# UK Innovation Survey 2015: Northern Ireland Results

Northern Ireland Statistics & Research agency

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## Key Points

- In 2012-14, more Northern Ireland (NI) businesses were innovation active than in 2010-12.
- Forty five per cent of enterprises in NI were estimated to be innovation active in the three year period 2012-14 (up from 40% in 2010-12[1]). This is lower than the equivalent UK figure of 53% (up from 45% in 2010-12).
- At 45%, NI was estimated to be the least innovation active country in the UK, whilst a comparison with Great Britain (GB) regions showed NI had moved from the least innovation active in 2010 - 2012 to the second least innovative in 2012 - 2014.
- In NI, large enterprises with 250 or more employees were more likely to engage in some sort of innovation activity with 66% estimated to be innovation active, compared to 44% of SMEs[2]. Large enterprises in NI tended to be slightly more innovation active than in the UK as a whole where 61% of large enterprises were innovation active, compared to 53% of UK SMEs.
- The difference between the proportions of enterprises that were product innovators in NI (14%) and the UK (19%) and process innovators (NI: 9%, UK: 13%) during 2012-14, remained similar compared to 2010-12.
- Manufacturing was the most innovative sector in NI. In particular, 'Manufacturing of Electrical and Optical Equipment' (87% innovation active) and 'Manufacturing of Transport Equipment' (84% innovation active).
- The most commonly reported innovation investments were in the acquisitions of computer software and hardware, followed by investment in advanced machinery
- Improving the quality of goods or services was the main factor driving innovation in NI and the UK as a whole. Enterprises reporting no innovation were the most likely to respond that there was no need due to market conditions.

Figure 1 below shows the rate of innovation activity for businesses across the countries and regions of the UK.

**Figure 1: Rate of innovation active businesses - country and regional innovation patterns**


[1]The 2010 - 2012 UK and NI figures provided in the previous NI publication were revised by BIS in October 2014. Full revisions can be accessed at https://www.gov.uk/government/collections/community-innovation-survey

[2]SMEs are defined here as having 10-249 employees. They may be part of an enterprise group.

# Contents

# 1. Introduction & context

The UK Innovation Survey (UKIS) provides a range of information related to innovation activity among enterprises, and includes information on the extent of innovation activity, the impact of innovation on businesses and the barriers to innovation.

This report presents results from the Northern Ireland (NI) element of the UKIS 2015, covering the three-year period from 2012 to 2014. The UK-level results can be found on the Department for Business, Innovation and Skills (BIS) website [3]. This is part of a wider European Community Innovation Survey (CIS) and is the ninth such survey, with the previous survey being undertaken in 2013[4]. EU-wide results will be published once national results are available.

Business innovation is a vital ingredient in raising the productivity, competitiveness and growth potential of modern economies. It is a key objective for the Northern Ireland Executive to encourage NI businesses to become more innovative and the key actions to achieve this are set out in the Innovation Strategy for Northern Ireland 2014-2025[5]. The importance of business innovation is also reflected in the Draft Programme for Government Framework 2016-21.[6]

The CIS complements other indicators of innovation by providing a regular snapshot of innovation inputs and outputs and the constraints faced by NI businesses in their innovation efforts, across the range of industries and business enterprises. It has the additional benefit of providing the basis for some comparisons with other European countries.

The survey samples enterprises with 10 or more employees in sections B to N of the Standard Industrial Classification (SIC) 2007. This is the third survey using a sample based on SIC 2007, which enables a more consistent comparison with the 2011 and 2013 survey data in the time series. Further information relating to coverage and sampling is contained in the Background Notes section.

With 756 of the 1493 enterprises selected responding, the NI element of the survey had a response rate of 51% (At the UK level a response rate of 51% was also achieved). In order to be representative, the responses have been weighted back to the population and this is reflected in the results shown throughout the publication.

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[3] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/506953/bis-16-134-uk-innovation-survey-2015.pdf

[4] The 2013 survey covers 2010-12

[5] https://www.economy-ni.gov.uk/publications/northern-ireland-innovation-strategy

[6] https://www.northernireland.gov.uk/sites/default/files/consultations/newnigov/draft-pfg-framework-2016-21.pdf

## 1.1 Definitions

The UK definition of innovation follows the EU-wide definition adopted by Eurostat. This definition of 'innovation active' includes any of the activities described below that enterprises were engaged in during the survey period:

1. Introduction of a new or significantly improved product (good or service) or process;

2. Engagement in innovation projects not yet complete or abandoned;

3. New and significantly improved forms of organisation, business structures or practices and marketing concepts or strategies;

4. Activities in areas such as internal research and development, training, acquisition of external knowledge or machinery and equipment linked to innovation activities;

This definition excludes expenditure and activities related to innovation.

For the purpose of the UK innovation survey and in line with the European-wide Community innovation survey a business that has engaged in any of the activities 1 to 3 is defined as **'innovation active'**.

For the purpose of this report a business that has engaged in any of the activities described in points 1 to 4 above is defined as a **'broader innovator'**. We define a '**wider innovator'** as a business that has engaged in the activity described in point 3.

# 2. Summary & commentary

## 2.1 Innovation activity

The results of the 2015 UKIS and revised results from the 2013 UKIS show that 45% of NI enterprises were estimated to be innovation active in 2012-14. The equivalent UK figure was 53% in 2012-14.

**Table 1: Proportion of enterprises engaging in innovation activity, by size and type of activity**

| Type of Activity | Size of Enterprise | | | | | |
|---|---|---|---|---|---|---|
| | SMEs | | Large | | All | |
| | NI % | UK% | NI % | UK% | NI % | UK% |
| **2015** | | | | | | |
| Innovation active | 44 | 53 | 66 | 61 | 45 | 53 |
| Broader innovator | 45 | 54 | 66 | 62 | 46 | 54 |
| Product Innovator | 13 | 19 | 26 | 27 | 14 | 19 |
| *of which (share with new-to-market products)* | 35 | 31 | 33 | 39 | 35 | 31 |
| Process innovator | 9 | 13 | 20 | 20 | 9 | 13 |
| *of which (share with new-to-industry processes)* | * | 26 | * | 24 | 29 | 26 |
| Abandoned activities | 4 | 4 | 10 | 7 | 4 | 4 |
| On-going activities | 18 | 17 | 26 | 24 | 18 | 17 |
| Innovation-related expenditure | 39 | 43 | 56 | 50 | 40 | 44 |
| Both product AND process innovator | 5 | 8 | 17 | 13 | 6 | 8 |
| Either product OR process innovator | 17 | 24 | 29 | 34 | 17 | 24 |
| **2013** | | | | | | |
| Innovation active | 40 | 45 | 48 | 50 | 40 | 45 |
| Broader innovator | 41 | 46 | 48 | 51 | 40 | 46 |
| Product Innovator | 15 | 18 | 24 | 23 | 15 | 18 |
| *of which (share with new-to-market products)* | 32 | 44 | 48 | 50 | 33 | 44 |
| Process innovator | 8 | 10 | 15 | 15 | 8 | 10 |
| *of which (share with new-to-industry processes)* | * | 23 | * | 26 | 18 | 23 |
| Abandoned activities | 4 | 4 | 7 | 5 | 4 | 4 |
| On-going activities | 11 | 15 | 18 | 19 | 12 | 15 |
| Innovation-related expenditure | 36 | 39 | 35 | 43 | 35 | 39 |
| Both product AND process innovator | 5 | 7 | 9 | 10 | 5 | 7 |
| Either product OR process innovator | 18 | 21 | 30 | 28 | 18 | 22 |

** = Cells have been suppressed to protect confidentiality*

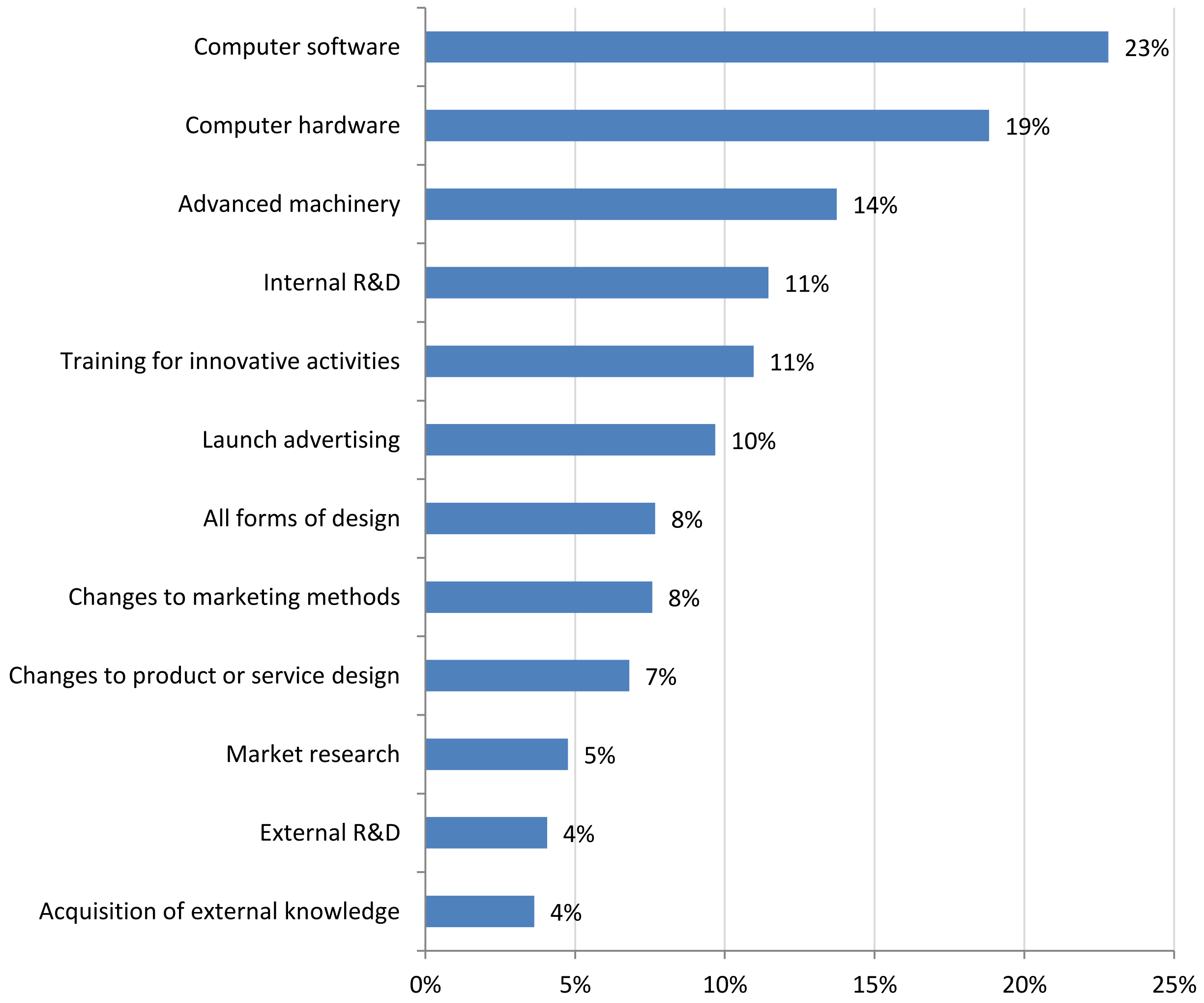
Comparisons between the 2013 and 2015 surveys (Table 1) indicate that the proportion of firms in NI engaged in innovation activity have increased over the period. Forty per cent of businesses were innovation active in 2010-12, rising to 45% during 2012-14. Comparable figures for the UK have also increased over the period, from 45% in 2010-12 to 53% in 2012-14.

Table 1 shows that large enterprises with 250 or more employees were more likely to engage in some sort of innovation activity, with 66% innovation active (48% in 2013), compared to 44% (2013: 40%) of SMEs. This was also the case at UK level, with 61% of large enterprises innovation active (50% in 2013) compared to 53% (2013: 45%) of SMEs.

The difference between the proportions of enterprises that were product innovators in NI (14%) and the UK (19%) and process innovators (NI, 9 % and the UK 13 %) during 2012-14, remained similar when compared to 2010-12.

4% of both NI and UK enterprises had projects during the period to develop product or process innovations that had to be abandoned before the end of 2014, while 18% of NI enterprises (UK: 17%) had innovation projects that were ongoing at the end of 2014. Forty per cent of NI and 44% of UK enterprises had some innovation-related expenditure during 2012-14, showing that businesses recognise the need to allocate resources to innovation.

**Figure 2: Breakdown of innovation activities by type of investment – all enterprises**



As shown in Figure 2 the most commonly reported activities were in the acquisitions of computer software and hardware, followed by advanced machinery and internal R&D. Computer software and computer hardware were also ranked as the top three highest expenditure categories in the 2013 survey.

## 2.2 Innovation by industry type

**Table 2: Innovation active businesses by industry over two survey periods (percentage of all enterprises)**

| Industry | Year | | | | | |
|---|---|---|---|---|---|---|
| | 2015 | | 2013 | | Percentage point change | |
| | NI % | UK% | NI % | UK% | NI | UK |
| **Production and Construction Sector** | | | | | | |
| Manufacture of electrical and optical equipment | 87 | 71 | 70 | 62 | 18 | 9 |
| Fuels, chemicals, plastic, metals and minerals | 53 | 64 | 61 | 52 | -9 | 12 |
| Manufacturing not elsewhere classified | 61 | 59 | 37 | 55 | 24 | 4 |
| Manufacture of Transport equipment | 84 | 70 | 83 | 55 | 1 | 15 |
| Food, clothing, wood, paper, publishing & printing | 51 | 61 | 46 | 53 | 5 | 9 |
| Electricity, gas and water supply | 67 | 47 | 59 | 42 | 9 | 5 |
| Construction | 45 | 46 | 35 | 41 | 10 | 5 |
| Mining and quarrying | * | 48 | * | 39 | * | 9 |
| **Distribution and Services Sector** | | | | | | |
| Real estate, renting and business activities | 52 | 55 | 45 | 43 | 8 | 12 |
| Financial intermediation | 70 | 59 | 71 | 45 | -2 | 14 |
| Transport, storage and communication | 42 | 50 | 43 | 38 | -1 | 12 |
| Wholesale trade (including cars and bikes) | 42 | 54 | 38 | 41 | 4 | 13 |
| Retail trade (excluding cars and bikes) | 33 | 48 | 32 | 46 | 1 | 3 |
| Hotels and restaurants | 38 | 47 | 31 | 38 | 8 | 10 |
| Motion Picture and Video Production | * | 51 | * | 48 | * | 3 |
| **ALL INDUSTRIES** | **45** | **53** | **40** | **45** | **5** | **8** |

Note: Figures may not add due to rounding
** = Cells have been suppressed to protect confidentiality*

As shown in Table 2, the percentage of firms reported to be innovation active varied considerably across industrial and commercial sectors. In the production and construction sector, manufacture of electrical and optical equipment had the highest proportion of innovation active enterprises (87%) followed by transport equipment at 84%.

In the distribution and services sector, financial intermediation had the highest proportion of innovation active enterprises (70%), whilst retail trade (excluding cars and bikes) had the lowest at 33%. In the UK as a whole, financial intermediation was also the most innovative sector (59%).

## 2.3 Factors driving innovation

Businesses defined as 'broader innovators[7]' were asked to rank a variety of drivers for innovating on a scale from no impact to low, medium or high impact. Table 4 shows the proportion of businesses that had rated 'high' in each of the innovation factors presented to them. The proportion of respondents who answered 'high' in each category is shown in Table 3.

**Table 3: Innovation factors (percentage of all broader innovators rating "high")**

| Factor | | Size of enterprise | | | | | |
|---|---|---|---|---|---|---|---|
| | | SMEs | | Large | | All | |
| | | NI | UK | NI | UK | NI | UK |
| Product-related | Improving quality of goods or services | 42 | 33 | 57 | 44 | 42 | 33 |
| | Increasing range of goods or services | 29 | 29 | 35 | 35 | 29 | 29 |
| | Entering new markets | 20 | 19 | 19 | 22 | 20 | 19 |
| | Increasing market share | 25 | 25 | 43 | 37 | 26 | 26 |
| | Improving flexibility of production or service provision | 19 | 17 | 35 | 22 | 20 | 17 |
| Process-related | Improving capacity for producing goods or services | 16 | 18 | 35 | 23 | 17 | 18 |
| | Reducing costs per unit produced or service provided | 28 | 18 | 41 | 26 | 28 | 18 |
| Product and Process related | Replacing outdated products or processes | 34 | 31 | 28 | 34 | 33 | 32 |
| | Increasing value added | 29 | 24 | 34 | 32 | 29 | 24 |
| Other | Meeting regulatory requirements | 21 | 16 | 21 | 22 | 21 | 16 |
| | Reducing environmental impacts | 17 | 9 | 13 | 14 | 17 | 9 |
| | Improving health and safety | 24 | 12 | 14 | 17 | 24 | 12 |

[7] The difference between businesses defined as 'Broader Innovators' and 'Innovation Active' businesses is the inclusion of the responses provided for the expenditure and activities linked to innovation. In other words, 'Broader Innovators' are the innovation active businesses that also provide information regarding their R&D related investments.

Similar to findings from the 2013 survey, in general, product-related factors were more often cited than process factors at both NI and UK level. 4 2% of NI and 33% of UK respondents rated improving the quality of goods or services as highly important, confirming a strongly customer-focused approach to innovation. Increasing the range of goods or services, increasing market share and replacing outdated products or processes were also widely reported drivers.

For large enterprises in NI and the UK, product related factors were again generally seen as the most important drivers for innovation activities. The most commonly reported driver for SMEs in NI and the UK was the improvement in quality of goods or services that innovation would bring.

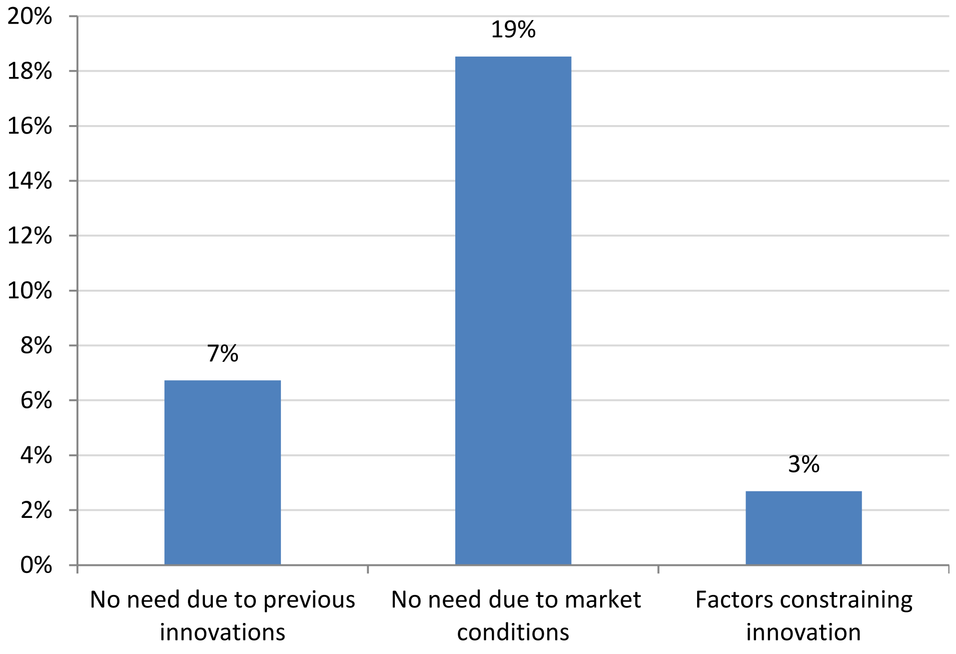
The least cited factors in NI were improving the capacity for producing goods or services and reducing environmental impacts, with 17% of respondents rating each factor as highly important. Just 9% of UK respondents cited reducing environmental impacts as a highly important driver for innovation.

## 2.4 Constraints on innovation

Businesses that reported having no innovation activity during the survey period were asked to indicate why it had not been necessary or possible to innovate. They were offered the response categories presented in Figure 3 alongside a response category saying 'none of these apply'.

Seventy-three per cent said that none applied in their case. 19% said there was no need due to market conditions, while 7% felt that there was no need due to previous innovations. 3% said there were factors constraining innovation.

**Figure 3: Reasons why enterprises did not innovate during 2012 - 2014 (non innovative firms only)**



## 2.5 Sources of information and co-operation for innovation

Introducing innovation is an increasingly complex process, requiring the co-ordination of multiple inputs. It is therefore important to know how far enterprises engage with external sources of technology and other innovation-related knowledge and information. Businesses can gain guidance, advice or even inspiration for their prospective innovation projects from a variety of both public and private sources.

Respondents were asked to rank a number of potential information sources on a scale from 'no relationship' to 'high importance'. The proportion which answered 'high' in each category is shown in Table 4. These sources are:

- **Internal:** from within the enterprise itself or from other enterprises within the enterprise group;

- **Market:** from suppliers, customers, clients, consultants, competitors, other businesses, commercial laboratories or private research and development institutes;

- **Institutional:** from the public sector such as government research organisations and universities; or

- **Other:** from conferences, trade fairs, exhibitions, scientific journals, trade/technical publications, professional or industry associations or technical, industry or service standards.

SMEs and large enterprises in NI and the UK reported internal and market sources as most important for information on innovation. This suggests that enterprises tend to rely on their own experience and knowledge coupled with information from suppliers, customers and clients.

In NI, 43% of respondents felt their own experience and knowledge was a highly important source of information during 2012-14, compared to the equivalent UK figure of 47%. However, both figures are lower than that reported in the 2013 survey; 45% for NI and 51% for the UK.

Similar to the 2013 survey period, institutional sources were considered to be of lowest importance among NI and UK enterprises. 2% of both UK and NI businesses mentioned 'universities or other higher education institutions' while 4% of NI and 2% of UK cited 'government or public research institutes'.

**Table 4: Enterprises rating Information sources as of 'high' importance (percentage of respondents)**

| Information source | Size of enterprise | | | | | |
|---|---|---|---|---|---|---|
| | SMEs | | Large | | All | |
| | NI | UK | NI | UK | NI | UK |
| **Internal** | | | | | | |
| Within the business or within the enterprise group | 43 | 46 | 57 | 60 | 43 | 47 |
| **Market** | | | | | | |
| Clients or customers from private sector | 28 | 20 | 12 | 26 | 27 | 20 |
| Clients or customers from public sector | * | 9 | * | 12 | 7 | 9 |
| Suppliers of equipment, materials, services or software | 31 | 23 | 36 | 25 | 31 | 23 |
| Competitors or other business in the industry | 11 | 13 | 13 | 16 | 11 | 13 |
| Consultants, commercial laboratories or private research & development institutes | 6 | 4 | 10 | 7 | 6 | 4 |
| **Institutional** | | | | | | |
| Universities or other higher education institutions | * | 2 | * | 3 | 4 | 2 |
| Government or public research institutes | * | 2 | * | 3 | 2 | 2 |
| **Other** | | | | | | |
| Technical, industry or service standards | * | 6 | * | 10 | 8 | 6 |
| Conferences, trade fairs or exhibitions | * | 6 | * | 5 | 8 | 6 |
| Professional and industry associations | * | 6 | * | 7 | 3 | 6 |
| Scientific journals and trade/technical publications | * | 1 | * | 2 | 4 | 1 |

** = Cells have been suppressed to protect confidentiality*

## Innovation Co-Operation

Fifty per cent of collaborative, broader innovators reported co-operation arrangements compared to 37% in 2010-12.

As shown in Table 5, among innovators who collaborated, 72% had agreements that operated at a local/regional level (compared to 81% in the 2013 survey).

The percentage of enterprises in NI which reported co-operation activity showed some change by geography over the year, with the exception of those with arrangements with Other European countries which remained unchanged at 24%. Co-operation with Local Partners (within the UK) decreased by 7 percentage points to 72% and with All Other Countries decreased by 1 percentage point to 16%. Co-operation activity with the UK increased by 5 percentage points to 44%.

The most frequent partners for co-operation among NI broader innovating enterprises were suppliers (60%), and other businesses within the enterprise group (50% of NI). The least likely co-operation arrangement in NI was with government or public research institutes (15% of collaborative, broader innovation active businesses).

**Table 5: Co-operation partners (percentage of collaborative, broader innovation active businesses)**

| Type of partner | Geography of co-operation | | | | |
|---|---|---|---|---|---|
| | Local/ Regional within the UK | UK | Other Europe | All other countries | Any |
| Suppliers of equipment, materials, services or software | 31 | 29 | 14 | 5 | 60 |
| Clients or customers from the private sector | 27 | 21 | 11 | 7 | 47 |
| Clients or customers from the public sector | 8 | 3 | * | 5 | 44 |
| Other businesses within the enterprise group | 29 | 16 | 13 | 7 | 50 |
| Competitors or other businesses within the industry | 22 | 12 | 2 | 3 | 37 |
| Universities or other higher education institutions | 11 | 6 | 2 | 3 | 20 |
| Consultants, commercial labs or private R&D institutes | 14 | 13 | 2 | 3 | 29 |
| Government or public research institutes | 7 | 5 | * | 3 | 15 |
| Any | 72 | 44 | 24 | 16 | 100 |

** = Cells have been suppressed to protect confidentiality*

## 2.6 Non-technological or wider forms of innovation

Innovation is not wholly about the development or use of technology or other forms of product or process change. Enterprises can also change their behaviour or business strategies to make themselves more competitive, often in conjunction with product or process innovation, but also as an independent means of improving competitiveness. For the 2015 survey, wider innovators are included in the ‘innovation active’ definition (see section 1.1 for more details).

Enterprises were asked whether they had made major changes to their business structure and practices in the three-year period 2012-2014. Headline results are summarised in Table 6.

Over a third (36%) of NI businesses engaged in one or more types of non-technological innovation over the 2015 survey period. Over a quarter (26%) mentioned the implementation of new business practices for organising procedures. Notably this was the largest change from the 2013 survey findings, up from 21%.

Unlike the 2013 survey, a greater proportion of large enterprises engaged in one or more of these changes (NI: 53% of large enterprises compared to 36% of SMEs). The 2013 survey showed that 32% of NI SMEs and 31% of large firms engaged in one or more forms of wider innovation during 2010-12.

In the UK the same was true with 45% of large enterprises compared to 42% of SMEs engaged in wider innovation activities.

**Table 6: Enterprises that introduced wider forms of innovation (percentage of respondents)**

| Forms of innovation | Size of enterprise | | | | | |
|---|---|---|---|---|---|---|
| | SMEs | | Large | | All | |
| | NI | UK | NI | UK | NI | UK |
| Wider innovator (any of changes below) | 36 | 42 | 53 | 45 | 36 | 42 |
| New method organising external relationships | 6 | 7 | 9 | 11 | 6 | 7 |
| New business practices | 26 | 27 | 24 | 30 | 26 | 27 |
| Changes to marketing concept or strategies | 13 | 16 | 19 | 16 | 13 | 16 |
| New method organising work responsibilities | 17 | 19 | 39 | 25 | 18 | 19 |

## 2.7 Regional variation and historical changes

**Table 7: Rate of innovation active businesses - country and regional innovation patterns**

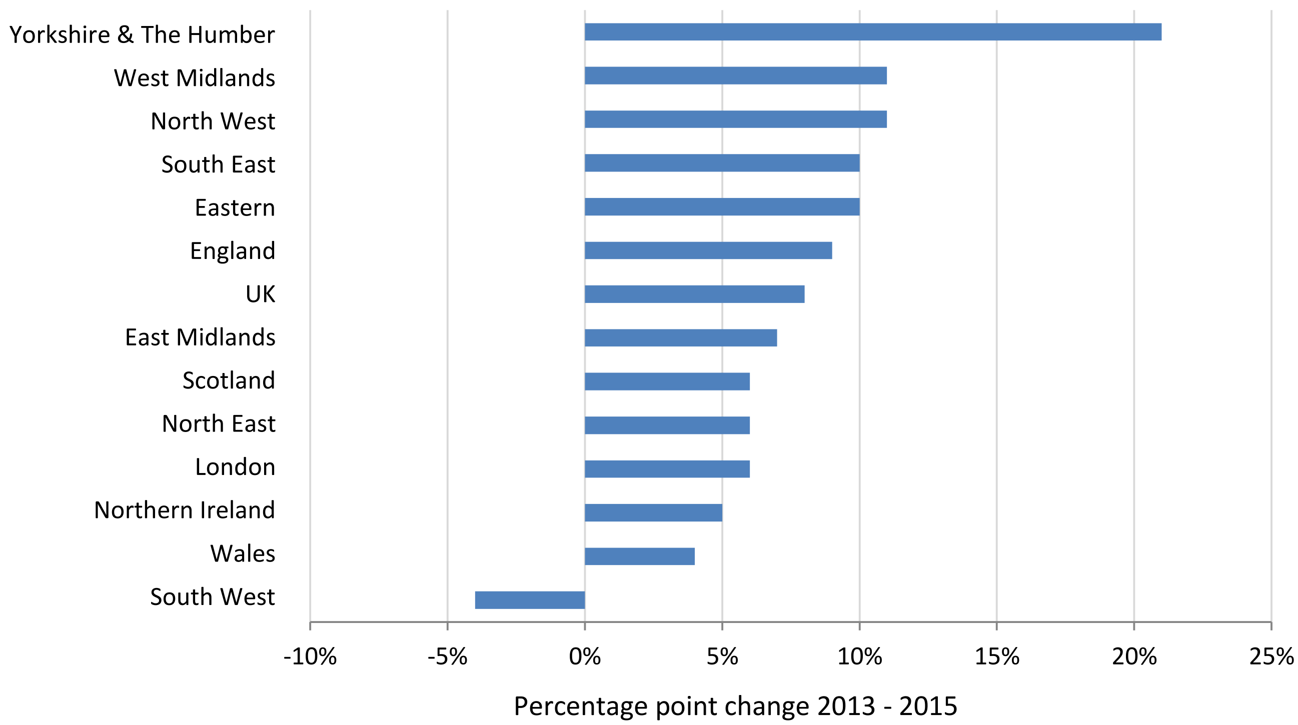
| Country or region | 2015 | 2013 | Percentage point change |
|---|---|---|---|
| Yorkshire and The Humber | 65 | 43 | 21 |
| South East | 57 | 47 | 10 |
| Eastern | 56 | 47 | 10 |
| East Midlands | 56 | 50 | 7 |
| West Midlands | 55 | 44 | 11 |
| England | 54 | 45 | 9 |
| UK | 53 | 45 | 8 |
| North East | 53 | 47 | 6 |
| North West | 53 | 42 | 11 |
| Wales | 51 | 47 | 4 |
| Scotland | 50 | 44 | 6 |
| London | 48 | 42 | 6 |
| Northern Ireland | 45 | 40 | 5 |
| South West | 43 | 48 | -4 |

*Note: Figures may not add due to rounding*

Table 7 above shows the rate of innovation activity for businesses across the countries and regions of the UK.  Results for 2015 displayed similar regional variation to the 2013 Survey, ranging from a high of 65 % in Yorkshire and The Humber to a low of 43 % in the South West.

Figure 4 shows that the proportion of innovation for all regions and countries increased notably since the 2013 survey, with the exception of the South West. Northern Ireland increased by five percentage points (from 40% to 45% of innovation active businesses), and is now the second least innovative region of the UK. (The revised 2013 results showed Northern Ireland to be the least innovative region of the UK).

**Figure 4: 2013 – 2015 percentage point change in innovation active businesses - country and regional innovation patterns**




## Comparisons with the 2013 survey

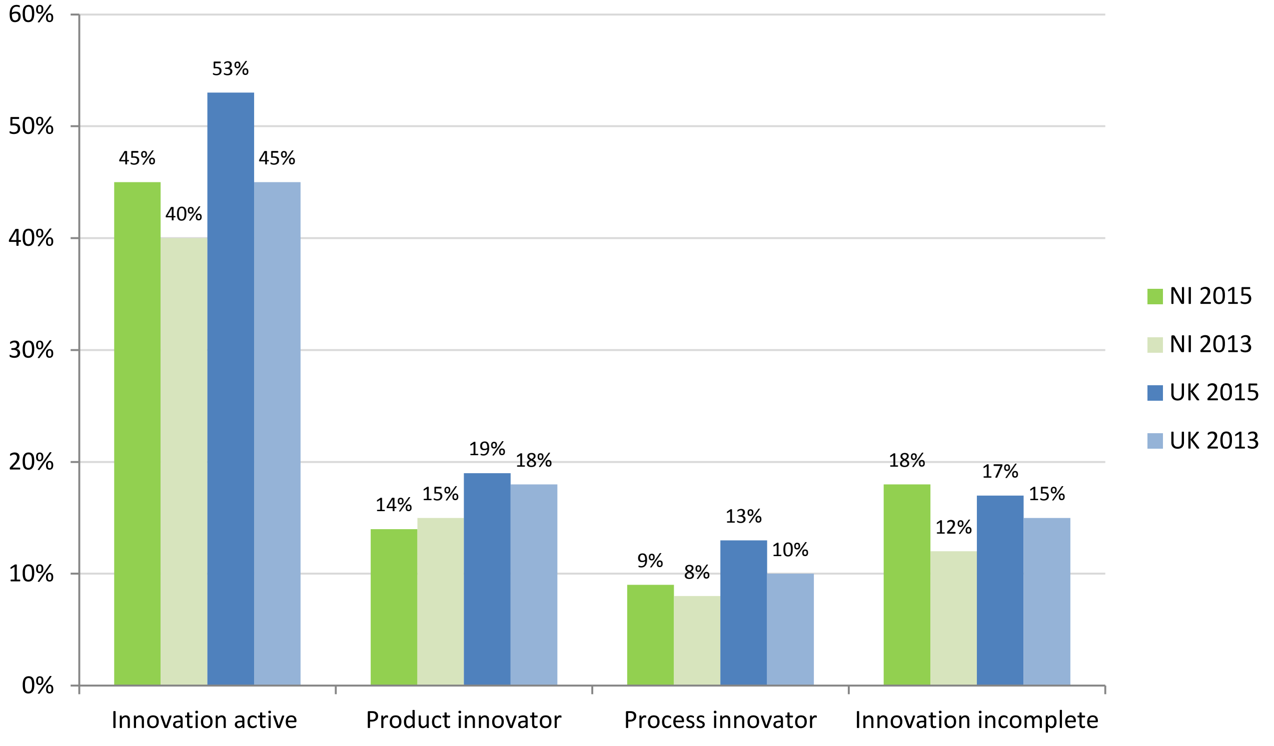
Figure 5 compares headline statistics from the 2013 UK innovation survey (referencing 2010-12) and the 2015 survey (2012-14).

The proportion of innovation active enterprises in NI over this period has increased from 40% to 45%. Comparable figures for the UK have also increased over the period, from 45% to 53%.

When innovation activity is examined by its component parts, the proportion of NI enterprises reporting product innovations has decreased slightly from 15% in 2010-12 to 14% in 2012-14.

Enterprises reporting process innovations increased slightly with 9% of responding NI firms indicating that they had engaged in these activities in 2010-12 compared to 8% in the previous survey period.

**Figure 5: Comparison of 2013 and 2015 Surveys: proportion of innovating enterprises (percentage of respondents)**



# 3. Background notes

## 3.1 Methodology

This report presents findings from the Northern Ireland element of the UK Innovation Survey (UKIS). The UKIS is part of a wider Community Innovation Survey (CIS) covering EU countries. The survey is based on a core questionnaire developed by the European Commission (Eurostat) and Member States.  This is the ninth iteration of the survey (CIS9). CIS8, covering the period 2010 to 2012, was carried out in 2013 and the results form part of various EU benchmarking exercises for international comparisons (see http://ec.europa.eu/growth/access-to-finance).

The UK Innovation Survey 2015 surveyed 1,493 enterprises in NI.  The survey was voluntary and conducted by means of a postal questionnaire and telephone interview for businesses that had not yet completed a postal response.

## 3.2 Coverage and sampling

The 2015 survey sampled enterprises with 10 or more employees in sections B to N of the Standard Industrial Classification (SIC) 2007.

The sample is a stratified design drawn from the Inter-Departmental Business Register (IDBR) with Neyman allocation used to determine the sample size in each stratum. Overall, roughly fifteen per cent of the target population in sampled.

Stratification was based on three variables:

i.) Region – All regions and countries in the UK (9 Standard Regions in England plus Scotland, Wales and Northern Ireland)

ii.) SIC Division - This was the third time survey data was collected using a sample based on SIC 2007. The groups included are as follows:

| | |
|---|---|
| SIC 05-09 | Mining and quarrying |
| SIC 10-18 | Manufacture of food, clothing, wood, paper, publishing, printing |
| SIC 19-25 | Manufacture of fuels, chemicals, plastic, metals and minerals |
| SIC 26-28 | Manufacture of electrical and optical equipment |
| SIC 29-30 | Manufacture of transport equipment |
| SIC 31-33 | Manufacture: not elsewhere classified |
| SIC 35-39 | Electricity, gas and water supply |
| SIC 41-43 | Construction |
| SIC 45-46 | Wholesale trade (including cars & bikes) |
| SIC 47 | Retail trade (excluding cars & bikes) |
| SIC 49-52 | Transport |
| SIC 53 | Post and courier activities |

| | |
|---|---|
| SIC 55-56 | Hotels & restaurants |
| SIC 58,62&63 | Computer and related activities/ICT |
| SIC 59-60 | Motion picture, video and tv programme production/programming & broadcasting |
| SIC 61 | Telecommunications |
| SIC 64-66 | Financial intermediation |
| SIC 68 | Real estate activities |
| SIC 69,70,75,76,78-83 | Other services not elsewhere classified |
| SIC 71.1 | Architectural and engineering activities and related technical consultancy |
| SIC 71.2 | Clinical testing and analysis |
| SIC 72 | Research and experimental development on social sciences and humanities |
| SIC 73 | Advertising and market research |
| SIC 74 | Other professional, scientific and technical activities |
| SIC 77 | Renting of machinery, equipment, personal and household goods |

iii.) Business Size:

Small: 10-49 employees

Medium: 50-99 employees

Medium: 100-249 employees

Large: 250+ employees

Additionally, to ensure representativeness, a census for all large firms (250+ employees) is taken.

The majority of the survey questions are concerned with innovation through new and improved products and processes (technological) and with the investments that develop and implement them along with changes in business structures, management and marketing practices (non-technological innovation).

The methodology, sample details and first UK-level findings from CIS 9 can be found on the UK Department for Business, Innovation & Skills website at the following link:

https://www.gov.uk/government/statistics/uk-innovation-survey-2015-main-report

The statistical annex for data from the 2015 UK innovation survey, including an interactive version of the report is found using the link below:

https://www.gov.uk/government/statistics/uk-innovation-survey-2015-statistical-annex-and-interactive-report

All results are grossed up to the business population, and all figures quoted relate to the UK Innovation Survey 2015 unless stated otherwise.

## 3.3 Response and weighting

The questionnaires from the initial survey were distributed between 23 and 25 February 2015.

Of the 1,493 enterprises selected, 756 valid responses were received, to give a response rate of 51%. The population and achieved sample are summarised in Table 8.

The composition of the 2015 achieved sample comprises a lower percentage of large firms (7% of returned forms) than the last survey (10%).

The results in this report are based on weighted data in order to be representative of the population of businesses. The responses were weighted back to the population using the inverse sampling proportion in each stratum, that is, the weight attributed to each enterprise was the number of enterprises in the population divided by the number of responses in that stratum.

Please note that as with all sample surveys, the estimates provided in this publication are subject to an associated degree of sampling error.

**Table 8: Summary of sample frame** (number of enterprises)

| Entire population | | | Returned sample | | |
|---|---|---|---|---|---|
| SMEs | Large | All | SMEs | Large | All |
| 5670 | 169 | 5839 | 700 | 56 | 756 |

### (i) Future Publications

The 2017 Community Innovation Survey results for the reporting period 2014-2016 (CIS 10) will be published in July 2018.

### For further information

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