

## NORTHERN IRELAND INDEX OF SERVICES - QUARTER 2 2011

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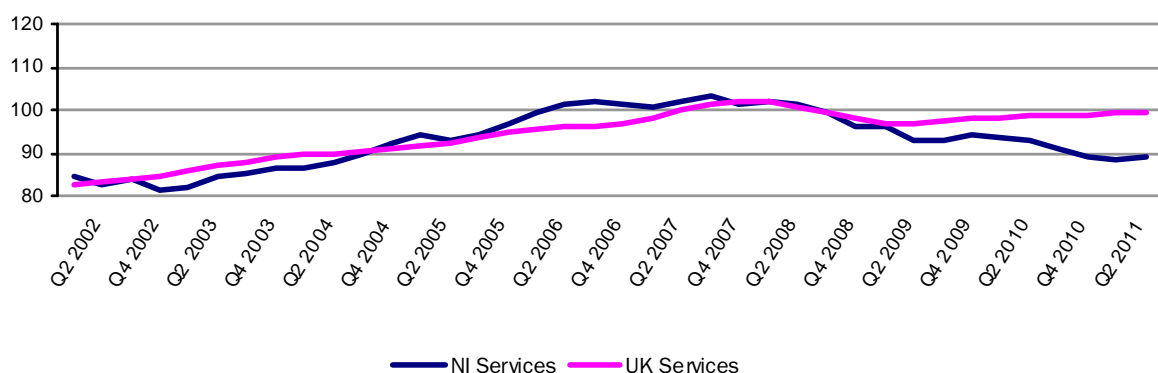
**IMPORTANT NOTICE:** Users of the Index of Services (IOS) should be aware that the Index is being published for the first time on a Standard Industrial Classification 2007 (SIC07) basis. Further details are available in sections 1 and 4 of the bulletin.

The Index of Services is a quarterly survey of companies designed to provide a general measure of changes in the output of the Northern Ireland private service sector industries in real terms. This publication contains seasonally adjusted data on a 2008 = 100 basis. These data are provisional and may be subject to change.

- Provisional results from the Index of Services for the second quarter of 2011 showed that output in NI rose by 0.6% over the quarter, compared with a rise of 0.2% in the UK as a whole. This is the first quarter-on-quarter growth since Q4 2009.
- Growth in business services and finance and in transport, storage, information and communication has offset falls in the wholesale and retail distribution and accommodation and food service activities and other services sectors.
- The NI index remains some 13.5% below the peak recorded in the third quarter of 2007. The UK index decreased by 2.2% over the same period.

**Index of Services in NI and UK**

(2008 = 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: Summary and Commentary

## Introduction

This bulletin provides provisional data from the Index of Services (IOS) for Northern Ireland (NI). The IOS is an important short-term measure of change in the output of the private services sector 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 recent uses is available on the website at <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-ios.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 Production (IOP) provides a general measure of changes in the output of the production industries. It is based on up-to-date information about the output and sales of the production industry. Provisional figures for Quarter 2 2011 show that output decreased over the quarter (4.1%) and increased over the year (1.2%). The IOP has experienced quarterly growth in six of the last eight quarters in the output of the production industries. The full bulletin can be accessed at <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production.htm>

The Index of Services is published for the first time on a Standard Industrial Classification 2007 (SIC07) basis. This has an impact on the type of businesses classified as service 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 services sector there are some new groupings of businesses. The previous IOS data were collected on a SIC03 basis and they have been converted to approximate the SIC07 coverage. Further detail can be found in the background notes (section 4).

The background notes (section 4) 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 results for the service sector as a whole, for wholesale and retail trade; repair of motor vehicles and motorcycles, accommodation and food service activities, for transport, storage, information and communication, for business services and finance and for other services sub sectors on a 2008=100 basis, giving data up to the most recent available quarter (Quarter 2 2011).

The private service sector is dominated by the business services and finance and the wholesale and retail trade; repair of motor vehicles and motorcycles, accommodation and food service activities sub-sectors. Together these account for approximately 72% of the sector's total private services Gross Value Added (GVA) at 2008.

Comparative UK data (produced by the Office for National Statistics (ONS)) are presented where these are available. The latest ONS IOS results are available at:

<http://www.ons.gov.uk/ons/publications/all-releases.html?definition=tcm%3A77-21577>

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 the seasonal effects. The comparison of the rolling annual average is useful for identifying changes in output over a longer time period than the other two approaches.

## **Northern Ireland Services**

### **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.

This quarter we have moved to publishing on a SIC07 basis. As the coverage of the Index (and the broad industry groupings) is different between SIC03 and SIC07 it is not possible to compare the results provided in this bulletin with those published in July 2011. As stated previously the data for Q1 2011 and earlier have been converted to approximate the SIC07 coverage and are therefore not strictly revisions.

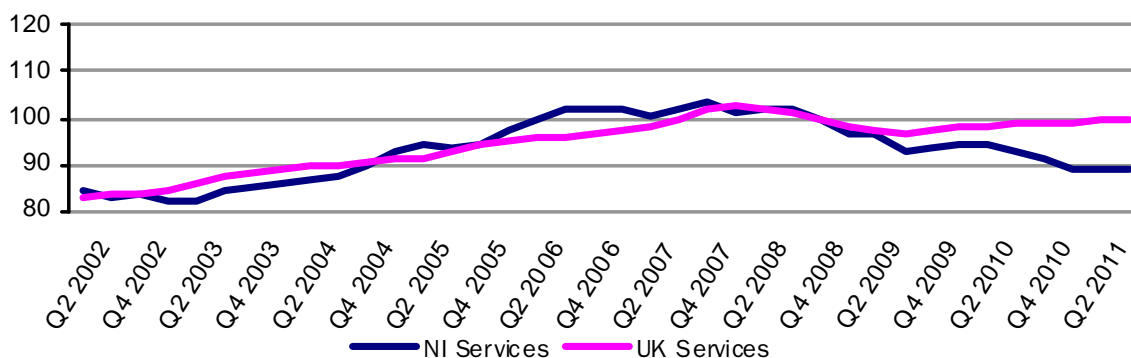
Perhaps the most significant impact of the move to SIC07 is that the peak of the Index is estimated to be at Q3 2007, whereas the previous statistical bulletin recorded a high point in Q3 2006, remaining relatively flat until Q3 2007 before gradually declining. It should be remembered that as the IOS coverage has changed this is not a like-for-like comparison.

### **Provisional results for Q2 2011**

Provisional results from the Index of Services for the second quarter of 2011 show that output in NI rose by 0.6% over the quarter, compared with a rise of 0.2% in the UK as a whole. This is the first quarter-on-quarter growth since Q4 2009, whilst the UK has experienced quarter-on-quarter growth in four of the last six quarters. Growth in business services and finance and in transport, storage, information and communication has offset falls in the wholesale and retail distribution and accommodation and food service activities and other services sectors. The Index of Production <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-index-of-production.htm> reported a decline over the quarter to Q2 2011.

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

(2008 =100)



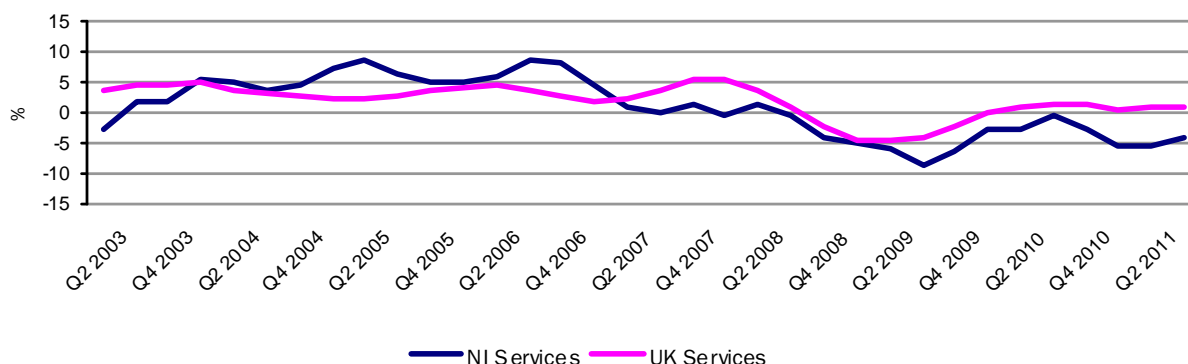
	NI	UK
Percentage change compared to previous quarter	0.6	0.2
Percentage change compared to same quarter one year ago	-4.0	1.0
Percentage change for most recent four quarters compared to previous four quarters	-4.2	1.0

NI private service sector output has declined by 13.5% from the peak recorded in Q3 2007, whilst the UK reported a decrease of 2.2% over the same time period.

### Services – year on year trend

Examination of year on year changes for each quarter allows closer examination of the rate of growth over the last nine years. Figure 2 illustrates the annual percentage change in the service sector. In Q1 2003 the annual growth was negative (-2.5%), then from Q2 2003 to Q3 2007 there was positive annual growth. From Q2 2008 there has been negative annual growth. Over the same period in the UK as a whole, negative annual growth did not start until later (Q3 2008) and since Q4 2009 the UK has recorded seven consecutive quarters of positive annual growth.

**Figure 2: All Services - Percentage change on a year earlier**



### **Services Subsections**

The sub-sectors in Northern Ireland make different contributions to the changes in the overall index.

Over the quarter, the sub sectors which contributed to the increase in the index were business services and finance which rose by 4.1% and transport, storage, information & communication which increased by 1.6%.

Over the year, the largest contribution to the decrease in the index was the wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities sector which fell by 9.6%. Over the same period, business services and finance (-1.4%), transport, storage, information & communication (-3.4%) and other services (-1.0%) sectors also reported decreases.

Over the latest four quarters, compared to the same period one year earlier (i.e. Q3 2009 – Q2 2010 to Q3 2010 – Q2 2011), the business services and finance sector (-6.1%) and wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities sector (-6.5%) contributed most to the decrease in the index.

### **Date of Next publication**

The Northern Ireland Index of Services for Quarter 3 2011 will be published on 18 January 2012.

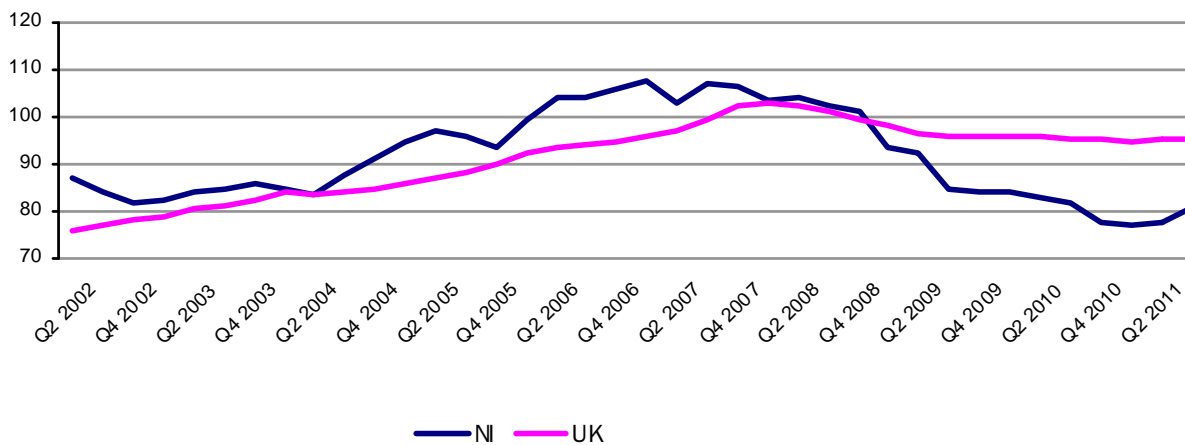
## 2: Services by Broad Industry Groups

This chapter focuses on the overall service sector split into individual industry categories. The private service sector is dominated by the business services and finance and wholesale and retail trade; repair of motor vehicles and accommodation and food service activities sub-sectors. Together these account for approximately 72% of the sector's total private services Gross Value Added at 2008.

### Business services and finance – SIC07 Sections K-N (Weight = 41%)

**Figure 3: Business services and finance**

(2008 = 100)



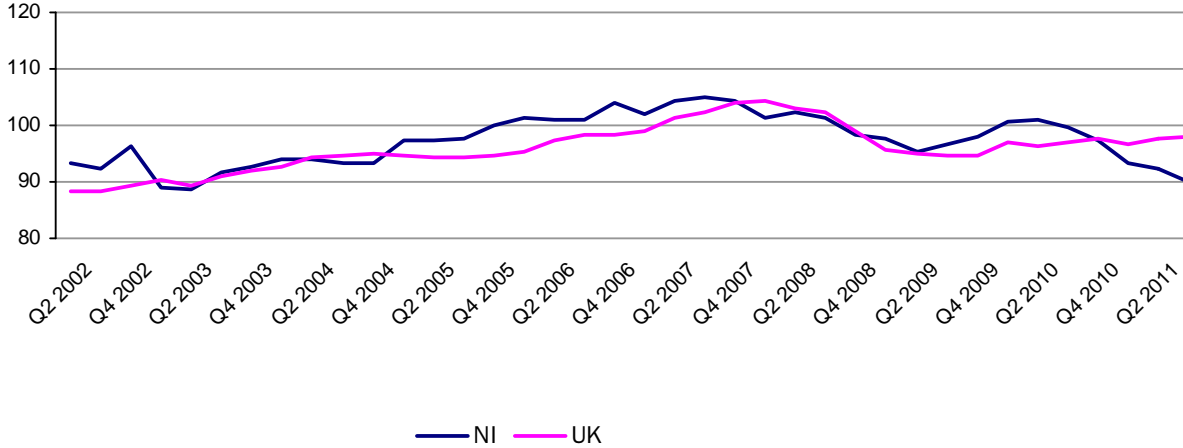
	NI	UK
Percentage change compared to previous quarter	4.1	0.3
Percentage change compared to same quarter one year ago	-1.4	0.1
Percentage change for most recent four quarters compared to previous four quarters	-6.1	-0.5

The index for business services and finance remains some 25.1% below the peak recorded in Q4 2006. The index has reported 13 consecutive year on year falls since Q2 2008 compared with the UK which has reported its first annual increase after 11 consecutive year on year falls.

**Wholesale and retail trade; repair of motor vehicles and motorcycles;  
Accommodation and food service activities – SIC07 Sections G&I (Weight = 31%)**

**Figure 4: Wholesale & retail trade; repair of motor vehicles and motorcycles  
Accommodation and food service activities**

(2008 =100)



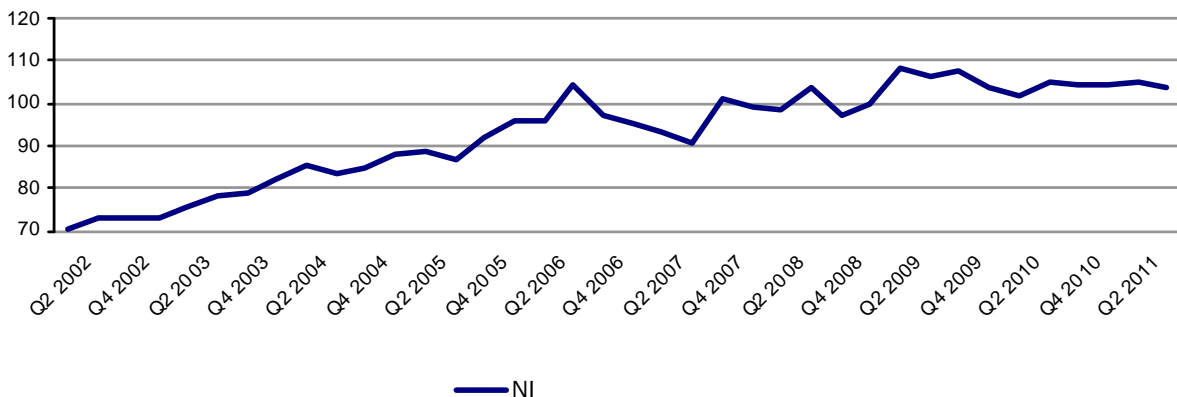
	NI	UK
Percentage change compared to previous quarter	-2.6	0.4
Percentage change compared to same quarter one year ago	-9.6	1.0
Percentage change for most recent four quarters compared to previous four quarters	-6.5	1.3

This index is 14.2% below the peak which was recorded in Q2 2007. The index has reported 4 consecutive year on year falls, compared with the UK which has reported annual increases in 3 of the last 4 quarters.

**Other services – SIC07 Sections P-S (Weight = 16%)**

**Figure 5: Other services**

(2008 =100)

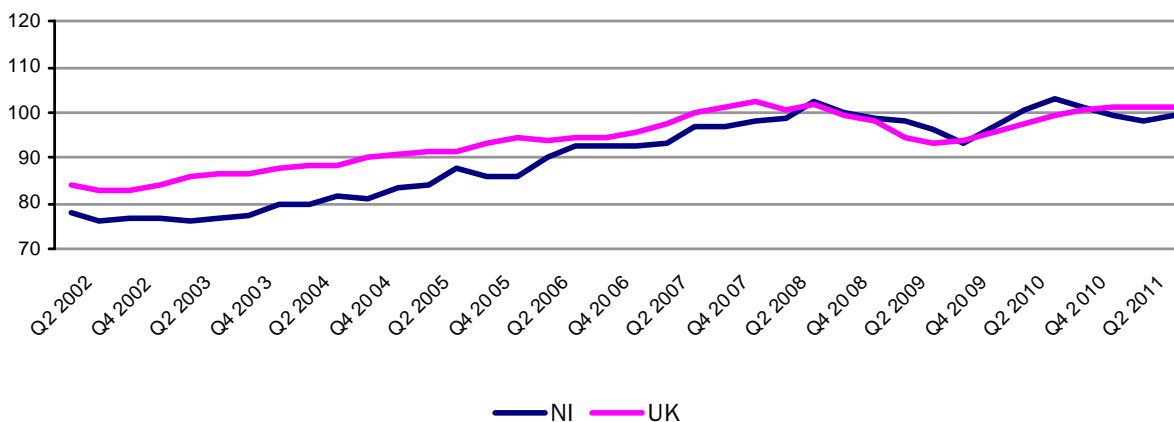


	NI
Percentage change compared to previous quarter	-1.2
Percentage change compared to same quarter one year ago	-1.0
Percentage change for most recent four quarters compared to previous four quarters	0.0

The other services index is 4.0% below the peak which was recorded in Q1 2009. This quarter, the index has reported a year on year fall, after having reported year on year increases in the previous 2 quarters.

### Transport, storage, information & communication – SIC07 Sections H & J (Weight = 12%)

**Figure 6: Transport, storage, information & communication**  
(2008=100)



	NI	UK
Percentage change compared to previous quarter	1.6	0.0
Percentage change compared to same quarter one year ago	-3.4	2.2
Percentage change for most recent four quarters compared to previous four quarters	1.1	4.7

The index for this sub sector reported an increase over the latest quarter after three consecutive quarterly falls. The index for the UK as a whole reported increases in 7 of the last 8 quarters.

### 3: Quarterly/ Annual/ Rolling Annual Average Changes

Table 1 – Northern Ireland Index of Services – Quarterly, Annual and Rolling Annual average<sup>\*1</sup> changes by sector  
Seasonally Adjusted (2008 = 100)

2008 = 100	All Services				Wholesale, retail, repair, Accommodation & food service				Transport, storage, information and communication				Business services & finance				Other services			
	G - S				G&I				H&J				K-N				P-S			
	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)
Weights <sup>*2</sup>	1000				314				116				407				162			
2002 Q1	84.5	-	-	-	93.4	-	-	-	78.1	-	-	-	86.9	-	-	-	70.1	-	-	-
Q2	82.6	-2.2	-	-	92.5	-0.9	-	-	76.2	-2.5	-	-	83.7	-3.7	-	-	73.1	4.3	-	-
Q3	83.8	1.4	-	-	96.5	4.3	-	-	76.7	0.6	-	-	81.6	-2.6	-	-	73.1	-0.1	-	-
Q4	81.7	-2.4	-	-	89.1	-7.7	-	-	76.8	0.2	-	-	82.2	0.8	-	-	73.2	0.2	-	-
2003 Q1	82.4	0.8	-2.5	-	88.8	-0.2	-4.9	-	76.1	-0.9	-2.6	-	83.6	1.7	-3.8	-	75.7	3.5	8.0	-
Q2	84.4	2.4	2.1	-	91.6	3.1	-1.0	-	76.8	1.0	0.8	-	84.4	0.9	0.8	-	78.4	3.5	7.2	-
Q3	85.4	1.3	2.0	-	92.6	1.1	-4.1	-	77.7	1.2	1.4	-	85.6	1.4	4.9	-	78.9	0.7	8.1	-
Q4	86.3	1.0	5.6	1.8	94.1	1.6	5.6	-1.2	80.2	3.1	4.4	1.0	84.6	-1.2	2.8	1.1	81.9	3.7	11.9	8.8
2004 Q1	86.5	0.2	5.0	3.7	93.9	-0.1	5.7	1.4	80.1	0.0	5.3	3.0	83.4	-1.4	-0.2	2.0	85.3	4.2	12.6	10.0
Q2	87.6	1.3	3.8	4.1	93.5	-0.5	2.0	2.2	81.8	2.1	6.5	4.4	87.3	4.7	3.5	2.7	83.4	-2.2	6.4	9.7
Q3	89.5	2.2	4.8	4.8	93.2	-0.3	0.7	3.5	81.3	-0.6	4.6	5.2	91.1	4.4	6.5	3.1	84.8	1.7	7.4	9.5
Q4	92.5	3.3	7.2	5.2	97.3	4.4	3.4	2.9	83.7	2.9	4.4	5.2	94.6	3.8	11.9	5.4	87.8	3.5	7.2	8.3

\*1 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.

\*2 The regional GVA weights relate to 2008.

Table 1 continued – Northern Ireland Index of Services – Quarterly, Annual and Rolling Annual average<sup>\*1</sup> changes by sector  
Seasonally Adjusted (2008 = 100)

2008 = 100	All Services				Wholesale, retail, repair, Accommodation & food service				Transport, storage, information and communication				Business services & finance				Other services			
	G - S				G&I				H&J				K-N				P-S			
	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)
Weights <sup>*2</sup>	1000				314				116				407				162			
2005 Q1	94.2	1.8	8.9	6.2	97.3	0.0	3.5	2.4	84.3	0.7	5.2	5.2	97.0	2.6	16.3	9.5	88.6	0.9	3.9	6.2
Q2	93.3	-0.9	6.5	6.8	97.8	0.6	4.7	3.1	87.7	4.1	7.2	5.4	95.7	-1.4	9.6	11.0	87.0	-1.8	4.3	5.6
Q3	94.2	1.0	5.3	6.9	99.9	2.2	7.2	4.7	86.1	-1.9	5.8	5.7	93.1	-2.7	2.2	9.8	91.8	5.5	8.2	5.9
Q4	97.2	3.2	5.1	6.4	101.2	1.3	4.1	4.9	86.2	0.2	3.1	5.3	99.1	6.5	4.8	8.0	95.7	4.4	9.1	6.4
2006 Q1	99.6	2.5	5.8	5.7	101.1	-0.1	4.0	5.0	90.1	4.5	6.9	5.8	103.9	4.8	7.0	5.9	95.8	0.0	8.1	7.4
Q2	101.6	2.0	8.9	6.3	101.1	0.0	3.4	4.6	92.4	2.5	5.3	5.3	103.7	-0.1	8.4	5.7	104.4	9.0	20.1	11.4
Q3	101.9	0.3	8.1	7.0	103.9	2.7	3.9	3.8	92.5	0.1	7.4	5.7	105.4	1.6	13.2	8.3	97.2	-6.9	5.9	10.7
Q4	101.6	-0.3	4.5	6.8	101.9	-1.9	0.7	3.0	92.8	0.3	7.6	6.8	107.6	2.1	8.5	9.3	95.5	-1.7	-0.2	8.2
2007 Q1	100.7	-0.9	1.1	5.6	104.5	2.5	3.3	2.8	93.4	0.7	3.7	6.0	102.9	-4.3	-0.9	7.1	93.0	-2.7	-2.9	5.4
Q2	101.9	1.2	0.3	3.4	105.0	0.5	3.8	3.0	96.9	3.8	5.0	5.9	106.7	3.7	2.9	5.7	90.5	-2.6	-13.3	-3.0
Q3	103.3	1.4	1.4	1.8	104.2	-0.8	0.3	2.0	97.1	0.2	5.0	5.3	106.1	-0.6	0.6	2.7	101.3	12.0	4.3	-3.2
Q4	101.3	-2.0	-0.3	0.6	101.3	-2.8	-0.6	1.7	98.0	0.9	5.6	4.8	103.3	-2.6	-3.9	-0.4	99.0	-2.3	3.7	-2.3
2008 Q1	102.2	0.9	1.5	0.7	102.5	1.2	-1.9	0.4	98.5	0.5	5.4	5.2	103.7	0.3	0.7	0.0	98.7	-0.4	6.1	-0.1
Q2	101.5	-0.6	-0.4	0.5	101.5	-1.0	-3.4	-1.4	102.3	3.9	5.5	5.4	102.1	-1.5	-4.3	-1.8	104.0	5.4	14.9	7.1
Q3	99.3	-2.2	-3.9	-0.8	98.5	-2.9	-5.4	-2.8	100.1	-2.1	3.1	4.9	100.8	-1.3	-4.9	-3.2	97.5	-6.3	-3.8	4.9
Q4	96.6	-2.8	-4.7	-1.9	97.8	-0.7	-3.4	-3.5	98.7	-1.4	0.8	3.7	93.3	-7.5	-9.7	-4.6	99.7	2.3	0.7	4.2

\*1 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.

\*2 The regional GVA weights relate to 2008.

Table 1 continued – Northern Ireland Index of Services – Quarterly, Annual and Rolling Annual average<sup>\*1</sup> changes by sector  
Seasonally Adjusted (2008 = 100)

2008 = 100	All Services				Wholesale, retail, repair, Accommodation & food service				Transport, storage, information and communication				Business services & finance				Other services			
	G - S				G&I				H&J				K-N				P-S			
	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)	Index	Quarter Change (%)	Annual Change (%)	Rolling Annual Change (%)
Weights <sup>*2</sup>	1000				314				116				407				162			
2009 Q1	<b>96.2</b>	-0.4	-5.8	-3.7	<b>95.5</b>	-2.4	-6.9	-4.8	<b>97.9</b>	-0.9	-0.6	2.2	<b>92.0</b>	-1.4	-11.3	-7.5	<b>108.0</b>	8.3	9.5	5.0
Q2	<b>93.1</b>	-3.3	-8.4	-5.7	<b>96.8</b>	1.4	-4.7	-5.1	<b>96.4</b>	-1.5	-5.8	-0.7	<b>84.2</b>	-8.5	-17.6	-10.8	<b>106.0</b>	-1.8	2.0	2.0
Q3	<b>93.2</b>	0.1	-6.2	-6.3	<b>98.1</b>	1.4	-0.4	-3.9	<b>93.2</b>	-3.3	-6.9	-3.2	<b>83.6</b>	-0.7	-17.1	-13.9	<b>107.4</b>	1.3	10.2	5.5
Q4	<b>94.1</b>	1.0	-2.5	-5.8	<b>100.7</b>	2.6	2.9	-2.3	<b>96.8</b>	3.8	-2.0	-3.9	<b>83.9</b>	0.4	-10.0	-14.0	<b>103.5</b>	-3.6	3.8	6.3
2010 Q1	<b>93.9</b>	-0.2	-2.4	-4.9	<b>100.9</b>	0.2	5.7	0.8	<b>100.7</b>	4.0	2.8	-3.0	<b>82.9</b>	-1.3	-9.9	-13.8	<b>101.8</b>	-1.7	-5.7	2.4
Q2	<b>93.0</b>	-1.0	-0.1	-2.8	<b>99.7</b>	-1.2	3.0	2.8	<b>103.1</b>	2.4	7.0	0.2	<b>81.7</b>	-1.4	-3.0	-10.3	<b>104.7</b>	2.9	-1.3	1.5
Q3	<b>90.9</b>	-2.2	-2.4	-1.8	<b>97.5</b>	-2.2	-0.7	2.7	<b>101.1</b>	-2.0	8.5	4.0	<b>77.4</b>	-5.2	-7.4	-7.7	<b>104.4</b>	-0.2	-2.8	-1.6
Q4	<b>89.3</b>	-1.8	-5.1	-2.5	<b>93.4</b>	-4.2	-7.2	0.1	<b>99.3</b>	-1.8	2.6	5.2	<b>76.6</b>	-1.1	-8.8	-7.3	<b>104.4</b>	-0.1	0.8	-2.3
2011 Q1	<b>88.8</b>	-0.5	-5.4	-3.3	<b>92.5</b>	-1.0	-8.3	-3.4	<b>98.1</b>	-1.3	-2.6	3.8	<b>77.4</b>	1.1	-6.6	-6.5	<b>104.9</b>	0.5	3.1	-0.1
Q2	<b>89.3</b>	0.6	-4.0	-4.2	<b>90.1</b>	-2.6	-9.6	-6.5	<b>99.6</b>	1.6	-3.4	1.1	<b>80.5</b>	4.1	-1.4	-6.1	<b>103.7</b>	-1.2	-1.0	0.0

\*<sup>1</sup> 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.

\*<sup>2</sup> The regional GVA weights relate to 2008.

## 4: Background Notes

### Background

The experimental Index of Services (IOS) was first published in Northern Ireland on 18 May 2005. Following assessment by the UK Statistics Authority the Index of Services was designated as a National Statistic on 5 August 2011. It is published quarterly and is designed to provide a general measure of changes in the output of the private sector service industries in Northern Ireland. (This is defined as Standard Industrial Classification 2007 (SIC07) sections G to S. In 2008 these private sector service industries accounted for 64% of regional Gross Value Added (GVA). See link to Regional GVA information <http://www.ons.gov.uk/ons/rel/regional-accounts/regional-economic-activity--gva-/december-2010/regional-gva.pdf>

### 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 Services is to provide a reliable indicator of short-term changes in the output of the service sector. Index numbers are a very good way of communicating this message. For example, the Index of Services Q2, 2011 value of 89.3 means that the level of output then was 10.7% lower than in 2008 which had a base year value of 100. The NI IOS 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 IOS sample was refreshed for Q2 2011 and was drawn on a SIC07 basis. It is now approximately 20% larger with approximately 1,900 companies. Due, in part, to the significant number of companies which fall into the census element, approximately 50% of businesses in the new sample were also in the old sample. As a statutory survey the response rate is now over 80%. The sample of service 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 100 or more employees and those employing 0 to 99 employees and having a turnover of £20 million or more. It is desirable to include these low employment high turnover companies in the sample in order to provide a more comprehensive picture of the overall economy.

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

For company non-returns, the data are imputed using a methodology that takes account of previous returned data and also the performance of similar sized businesses engaged in the same activities. More specifically, the imputed data are calculated using all returned turnover in the quarter for each 2 digit SIC/ employment size band and also the associated employment in each category. This enables a full series of turnover per employee ratios to be created for each 2 digit SIC/ employee size band.

The ratio is then factored up dependent on the number of employees in the non-responding company to generate a total turnover for imputation.

The employee figures used are taken where possible from the NI Quarterly Employment Survey (QES) and are matched with IOS by IDBR Reporting Unit reference. If no employee figure is available from the QES then the selected IDBR employee figure is used instead.

The overall Index of Services is calculated by weighting together industry level indices that describe the activity of an industry sector using the Standard Industrial Classification. This is done using relative shares of regional GVA on an annual basis. The annual weights from regional GVA are more up to date and their use is in line with recommendations from the Office for National Statistics (ONS).

The Northern Ireland Index of Services 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 private sector 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/elmr/economic-trends--discontinued-/no--630--may-2006/methodological-note--annual-chain-linking.pdf>

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:

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

This can then be applied to the converted back series, thus retaining the previous growth rates

## **Deflation**

All series, unless otherwise quoted, are measured at constant market price (2008 = 100). 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/rel/naa1-rd/national-accounts-concepts--sources-and-methods/august-2011/deflation-improvements-in-the-uk-national-accounts.pdf>

## **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. From Quarter 2 2010 we have moved from using X-11 ARIMA to X-12 ARIMA as our seasonal adjustment package. A comparison of results using both X-11 and X-12 shows that the underlying trend has remained the same. The following is a link to detailed documentation on X-12 ARIMA <http://www.ons.gov.uk/ons/guide-method/method-quality/general-methodology/time-series-analysis/index.html>

## **Quality reporting**

One indicator of the reliability of the figures in this bulletin can be obtained by monitoring the size of revisions. Previous revisions triangles are based on SIC03 data. With the move to SIC07 it is not possible to update the current revisions triangles with the data published on a SIC07 basis. Further information on the construction of SIC07 revisions triangles will be announced in the next bulletin.

## **Summary quality report**

A summary quality report for this publication can be found on the IOS Quality and Revisions page of the website at <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-ios/revisions-to-ios.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 Index of Production and IOS 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 for the first time in this bulletin.

In line with ONS, the base year was changed from 2006 = 100 to 2008 = 100 for the first time in this bulletin (Quarter 2 2011).

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 are 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 from the Quarter 2 2010 bulletin.

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

On 6 September 2010 the IOS became a statutory survey. As a result, the survey forms issued for the period July to September 2010 were the first collected under statute and the change increased overall response rates from around 63% to approximately 80%. The January 2011 bulletin was the first to publish such data.

### **Planned future revisions**

The IOS revisions policy can be found at

<http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-ios/revisions-to-ios.htm>

### **Publications policy**

All Economic and Labour Market statistics publications are available to download free of charge from the website

<http://www.detini.gov.uk/deti-stats-index.htm>

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

The tables from the current publication, which includes all the data from the start of the series in 2002, are available in Excel format to download free of charge from the IOS website at <http://www.detini.gov.uk/deti-stats-index/stats-surveys/stats-ios.htm>

The IOS is published on the same day as the Index of Production in January, April, July and October of each year.

The Economic and Labour Market 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/deti-stats-index/stats-national-statistics.htm>

## **SIC 2007 Definitional changes**

### **Business services and finance – SIC07 Sections K-N (Weight = 41%)**

This sector includes financial service activities, real estate activities, specialised professional, scientific and technical activities and a variety of activities that support general business operations.

The development and selling of real estate has moved from SIC03 Section J to SIC07 Section F (construction). SIC03 Division 72 (computer and related activities) is no longer part of this section. Computer repair activities have been grouped with repair of household goods in SIC07 Section S (other service activities), while software publishing and IT activities have been grouped in the new SIC07 Section J (information and communication). While SIC07 Section N (administrative and support service activities) covers activities that support general business operations - this pulls in units from many parts of SIC03, for example: employment services, call centres, travel arrangements and reservation services, investigation and security services. Veterinary services have moved from SIC03 Section N (health and social work) to SIC07 Section M (professional, scientific and technical services).

### **Wholesale and retail trade; repair of motor vehicles and motorcycles; Accommodation and food service activities – SIC07 Sections G&I (Weight = 31%)**

This sector includes wholesale and retail sale and the supply of services incidental to the sale of merchandise as well as the repair of motor vehicles and motorcycles. This sector also includes the provision of short-stay accommodation for visitors and the provision of complete meals and drinks fit for immediate consumption.

The repair and maintenance of personal and household goods has moved from SIC03 Section G (wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods) to SIC07 Section S (other service activities).

There are no significant changes between SIC03 Section H (hotels and restaurants) and SIC07 Section I.

### **Other services – SIC07 Sections P-S (Weight = 16%)**

This sector includes other activities not covered elsewhere - education, health & social work, arts, entertainment and recreation and other services. There are no comparable UK figures for other services.

SIC07 Section P (education) has broadened to include specialised sport, cultural and other educational services and also specialised support services. Formerly these types of services would have fallen under other service sections e.g. SIC03 Section O (other community, social and personal services). Veterinary services have moved from SIC03 Section N (health and social work) to SIC 2007 Section M (professional, scientific and technical services). Substantial components of SIC03 Section O (other community, social and personal service activities) have been moved to SIC07 Section E (water supply; sewerage, waste management and remediation activities) and SIC07 Section J (information and communication).

### **Transport, storage, information & communication – SIC07 Sections H & J (Weight = 12%)**

This sector includes the provision of passenger or freight transport and associated activities, postal and courier activities, the production and distribution of information and cultural products, as well as data or communications, information technology activities and the processing of data and other information service activities.

SIC03 Section I (transport, storage and communication) has been replaced by SIC07 Section H (transport and storage) and SIC07 Section J (information and communication).

Section J (information and communication) under SIC07 is a major new section - the main components of this section are publishing activities, including software publishing (SIC07 Division 58), motion picture and sound recording activities (SIC07 Division 59), radio and TV broadcasting and programming activities (SIC07 Division 60), telecommunications activities (SIC07 Division 61) and information technology activities (SIC07 Division 62) and other information service activities (SIC07 Division 63). These activities were included in SIC03 Sections D (manufacturing), I (transport, storage and communications), K (real estate, renting and business activities) and O (other community, social and personal service activities), therefore having a strong impact on comparability across the SIC versions. However, this new treatment of information and communication activities provides a more consistent approach (based on the character of the activities carried out) than the SIC03 version.

## **Next publication**

The next bulletin will be published on 18<sup>th</sup> January 2012.

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