

Quarter 3 (July - September) 2017

# Northern Ireland Index of Services

Date: 13 December 2017

Geographical Area: Northern Ireland

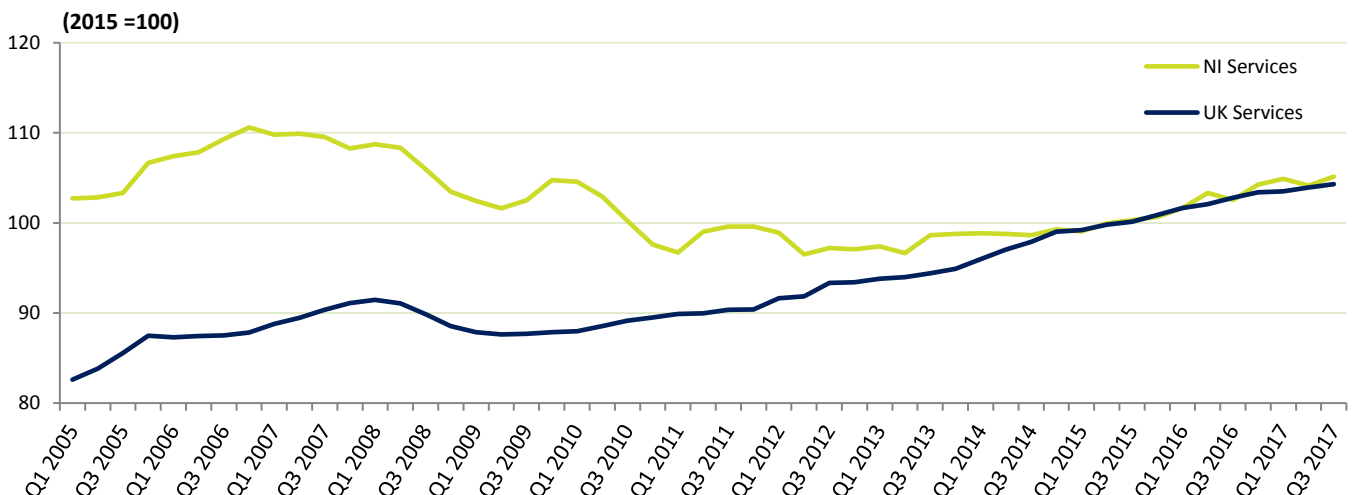
Theme: Economy

Frequency: Quarterly

## Key Points

- Provisional results from the seasonally adjusted Index of Services for the third quarter (July - September) of 2017 show that output in Northern Ireland (NI), in real terms, increased over the quarter by 1.0% and over the year by 2.5%. The services index has shown an increase over the year for the last twelve quarters, including Quarter 3 2017.
- The UK as a whole reported growth over the quarter and year, by 0.4% and 1.5% respectively.
- When the most recent four quarters are compared to the previous four quarters, the NI services sector reported annualised growth of 2.5% to Quarter 3 2017.
- The NI index has recovered by 9.0% since the recent minimum value recorded in Quarter 2 (April - June) 2012. The UK index has recovered by 19.1% since the recent low recorded in Quarter 2 2009.

**Figure 1: Index of Services, Northern Ireland and UK**



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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.

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is a producer's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

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# 1 Introduction and context

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This bulletin provides provisional data which is collected from the Index of Services (IOS) aspect of the Quarterly Business Survey (QBS) for Northern Ireland. 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 policymakers, Members of the Legislative Assembly, the business community, economic commentators, academics and members of the general public with an interest in the state of the NI economy. A summary of recent uses is available on the website at <https://www.nisra.gov.uk/publications/further-information-index-services>

The Department for the Economy (DfE) Economic Commentary (Summer 2017) 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 <https://www.economy-ni.gov.uk/publications/df-economic-commentary>

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 (IOP), are available on the Economic Overview page of the NISRA Economic and Labour Market Statistics website at <https://www.nisra.gov.uk/statistics/nisra-economic-and-labour-market-statistics-elms/economic-overview>

The separate Northern Ireland 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 3 2017 showed that output in Northern Ireland fell by 3.6% quarterly and by 6.5% annually. The index is now 6.9% above the recent low seen in Quarter 3 2009. Further information and results from the NI IOP can be accessed at <https://www.nisra.gov.uk/statistics/economic-output-statistics/index-production>

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

The background notes (section 5) 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. All services sector series are seasonally adjusted on a 2015=100 basis, using X-13 ARIMA SEATS, giving data up to the most recent available quarter (Quarter 3 2017).

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 69% of the sector's total private services Gross Value Added (GVA) at 2015.

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/economy/economicoutputandproductivity/output/bulletins/indexofservices/previousReleases>

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 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 factors, methodological changes or changes to classifications.

### **Date of next publication**

The next Northern Ireland Index of Services publication is planned for 21<sup>st</sup> March 2018.

## 2 Executive summary

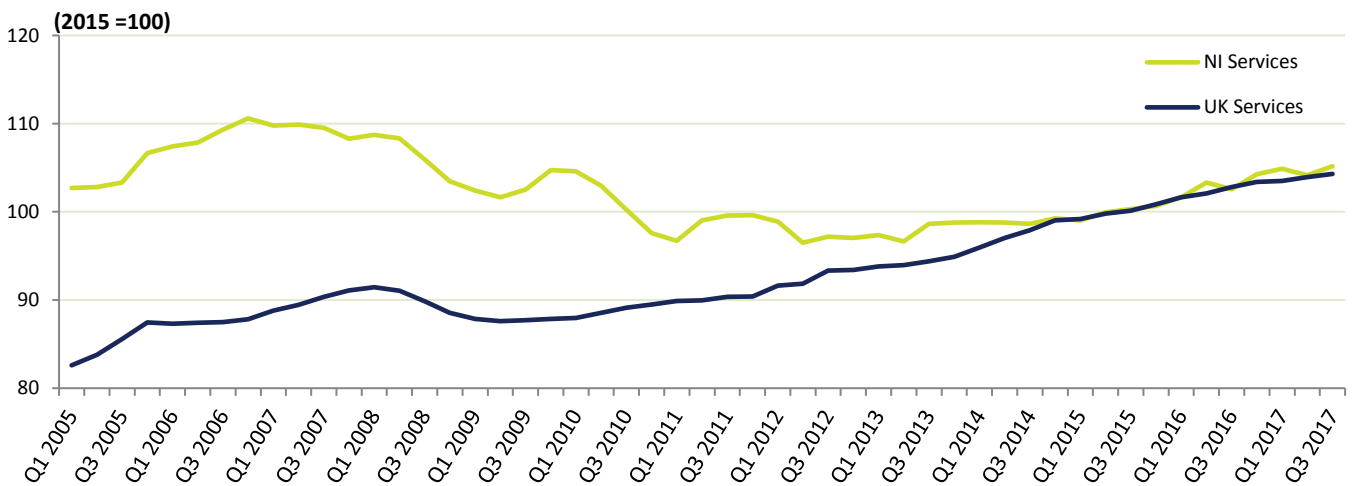
### Provisional results for Quarter 3 (July – September) 2017

Provisional results from the seasonally adjusted Index of Services for the third quarter of 2017 show that output in NI, in real terms, increased over the quarter by 1.0%. Growth over the year (2.5%) in the services sector was higher than UK growth of 1.5% over the equivalent period (Quarter 3 2016 to Quarter 3 2017).

The NI index has shown an increase over the year for the last twelve quarters, including Quarter 3 2017.

When the most recent four quarters are compared to the previous four quarters, the NI services sector reported annualised growth of 2.5% to Quarter 3 2017.

**Figure 2: Index of Services, Northern Ireland and UK**



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**Table 1: Index of Services percentage change, Northern Ireland and UK**

	NI	UK
<b>Percentage change compared to:</b>		
Previous quarter	1.0%	0.4%
Same quarter one year ago	2.5%	1.5%
Most recent four quarters compared to previous four quarters	2.5%	1.9%

The NI index has recovered by 9.0% since the recent minimum value recorded in Quarter 2 2012. The UK index has recovered by 19.1% since the recent low recorded in Quarter 2 2009.

## Services subsections

The sub-sectors in Northern Ireland make different contributions<sup>1</sup> to the changes in the overall index.

**Table 2: Index of Services percentage change by broad industry group, Northern Ireland**

	G&I <sup>2</sup>	H&J <sup>3</sup>	KLMN <sup>4</sup>	PQRS <sup>5</sup>
Relative weight	35.9%	13.2%	32.6%	18.3%
<b>Percentage change compared to:</b>				
Previous quarter	1.1%	0.1%	0.4%	1.3%
Same quarter one year ago	1.2%	5.7%	3.6%	3.8%
Most recent four quarters compared to previous four quarters	2.0%	6.4%	3.1%	1.4%

All services subsectors are ordered below based on their contribution to change in the overall services index, across each measure of change.

### Quarterly change

Over the quarter, all broad industry group indices increased: the wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities (G&I) sector by 1.1%; the 'other' services (PQRS) sector by 1.3%; the business services and finance (KLMN) sector by 0.4%; and the transport, storage, information & communication (H&J) sector by 0.1%.

### Annual change

Over the year, all broad industry group indices increased: the business services and finance (KLMN) sector (3.6%); the transport, storage, information & communication (H&J) sector (5.7%); the 'other' services (PQRS) sector (3.8%); and the wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities (G&I) sector (1.2%).

### Rolling annual average change

Over the latest four quarters, all broad industry group indices increased: the business services and finance (KLMN) sector (3.1%); the transport, storage, information & communication (H&J) sector (6.4%); the wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities (G&I) sector (2.0%); and the 'other' services (PQRS) sector (1.4%).

### Commentary

Output in the services sector increased in real terms (by 1.0%) over the third quarter, to the highest point since Quarter 3 2008. NI output in this sector remains nearly 5% lower than the NI series high (Quarter 4 2006). Growth over the year (2.5%) in the sector was higher than UK growth of 1.5% over the equivalent period (Quarter 3 2016 to Quarter 3 2017).

<sup>1</sup> Contributions of the individual sectors may not sum to total due to rounding

<sup>2</sup> Wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities sector

<sup>3</sup> Transport, storage, information & communication sector

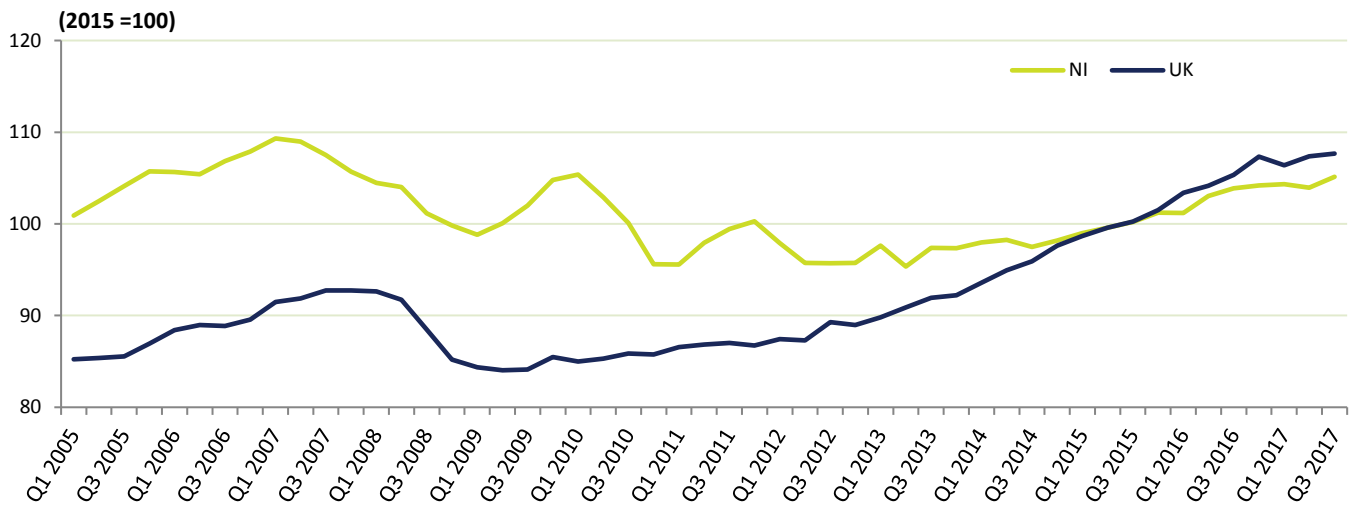
<sup>4</sup> Business services and finance sector

<sup>5</sup> Other services sector

### 3 Services by broad industry groups

This section focuses on the performance of the overall service sector and the main industry categories of which it is comprised. The private service sector is dominated by the (i) wholesale and retail trade; repair of motor vehicles and accommodation and food service activities and (ii) business services and finance sub-sectors. Together these account for approximately 69% of the sector's total private services Gross Value Added at 2015. The sub-sectors are listed in order of importance of the contribution made to the overall Index of Services.

**Figure 3: Wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities – SIC07 Sections G & I (weight = 35.9%) (seasonally adjusted series), Northern Ireland and UK**



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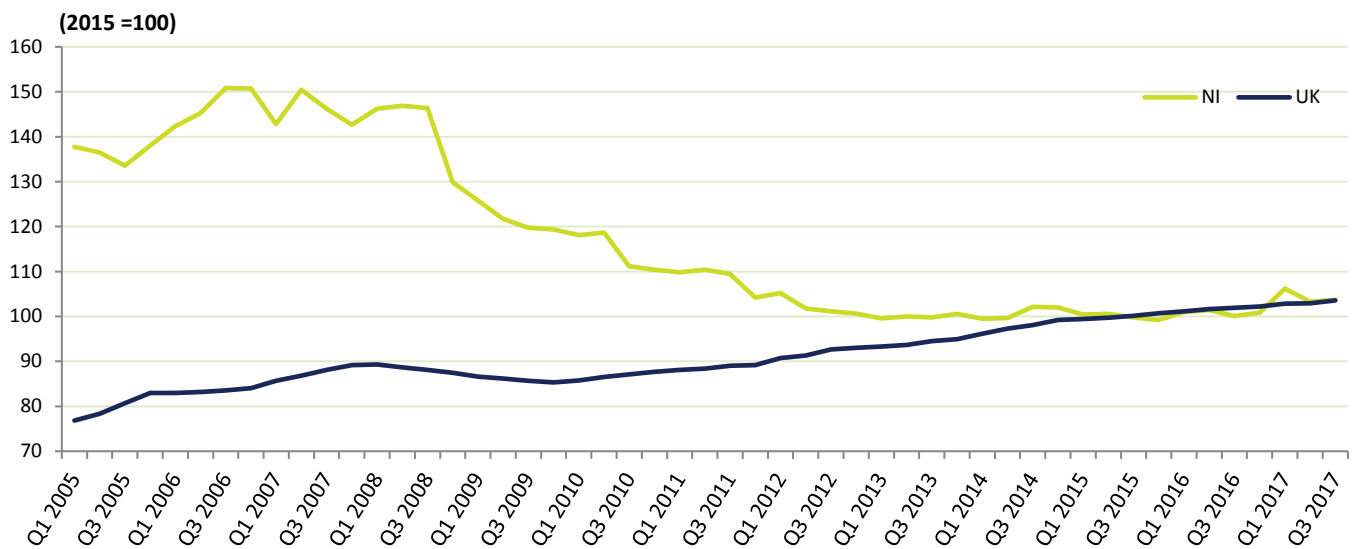
**Table 3: Wholesale and retail trade; repair of motor vehicles and motorcycles; accommodation and food service activities percentage change, Northern Ireland and UK**

	NI	UK
<b>Percentage change compared to:</b>		
Previous quarter	1.1%	0.3%
Same quarter one year ago	1.2%	2.2%
Most recent four quarters compared to previous four quarters	2.0%	3.5%

This NI sector recorded similar levels of growth over the quarter and year, of 1.1% and 1.2% respectively. The UK as a whole reported growth over the quarter and year of 0.3% and 2.2% respectively.



**Figure 4: Business services and finance – SIC07 Sections K-N (weight = 32.6%) (seasonally adjusted series), Northern Ireland and UK**



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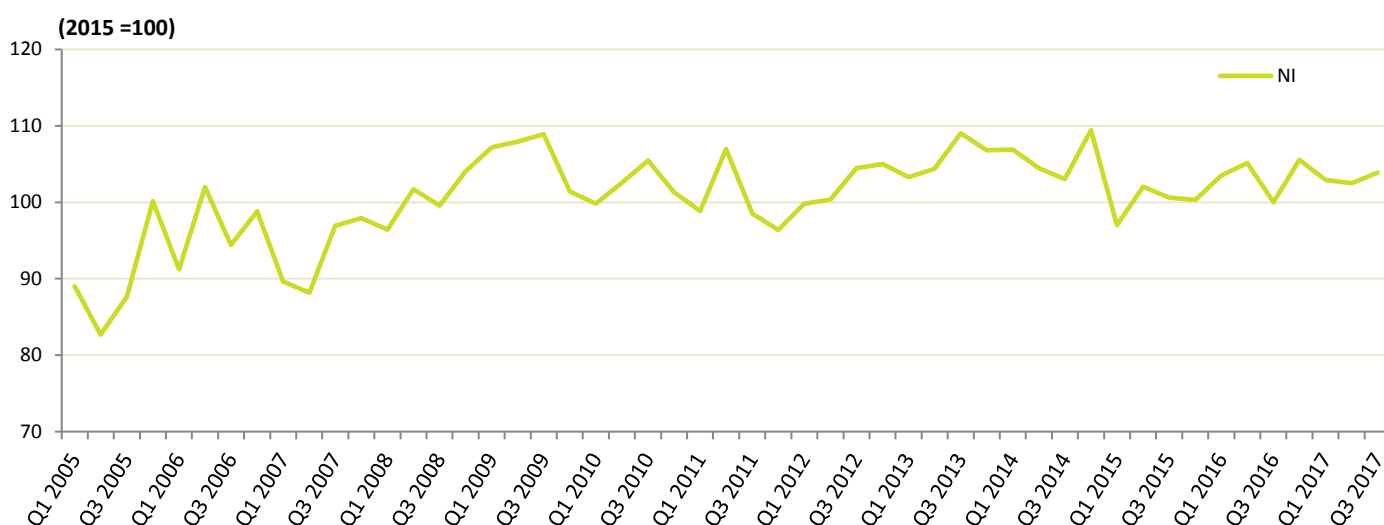
**Table 4: Business services and finance percentage change, Northern Ireland and UK**

	NI	UK
<b>Percentage change compared to:</b>		
Previous quarter	0.4%	0.6%
Same quarter one year ago	3.6%	1.6%
Most recent four quarters compared to previous four quarters	3.1%	1.5%

The seasonally adjusted index for business services and finance, which includes financial services and real estate activities shows that output in NI increased over the quarter (0.4%) and over the year (3.6%). This compares with quarterly (0.6%) and annual increases (1.6%) in the UK.

On a rolling annual average basis, the NI index reported an increase in output (3.1%) to Quarter 3 2017, with the UK recording an increase of 1.5% on this basis.

**Figure 5: Other services – SIC07 Sections P-S (weight = 18.3%)  
(seasonally adjusted series), Northern Ireland**



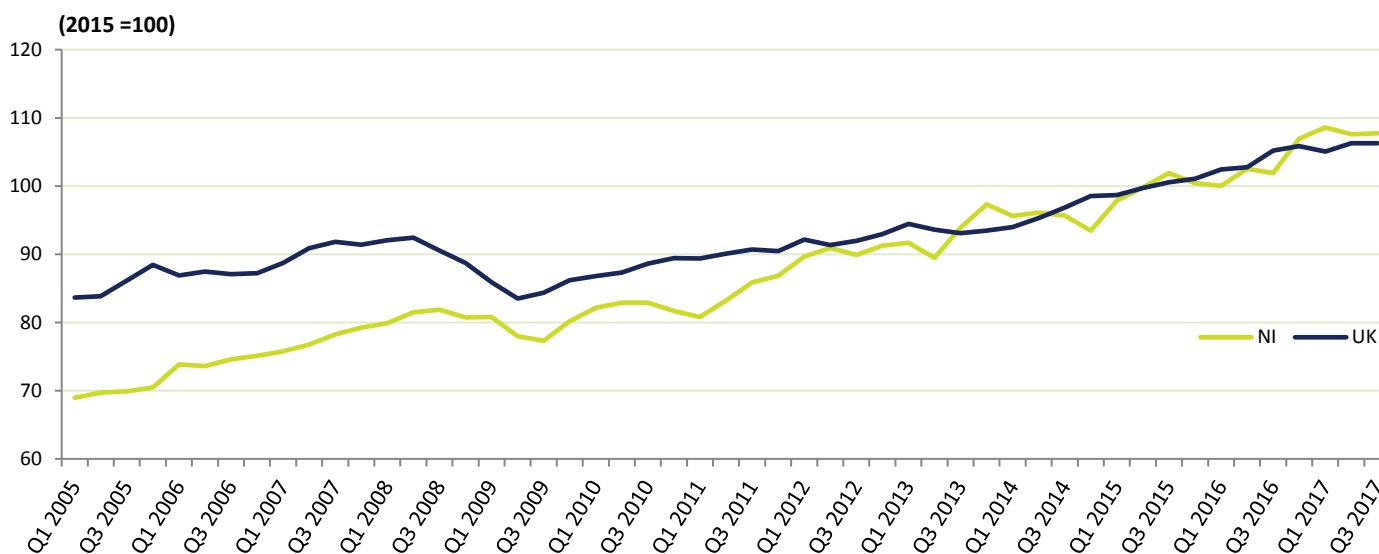
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**Table 5: Other services percentage change, Northern Ireland**

	NI
<b>Percentage change compared to:</b>	
Previous quarter	1.3%
Same quarter one year ago	3.8%
Most recent four quarters compared to previous four quarters	1.4%

The seasonally adjusted ‘other’ services sector has reported increases over the quarter (1.3%) and over the year (3.8%). On a rolling annual average basis, the increase of 1.4% is the fourth quarter of growth on this basis following seven consecutive quarters of decline since Quarter 1 (January - March) 2015.

**Figure 6: Transport, storage, information & communication – SIC07 Sections H & J (Weight = 13.2%) (seasonally adjusted series), Northern Ireland and UK**



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**Table 6: Transport, storage, information & communication percentage change, Northern Ireland and UK**

	NI	UK
<b>Percentage change compared to:</b>		
Previous quarter	0.1%	0.0%
Same quarter one year ago	5.7%	1.0%
Most recent four quarters compared to previous four quarters	6.4%	2.9%

The index for this sector in NI reported an increase over the quarter of 0.1% while the UK index reported no change. The NI index rose by 5.7% over the year whereas the UK index rose by 1.0% over the same time period.

On a rolling annual average basis, the index for this sector in Northern Ireland increased by 6.4%; the UK as a whole increased by 2.9%.

## 4 Quarterly/annual/rolling annual average changes

Table 7: Index of Services – Quarterly, annual and rolling annual average<sup>1</sup> changes by sector (seasonally adjusted), Northern Ireland

		All Services, Sections G-S			Wholesale, retail, repair, Accommodation & food services – Sections G&I (Weight <sup>2</sup> = 35.9%)			Transport, storage, information & communication – Sections H & J (weight <sup>2</sup> = 13.2%)			Business services and finance – Sections K-N (weight <sup>2</sup> = 32.6%)			Other services – Sections P-S (weight <sup>2</sup> = 18.3%)							
		Index	% Change			Index	% Change			Index	% Change			Index	% Change						
			Quarter	Annual	Rolling		Quarter	Annual	Rolling		Quarter	Annual	Rolling		Quarter	Annual	Rolling	Quarter	Annual	Rolling	
2005	Q1	102.7	-	-	-	100.9	-	-	-	69.0	-	-	-	137.7	-	-	-	89.0	-	-	-
	Q2	102.8	0.1	-	-	102.5	1.6	-	-	69.7	1.1	-	-	136.5	-0.9	-	-	82.7	-7.1	-	-
	Q3	103.3	0.5	-	-	104.1	1.6	-	-	69.9	0.2	-	-	133.6	-2.1	-	-	87.7	6.0	-	-
	Q4	106.7	3.2	-	-	105.7	1.5	-	-	70.5	0.8	-	-	138.1	3.4	-	-	100.2	14.2	-	-
2006	Q1	107.4	0.7	4.6	-	105.7	-0.1	4.7	-	73.8	4.8	7.1	-	142.3	3.1	3.4	-	91.2	-8.9	2.5	-
	Q2	107.9	0.4	4.9	-	105.4	-0.2	2.9	-	73.6	-0.3	5.6	-	145.3	2.0	6.4	-	102.0	11.8	23.3	-
	Q3	109.3	1.4	5.8	-	106.9	1.4	2.6	-	74.6	1.3	6.7	-	150.8	3.8	12.9	-	94.4	-7.4	7.7	-
	Q4	110.6	1.2	3.7	4.7	107.9	1.0	2.0	3.0	75.1	0.7	6.6	6.5	150.7	-0.1	9.2	7.9	98.8	4.7	-1.3	7.5
2007	Q1	109.8	-0.7	2.2	4.1	109.3	1.3	3.5	2.7	75.8	0.9	2.6	5.3	142.8	-5.3	0.3	7.1	89.6	-9.3	-1.7	6.4
	Q2	109.9	0.1	1.9	3.4	109.0	-0.3	3.4	2.9	76.8	1.3	4.3	5.0	150.4	5.3	3.5	6.4	88.2	-1.6	-13.5	-2.6
	Q3	109.5	-0.3	0.2	2.0	107.5	-1.3	0.6	2.4	78.2	1.9	4.9	4.6	146.2	-2.8	-3.1	2.4	96.9	9.9	2.7	-3.7
	Q4	108.3	-1.1	-2.1	0.5	105.7	-1.7	-2.0	1.3	79.3	1.3	5.5	4.3	142.7	-2.4	-5.3	-1.2	98.0	1.0	-0.9	-3.6
2008	Q1	108.7	0.4	-1.0	-0.3	104.5	-1.2	-4.4	-0.7	79.9	0.8	5.5	5.1	146.2	2.5	2.4	-0.7	96.4	-1.6	7.6	-1.4
	Q2	108.3	-0.4	-1.4	-1.1	104.0	-0.4	-4.5	-2.6	81.5	2.0	6.1	5.5	146.9	0.4	-2.3	-2.1	101.7	5.5	15.3	5.9
	Q3	105.9	-2.2	-3.3	-1.9	101.2	-2.7	-5.9	-4.2	81.9	0.5	4.6	5.4	146.3	-0.4	0.1	-1.4	99.6	-2.1	2.7	5.9
	Q4	103.5	-2.3	-4.4	-2.5	99.8	-1.3	-5.6	-5.1	80.8	-1.3	1.9	4.5	129.9	-11.3	-9.0	-2.2	104.0	4.5	6.2	7.8

<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 2015. Contributions of the individual sectors may not sum to total due to rounding.

**Table 7 (cont): Index of Services – Quarterly, annual and rolling annual average<sup>1</sup> changes by sector (seasonally adjusted), Northern Ireland**

		All Services, Sections G-S				Wholesale, retail, repair, Accommodation & food services – Sections G&I (Weight <sup>2</sup> = 35.9%)				Transport, storage, information & communication – Sections H & J (weight <sup>2</sup> = 13.2%)				Business services and finance – Sections K-N (weight <sup>2</sup> = 32.6%)				Other services – Sections P-S (weight <sup>2</sup> = 18.3%)			
		Index	% Change			Index	% Change			Index	% Change			Index	% Change			Index	% Change		
			Quarter	Annual	Rolling		Quarter	Annual	Rolling		Quarter	Annual	Rolling		Quarter	Annual	Rolling		Quarter	Annual	Rolling
2009	Q1	102.4	-1.0	-5.8	-3.7	98.8	-1.0	-5.4	-5.3	80.8	0.1	1.1	3.4	125.8	-3.1	-14.0	-6.3	107.2	3.0	11.2	8.7
	Q2	101.6	-0.8	-6.2	-4.9	100.1	1.3	-3.8	-5.2	78.0	-3.5	-4.3	0.8	121.7	-3.3	-17.1	-10.0	107.9	0.7	6.2	6.5
	Q3	102.5	0.9	-3.2	-4.9	102.0	1.9	0.8	-3.5	77.3	-0.8	-5.5	-1.8	119.7	-1.6	-18.2	-14.6	108.9	0.9	9.4	8.2
	Q4	104.7	2.2	1.2	-3.6	104.8	2.7	4.9	-0.9	80.2	3.7	-0.7	-2.4	119.4	-0.3	-8.1	-14.5	101.4	-6.9	-2.5	5.9
2010	Q1	104.6	-0.2	2.1	-1.6	105.4	0.6	6.6	2.1	82.1	2.5	1.6	-2.3	118.1	-1.1	-6.1	-12.7	99.8	-1.6	-6.9	1.4
	Q2	103.0	-1.6	1.3	0.3	102.9	-2.3	2.8	3.8	82.9	1.0	6.4	0.4	118.7	0.5	-2.5	-9.1	102.6	2.8	-5.0	-1.4
	Q3	100.2	-2.6	-2.2	0.6	100.1	-2.7	-1.9	3.1	82.9	0.0	7.2	3.6	111.2	-6.3	-7.1	-6.0	105.5	2.8	-3.2	-4.4
	Q4	97.6	-2.6	-6.8	-1.4	95.6	-4.5	-8.7	-0.4	81.7	-1.5	1.9	4.2	110.4	-0.7	-7.5	-5.8	101.3	-3.9	-0.1	-3.8
2011	Q1	96.7	-0.9	-7.5	-3.9	95.6	-0.1	-9.3	-4.4	80.8	-1.1	-1.7	3.4	109.8	-0.5	-7.0	-6.0	98.9	-2.4	-1.0	-2.4
	Q2	99.0	2.4	-3.8	-5.1	97.9	2.5	-4.8	-6.2	83.2	3.1	0.4	1.9	110.4	0.5	-7.0	-7.2	107.0	8.2	4.3	0.0
	Q3	99.6	0.6	-0.6	-4.7	99.4	1.5	-0.6	-5.9	85.9	3.2	3.6	1.0	109.5	-0.8	-1.5	-5.8	98.5	-7.9	-6.6	-0.9
	Q4	99.6	0.0	2.1	-2.6	100.3	0.8	4.9	-2.7	86.9	1.1	6.3	2.1	104.2	-4.9	-5.6	-5.3	96.4	-2.2	-4.9	-2.1
2012	Q1	98.9	-0.7	2.3	-0.1	97.9	-2.4	2.5	0.4	89.7	3.2	11.0	5.3	105.2	1.0	-4.2	-4.6	99.8	3.6	1.0	-1.6
	Q2	96.5	-2.4	-2.5	0.3	95.8	-2.2	-2.2	1.1	90.9	1.4	9.2	7.5	101.8	-3.3	-7.8	-4.8	100.4	0.5	-6.2	-4.2
	Q3	97.2	0.7	-2.4	-0.2	95.7	-0.1	-3.8	0.3	89.9	-1.1	4.7	7.8	101.1	-0.6	-7.6	-6.3	104.5	4.1	6.0	-1.2
	Q4	97.1	-0.1	-2.6	-1.3	95.8	0.1	-4.5	-2.1	91.3	1.5	5.1	7.4	100.6	-0.5	-3.4	-5.8	105.0	0.5	8.9	2.2
2013	Q1	97.4	0.3	-1.5	-2.3	97.6	1.9	-0.3	-2.7	91.7	0.5	2.3	5.2	99.5	-1.1	-5.4	-6.1	103.3	-1.6	3.5	2.8
	Q2	96.6	-0.8	0.1	-1.6	95.3	-2.3	-0.4	-2.3	89.5	-2.4	-1.6	2.5	100.0	0.5	-1.7	-4.6	104.4	1.0	4.0	5.6
	Q3	98.6	2.1	1.5	-0.6	97.4	2.1	1.7	-0.9	93.9	4.9	4.5	2.5	99.8	-0.3	-1.3	-3.0	109.1	4.5	4.4	5.2
	Q4	98.8	0.1	1.8	0.5	97.3	0.0	1.6	0.7	97.3	3.7	6.6	2.9	100.6	0.8	-0.1	-2.2	106.8	-2.0	1.7	3.4

<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 2015. Contributions of the individual sectors may not sum to total due to rounding.

**Table 7 (cont): Index of Services – Quarterly, annual and rolling annual average<sup>1</sup> changes by sector (seasonally adjusted), Northern Ireland**

		All Services, Sections G-S				Wholesale, retail, repair, Accommodation & food services – Sections G&I (Weight <sup>2</sup> = 35.9%)				Transport, storage, information & communication – Sections H & J (weight <sup>2</sup> = 13.2%)				Business services and finance – Sections K-N (weight <sup>2</sup> = 32.6%)				Other services – Sections P-S (weight <sup>2</sup> = 18.3%)			
		Index	% Change			Index	% Change			Index	% Change			Index	% Change			Index	% Change		
			Quarter	Annual	Rolling		Quarter	Annual	Rolling		Quarter	Annual	Rolling		Quarter	Annual	Rolling		Quarter	Annual	Rolling
2014	Q1	98.8	0.0	1.5	1.2	98.0	0.7	0.4	0.8	95.6	-1.7	4.3	3.4	99.5	-1.1	-0.1	-0.8	106.9	0.0	3.5	3.4
	Q2	98.8	-0.1	2.2	1.7	98.3	0.3	3.1	1.7	96.1	0.5	7.4	5.7	99.7	0.2	-0.4	-0.5	104.5	-2.3	0.1	2.4
	Q3	98.6	-0.1	0.0	1.4	97.5	-0.8	0.1	1.3	95.7	-0.4	1.9	5.0	102.1	2.5	2.4	0.5	103.0	-1.3	-5.5	-0.1
	Q4	99.3	0.6	0.5	1.0	98.2	0.7	0.9	1.1	93.5	-2.3	-3.9	2.3	102.0	-0.1	1.4	0.8	109.4	6.2	2.5	0.1
2015	Q1	99.1	-0.2	0.2	0.7	99.0	0.8	1.0	1.3	97.9	4.7	2.3	1.8	100.4	-1.5	1.0	1.1	97.0	-11.4	-9.2	-3.1
	Q2	100.0	0.9	1.2	0.5	99.6	0.6	1.4	0.9	99.8	2.0	3.9	1.0	100.6	0.1	0.9	1.4	102.0	5.2	-2.3	-3.7
	Q3	100.3	0.4	1.7	0.9	100.2	0.6	2.8	1.5	101.9	2.1	6.5	2.2	99.8	-0.8	-2.3	0.2	100.6	-1.4	-2.4	-2.9
	Q4	100.7	0.3	1.4	1.1	101.2	1.0	3.1	2.1	100.4	-1.5	7.4	5.0	99.2	-0.6	-2.7	-0.8	100.3	-0.3	-8.3	-5.6
2016	Q1	101.6	1.0	2.6	1.7	101.2	0.0	2.2	2.4	100.0	-0.4	2.2	5.0	101.0	1.8	0.6	-0.9	103.5	3.1	6.7	-1.8
	Q2	103.3	1.7	3.4	2.3	103.0	1.8	3.5	2.9	102.5	2.5	2.7	4.7	101.4	0.4	0.9	-0.9	105.1	1.6	3.0	-0.5
	Q3	102.5	-0.7	2.2	2.4	103.9	0.8	3.7	3.1	101.9	-0.6	0.0	3.0	100.1	-1.3	0.3	-0.3	100.0	-4.8	-0.6	0.0
	Q4	104.3	1.7	3.6	2.9	104.2	0.3	2.9	3.1	106.9	4.9	6.5	2.9	100.9	0.8	1.7	0.9	105.6	5.5	5.2	3.6
2017	Q1	104.9	0.6	3.2	3.1	104.3	0.2	3.1	3.3	108.6	1.6	8.6	4.4	106.2	5.3	5.1	2.0	102.9	-2.5	-0.6	1.8
	Q2	104.1	-0.7	0.8	2.4	103.9	-0.4	0.9	2.6	107.6	-0.9	4.9	5.0	103.3	-2.7	1.8	2.3	102.5	-0.4	-2.5	0.4
	Q3	105.2	1.0	2.5	2.5	105.1	1.1	1.2	2.0	107.7	0.1	5.7	6.4	103.7	0.4	3.6	3.1	103.9	1.3	3.8	1.4

[Download in Excel](#)

<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 2015. Contributions of the individual sectors may not sum to total due to rounding.

## 5 Background notes

### Background

The experimental Index of Services (IOS) was first published in Northern Ireland on 18 May 2005. Following an assessment by the UK Statistics Authority, the IOS 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). Based on employee jobs, in 2015 these private sector service industries accounted for 61% of all service sector Regional Gross Value Added (GVA). See link to Regional GVA information

<https://www.ons.gov.uk/economy/grossvalueaddedgva/bulletins/regionalgrossvalueaddedincomeapproach/december2016>

### 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 IOS 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 Quarter 3 2017 value of 105.2 means that the level of output then was 5.2% higher than in 2015 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://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/qui-de-method/user-guidance/index-of-services-methodology/index-construction/index.html>

### Index sample

The IOS sample was refreshed for Quarter 1 2014 and was drawn on a SIC07 basis. The sample was boosted from around 1,600 businesses and it is now approximately 3,300 companies. As a statutory survey the response rate is 80% (on average). 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 £10 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. This sample has been designed to give sufficiently accurate results, yet keep the total costs to businesses to a minimum.

Questionnaires were issued to both the new and existing businesses on each sample, for three quarters, as a means to calculate a link factor between the old sample (up to and including Quarter 4 2013) and the new sample (from Quarter 1 2014 onwards). With advice from ONS Methodologists, as the result of a successful Quality Improvement Fund, a methodology has been developed in order to integrate the new samples without making significant changes to the back series data, thus giving a meaningful index.

### **Data collection, validation and Index calculation**

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. Since the beginning of 2016, a Quarterly Business Survey form was issued to all businesses who previously received an IOS form and/or a Quarterly Employment Survey form. Companies are also asked to provide employment and turnover information at the same time. This combined survey form, coupled with the roll-out of an 'eForm' (designed to collect data electronically) is intended to reduce the burden to businesses currently receiving two separate forms at different times.

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

The overall IOS 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 ONS.

The Northern Ireland IOS 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 a 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 Quarter 1 2011 and Quarter 2 2011 is known. We have the Quarter 2 2011 value (SIC07) and the Quarter 1 2011 value (converted from SIC03 to SIC07). We can, therefore, create the following link factor:



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

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

For Quarter 1 2014 and Quarter 2 2014, questionnaires were issued to companies in both the existing sample and the new sample, thus allowing a link factor to be calculated based on the average percentage change between the two. This link factor was then applied to each of the quarterly turnover back series (grossed & deflated), in order to give a series of the same magnitude as the new sample series (from Quarter 1 2014 onwards).

## **Deflation**

All series, unless otherwise quoted, are measured at a constant market price (2015 = 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/guide-method/method-quality/specific/economy/national-accounts/articles/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. All IOS time series are checked on an annual basis using X-13 ARIMA SEATS for evidence of seasonality, and those series where seasonality is detected are adjusted using X-13 ARIMA SEATS in order to obtain a clear picture of the general trend. Unadjusted data are also available.

The figures presented in this publication are calculated using the X-13 ARIMA SEATS method of seasonal adjustment. The following is a link to an ONS Guide to seasonal adjustment with X-12 ARIMA (an updated guide for X-13 ARIMA SEATS is currently being finalised by ONS):

<http://www.ons.gov.uk/ons/guide-method/method-quality/general-methodology/time-series-analysis/guide-to-seasonal-adjustment.pdf>

## **Quality reporting**

One indicator of the reliability of the figures in this bulletin can be obtained by monitoring the size of revisions. 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 due course.

## Summary quality report

A summary quality report for this publication can be found on the IOS Quality and Revisions page of the website at

<https://www.nisra.gov.uk/statistics/index-services/ios-quality-and-revisions>

## 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. 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

Figures in this publication of IOS are weighted using 2015 GVA which became available on 15<sup>th</sup> December 2016.

Results are published on a SIC07 basis and in line with ONS, the base year of the Northern Ireland IOS has been moved to 2015.

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.

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

## Planned future revisions

The IOS revisions policy can be found at

<https://www.nisra.gov.uk/publications/quality-and-revisions-documents-ios>

The SIC 47 code of retail is scheduled to be constructed as a separate series and it is planned to publish this series in the near future.

## Publications policy

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

<https://www.nisra.gov.uk/statistics/economy/nisra-economic-and-labour-market-statistics-elms>

The IOS bulletin and tables from the current publication, which includes all the data from the start of the series in 2005, are available in Excel and Open Document format to download free of charge from the IOS website at

<https://www.nisra.gov.uk/statistics/economic-output-statistics/index-services>

Future IOS publications are due to be published on the same day as the Index of Production and the Quarterly Employment Survey in March, June, September and December of each year.

The Economic and Labour Market Statistics publication schedule is available at

<https://www.nisra.gov.uk/publications/elms-publication-schedule>

## **SIC 2007 definitions**

### **Wholesale and retail trade; repair of motor vehicles and motorcycles; Accommodation and food service activities – SIC07 Sections G&I (Weight = 35.9%)**

This sector includes the 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.

### **Transport, storage, information & communication – SIC07 Sections H & J (Weight = 13.2%)**

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.

### **Business services and finance – SIC07 Sections K-N (Weight = 32.6%)**

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.

### **Other services – SIC07 Sections P-S (Weight = 18.3%)**

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.

## **Next publication**

The next bulletin is due to be published on 21<sup>st</sup> March 2018.

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