

# Northern Ireland Composite Economic Index

## Quarter 4 2015

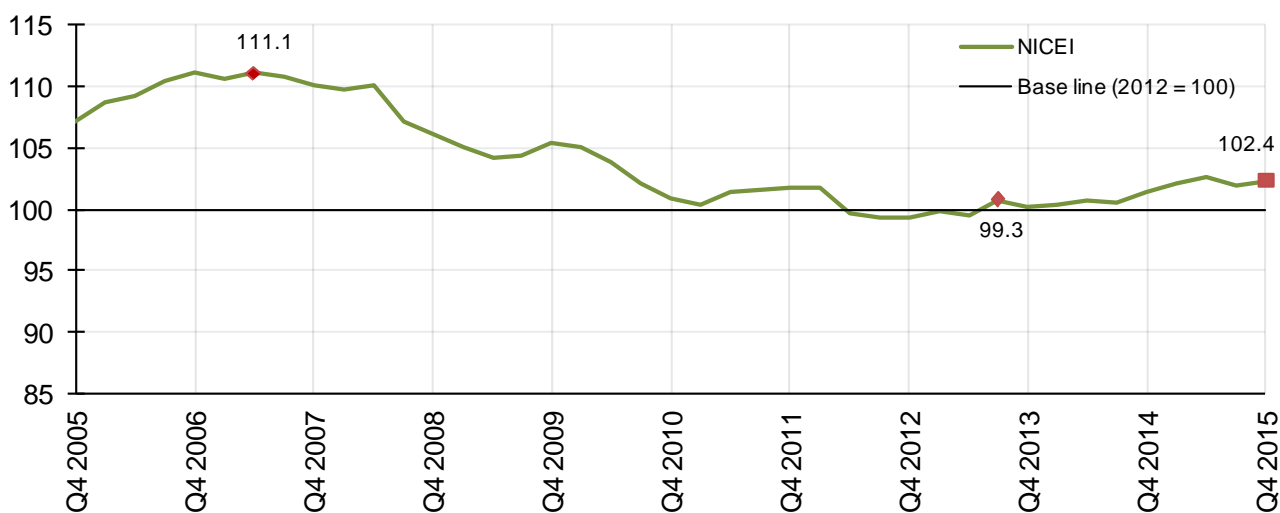


Date: 14 April 2016  
Geographical Area: Northern Ireland  
Theme: Economy Statistics  
Frequency: Quarterly

### Key points

- The Northern Ireland Composite Economic Index (NICEI) results show that NI economic activity was estimated to have increased by 0.4% in real terms between Quarter 3 (July – September) and Quarter 4 (October – December) 2015. The index also increased by 0.9% over the year (Quarter 4 2014 to Quarter 4 2015) in real terms.
- Over the last two years annual output, (averaged over the four quarters to Quarter 4 2015 compared to the previous four quarters) increased by 1.4%. Although the measures are not produced on a fully equivalent basis, comparisons with the UK over the same period show that the NICEI grew at a slower rate (1.4%) compared to UK GDP growth (2.3%)<sup>1</sup>.
- The NI private sector was estimated to have grown by 0.7% over the quarter, by 2.0% over the year to Quarter 4 2015, and by 2.3% for the whole of 2015, compared to 2014.
- The Public sector jobs index decreased by 0.5% over the quarter, and is now at its lowest level since the series began in 2002. As previously reported, the index has been impacted by the Voluntary Exit Scheme (VES), currently being implemented by the Northern Ireland Civil Service, which will see an ongoing reduction in the number of public sector employees.
- The NICEI is currently 3.1% above the minimum reached in Quarter 3 2012.

Figure 1: NI Composite Economic Index



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<sup>1</sup> NISRA have calculated this figure based on published GDP data by calculating the growth between the average GDP level of the four quarters of 2014 and the average of the four quarters of 2015.  
NI Composite Economic Index Statistical Bulletin published 14<sup>th</sup> April 2016

This Report contains the following chapters:

1. [Context](#)
2. [NI Composite Economic Index Quarter 4 \(October to December\) 2015](#)
3. [Contribution to change](#)
4. [Comparisons with measures of GDP](#)
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Please note that the data in this release can be downloaded in excel by clicking the button under the respective tables/charts. In addition, the summary tables and comparisons with the UK, ROI and Scottish GDP can be downloaded in Open Data Format from the [NINIS website](#).

The next publication for Quarter 1 2016 results will be in July 2016.

# 1

## Context

The results for the NICEI for Quarter 4 2015 show that economic output in NI increased by 0.4% over the quarter and increased by 0.9% over the year to Quarter 4 2015.

Growth over the quarter and year has also been reported by other economic indicators such as the labour and housing markets.

The most recent NI [Labour Market Report](#) (March 2016) shows that over the quarter from November to January 2016 and over the year to January 2016 the labour market continues to improve with a decrease in unemployment and economic inactivity alongside a growing employment rate (see below for further details on the labour market).

The most recent [Quarterly Employment Survey](#) also shows that the number of jobs has increased over the fourth quarter of 2015 and over the last year.

Coupled with the positive performance of the labour market the housing market continues to show signs of growth. The most recent [NI Residential Property Price Index](#) reports that in Quarter 4 2015 property prices in NI recorded growth over the quarter and the year. This is set against a backdrop of growing numbers of new builds commencing<sup>2</sup>, increased lending<sup>3</sup> and continued falling numbers of repossessions<sup>4</sup>.

As reported in the Quarter 3 NICEI bulletin, the NICEI is designated as an experimental index to reflect its status as a measure under development. Users should take this into account when interpreting results. Ongoing areas of development are highlighted below:

- The Public Sector jobs index of the NICEI is based on public sector jobs. This may be unduly impacted by the fact that the NI Civil Service is currently undergoing a period of strategic reorganisation in the form of a Voluntary Exit Scheme (VES) which seeks to reduce the number of such jobs. For example, a ten percent reduction in public sector jobs may not equate to an equivalent fall in public sector output. NISRA is continuing to investigate how to improve the measure of public sector output as part of planned improvements to the NICEI series. This includes the assessment of various output measures for different public sector functions and analysis of public sector expenditure data and appropriate deflators.
- Another factor to bear in mind relates to the fact that the Index of Construction component of the NICEI only covers the output of construction firms' activity in Northern Ireland. There is evidence to suggest that since the downturn many NI construction firms have been sending employees to work in projects based outside NI. NISRA is currently investigating the feasibility of including the value of such work in the construction index.

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<sup>2</sup> [Land and Property Services, New Dwellings Statistics, Q4 2015](#)

<sup>3</sup> [Council of Mortgage Lenders, February 2015](#)

<sup>4</sup> [NI Courts and Tribunals Service – Mortgages: Actions for Possession bulletin October to December 2015](#)

## 2

## NI Composite Economic Index Quarter 4 (October to December) 2015

The NICEI is an experimental quarterly measure of the performance of the Northern Ireland (NI) economy based on available official statistics. Existing published quarterly indices (i.e. Index of Services (IOS), Index of Production (IOP), Index of Construction (IOC), and public sector employee jobs data from the Quarterly Employment Survey (QES), plus unpublished agricultural output data from DARD) are weighted using ONS Regional Accounts Gross Value Added (GVA) data to provide a proxy measure of total economic output in the NI economy on a quarterly basis.

### Key results (by private and public sector indices)

NI economic activity is estimated to have

- increased by 0.4% in real terms from Quarter 3 2015 to Quarter 4 2015;
- it also increased by 0.9% over the year.

Private sector output

- increased by 0.7% in real terms over the quarter;
- and recorded growth (2.0%) compared to the same quarter one year ago.

The Public sector jobs index

- fell by 0.5% over the quarter; and
- decreased by 2.4% compared to Quarter 4 2014.

On a slightly longer timeframe, the NICEI results show that annual output averaged over the four quarters to Quarter 4 2015 compared to the previous four quarters increased by 1.4% in real terms. This represents an improvement on 2014 when the growth rate was 0.7% compared to 2013.

- The Private sector index increased by 2.3% in 2015 compared to 2014 which had a growth rate of 1.6% compared to 2013;
- Whilst the Public sector jobs index decreased by 1.3% over the same period.

Table 1 provides a summary of changes over the quarter, year and rolling four quarters for the NICEI and its private and public sector jobs sub-indices.

**Table 1: Overview of performance of Northern Ireland Economy, Quarter 4 2015**

	Change on quarter	Change on year	Rolling annual average change <sup>5</sup>
NICEI	0.4%	0.9%	1.4%
NI Private Sector	0.7%	2.0%	2.3%
NI Public Sector jobs	-0.5%	-2.4%	-1.3%

<sup>5</sup> Most recent 4 quarters compared to previous 4 quarters  
NI Composite Economic Index Statistical Bulletin published 14<sup>th</sup> April 2016

# 3

## Contribution to change

### Change over the quarter

Latest results show that over the quarter to Quarter 4 (October-December) 2015:

- NI economic activity increased by 0.4%;
- the Private sector index experienced growth of 0.7%; and
- the index for the Public sector jobs decreased over the quarter by 0.5%.

The change (0.4%) in the NICEI over the latest quarter was driven by increases in the:

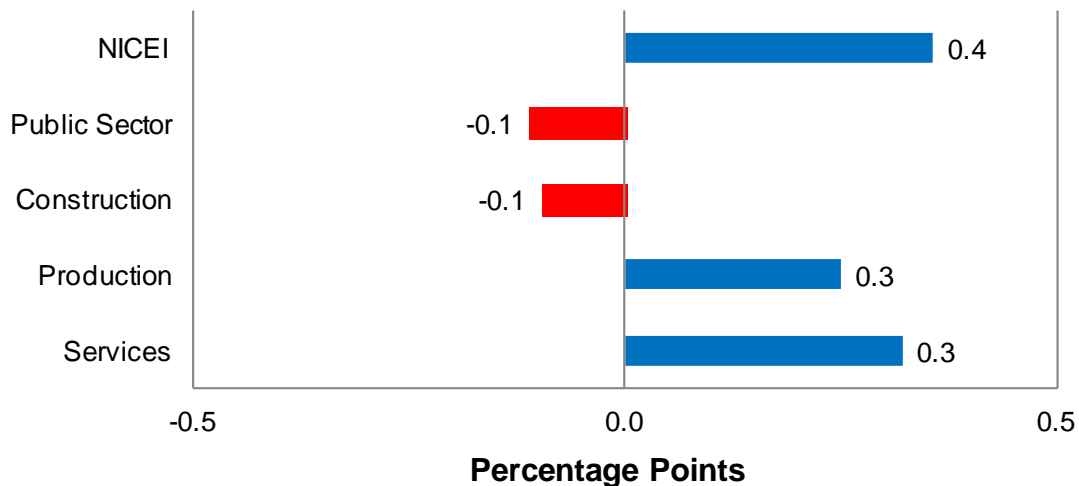
- Services sector (a contribution of 0.3 percentage points (pps)); and
- Production sector (a contribution of 0.3 pps).

These increases were offset by decreases in the:

- Public sector jobs index (a contribution of -0.1 pps); and
- the Construction sector index (a contribution of -0.1 pps).

The changes in each of these individual series can be found in Table 2 at the end of this document.

**Figure 2: Contributions of component indices to quarterly change in the NICEI Q4 2015<sup>6</sup>**



### Change over the year

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The NICEI results show that over the year (Quarter 4 2014 to Quarter 4 2015):

- NI economic activity increased by 0.9%;
- the Private sector index experienced growth of 2.0%; and
- the index for the Public sector jobs decreased over the year by 2.4%.

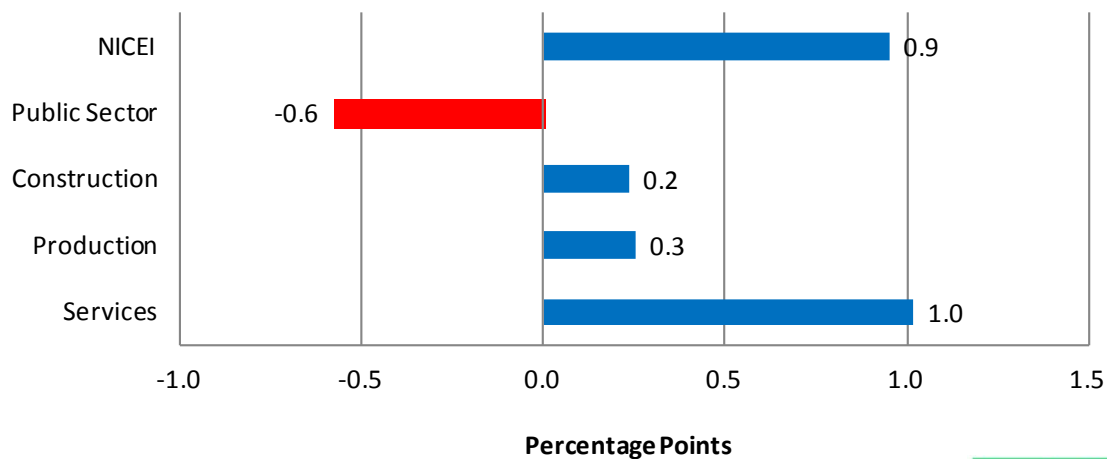
The increase in the NICEI over the year (0.9%) was driven by increases in:

- the Services sector (a contribution of 1.0 pps);
- the Production sector (a contribution of 0.3 pps); and
- the Construction sector (a contribution of 0.2 pps).

These increases were offset by a decrease in the Public sector jobs index (a contribution of -0.6 pps).

<sup>6</sup> Please note figures may not sum due to rounding

**Figure 3: Contributions of component indices to annual change in the NICEI Q4 2015<sup>7</sup>**



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### Rolling annual average change

Looking at annual output (averaged over the four quarters to Quarter 4 2015) compared to the average of the previous four quarters the results show:

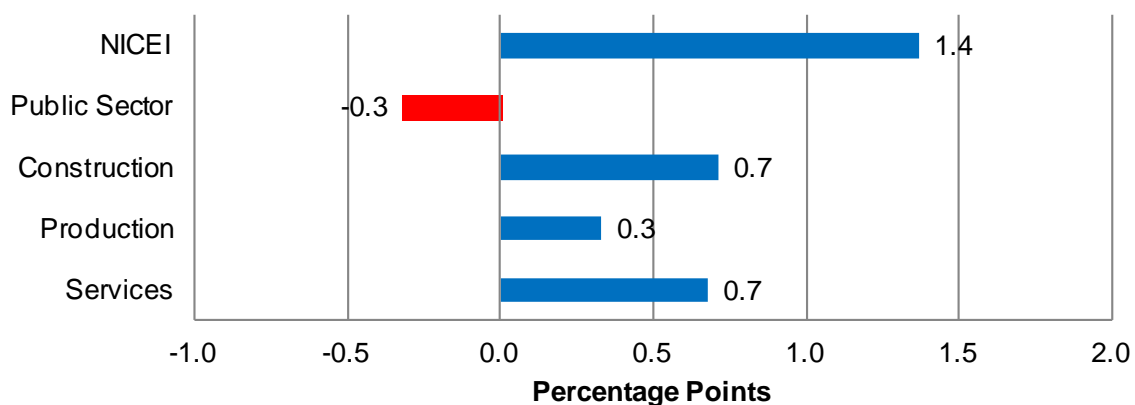
- NI economic output increased in real terms by 1.4%;
- The Private sector index experienced growth of 2.3%; and
- The Public sector jobs index decreased by 1.3%.

The growth in the NICEI (1.4%) over this period was a combination of increases in:

- the Construction sector (contribution of 0.7 pps);
- the Services sector (contribution of 0.7 pps); and
- the Production sector (contribution of 0.3 pps).

These increases were offset by a decrease in the Public sector jobs index (contribution of -0.3 pps).

**Figure 4: Contributions of component indices to rolling annual average change in the NICEI, Q4 2015**



[Download in excel](#)

<sup>7</sup> Please note figures may not sum due to rounding

# 4

## Comparison with measures of GDP

The NICEI is not equivalent to the Office for National Statistics (ONS) quarterly measure of change in Gross Domestic Product (GDP) for the whole UK economy. This is because the ONS measure is based on a broader range of sources including output, income and expenditure estimates of economic activity, whereas the NICEI is based on output and employee jobs data. However, when applied to the equivalent UK data sources, the NICEI methodology has been shown to provide a close short term approximation to the UK GDP series (see [NICEI Methodology Paper](#)).

Although the measures are not produced on a fully equivalent basis, comparisons with the UK show that NI output increased by 0.4% over the quarter whilst the UK GDP<sup>8</sup> increased by 0.6% from Quarter 3 to Quarter 4 2015. The UK economy also grew by 2.1% over the year to Quarter 4 2015 whereas NI output increased by 0.9%.

When the extent of change is considered over the last two years, it can be seen that average GDP growth for the four quarters to Quarter 4 2015 for the UK was 2.3% compared to the previous four quarters. The NI growth rate was 1.4% over the same period.

The UK has reported GDP growth in each of the last 12 quarters, whereas the NICEI has reported growth in 8 of the last 12 quarters. The NICEI is currently 3.1% above the minimum recorded in Q3 2012 whereas UK GDP is 13.9% above the minimum value (since the pre-downturn peak of Q1 2008) recorded in Q2 2009. This continues to suggest that NI has had a much slower recovery than that of the UK as a whole.

The most recent results show that Scottish GDP<sup>9</sup> grew by 0.2% during the fourth quarter of 2015 and increased by 0.9% over the year compared to Quarter 4 2014. The average growth for the four quarters to Quarter 4 2015 compared to the previous four quarters was 1.9%.

Looking at the Republic of Ireland Quarterly National Accounts<sup>10</sup>, the Irish economy has been growing at a faster pace than the UK, reporting GDP growth of 2.7% over the quarter to Quarter 4 2015. Over the year to Quarter 4 2015 GDP increased by 9.3%, with an average annual growth of 7.8% (latest four quarters compared to the previous four quarters).

Please note that a table showing a comparison of the NI Composite Economic Index and GDP for the UK, Scotland and Republic of Ireland can be found in the downloadable tables on the [ELMSB](#) and [NINIS](#) websites.

<sup>8</sup> [ONS Quarterly National Accounts](#), Quarter 4 (Oct to Dec) 2015 (The measure of GDP referred to is the chained volume index of GDP at market prices)

<sup>9</sup> [Scottish Government Quarterly National Accounts, Quarter 4 2015](#)

<sup>10</sup> [CSO Quarterly National Accounts, Quarter 4 2015](#)

Results for the NICEI indicate that in real terms growth between 2012 and 2013 was essentially flat (0.1% increase), though the growth rate increased to 0.7% between 2013 and 2014, and to 1.4% between 2014 and 2015. The most recent quarterly results show a return to growth (0.4%) following a decrease between Quarter 2 and Quarter 3 2015.

Although the sources are not fully comparable, there is continuing evidence that the annual average rate of growth in the NI economy (1.4%) to Quarter 4 2015 lags behind that of the UK (2.3%). This is despite the fact that NI growth in 2015 (1.4%) was twice that recorded in 2014 (0.7%).

The most recent unemployment figures show that unemployment fell over the quarter by 0.1 percentage points (to 6.0%) in November-January 2016. The average unemployment rate for 2015 was 6.1% which was slightly lower than the average rate of 6.4% in 2014.

The most recent [Quarterly Employment Survey](#) also shows that the number of jobs has increased over the fourth quarter of 2015 and over the last year.

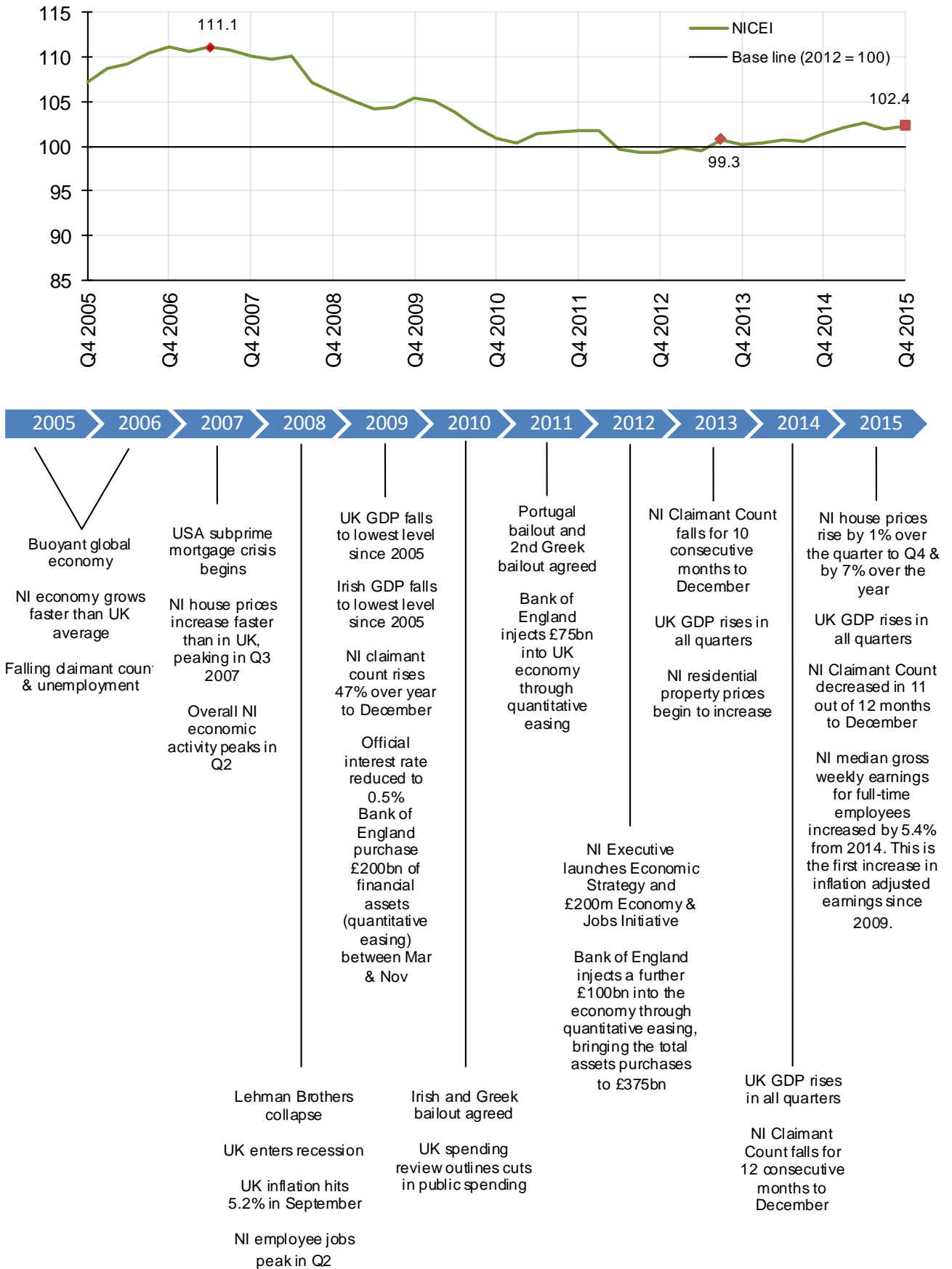
NI Private sector growth in the four quarters to Quarter 4 2015 averaged 2.3% compared to the four quarters of 2014, and outstripped growth for the NI economy as a whole.

Apart from the public sector, annual growth between Quarter 4 2014 and Quarter 4 2015 has been reported in the Construction, Services and Production sectors, with the Services sector making the largest contribution to growth over the year to December 2015.

An overview of the NICEI time series alongside an economic timeline of key world, European, UK and NI events to help place the performance of the NICEI into context is provided overleaf.



**Figure 5: Overview of the performance of the NICEI alongside a timeline of key economic events, 2005-15**



Further information on the state of the Northern Ireland economy, setting it in context with the UK and Republic of Ireland can be found in the latest Department of Enterprise, Trade and Investment (DETI) [Economic Commentary](#).

## Coverage

Together the existing IOS, IOP and IOC indices cover their respective elements of the private sector economy. Output data currently provided by DARD is unpublished and as such we are not able to disclose this data. No appropriate output data for the Public sector is collected in Northern Ireland and as a best available proxy public sector employment from the Quarterly Employment Survey (QES) was used, as recommended by ONS.

Further information on the main input data is presented below:

**IOP:** The quarterly NI Index of Production is currently based on a sample of around 1,000 businesses, which covers approximately 93% of the turnover of the population at the time of selection and a response rate of almost 90%. This includes a **census of all companies employing 40 or more employees as well as those employing 0 to 39 employees and having a turnover of £10 million or more**. The new sample has been designed to have a minimum precision of 10% for each of the production subsectors.

**IOS:** The quarterly NI Index of Services is currently based on a sample of around 3,300 businesses out of a population of c. 37,000. The sample consists of a census of dominant companies and a Neyman stratified random sample of the remaining companies and covers approximately 72% of turnover. The **census element consists of all companies employing 100 or more employees as well as those employing 0 to 99 employees and having a turnover of £10 million or more**.

**IOC:** From a sampling universe of approximately 10,000 firms, a disproportionate sample of 700 construction firms is randomly selected to take part in the NI Quarterly Construction Enquiry. The sample is disproportionately stratified (into six strata) using IDBR turnover as the stratification variable. This includes a **census of all companies with a turnover of £5.25m or greater**. Further information on the IOC sample coverage and methodology can be found [here](#).

## Weighting and Combining the Data

The output series were produced as weighted aggregates of the above input series, where the weights were based on Gross Value Added (GVA)<sup>11</sup> by industry obtained for Northern Ireland from Regional Accounts produced by ONS.

Please note that the latest available GVA by industry published in December 2015 refers to the year 2014.

## Annual Chain-Linking

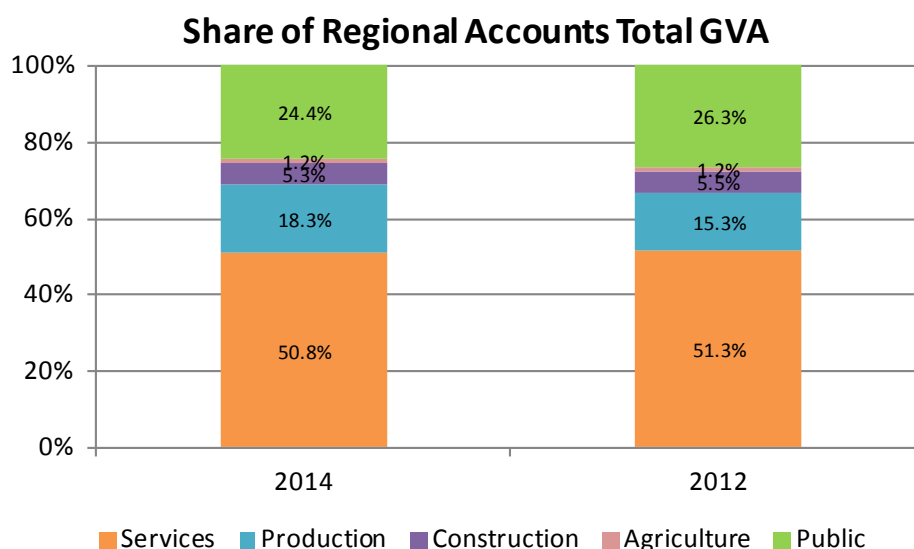
Annual chain-linking was used to combine the private Services, Production, Construction and Agriculture sectors to produce an index for the Private sector, which was then combined with the index for the Public sector to give an overall index for the economy. Use of annual chain-linking is standard National Accounts practice.

The industry shares published by ONS in December 2015 relating to 2014 GVA were used to update the NICEI weights in this publication; as such the impact of changes of each sector on the overall index will be different compared to those previously reported. The change in the share of GVA based on 2014 and 2015 regional accounts figures is presented below.

<sup>11</sup> Please note that a glossary of national accounts terms and definitions can be found [here](#).  
NI Composite Economic Index Statistical Bulletin published 14<sup>th</sup> April 2016

Please note that the 2015 regional accounts publication provided industry level data up to 2014, whereas previously industry level data was only available up to two years after the reference period i.e. the 2014 regional accounts only had industry level data up to 2012. Therefore the graph below shows the difference between the shares based on 2014 and 2012 GVA values. The 2014 values are based on the most recent GVA figures published by ONS (December 2015) whilst the 2012 figures are based on the data published in December 2014 (the most up to date weights at that time and those which were used as weights prior to new data becoming available in December 2015).

**Figure 6: Share of Regional Accounts Total GVA**



The main change is that the share of the Production sector has increased (+2.9 pps) with the Public sector share decreasing by 1.9 pps and the Services and Construction sectors also decreasing (-0.5 pps and -0.2 pps respectively).

### Seasonal Adjustment of the Indices

The indirect method of seasonal adjustment was employed. Seasonally adjusted figures were input (where possible) and when the combined output series were tested for seasonality there was no residual seasonality found, therefore no seasonal adjustment was required.

### Base and reference year

As part of the Blue Book process (UK National Accounts), and in line with Eurostat guidance, the base year and reference year for chained volume estimates are moved forward by one year so that the estimates better reflect the industrial structures and prices currently seen within the economy. Re-referencing on its own does not cause revisions to real growth rates, but the rebasing process, taking on as it does new Gross Value Added and product weights from the supply and use balancing process, will cause revisions to the growth rates of chained volume components.

### Public Sector Employees

The public sector employee jobs figures used in our analysis are sourced from the Office for National Statistics who compile the figures to produce their [Public Sector Employment publications](#). The public sector comprises central government, local government and public corporations as defined for the UK National Accounts.

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# Annex 1: Index Tables

The table below provides an overview of the index tables for the Composite Economic Index and its constituent indices. The arrows in the cells indicate whether the index has increased/decreased/remained constant from the previous quarter.

Key:  Maximum value reached  
 Minimum value reached

**Table 2: Overview of NICEI and component indices**

[Download in excel](#)

	Quarter	Composite Economic Index	Private sector	Public sector	Services	Production	Construction
2005	1	105.2	106.3	102.3	105.4	97.5	149.1
	2	↑ 106.0	↑ 107.4	↑ 102.8	↑ 106.2	↑ 98.2	↑ 153.1
	3	→ 106.0	↓ 107.2	↑ 103.1	↑ 106.3	↓ 95.8	↑ 157.5
	4	↑ 107.1	↑ 108.7	↑ 103.2	↑ 109.5	↑ 96.1	↓ 148.9
2006	1	↑ 108.8	↑ 111.0	→ 103.2	↑ 110.5	↑ 99.1	↑ 159.0
	2	↑ 109.2	↑ 111.7	↓ 103.1	↑ 110.9	↑ 100.9	↑ 159.6
	3	↑ 110.5	↑ 113.3	↑ 103.2	↑ 112.4	↑ 101.0	↑ 168.1
	4	↑ 111.1	↑ 114.2	↓ 103.0	↑ 113.8	↑ 101.3	↓ 167.5
2007	1	↓ 110.6	↓ 113.7	↓ 102.9	↓ 113.1	↑ 101.4	↓ 163.6
	2	↑ 111.1	↑ 114.2	↑ 103.1	→ 113.1	↑ 102.2	↑ 169.2
	3	↓ 110.8	↓ 114.0	↓ 102.5	↓ 112.7	↑ 105.4	↓ 161.6
	4	↓ 110.2	↓ 113.1	↑ 102.7	↓ 111.3	↑ 107.2	↓ 154.8
2008	1	↓ 109.7	↓ 112.4	→ 102.7	→ 111.3	↓ 106.0	↓ 148.8
	2	↑ 110.1	↑ 113.3	↓ 102.0	↑ 111.7	↑ 106.6	↑ 155.5
	3	↓ 107.1	↓ 109.5	↓ 101.1	↓ 108.6	↓ 104.0	↓ 143.6
	4	↓ 106.1	↓ 106.7	↑ 104.8	↓ 106.3	↓ 98.7	↓ 141.1
2009	1	↓ 105.0	↓ 105.1	→ 104.8	↓ 105.3	↓ 94.8	↓ 138.7
	2	↓ 104.2	↓ 103.9	↑ 105.1	↓ 104.7	↓ 92.4	↓ 136.6
	3	↑ 104.4	↑ 104.0	↑ 105.4	↑ 105.5	↓ 91.3	↓ 135.7
	4	↑ 105.5	↑ 105.6	↓ 105.2	↑ 107.7	↑ 92.2	↓ 133.1
2010	1	↓ 105.0	↓ 105.3	↓ 104.4	↓ 107.5	↑ 93.4	↓ 125.5
	2	↓ 103.9	↓ 104.0	↓ 103.6	↓ 106.0	↑ 93.6	↓ 121.2
	3	↓ 102.2	↓ 102.0	↓ 102.7	↓ 102.8	↑ 94.2	↑ 121.8
	4	↓ 100.9	↓ 100.3	↓ 102.5	↓ 99.9	↑ 97.4	↓ 113.9
2011	1	↓ 100.3	↓ 99.7	↓ 101.9	↓ 98.9	↑ 98.6	↓ 109.6
	2	↑ 101.4	↑ 101.5	↓ 101.3	↑ 101.9	↑ 100.5	↓ 101.4
	3	↑ 101.6	↑ 102.0	↓ 100.6	↓ 101.8	↑ 102.8	↑ 103.5
	4	↑ 101.8	↑ 102.4	↓ 100.0	↑ 102.0	↑ 103.5	↑ 104.1
2012	1	↓ 101.7	↓ 102.2	↑ 100.1	↓ 101.2	↓ 102.1	↑ 111.3
	2	↓ 99.8	↓ 99.7	↓ 99.8	↓ 99.6	↓ 100.8	↓ 97.9
	3	↓ 99.3	↓ 99.1	→ 99.8	→ 99.6	↓ 99.1	↓ 95.1
	4	→ 99.3	↓ 99.0	↑ 100.2	→ 99.6	↓ 98.1	↑ 95.8
2013	1	↑ 99.8	↑ 99.6	↑ 100.4	↑ 99.8	↑ 99.6	↑ 96.3
	2	↓ 99.6	↓ 99.3	→ 100.4	↑ 100.2	↓ 99.1	↓ 90.9
	3	↑ 100.8	↑ 100.8	↑ 100.6	↑ 101.3	↑ 102.3	↑ 92.9
	4	↓ 100.2	→ 100.8	↓ 98.5	↑ 101.5	↑ 102.9	↓ 86.8
2014	1	↑ 100.4	↑ 101.3	↓ 97.9	↑ 101.9	↓ 102.3	↑ 91.2
	2	↑ 100.8	↑ 101.8	↑ 98.0	↑ 102.2	↑ 103.3	↑ 91.6
	3	↓ 100.6	↓ 101.5	↑ 98.2	↓ 101.9	↓ 103.2	↑ 92.9
	4	↑ 101.4	↑ 102.5	↑ 98.3	↑ 102.4	↑ 103.9	↑ 98.0
2015	1	↑ 102.2	↑ 103.7	↓ 97.9	↓ 102.3	↑ 105.6	↑ 107.6
	2	↑ 102.6	↑ 104.4	↓ 97.2	↑ 103.3	↓ 105.4	↑ 109.7
	3	↓ 101.9	↓ 103.9	↓ 96.3	↑ 103.7	↓ 103.9	↓ 104.3
	4	↑ 102.4	↑ 104.6	↓ 95.8	↑ 104.4	↑ 105.3	↓ 102.5

	NICEI	Private Sector	Public Sector	Services	Production	Construction
Q/Q	0.4%	0.7%	-0.5%	0.6%	1.3%	-1.8%
Y/Y	0.9%	2.0%	-2.4%	2.0%	1.3%	4.6%
most recent 4 Qs vs previous 4 Qs	1.4%	2.3%	-1.3%	1.3%	1.8%	13.5%