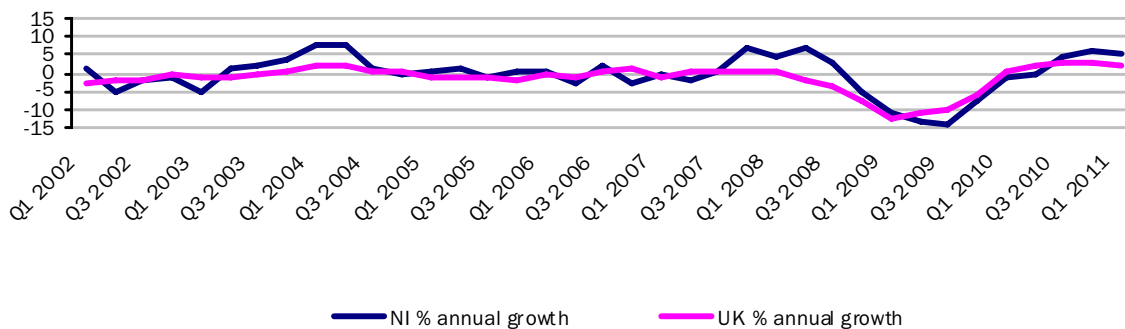


## Production – growth trend

Figure 2 illustrates the annual percentage change in output in the production sector over time. Annual growth was maintained from Q3 2007 to Q3 2008 it then reported a negative growth in Q4 2008 which continued until Q2 2010, with a noticeable low in Q3 2009 (-13.8%). Q1 2011 reported annual growth of 5.7%.

**Figure 2: Production - % change on a year earlier in NI and UK**

(2006 =100)



## Manufacturing

Manufacturing comprises the main element (over 85%) of the production index and therefore the manufacturing index has a similar profile to the overall production index. Quarterly growth in NI at the start of 2011 was faster than in the UK.

- Manufacturing output levels increased over the previous quarter by 1.2%. (UK: +0.8%)
- Manufacturing output levels increased by 6.4% compared to the same quarter one year ago (UK: +4.4%)
- Manufacturing output levels increased by 4.4% over the most recent four quarters similar to the previous four quarters (UK: +4.3%)

## Manufacturing Subsections

Food, Drink and Tobacco represents one third of the manufacturing index. Like the overall manufacturing index, it has shown growth in three out of the last four quarters. However, the biggest contribution to the production index quarterly growth for Q1 2011 has been the increase in the output of the Engineering and Allied Industries. This sector, which represents nearly 30% of the Manufacturing index, increased by 2.8% between Q4 and Q1 2011.

In the latest quarter, four of the six broad manufacturing subsectors reported an increase over the quarter: Engineering & Allied Industries (2.8%), Other Manufacturing (2.8%), Basic Metals & Fabricated Metal Products (4.0%) and Leather, Textiles & Textile Products (4.6%). Manufacture of Food, Drink & Tobacco (-0.9%) and Chemicals & Chemical Products (-2.4%) reported a fall over the same period.

## Manufacturing Productivity

The index of manufacturing productivity (which provides a measure of the number of units of output produced per person per paid hour) increased by 1.4% over the quarter and recorded an increase of 5.0% over the year. Figures from the March 2011 Quarterly Employment Survey (published in June 2011) show a slight decrease of 0.2% in seasonally adjusted employee jobs in the production sector over the latest quarter, they showed an increase of 1.6% over the year.

## **Other Production**

The Electricity, Gas and Water index decreased by 0.6% compared to Quarter 4 2010 and increased over the year by 3.1%.

Mining and Quarrying recorded an increase of 0.4% compared to the previous quarter and a fall of 8.3% over the year.

## **Market Sector Changes**

Investment goods are the type of goods that companies buy when they are looking to expand production or upgrade existing equipment. The output of Northern Ireland businesses which manufacture these goods has increased for the last six quarters ( up 2.3% over the quarter and 15.7% over the year) indicating, perhaps that certain businesses are confident enough to start investing in their future.

The output of businesses producing intermediate goods (cement, rubber, plastic, chemicals, electronics) has remained relatively constant over the last five quarters with modest increases in the index compared to the previous quarter (+1.6%), same quarter a year ago (+1.9%) and the last four quarters compared to the same four quarters one year previously (+2.5%) This is an area where NI has performed better than the UK in recent years.

Consumer goods are those intended for purchase by private consumers and output is therefore closely linked to consumer demand and the factors which influence this. Inflationary pressures and wage constraints in 2011 are also likely to constrain consumer demand. How this impacts on Northern Ireland businesses producing consumer goods is difficult to predict but the fall in the consumer goods index this quarter (-0.8%) and the fall in the annual rolling average (-0.6%) may indicate these pressures beginning to take effect.

## **Date of Next Publication**

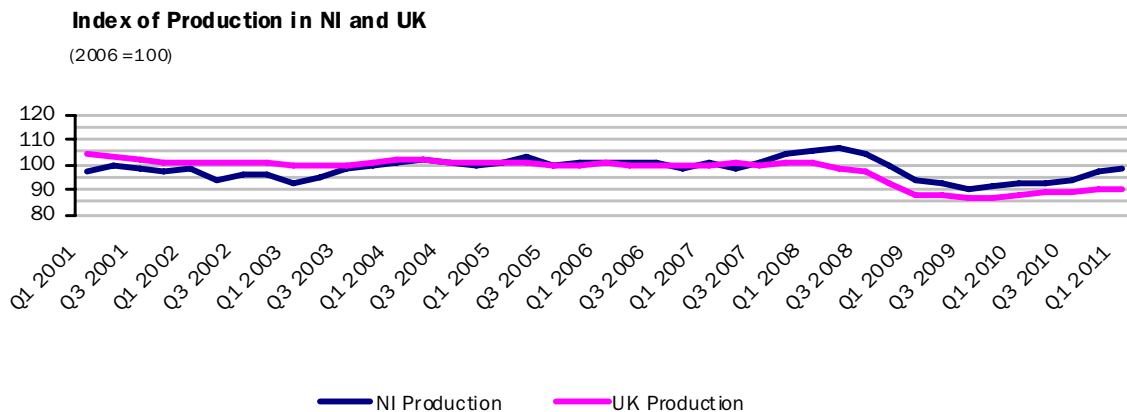
The Northern Ireland Index of Production for Quarter 2 2011 will be published on Wednesday 12<sup>th</sup> October 2011.

# Output of the Production Industries 2006=100, Seasonally Adjusted Chained Volume Index

## 2

Output from the overall production industries in January-March (Quarter 1 2011) increased by 1.0% over the quarter and increased by 5.7% compared to one year earlier.

Northern Ireland's production levels increased over the quarter (1.0%), the UK reported a slight fall (-0.1%) over the quarter and a rise of 1.9% over the year.



Over the latest four quarters compared to the same four quarters one year earlier the Production sector in NI has increased by 4.2%, the UK also reported a rise (2.5%).

NI production has decreased by 2.3% from Q1 2007 to Q1 2011, much smaller than the decrease of 9.9% recorded for the UK as a whole 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 Approximate Gross Value Added (GVA) within the overall production sector.

**Table 1: Northern Ireland Index of Production seasonally adjusted (2006 = 100)**

Sector	Production Industries C+D+E	Manufacturing D	Electricity, Gas & Water Supply E	Mining & Quarrying C
weights	1000.0	864.8	117.3	17.9
2001	98	97	113	72
2002	96	96	99	74
2003	97	96	101	85
2004	101	101	103	91
2005	101	101	103	92
2006	100	100	100	100
2007	101	101	97	113
2008	104	103	108	93
2009	92	90	108	86
2010	94	92	111	93

**Table 1 (cont'd) : Northern Ireland Index of Production seasonally adjusted (2006 = 100)**

Sector	Production Industries C+D+E	Manufacturing D	Electricity, Gas & Water Supply E	Mining & Quarrying C
weights	1000.0	864.8	117.3	17.9
2001 1	97.1	94.9	116.7	75.0
2	99.3	97.9	114.3	68.2
3	98.3	97.2	110.9	68.8
4	97.3	96.1	109.8	74.8
2002 1	98.2	97.8	104.8	75.6
2	93.9	94.1	96.8	69.8
3	96.5	96.7	98.7	73.9
4	96.0	96.2	97.1	78.7
2003 1	93.0	92.5	98.3	82.1
2	95.1	94.9	99.1	80.6
3	98.9	98.7	102.4	86.8
4	99.7	99.5	102.6	89.9
2004 1	100.2	100.0	104.3	84.8
2	102.5	102.5	104.3	86.2
3	100.2	100.3	100.6	90.2
4	99.7	99.5	100.9	102.8
2005 1	100.6	101.0	101.3	78.6
2	103.4	103.1	107.3	90.1
3	99.1	98.9	101.0	96.1
4	100.4	100.1	102.4	102.5
2006 1	101.0	100.8	103.3	91.6
2	100.4	100.7	98.9	97.9
3	100.8	100.9	99.5	104.7
4	97.8	97.6	98.1	106.3
2007 1	100.4	100.5	98.5	106.5
2	98.9	99.2	94.9	109.5
3	101.3	101.7	95.9	114.6
4	104.3	104.6	99.9	120.6
2008 1	105.0	105.0	105.6	105.3
2	106.0	105.9	108.2	94.1
3	104.1	103.7	108.6	91.3
4	99.0	97.7	110.7	83.0
2009 1	93.6	91.9	107.6	86.9
2	92.0	89.8	109.4	84.9
3	89.7	87.2	109.2	82.5
4	91.2	89.2	105.9	89.2
2010 1	92.8	90.4	110.1	96.1
2	91.9	89.5	108.4	98.9
3	93.9	91.7	111.0	90.6
4	97.1	95.0	114.2	87.8
2011 1	98.1	96.2	113.6	88.1
Percentage change latest quarter on:				
Previous quarter				
	1.0	1.2	-0.6	0.4
Same quarter a year ago				
	5.7	6.4	3.1	-8.3
Rolling Average*				
	4.2	4.4	2.9	3.6

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. R – revised from previous publication.

## Manufacturing - (weight 86.5%)

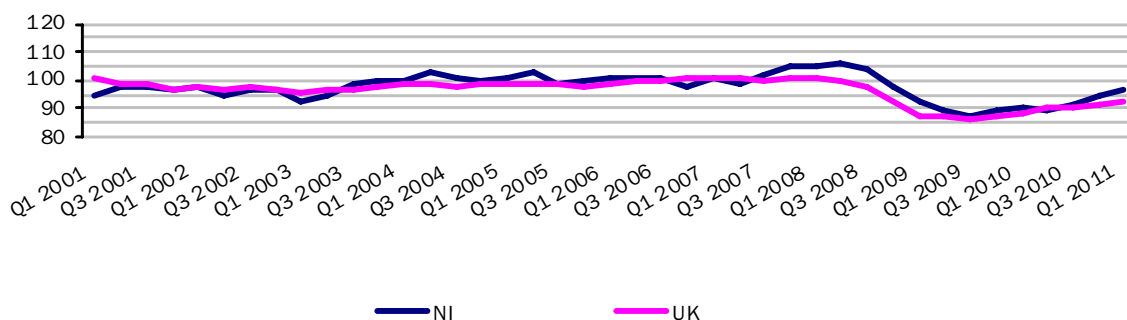
The manufacturing index covers those businesses primarily involved in the mechanical, physical or chemical transformation of materials, substances or components into new products.

Manufacturing output in Northern Ireland from Q4 2010 to Q1 2011 increased by 1.2%, the UK over the same period reported an increase of 0.8%. NI recorded an increase of 6.4% in manufacturing output over the year, the UK as a whole reported a rise of 4.4%. (See figure 4).

NI manufacturing output over the latest four quarters increased by 4.4% compared to the previous four quarters, the UK recorded a similar rise of 4.3% over the same period.

**Figure 4: Manufacturing NI & UK**

(2006 =100)



## Electricity, Gas & Water Supply - (weight 11.7%)

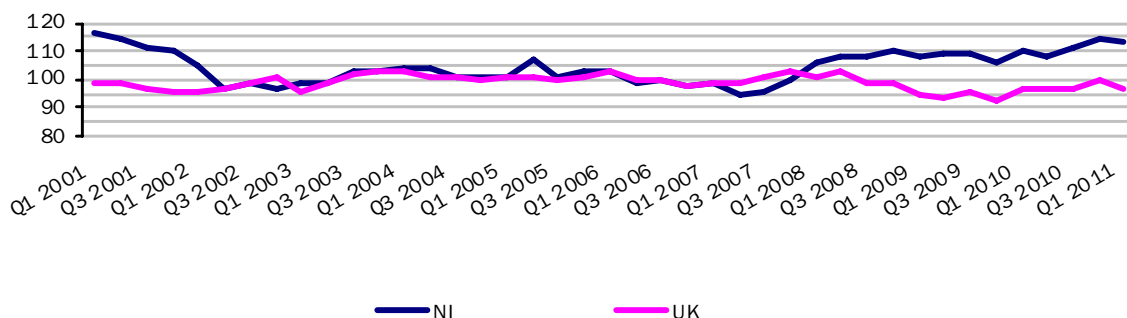
The Electricity, Gas and Water Supply sector covers the provision of electric power, natural gas, steam and water supply through a permanent infrastructure.

The index for this sector decreased by 0.6% over the quarter, the UK also recorded a decrease (-3.5%). Compared to the same quarter one year earlier, NI reported an increase of 3.1% and the UK recorded a slight rise of 0.2%. (See figure 5).

Over the latest four quarters compared to the same period one year earlier, the sector for NI and the UK as a whole both reported an increase, 2.9% and 2.8% respectively.

**Figure 5: Electricity, Gas & Water NI & UK**

(2006 =100)



**Mining and Quarrying - (weight 1.8%)**

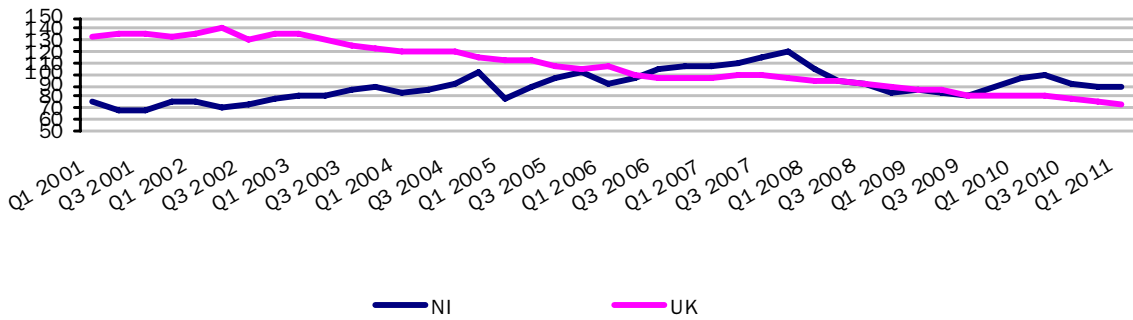
Mining and Quarrying includes those businesses involved in the extraction of minerals occurring naturally as solids, liquids or gases.

The Mining and Quarrying index increased by 0.4% over the quarter, while the UK recorded a fall of 1.7%. Compared to the same quarter one year earlier, the sector decreased by 8.3%; the UK reported a decrease of 8.7%. (See figure 6).

Over the latest four quarters compared to the same period one year earlier, the sector increased by 3.6%, while the UK as a whole reported a decline of 6.5%.

**Figure 6: Mining & Quarrying NI & UK**

(2006 =100)



# Manufacturing Subsections 2006=100 Seasonally Adjusted Chained Volume Index

## 3

Full series of index numbers and percentage growths back to 2001 are provided for each sub-sector in tables at the end of this section.

### Food, Drink & Tobacco - (weight 29.1%)

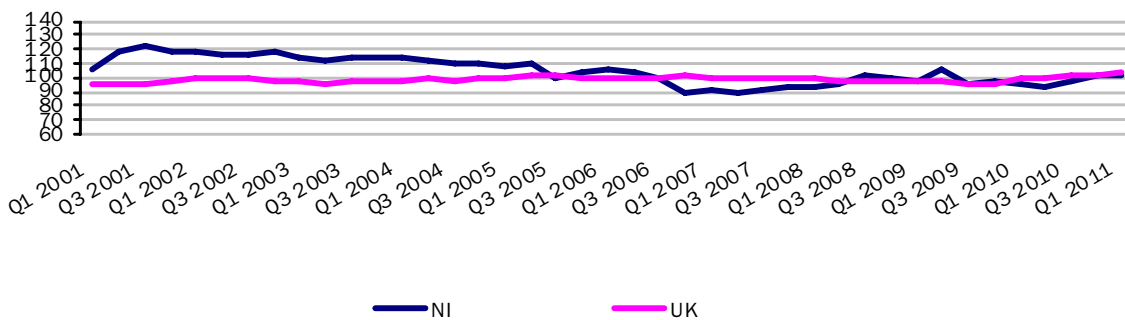
The Manufacture of Food, Drink and Tobacco index showed a decrease of 0.9% over the quarter, in contrast the UK reported an increase of 0.9%. (See figure 7).

Over the year, the NI Food, Drink and Tobacco output increased by 4.8% the UK also recorded a rise (4.0%).

Over the latest four quarters compared to the same period one year earlier NI increased by 0.2%, the UK as a whole recorded a greater increase of 4.9%.

**Figure 7: Food, Drink & Tobacco NI & UK**

(2006 =100)



### Engineering & Allied Industries - (weight 24.9%)

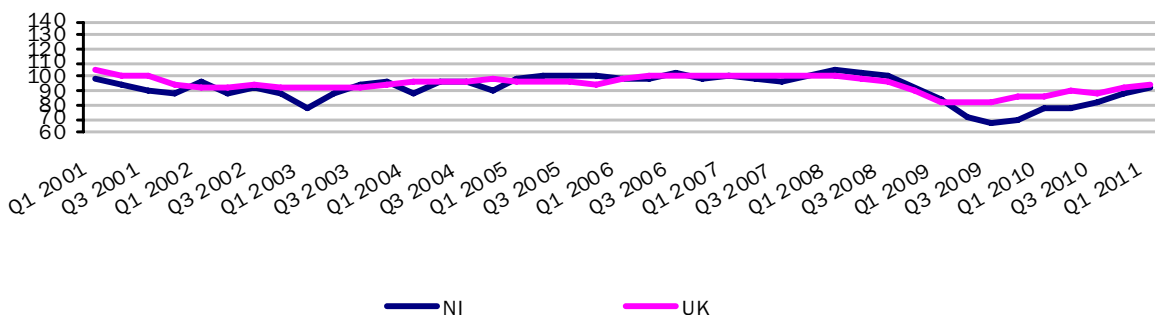
The Engineering & Allied Industries index increased by 2.8% over the quarter, the UK recorded a rise of 2.5% over the same period. (See figure 8)

Over the year, the NI Engineering & Allied Industries increased by 18.7%, the UK also reported a rise (9.8%).

Over the latest four quarters compared to the same period one year earlier, the sector increased by 20.0%; the UK as a whole recorded an increase of 9.1%.

**Figure 8: Engineering & Allied Industries NI & UK**

(2006 =1.00)



### Total Other Manufacturing - (weight 21.5%)

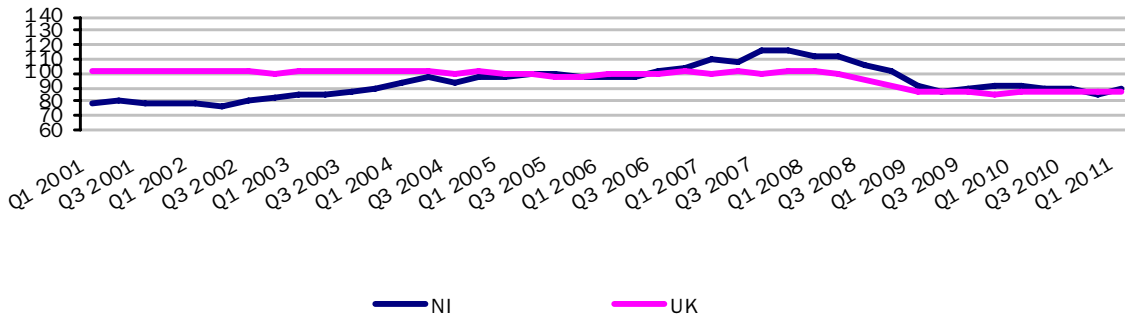
The Total Other Manufacturing index increased by 2.8% over the quarter, the UK reported a rise of 0.7 % over the same period. (See figure 9).

Over the year, the NI Total Other Manufacturing index fell by 2.5% in contrast the UK as a whole rose by 1.2%.

Over the latest four quarters compared to the same period one year earlier, the sector decreased by 2.4%, while the UK reported a rise of 1.5%.

**Figure 9: Total Other Manufacturing NI & UK**

(2006 = 100)



### Basic Metals & Fabricated Metal Products - (weight 4.8%)

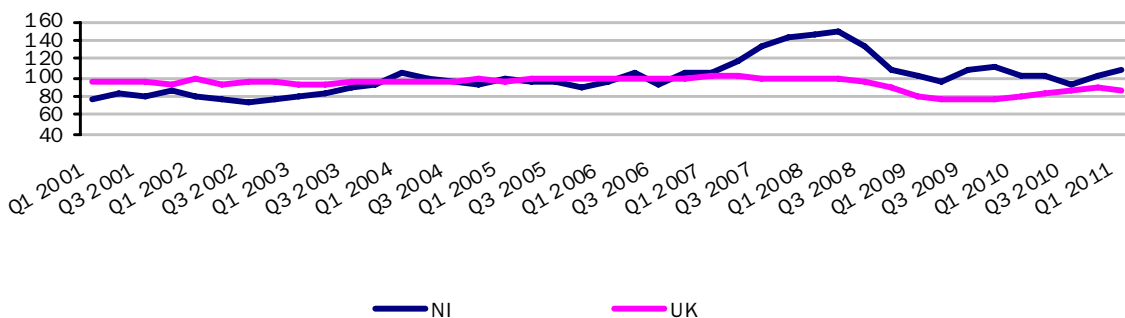
The Basic Metals & Fabricated Metal Products index increased by 4.0% over the quarter, the UK reported a fall (-3.2%). (See figure 10).

Over the year, the NI Basic Metals & Fabricated Metal Products index increased by 4.9%, the UK also recorded a rise (6.9%).

Over the latest four quarters compared to the same period one year earlier, the sector reported a decrease of 2.5%, the UK reported an increase of 10.6%.

**Figure 10: Basic Metals & Fabricated Metal Products NI & UK**

(2006 = 100)



### Chemicals & Chemical Products - (weight 3.9%)

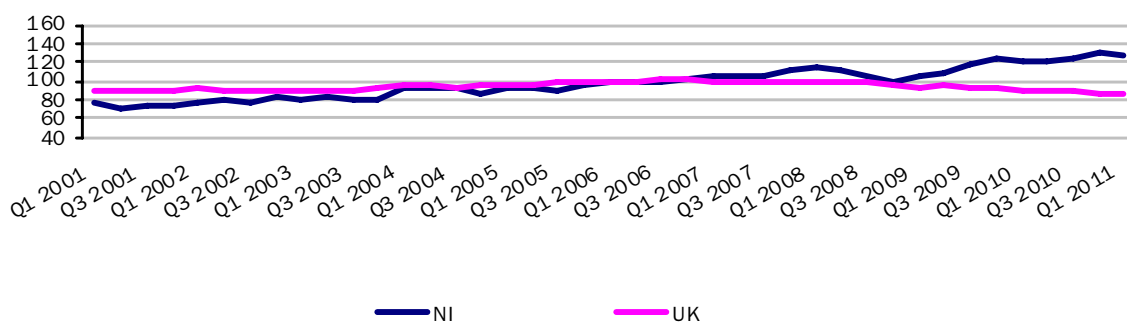
The Chemicals & Chemical Products index reported a decrease of 2.4% from Q4 2010 to Q1 2011, the UK reported a slight increase of 0.1% over the same period. (See figure 11).

Over the year, the NI Chemicals & Chemical Products index rose by 4.5% compared to a decrease of 3.8% reported by the UK as a whole.

Over the latest four quarters compared to the same period one year earlier, the sector increased by 6.0%; the UK reported a decrease of 6.1%.

**Figure 11: Chemicals & Chemical Products NI & UK**

(2006=100)



### Leather, Textiles & Textile Products - (weight 2.3%)

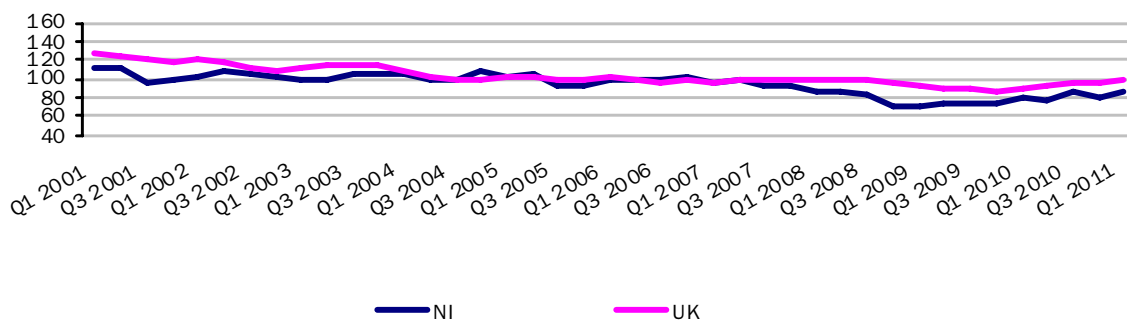
The Leather, Textiles & Textile Products index increased by 4.6% over the quarter; the UK as a whole also reported an increase (2.8%). (See figure 12).

Over the year, the NI Leather, Textiles & Textile Products index reported an increase of 6.0% and the UK reported a rise of 10.1%.

Over the latest four quarters compared to the same period one year earlier, the sector increased by 7.4%, the UK reported a rise of 8.0%.

**Figure 12: Leather, Textiles & Textile Products NI & UK**

(2006=100)



**Table 2: Northern Ireland Index of Production by Broad Manufacturing Subsectors  
Seasonally Adjusted (2006=100)**

	Food, Drink & Tobacco	Leather, Textiles & textile products	Chemicals & Chemical Products	Basic Metals & Fabricated Metal Products	Engineering and Allied industries	Total Other Manufacturing
Sector	DA	DB & DC	DG	DJ	DK, DL, DM	DD, DE, DF, DH, DI, DN
<b>Weights</b>	<b>291.1</b>	<b>23.2</b>	<b>39.4</b>	<b>47.6</b>	<b>248.6</b>	<b>215.0</b>
2001	117	104	74	82	94	79
2002	117	105	79	77	91	80
2003	113	102	82	87	89	86
2004	112	103	91	98	94	96
2005	105	99	93	95	100	98
2006	100	100	100	100	100	100
2007	91	96	108	125	99	112
2008	97	82	108	135	101	108
2009	99	74	115	104	73	90
2010	98	81	124	101	82	88
Seasonally adjusted quarterly figures						
2001 1	106.8	110.5	75.9	78.8	99.6	78.4
2	118.9	110.4	72.3	84.1	94.6	79.9
3	121.9	96.3	75.2	80.3	91.3	78.4
4	119.4	98.1	73.3	86.5	89.0	78.9
2002 1	118.4	101.2	75.8	79.3	97.0	78.5
2	115.6	107.2	79.3	76.5	87.7	77.5
3	117.0	106.5	77.8	74.3	93.2	80.7
4	118.0	103.5	82.3	76.6	88.1	82.0
2003 1	113.9	98.0	81.4	80.5	78.0	84.3
2	112.0	100.5	82.6	84.6	87.4	84.4
3	113.7	105.0	80.9	89.9	94.7	87.6
4	113.2	105.7	81.8	93.0	96.2	88.8
2004 1	114.0	106.1	91.7	104.0	88.6	94.1
2	112.8	99.7	93.7	100.1	97.1	97.3
3	109.4	100.4	91.8	96.1	97.5	93.8
4	110.6	107.8	87.5	93.1	91.2	96.9
2005 1	107.3	101.1	92.5	98.0	99.3	96.5
2	110.9	106.6	94.1	96.4	100.1	98.7
3	99.8	93.6	90.9	94.9	100.3	99.0
4	103.1	94.5	96.4	90.1	101.8	97.5
2006 1	106.2	98.2	97.8	95.0	99.6	97.2
2	103.6	99.2	99.6	105.1	98.8	98.3
3	100.5	99.2	100.2	94.7	102.8	100.9
4	89.6	103.5	102.3	105.2	99.0	103.6
2007 1	91.8	97.7	106.0	105.4	101.1	109.8
2	89.5	98.8	106.1	117.4	98.8	107.7
3	90.7	93.9	106.7	134.8	96.5	115.3
4	92.8	93.1	111.8	143.8	100.0	117.0

**Table 2 cont'd: Northern Ireland Index of Production by Broad Manufacturing Subsectors  
Seasonally Adjusted (2006=100)**

	Food, Drink & Tobacco	Leather, Textiles & textile products	Chemicals & Chemical Products	Basic Metals & Fabricated Metal Products	Engineering and Allied industries	Total Other Manufacturing
Sector	DA	DB & DC	DG	DJ	DK, DL, DM	DD, DE, DF, DH, DI, DN
Weights	291.1	23.2	39.4	47.6	248.6	215.0
Seasonally adjusted quarterly figures						
2008 1	94.1	85.3	114.6	146.2	104.5	111.5
2	95.9	88.1	112.7	150.9	103.7	112.6
3	100.8	83.9	105.0	133.2	101.0	106.2
4	99.0	71.7	98.0	108.9	92.9	101.9
2009 1	98.2	71.8	104.9	100.9	83.1	91.3
2	105.3	75.4	109.5	96.2	70.4	87.9
3	96.0	75.1	119.5	108.9	66.5	89.9
4	96.5	74.8	124.9	110.8	70.2	91.6
2010 1	96.4	80.4	120.9	102.9	77.0	90.4
2	94.0	76.0	122.0	102.4	78.7	88.7
3	98.0	85.5	125.6	94.2	81.7	88.7
4	102.0	81.5	129.3	103.7	89.0	85.7
2011 1	101.0	85.3	126.3	107.9	91.5	88.1
Percentage change latest quarter on:						
Previous quarter						
	-0.9	4.6	-2.4	4.0	2.8	2.8
Same quarter a year ago						
	4.8	6.0	4.5	4.9	18.7	-2.5
Rolling Average*						
	0.2	7.4	6.0	-2.5	20.0	-2.4

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.

**Table 3: Northern Ireland Index of Production – Engineering & Allied Trades, and Total Other Manufacturing Industries, Seasonally Adjusted (2006=100)**

Engineering & Allied Trades				Total Other Manufacturing Industries				
	Machinery & Equipment NES	Electrical & Optical Equipment	Transport Equipment	Wood & Wood Products	Pulp, Paper & Printing	Rubber & Plastic Products	Non-metallic Mineral Products	Other Manufacturing
Sector	DK	DL	DM	DD	DE	DH	DI	DF+DN
Weights	62.7	91.5	94.3	18.6	47.9	70.4	52.3	25.8
2001	73	67	133	71	111	70	70	66
2002	82	69	119	80	108	71	70	71
2003	78	77	109	87	108	79	79	80
2004	84	83	110	92	111	98	86	81
2005	91	96	110	93	108	100	92	90
2006	100	100	100	100	100	100	100	100
2007	115	94	94	106	111	110	112	130
2008	109	87	108	99	112	109	101	117
2009	67	68	80	73	103	91	75	108
2010	86	80	80	70	96	94	70	110
Seasonally adjusted quarterly figures								
2001 1	74.2	74.8	140.7	69.2	112.4	70.6	66.5	67.8
2	74.7	62.5	138.9	70.4	115.8	70.2	69.8	66.8
3	72.4	60.7	133.4	69.9	110.0	71.0	69.4	64.0
4	71.2	68.3	120.7	75.8	106.5	70.1	73.1	65.8
2002 1	76.8	71.9	134.7	79.3	108.2	68.2	69.9	68.4
2	77.9	63.9	117.3	76.7	108.4	67.2	68.1	67.5
3	99.8	67.0	114.2	76.6	110.0	72.2	70.4	73.2
4	75.1	72.6	111.6	85.7	107.3	74.4	71.7	73.7
2003 1	76.1	73.1	83.9	87.1	109.2	76.4	76.8	73.1
2	77.8	75.3	105.5	86.4	107.1	78.1	77.1	73.2
3	77.6	78.1	122.3	87.1	107.0	78.5	81.1	89.8
4	78.7	81.2	122.4	88.0	109.3	82.8	80.6	83.8
2004 1	82.1	83.9	97.4	92.1	109.0	97.8	85.2	75.9
2	87.3	81.9	118.4	92.5	114.1	101.6	85.4	82.3
3	83.2	83.4	120.7	89.8	110.5	94.8	85.5	79.2
4	83.3	84.6	102.7	92.4	111.7	98.6	87.9	86.2
2005 1	88.3	92.6	113.1	92.2	107.1	98.9	89.9	86.6
2	93.6	96.3	108.3	91.0	109.7	101.5	93.5	86.6
3	93.8	97.2	107.7	93.3	107.9	100.4	91.5	97.8
4	88.4	99.8	112.6	93.7	107.7	99.1	91.2	89.9
2006 1	100.0	103.7	95.3	92.5	100.3	100.1	93.4	94.7
2	96.8	95.4	103.6	97.0	98.7	97.3	97.5	103.1
3	96.4	102.2	107.7	99.2	100.7	99.8	104.4	98.4
4	107.4	98.8	93.7	111.2	100.6	102.8	104.7	103.9
2007 1	108.3	102.9	94.5	108.1	105.3	108.3	106.9	128.9
2	108.7	99.9	91.0	105.8	105.2	107.6	104.2	121.1
3	115.1	88.2	92.2	102.7	116.7	110.3	117.5	130.8
4	126.3	83.2	99.0	108.5	115.2	112.1	117.6	138.6
2008 1	122.3	87.1	109.5	101.3	112.7	114.7	107.3	116.7
2	120.2	84.4	111.5	106.7	114.6	117.0	105.5	115.5
3	110.1	90.1	105.4	97.7	110.3	109.3	95.1	119.0
4	84.1	86.5	105.0	92.2	109.7	96.9	96.9	118.1
2009 1	64.6	80.2	98.1	73.3	102.0	92.1	75.9	113.6
2	64.1	66.1	78.7	74.9	104.4	81.6	74.1	111.6
3	67.0	64.6	68.0	77.7	102.0	90.8	75.7	103.0
4	71.1	62.5	77.0	66.3	102.8	98.2	75.3	103.8

**Table 3 cont'd: Northern Ireland Index of Production – Engineering & Allied Trades, and Total Other Manufacturing Industries, Seasonally Adjusted (2006=100)**

Engineering & Allied Trades				Total Other Manufacturing Industries				
	Machinery & Equipment NES	Electrical & Optical Equipment	Transport Equipment	Wood & Wood Products	Pulp, Paper & Printing	Rubber & Plastic Products	Non-metallic Mineral Products	Other Manufacturing
Sector	DK	DL	DM	DD	DE	DH	DI	DF+DN
Weights	62.7	91.5	94.3	18.6	47.9	70.4	52.3	25.8
Seasonally adjusted quarterly figures								
2010 1	76.5	73.6	80.7	70.2	101.2	92.0	74.8	112.3
2	83.8	77.4	76.5	66.7	96.8	93.2	74.2	107.2
3	89.3	80.2	78.0	69.7	93.5	95.2	70.2	113.3
4	93.3	89.9	85.3	72.0	93.0	94.3	62.7	105.4
2011 1	97.0	89.9	89.3	66.0	93.2	98.4	66.6	110.1
Percentage change latest quarter on:								
Previous quarter								
	3.9	-0.1	4.8	-8.3	0.2	4.3	6.3	4.5
Same quarter a year ago								
	26.8	22.2	10.6	-5.9	-7.9	7.0	-11.0	-1.9
Rolling Average*								
	30.4	26.5	8.1	-5.0	-8.2	5.1	-8.8	1.2

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.

# Market Sector Analysis 2006=100

## Seasonally Adjusted Chained Volume Index

# 4

### 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 4 highlights that, over the quarter two of the three market sectors increased, Investment Goods up 2.3% and Intermediate Goods up 1.6%, while Consumer Goods recorded a decrease (-0.8%).

Over the year all three market sectors reported a rise, Investment Goods up 15.7%, Consumer Goods up 3.8% and Intermediate Goods rose by 1.9%.

**Table 4: Index of Production by Market Sectors**  
**Seasonally Adjusted (2006=100)**

Sector	Market Sectors		
	Investment Goods	Intermediate Goods	Consumer Goods
Weights	262.0	404.9	333.1
2001	92	87	116
2002	91	83	116
2003	89	89	112
2004	95	96	111
2005	101	97	105
2006	100	100	100
2007	102	107	93
2008	104	107	98
2009	76	96	98
2010	83	99	96

Table 4 (cont'd) Production by Market Sectors Seasonally Adjusted (2006=100)

Sector	Market Sectors		
	Investment Goods	Intermediate Goods	Consumer Goods
Weights	262.0	404.9	333.1
2001 1	95.8	88.4	108.5
2	93.1	87.0	119.2
3	90.3	85.4	120.1
4	88.4	86.2	117.9
2002 1	95.8	84.1	117.2
2	87.0	81.5	114.5
3	92.4	83.2	116.0
4	88.0	84.1	116.6
2003 1	78.7	86.0	112.8
2	87.8	87.2	110.5
3	94.8	90.4	112.5
4	96.6	90.9	112.7
2004 1	90.4	95.6	113.5
2	98.1	96.9	112.7
3	98.2	94.2	108.9
4	92.3	95.8	110.4
2005 1	100.2	95.4	107.3
2	101.2	98.8	110.7
3	100.9	97.2	100.0
4	101.1	97.8	103.1
2006 1	99.6	98.1	105.6
2	99.0	99.4	102.8
3	102.4	99.9	100.7
4	99.2	102.6	90.9
2007 1	101.4	105.4	93.4
2	100.7	103.8	91.6
3	101.5	107.4	93.6
4	105.9	110.7	95.2
2008 1	110.5	109.2	95.7
2	109.8	110.3	97.6
3	103.7	107.2	100.6
4	93.4	103.0	98.5
2009 1	85.6	95.7	97.4
2	73.3	94.4	103.8
3	70.7	97.3	95.6
4	73.5	98.5	96.1
2010 1	79.4	99.2	95.6
2	79.8	99.1	92.8
3	81.8	99.6	96.6
4	89.7	99.5	100.1
2011 1	91.8	101.1	99.3
Percentage change latest quarter on:			
Previous quarter			
	2.3	1.6	-0.8
Same quarter a year ago			
	15.7	1.9	3.8
Rolling Average			
	15.6	2.5	-0.6

### Investment Goods - (weight 26.2%)

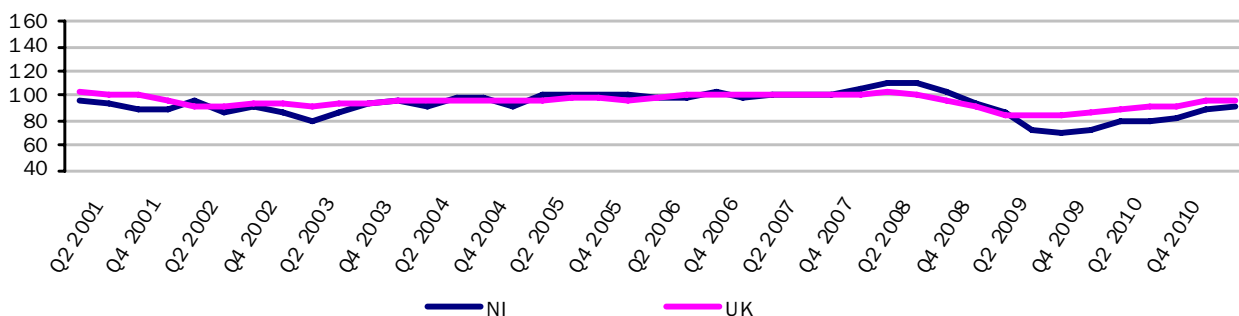
The Investment Goods index increased by 2.3% over the quarter with the UK as a whole increasing by 1.9%. Over the year, the sector increased by 15.7% and the UK reported a rise of 8.9%. (See figure 13).

Over the latest four quarters compared to the same period one year earlier, the sector increased by 15.6%, the UK rose by 9.1% over the same period.

The significant falls in output experienced from the middle of 2008 reflect 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 in the future, although output in NI remains significantly below its 2008 peak.

**Figure 13: Investment Goods NI & UK**

(2006 = 100)



### Intermediate Goods - (weight 40.5%)

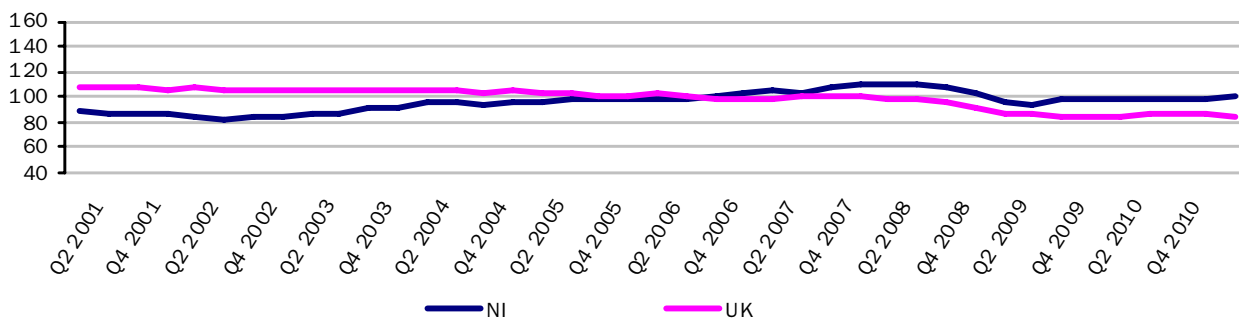
The Intermediate Goods index increased over the quarter (1.6%) while the UK reported a decrease of 1.4%. Over the year, the sector increased by 1.9% and the UK recorded a decrease of 0.7%. (See figure 14).

Over the latest four quarters compared to the same period one year earlier, the sector increased by 2.5% and the UK by 0.6%.

While this category has experienced recent increases in output, it has yet to return to pre-recession levels. This is an area where NI has performed better than the UK in recent years.

**Figure 14: Intermediate Goods NI & UK**

(2006 = 100)



### Consumer Goods - (weight 33.3%)

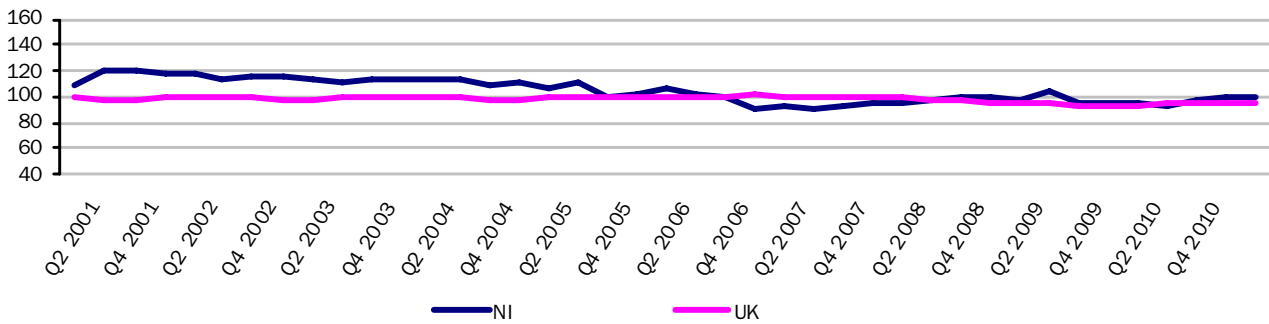
The Consumer Goods index decreased over the quarter (-0.8%) while the UK recorded an increase (0.2%). Over the year, both NI and the UK as a whole recorded increases of 3.8% and 1.7% respectively. (See figure 15).

Over the latest four quarters compared to the same period one year earlier, the sector decreased by 0.6%, the UK reported an increase (1.5%).

Although this category has performed relatively strongly during the recession, there have been significant inflationary pressures and wage constraints facing consumers in 2011. It would be expected that these constraints on consumer demand could lead to a decline in output of consumer goods going forward, and the fall this quarter may indicate these pressures beginning to take effect.

**Figure 15: Consumer Goods NI & UK**

(2006 = 100)



# Index of Manufacturing Productivity 2006=100

## Seasonally Adjusted Chained Volume Index

# 5

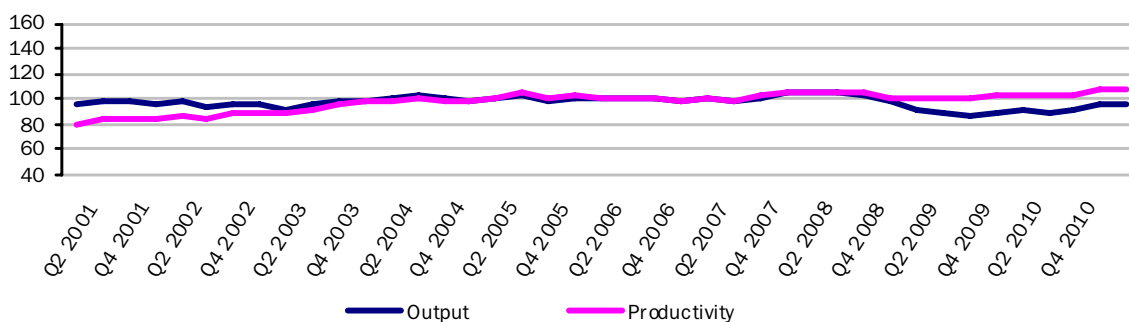
### Manufacturing Productivity

The index of manufacturing productivity provides a measure of the number of units of output produced each man hour. The index includes seasonally adjusted employees in employment, the 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 increased by 1.4% over the quarter and rose by 5.0% over the year. Over the latest four quarters compared to the same period one year earlier, the index increased by 2.9%.

**Figure 16: Manufacturing Output & Productivity NI & UK**

(2006=100)



The most recently published Quarterly Employment Survey seasonally adjusted figures for March 2011 (based on the 2007 Standard Industrial Classification) reported a decrease of 0.2% over the quarter and an increase 1.6% over the year.

Manufacturing Productivity Index									
Annual Averages		Quarterly series		Quarterly series		Quarterly series		Quarterly series	
2001	83	2001 1	79.5	2004 1	97.7	2007 1	101.2	2010 1	103.0
2002	87	2	83.1	2	101.5	2	99.3	2	102.2
2003	93	3	84.2	3	99.5	3	101.9	3	104.1
2004	99	4	84.1	4	99.2	4	105.3	4	106.6
2005	102	2002 1	87.1	2005 1	101.3	2008 1	104.5	2011 1	108.1
2006	100	2	84.1	2	104.6	2	105.4	% change latest qtr on:	
2007	102	3	87.7	3	100.3	3	104.8	Previous quarter	
2008	104	4	88.1	4	102.1	4	101.6	1.4	
2009	102	2003 1	87.8	2006 1	100.7	2009 1	100.6	Same qtr a year ago	
2010	104	2	91.8	2	100.9	2	101.6	5.0	
		3	96.0	3	100.9	3	100.8	Rolling average	
		4	97.7	4	97.5	4	103.7	2.9	

# Background Notes

## 6

### **BACKGROUND**

The Northern Ireland Index of Production (IOP) has been produced since 1949 and figures are available in the current format back to 2001. 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 2003 sections C, D and E.) In 2008 these industries accounted for 17% of regional Gross Value Added (GVA). See link to Regional GVA information <http://www.statistics.gov.uk/statbase/Product.asp?vlnk=14650>

### **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 Q1, 2011 value of 96.8 means that the level of output was 3.2% lower than in 2006 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 charge 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/about-statistics/user-guidance/ios-methodology/index.html>

### **INDEX SAMPLE**

The IOP sample contains around 600 companies and the response rate is over 95%. 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. This sample has been designed so as to give sufficiently accurate results, yet keep the total costs to businesses to a minimum. As this sample has been in place for some time, a new sample using the above methodology is currently being constructed to be more representative of current production companies.

### **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 employee numbers for the previous quarter. 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). We have recently asked these companies to also provide turnover data and most have been able to provide this, starting with the Quarter 2, 2010 data. When we have data for sufficient quarters on both bases we will switch to using their turnover data and publish an estimate of the impact of the change on the index. In response to user demand we have just started asking for information on the value of exports. We will need to collect a sufficient time series of exports information before we are in a position to publish this.

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 approximate GVA data from the 2006 Northern Ireland Annual Business Inquiry. For most 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.

Following advice from a Quality Improvement Fund project we reviewed the sectors/businesses that were being smoothed, as a result this quarter (Q1 2011) smoothing was only applied to one company with particularly volatile results, which would have unduly distorted the indices in some quarters. The effect of this change is reflected *inter alia* in revisions of previously published figures.

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 seasonally adjusted estimates are given in Section 4 of this bulletin. It distinguishes between Consumer, Investment and 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 each man hour. The productivity index is based on the 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 man hours is calculated based on the number of employees in employment and average weekly hours. The index of manufacturing is divided by the index of man hours to produce the Index of Productivity.

The IOP is a fixed-base chain-linked index. (Chain-linking involves the linking of growth estimates between different time periods in order to produce a continuous time series). Currently the base year is 2006=100. We have deferred the move to annual chain linking, which follows the recommendation of the System of National Accounts 1993, to our October 2011 publication, to allow further investigation. A paper on annual chain-linking from ONS is available at

[http://www.statistics.gov.uk/articles/economic\\_trends/ET\\_May\\_Annual\\_Chain\\_Linking.pdf](http://www.statistics.gov.uk/articles/economic_trends/ET_May_Annual_Chain_Linking.pdf)

## **DEFLATION**

All series, unless otherwise quoted, are measured at constant market price. Deflators (based on the Producer Prices indices) adjust the value series to take out the effect of price change to give the volume series.

## **SEASONAL ADJUSTMENT**

The index numbers in this statistical bulletin are all seasonally adjusted. This aids interpretation by removing annually recurring fluctuations, for example due to holidays or other regular seasonal patterns. Unadjusted data are also available. The figures presented in this publication are calculated using the X-12 ARIMA method of seasonal adjustment. The following is a link to detailed documentation on X-12 ARIMA

[http://www.statistics.gov.uk/about/data/methodology/general\\_methodology/downloads/BlackBook.pdf](http://www.statistics.gov.uk/about/data/methodology/general_methodology/downloads/BlackBook.pdf)

## **QUALITY REPORTING**

One indicator of the reliability of the figures in this bulletin can be obtained by monitoring the size of revisions. The table below is based on the revisions between the first estimate and the estimate three years later. This is provided for the most recent five year period for which we have data. Please note that these indicators only report summary measures for revisions. The revised data may, themselves, be subject to sampling and other sources of error. More detail on this can be found in the summary quality report (see next section).

The table below presents a summary of the differences between the first estimates (of quarterly growth) published between 2003Q2 and 2008Q1 and the estimates published three years later.

	Value in latest period 2011Q1 - (percent)	Revision between first publication and estimates three years later	
		Average over 20 Quarters (2003Q2 to 2008Q1)	Average over 20 Quarters without regard to sign (average absolute revision)
Index of Production quarter on quarter growth rate	+1.0	+0.4	1.4

A spreadsheet giving revisions triangles of estimates for all quarters from 2001Q2 through to the current quarter, and the calculations behind the averages in the above table are available at <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production/stats-newpage-4.htm>

A statistical test has been applied to the average revisions to find out if they are statistically different from zero. No such differences have been found.

A spreadsheet providing measures of the revisions to all the data in this statistical bulletin is available 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>

#### **STATUS OF FIGURES IN CURRENT BULLETIN**

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 becomes available.

Significant revisions to previous quarters' figures are highlighted in the main text of the bulletin.

The index has been produced using X-12 ARIMA seasonal adjustment.

Comparisons between the Index of Production and the Annual Business Inquiry (ABI) may not necessarily match because of definitional and coverage differences. For example the Index of Production covers the dominant business activity and the ABI covers workplace activity. A table giving summary revisions statistics is published for the first time in this bulletin.

#### **PLANNED FUTURE REVISIONS**

Index of Production currently produces the statistical bulletin and tables in accordance with the 2003 UK Standard Industrial Classification System (SIC03). The Q2 2011 IOP publication released in October 2011, will be classified on a 2007 UK SIC basis which has recently been introduced to replace the 2003 Classification.

In line with ONS intentions the NI IOP publication will update the base year to 2008=100 for the October 2011 publication.

IOP results from Q2 2011 will be based on a new increased sample of approximately 650 companies, this will be more representative of current businesses in the production sector. The sample will consist 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 40 employees and having a turnover of £20 million or more.

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>

See National Statistics section.

#### **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 2001, 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 published on the same day as the Index of Services in January, April, July and October of each year and the latest July edition can be accessed at <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-ios.html>

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

The list of people given pre-release access to this publication is available at [http://www.detini.gov.uk/publication\\_pre-release\\_access\\_list-6.pdf](http://www.detini.gov.uk/publication_pre-release_access_list-6.pdf)

#### **NATIONAL STATISTICS**

National Statistics are produced to high professional standards as set out in the Code of Practice for Official Statistics. <http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>

The UK Statistics Authority published its Assessment Report of the Northern Ireland index of Production and Index of Services on 6 January 2011. Subject to meeting three requirements which are in the process of being implemented, the Index of Production will be re-accredited as a National Statistic. The report can be accessed at <http://www.statisticsauthority.gov.uk/assessment/assessment/assessment-reports/index.html>

#### **NEXT PUBLICATION**

The next bulletin will be published on 12 October 2011.

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