

UK Innovation Survey 2015 - Results for Scotland

BUSINESS AND ENERGY

BUSINESS AND ENERGY

UK Innovation Survey 2015 – Scotland

Introduction

This report presents the Scottish findings from the UK Innovation Survey 2015, covering the three-year period from 2012 to 2014.

Key Points:

- 50.4 per cent of enterprises are innovation active in Scotland, this is an increase of 7.1 percentage points from the 2013 Survey.
- The percentage of innovation active enterprises in Scotland is 2.6 percentage points lower than the UK average of 53.0 per cent. This is an increase from a gap of 1.1 per cent in the 2013 survey and represents a widening of the gap.
- The share of innovation active enterprises in Scotland has increased by 18.8 percentage points since the 2011 survey compared to a 17.6 percentage point increase for the UK as a whole.
- Large businesses (those with 250 or more employees) are more likely to be innovators compared to smaller businesses.
- Enterprises in the 'manufacturing of food, clothing, wood, paper, publish & print' sector are most likely to be innovation active.
- Businesses based in remote rural areas are more likely to be innovation active, compared to enterprises in accessible rural areas which are least likely to be innovation active.
- The highest share of Innovation Expenditure in Scotland and the UK goes on In-house research and development.
- For both Scotland and the UK the main driver for innovation is improving quality of goods or services.
- 42.4 per cent of broader innovators reported having co-operation arrangements. This is an increase of 11.4 percentage points since the 2013 survey.

Contents

Innovation Activity.....	4
Figure 1: Percentage of Enterprises Engaging in Innovation Activities, 2012 – 2014.....	5
Table 1: Share of Enterprises Engaging in Innovation Activities, 2011 – 2015 Surveys.....	5
Figure 2: Percentage of Enterprises Engaging in Innovation Activities in Scotland from the Innovation Surveys 2011, 2013 and 2015.....	6
Innovation Activities – by Size.....	6
Figure 3: Percentage of Enterprises Engaging in Innovation Activities by Size, Scotland 2012 – 2014.....	7
Innovation Activity – by Sector.....	7
Figure 4: Percentage of Enterprises that are Innovation Active by Sector, UK and Scotland 2012 – 2014.....	8
Table 2: Percentage of Enterprises that do Product/Process Innovation by Broad Sector.....	8
Innovation Activity – Growth Sector.....	9
Figure 5: Innovation Active Enterprises by Growth Sector, 2015, for Scotland and the UK.....	10
Geography of Innovation – Regional.....	10
Figure 6: Share of Innovation Active Enterprises by Region.....	11
Table 3: Innovation Active Enterprises by Nomenclature of Units for Territorial Statistics (NUTS 2) Region.....	12
Innovation Activity – Urban Rural Classification.....	12
Figure 7: Percentage of Enterprises that are Innovation Active by 2012-2014 Urban Rural 3 fold classification.....	13
Figure 8: Composition of Innovative Enterprises by Urban Rural 2012-14 Classification.....	14
Type of Innovation Expenditure.....	14
Figure 9: Percentage share of Innovation Expenditure by type of Expenditure for all Enterprises.....	15
Table 4: Percentage of business's total turnover in 2014.....	16
Context for Innovation.....	16
Figure 10: Innovation Factors (% of innovation active enterprises rating 'high').....	16
Co-operation Arrangements.....	17
Figure 11: Co-operation Arrangements.....	17
Table 5: Cooperation by enterprise size.....	18
Table 6: Importance of information for innovation activities.....	18

Constraints to Innovation	18
Table 7: Factors in Constraining Innovation Activities for Broader Innovators Active Enterprises (% of enterprises rating 'high')	19
Exports.....	19
Table 8: Geographic markets that businesses sell their goods and/ or services	19
Figure 12: Innovators are more likely to Export.....	20
Table 9: Export value for 2014 for Scotland and the UK by Innovation Active and Non-innovation Active	20
Turnover	20
Table 10: Change in turnover by size band and region, 2012 to 2014.....	21
Qualifications	21
Table 11: Average proportion (%) of 2014 employees who hold a degree or higher level qualification	21
Table 12: Skill Type employed in Scotland and the UK, by size of enterprise, 2015	22
Methodology	23
Coverage and sampling.....	23
Response and weighting	23
Annex A Innovation Activity – EU Comparison.....	24
Annex B –Tables	28
Annex C – Broad Sector break down	31
Annex D – Growth Sectors	35

Innovation Activity

Innovation takes place through a wide variety of business practices and a range of indicators can be used to measure its level within the enterprise or in the economy as a whole. These include the levels of effort employed (measured through resources allocated to innovation) and of achievement (the introduction of new or improved products and processes). This section reports on the types and levels of innovation activity over the three year period, from 2012 to 2014, and makes comparisons with the results for the UK as a whole.

The definition of innovation activity here includes any of the activities described below that enterprises were engaged in during the survey period. These activities are as follows:

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 or 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 activities¹.

For the purposes of the UK Innovation Survey, a business that has engaged in any of the activities 1 to 3 above is defined as **innovation active**; a business that has engaged in any of the activities 1 to 4 is defined as a **broader innovator**, and a business that has engaged in activity 3 is defined as a **wider innovator**.

The UK definition used for innovation active follows that adopted by Eurostat. The EU-wide definition of innovation active is as follows: introduction of a new or significantly improved product (goods or service) or process; engagement in innovation projects not yet complete or abandoned; new or significantly improved forms of organisation, business structures or practices and marketing concepts or strategies. It excludes expenditure and activities linked to innovation.

Figure 1 shows the share of enterprises engaging in innovation activity for both Scotland and the UK as a whole. For the majority of innovation activities, featured in Figure 1, Scotland lags behind the UK - the exceptions to this are 'Wider Innovation', 'Product Innovation' and 'Both Product AND Process Innovation'.

¹ The questions in Section C 'Context for Innovation' of the questionnaire are only asked if the respondent said yes to Q3, 4, 6, 10 or 13 (i.e. strategic innovator, innovation activities, product innovator, process innovator or abandoned/incomplete innovation) in Section B 'Innovation Activities' of the questionnaire.

Figure 1: Percentage of Enterprises Engaging in Innovation Activities, 2012 – 2014

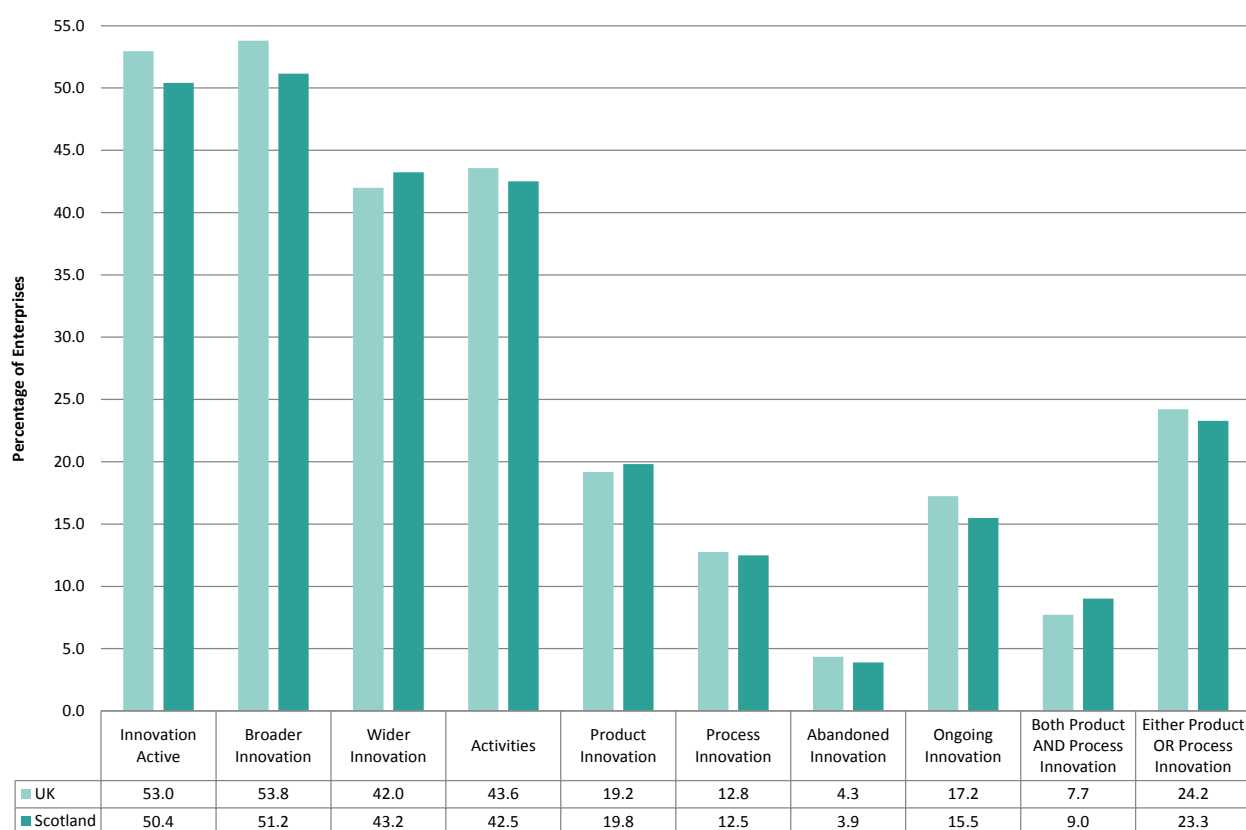


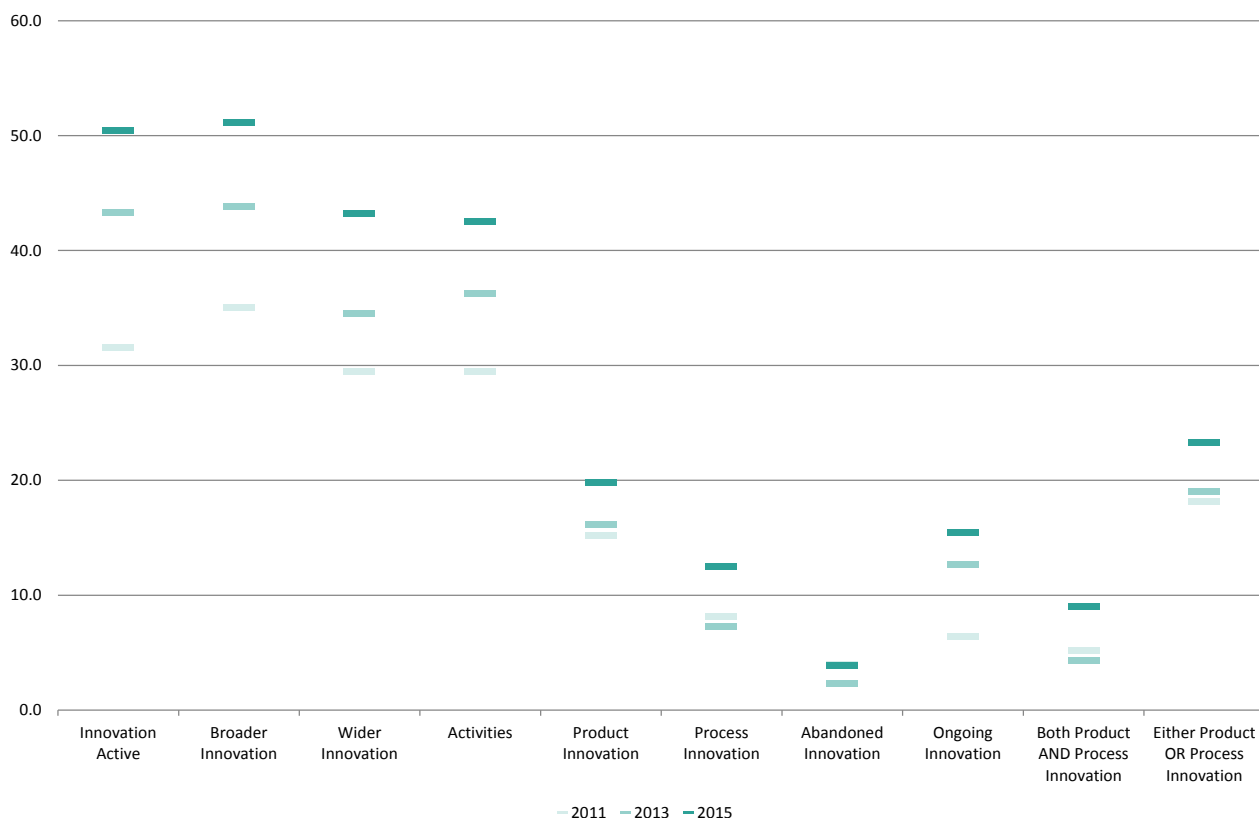
Table 1 and Figure 2 compares the percentage of enterprises engaging in innovation activities from the 2015, 2013 and 2011 UK Innovation Surveys. Since the 2011 survey there has been an increase of 18.8 percentage points in the share of enterprises classified as innovation active in Scotland, from 31.6 to 50.4 per cent. This compares to a 17.6 percentage point increase for the UK over the same period.

Table 1: Share of Enterprises Engaging in Innovation Activities², 2011 – 2015 Surveys

	Scotland				UK			
	2011	2013	2015	Change between 2011 and 2015	2011	2013	2015	Change between 2011 and 2015
Innovation Active	31.6	43.3	50.4	18.8	35.4	44.4	53.0	17.6
Broader Innovation	35.0	43.8	51.2	16.1	38.6	45.2	53.8	15.2
Wider Innovation	29.5	34.5	43.2	13.8	30.8	36.9	42.0	11.2
Activities	29.4	36.2	42.5	13.1	33.1	39.0	43.6	10.5
Product Innovation	15.2	16.1	19.8	4.6	18.9	18.0	19.2	0.3
Process Innovation	8.1	7.2	12.5	4.4	10.3	10.3	12.8	2.5
Abandoned Innovation	4.0	2.3	3.9	-0.1	4.3	3.9	4.3	0.0
Ongoing Innovation	6.4	12.7	15.5	9.1	6.5	14.5	17.2	10.7
Both Product AND Process Innovation	5.2	4.3	9.0	3.8	7.5	7.0	7.7	0.2
Either Product OR Process Innovation	18.1	19.0	23.3	5.2	21.6	21.3	24.2	2.6

² 2013 survey figures appear different compared to the UK Innovation survey 2015: main report (<https://www.gov.uk/government/statistics/uk-innovation-survey-2015-main-report>) due to the different weights used. For consistency the figures in table one all based on weight25.

Figure 2: Percentage of Enterprises Engaging in Innovation Activities in Scotland from the Innovation Surveys 2011, 2013 and 2015



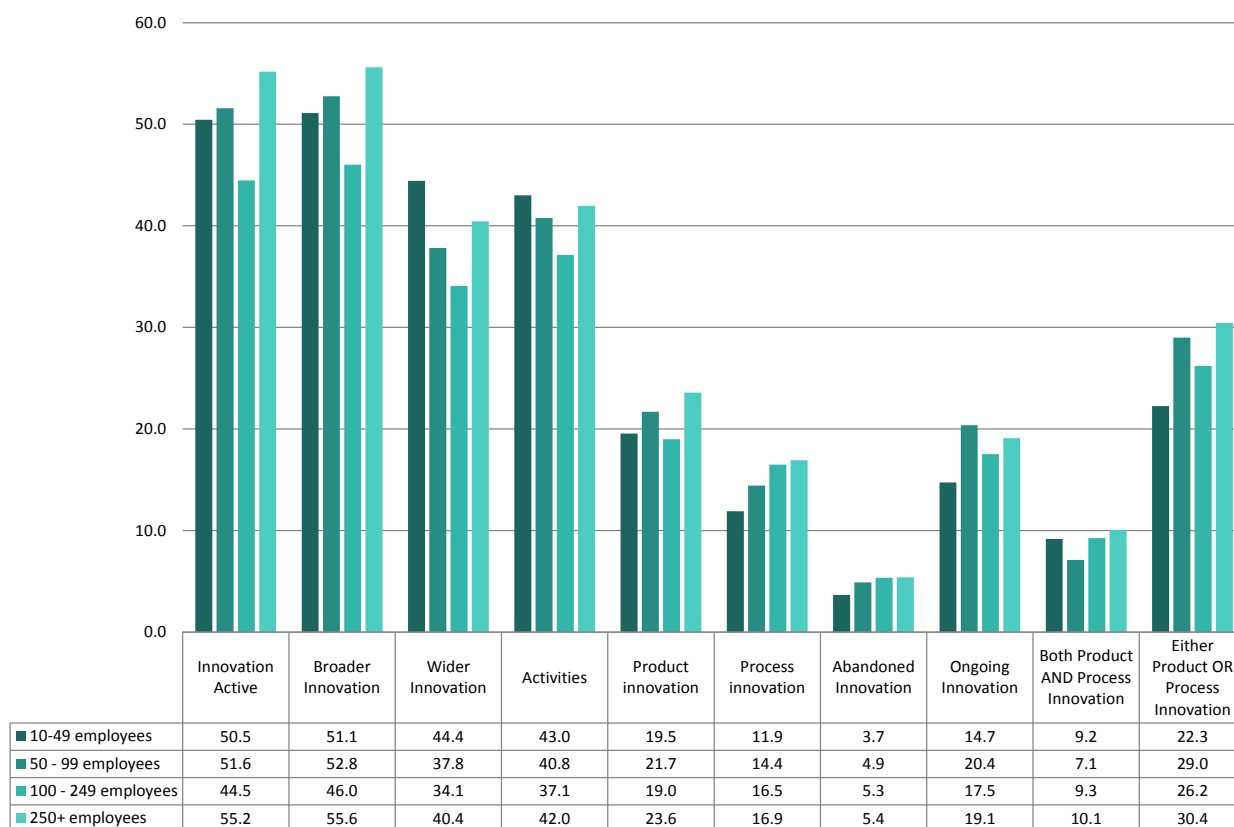
Innovation Activities – by Size

Figure 3 shows the breakdown of innovation activity for Scotland broken down by size of the enterprise. Large enterprises (those with more than 250 employees) are more likely to be innovators.

For example, 55.2 per cent of enterprises with more than 250 employees are innovation active, this compares to 50.5 per cent, 51.6 per cent and 44.5 per cent for enterprises with 10 - 49 employees, 50 – 99 employees and 100 – 249 employees respectively.

This trend is replicated in the UK as a whole with 61 per cent of enterprises with more than 250 employees being innovation active.

Figure 3: Percentage of Enterprises Engaging in Innovation Activities by Size, Scotland 2012 – 2014



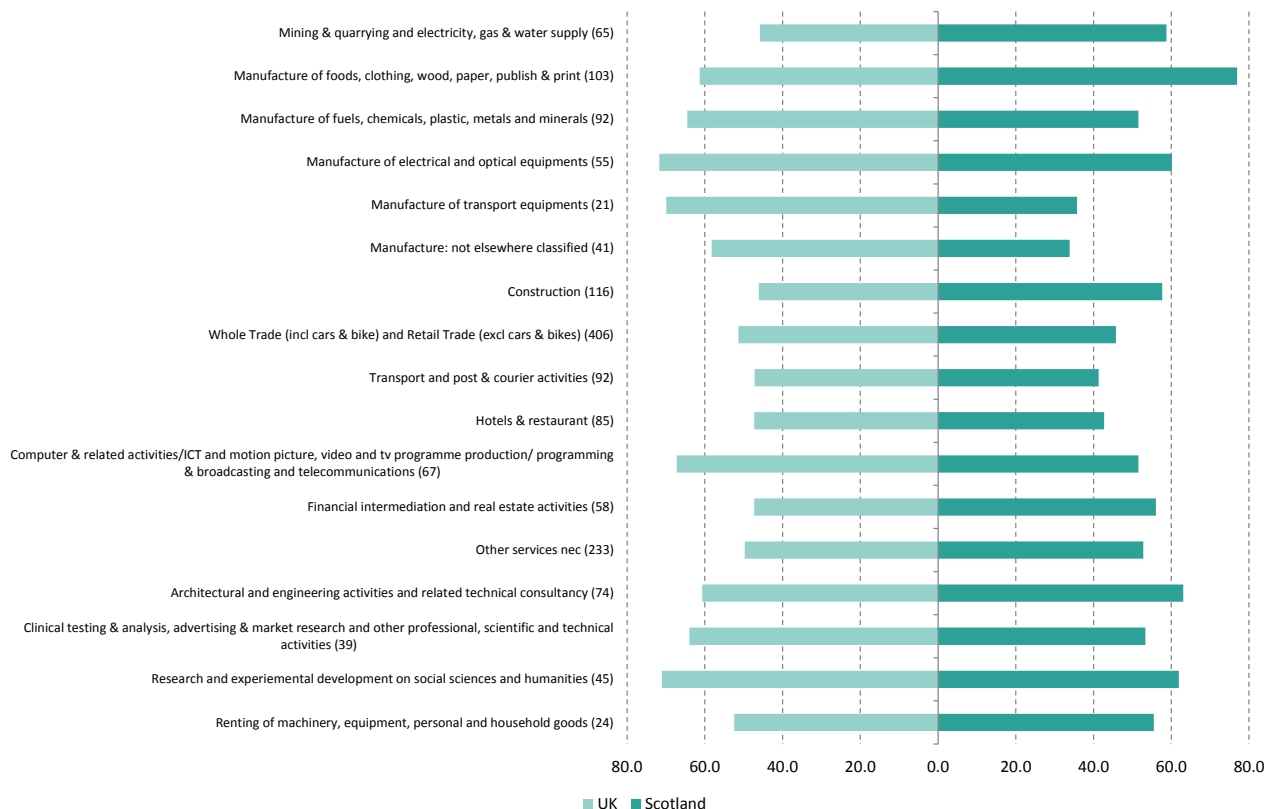
Innovation Activity – by Sector

Investigating the 'Innovation Active' enterprises for both the UK and Scotland and breaking these down to industry sectors produces the following Figure 4. Enterprises in the 'manufacturing of food, clothing, wood, paper, publish & print' sector are most likely to be innovation active. Enterprises in the 'manufacture: not elsewhere classified' sector are least likely to be innovation active.

Of the 17 sector groups that are shown in Figure 4, Scottish enterprises are more innovation active in 7 sector groups compared to the UK as a whole. The sector with the greatest positive difference for Scotland is 'manufacture of food, clothing, wood, paper, publish & print' (76.9 per cent for Scotland compared to 61.3 per cent for UK as a whole). However, for the 'Manufacture: not elsewhere classified'³, sector only 33.9 per cent of enterprises in Scotland are innovation active compared to 58.2 per cent in the UK.

³ Manufacture: not elsewhere classified includes: 'Manufacture of Furniture', 'Other Manufacturing' and 'Repairs & Installation of Machinery & Equipment'.

Figure 4: Percentage of Enterprises that are Innovation Active by Sector⁴, UK and Scotland 2012 – 2014



*sample size shown in brackets

Table 2 shows the percentage of enterprises that partake in specific types of innovation split into broad sectors for both Scotland and the UK as a whole. Scottish enterprises within the manufacturing sector are more likely to be involved in product innovation than other sectors, while those in the ‘electricity, gas and water supply’ sector are most likely to be involved in process innovation.

For Scotland 30.9 per cent of enterprises in the manufacturing sector are involved in product innovation, compared to 19.8 per cent of all enterprises. For process innovation 45.2 per cent of enterprises in the ‘electricity, gas and water supply’ sector are involved compared to 12.5 per cent for Scotland as a whole.

Table 2: Percentage of Enterprises that do Product/Process Innovation by Broad Sector

Broad Sectors	Product Innovation		Process Innovation	
	Scotland	UK	Scotland	UK
Construction	9.0	13.2	7.9	8.7
Electricity, Gas and Water Supply	18.9	14.5	45.2	19.6
Hotels and Restaurants	23.4	13.8	11.9	6.5
Manufacturing	30.9	31.6	19.7	21.6
Mining and Quarrying	24.9	13.1	16.6	11.6
Wholesale Trade and Retail	13.7	16.0	8.8	10.8
Transportation and Storage	13.6	12.4	5	9.4
Other Services	21.9	21.5	14.7	14.9
Total	19.8	19.2	12.5	12.8

⁴ Break down of sectors by SIC 2007 code available in Annex C

Innovation Activity – Growth Sector

The six private sector dominated growth sectors, as identified in Scotland's Economic Strategy (SES) 2015, are:

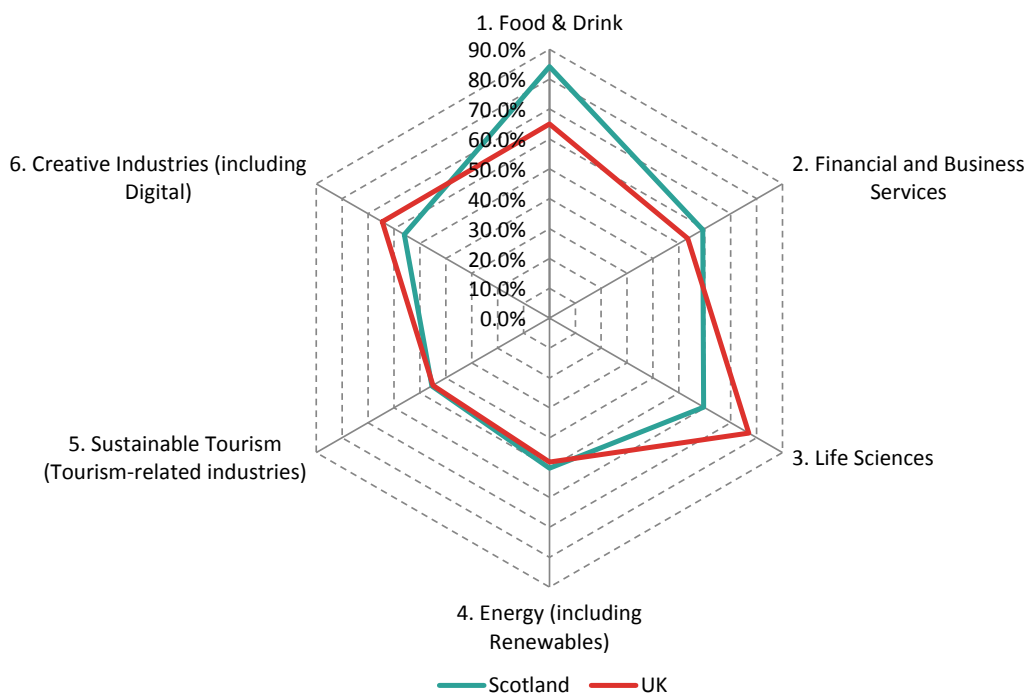
- Food & Drink⁵ (including agriculture & fisheries)
- Creative Industries⁵ (including digital)
- Sustainable Tourism⁵
- Energy (including renewables)
- Financial & Business Services⁵
- Life Sciences

The Growth Sectors are defined using Standard Industrial Classification (SIC) 2007 codes as per Annex C.

Figure 5 shows the percentage of innovation active enterprises by the six growth sectors from the 2015 UK Innovation Survey for Scotland and the UK as a whole. For four of the sectors (food & drink, financial & business services, energy (excluding renewables) and the sustainable tourism (tourism-related industries)) the Scottish enterprises are more innovation active compared to the UK. For Scotland the food & drink sector has the greatest percentage of innovation active enterprises, around 84 per cent of enterprises stated that they were innovation active compared to only 45 per cent of enterprises in the sustainable tourism sector.

⁵ The UK Innovation survey does not include all SIC codes that would usually be covered in the Growth Sectors. Please refer to Annex C for a list of Growth Sector SIC codes included and not included in the UK Innovation survey.

Figure 5: Innovation Active Enterprises by Growth Sector, 2015, for Scotland and the UK



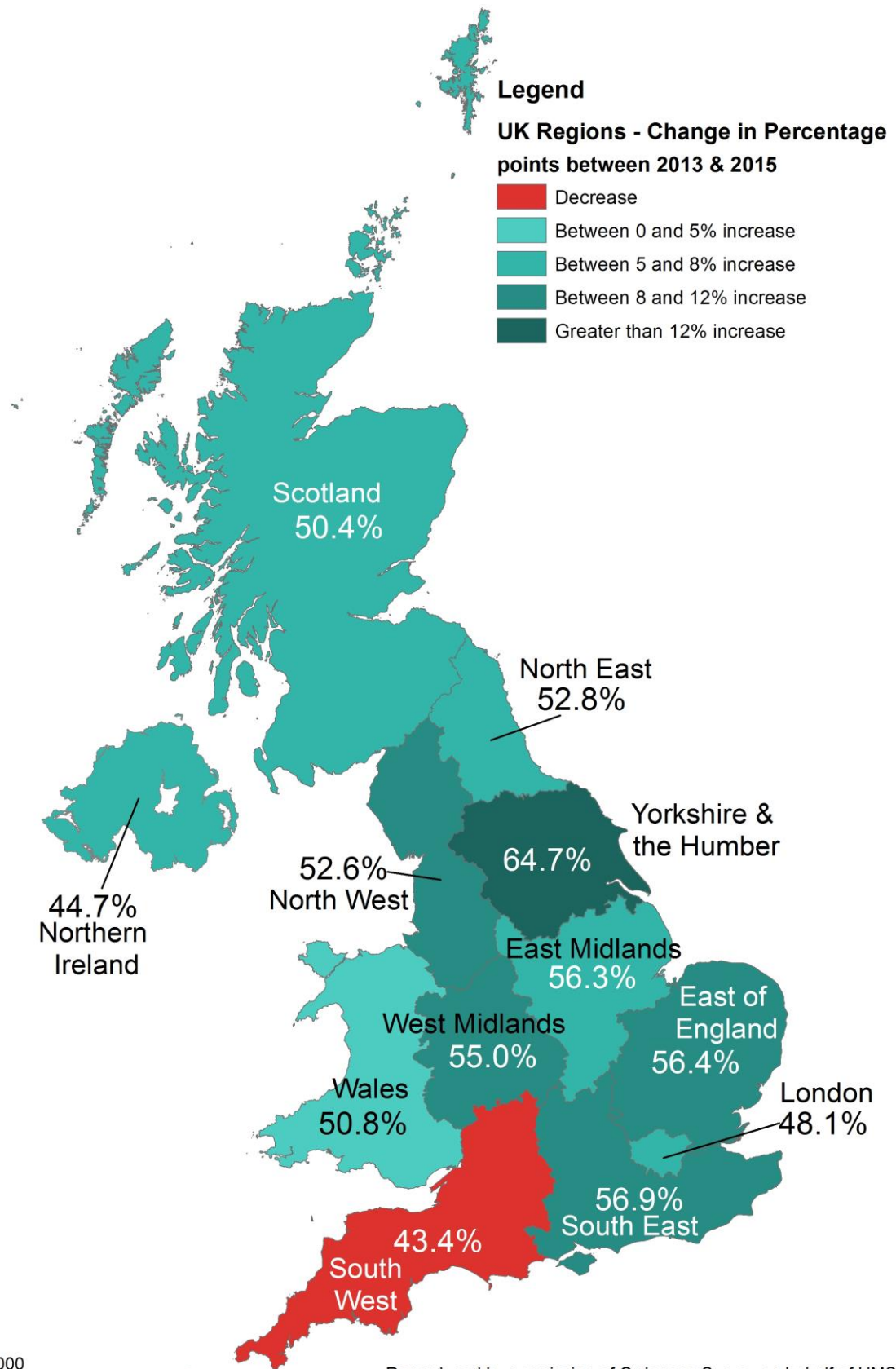
Geography of Innovation – Regional

Figure 6 shows the change in the percentage of innovation active enterprises, between the 2013 Innovation Survey and the 2015 Innovation Survey, across the regions and countries of the UK. All but one of the 12 regions saw an increase in the percentage of innovation active enterprises, the only region that didn't was the South West. Yorkshire and the Humber saw the largest percentage point increase, rising from 43.0 per cent in 2013 to 64.7 per cent in 2015, an increase of 21.7 percentage points. In comparison the share of Scottish enterprises which are innovation active increased from 43.3 per cent in 2013 to 50.4 per cent in 2015, an increase of 7.1 percentage points.

Although, between the 2013 and 2015 surveys, Scotland has seen an increase in the percentage of innovation active enterprises the majority of other regions within the UK have also seen a similar if not larger increase.

Included in Figure 6 is the share of innovation active enterprises. Scotland's share of 50.4 per cent ranks 9th out of the 12 UK regions and countries. This is a drop from 8th place in the previous Innovation Survey.

Figure 6: Share of Innovation Active Enterprises by Region



Scale 1:4,500,000
 Source: Office for National Statistics
 (Complied by Scottish Government)

Reproduced by permission of Ordnance Survey on behalf of HMSO
 Crown copyright and database right (2016). All rights reserved.
 Ordnance Survey Licence number 100020540

Nomenclature of Units for Territorial Statistics (NUTS)

There are three levels of Nomenclature of Units for Territorial Statistics (NUTS) geography. The NUTS geography is a hierarchical structure – in the UK there are currently 12 NUTS1 areas (Northern Ireland, Scotland, Wales and the nine Government Office Regions in England), 37 NUTS2 Areas and 139 NUTS3 Areas. In Scotland there are four NUTS2 areas.

Table 3 compares the percentage of innovation active enterprises for the four NUTS2 regions of Scotland, between the 2013 UK Innovation Survey and the 2015 UK Innovation Survey, innovation activity has increased in each region. The Highlands and Islands has seen the greatest increase over this period, from 45.8 per cent to 63.3 per cent. North Eastern Scotland has seen the smallest increase of just 0.4 percentage points from 37.7 per cent in 2013 to 38.1 per cent in 2015.

Table 3: Innovation Active Enterprises by Nomenclature of Units for Territorial Statistics (NUTS 2) Region

Nomenclature of Units for Territorial Statistics (NUTS2)	Innovation Active	
	2013	2015
Eastern Scotland (606)	43.3%	48.2%
South Western Scotland (600)	45.0%	53.8%
North Eastern Scotland (282)	37.7%	38.1%
Highland and Islands (128)	45.8%	63.3%
Scotland	43.3%	50.4%

Innovation Activity – Urban Rural Classification

The Scottish Governments Urban Rural Classification defines urban and rural areas across Scotland. The classification is based on population and accessibility (using drive-time analysis to identify accessible and remote areas). The main classifications are the 2-fold, 3-fold, 6-fold and 8-fold classifications which distinguish between urban, rural and remote rural areas using two, three, six and eight categories, respectively. The classification is updated every two years and the figures here are based on the 2013-14 classification.

The 3-fold Urban Rural classification categories are:

1. Rest of Scotland: Settlements of 3,000 or more people
2. Accessible Rural: Settlements of less than 3,000 people and within 30 minutes drive of a settlement of 10,000 or more
3. Remote Rural: Settlements of less than 3,000 people and with a drive time of over 30 minutes to a settlement of 10,000 or more.

Figure 7 shows the share of enterprises engaging in innovation activity for the UK and Scotland, as well as Scotland broken down into the 3-fold Urban Rural classification. Concentrating on the percentage of those enterprises that are ‘innovation active’, enterprises that are located in the remote rural areas are more likely to be innovation

active compared to any other area. This finding is more noticeable than it has been in previous iterations of the Innovation Survey.

Figure 7: Percentage of Enterprises that are Innovation Active by 2012-2014 Urban Rural 3 fold classification

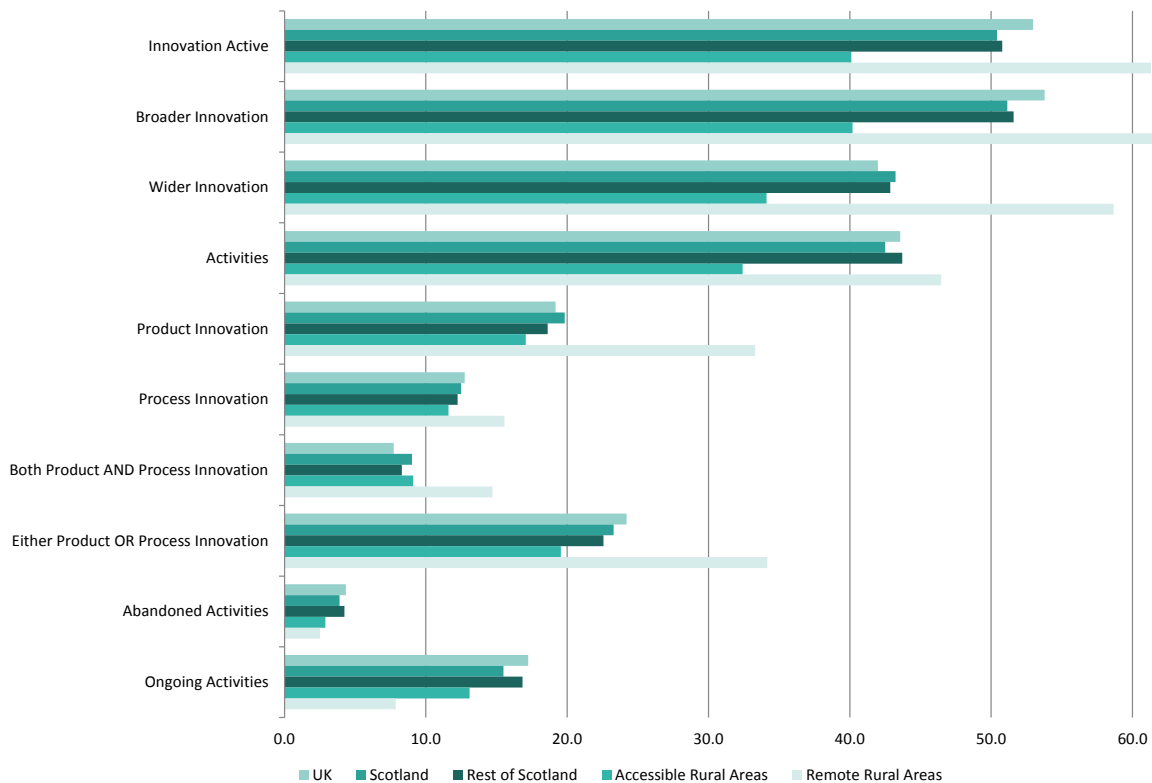


Figure 8 shows the composition of how the classifications of Innovation Activity are broken down by 3-fold Urban Rural classification. For example of those enterprises that are Innovation Active, nearly 12 per cent are located in the remote rural areas, over 10 per cent in accessible rural areas and 78 per cent in the rest of Scotland.

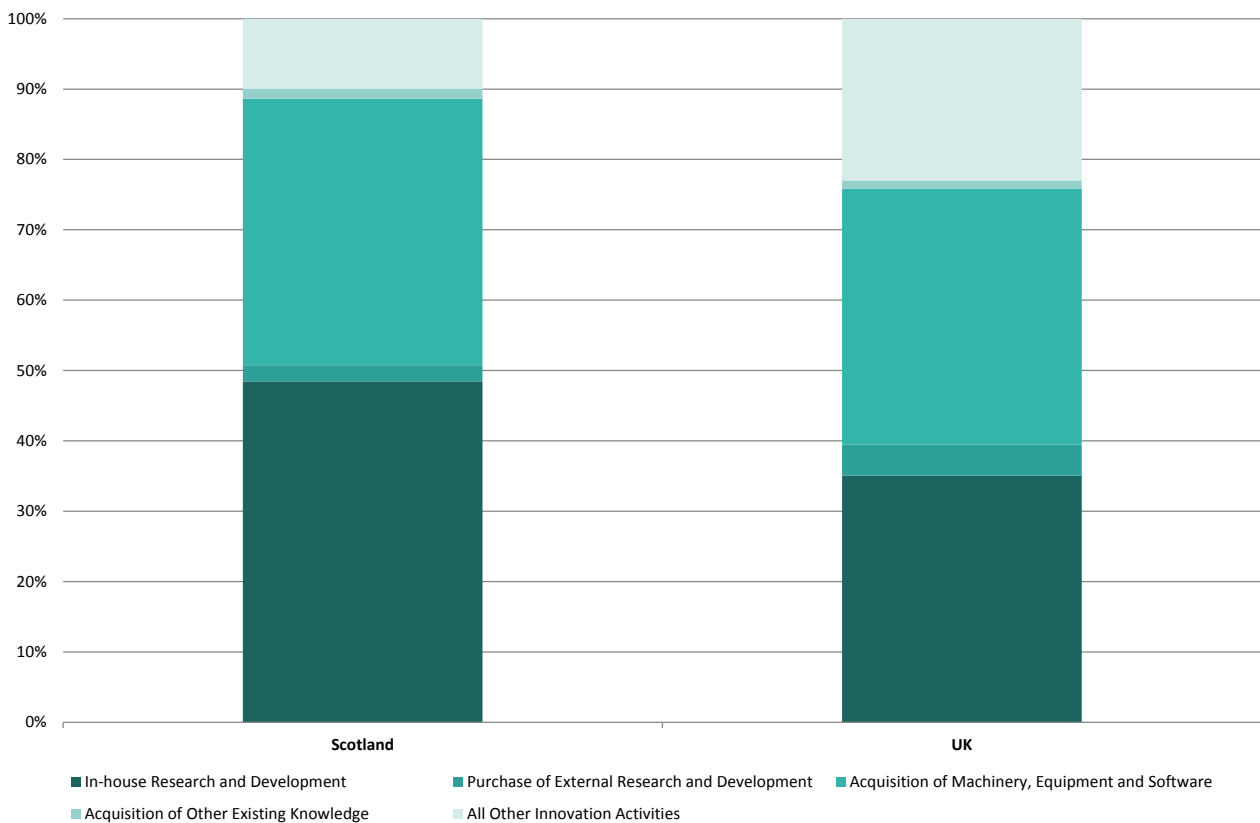
Figure 8: Composition of Innovative Enterprises by Urban Rural 2012-14 Classification



Type of Innovation Expenditure

Results from the 2015 UK Innovation Survey show that total spending on innovation activities for enterprises in Scotland accounted for only 5.1 per cent of the total UK expenditure. Figure 9 shows the break down of type of innovation expenditure by enterprises. The largest proportion of expenditure for both Scotland and the UK as a whole is on In-house Research and Development, 48.5 per cent for Scotland and 35.1 per cent for the UK.

Figure 9: Percentage share of Innovation Expenditure by type of Expenditure for all Enterprises



As well as asking about the main innovation related investments and the amount of expenditure in 2014 the UK Innovation Survey also asked the businesses to estimate the percentage of their 2014 turnover that relates to goods and services that were;

- new to market in 2012-2014,
- only new to this business in 2012-2014,
- significantly improved in 2012-2014, and
- unchanged or only marginally modified.

Comparing these categories for Scotland and the UK as a whole (Table 4), the UK has a higher percentage of turnover related to goods or services new to market compared to Scotland. Scotland has a higher percentage of turnover coming from goods or services that were only new to this business in 2012 – 2014 and those that were significantly improved in 2012-2014 compared to the UK as a whole, 10.4 per cent and 15.5 per cent compared to 9.7 per cent and 11.5 per cent respectively.

Table 4: Percentage of business's total turnover in 2014

	Scotland				
	10 - 49 employees	50 - 99 employees	100 - 249 employees	250 + employees	Total
New to market in 2012 - 2014	5.0	2.3	1.8	3.7	4.5
Only new to this business in 2012 - 2014	11.1	8.4	8.1	4.9	10.4
Significantly improved in 2012 - 2014	17.5	4.6	11.5	9.0	15.5
Unchanged or only marginally modified	66.4	84.7	78.6	82.5	69.6

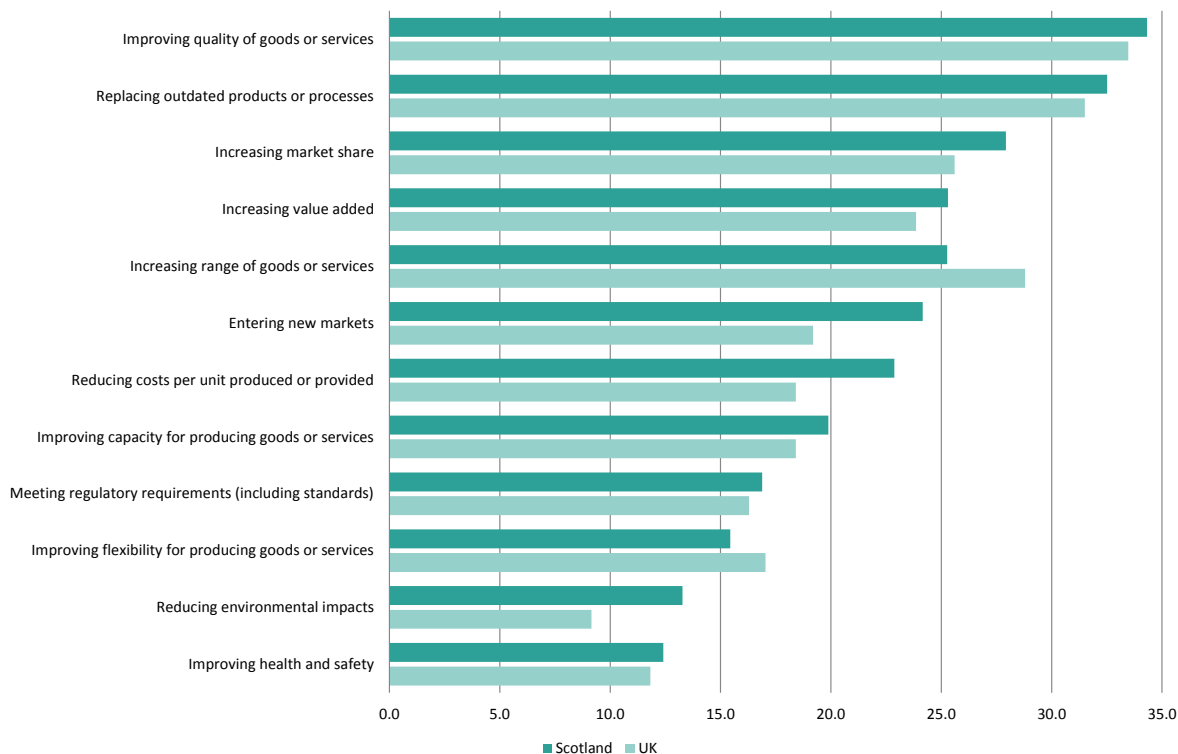
	UK				
	10 - 49 employees	50 - 99 employees	100 - 249 employees	250 + employees	Total
New to market in 2012 - 2014	6.9	5.6	4.3	4.7	6.5
Only new to this business in 2012 - 2014	10.0	8.3	9.2	7.1	9.7
Significantly improved in 2012 - 2014	12.0	9.4	10.1	9.5	11.5
Unchanged or only marginally modified	71.2	76.8	76.4	78.8	72.4

Context for Innovation

For those enterprises classified as innovation active they were asked to rank the drivers of innovation either 'high', 'medium', 'low' or 'not applicable'. Figure 10 shows how the enterprises ranked the drivers for both Scotland and the UK as a whole.

For both Scotland and the UK as a whole, the factor that has been ranked as the most important driver for innovation was 'improving quality of goods or services'. When looking at the factors that were ranked as the least highly rated factors for driving innovation, for Scotland this was 'improving health and safety', whereas for the UK as a whole 'reducing environmental impacts was ranked the lowest.

Figure 10: Innovation Factors (% of innovation active enterprises rating 'high')



Co-operation Arrangements

The proportion of broader innovators who reported having co-operation arrangements on some innovation activities remained similar to the previous surveys for the UK as a whole (40 per cent, compared to 41 per cent in the 2013 survey). However, there was an increase in the proportion of broader innovators having co-operation arrangements in Scotland (42.4 per cent, compared to 31 per cent in the 2013 survey).

Of the 42.4 per cent of enterprises that had co-operation arrangements 65.0 per cent of these had them with the suppliers of equipment, materials, services or software. Whereas only 15.7 per cent replied stating that they had co-operation arrangements with government or public research institutes.

Figure 11: Co-operation Arrangements

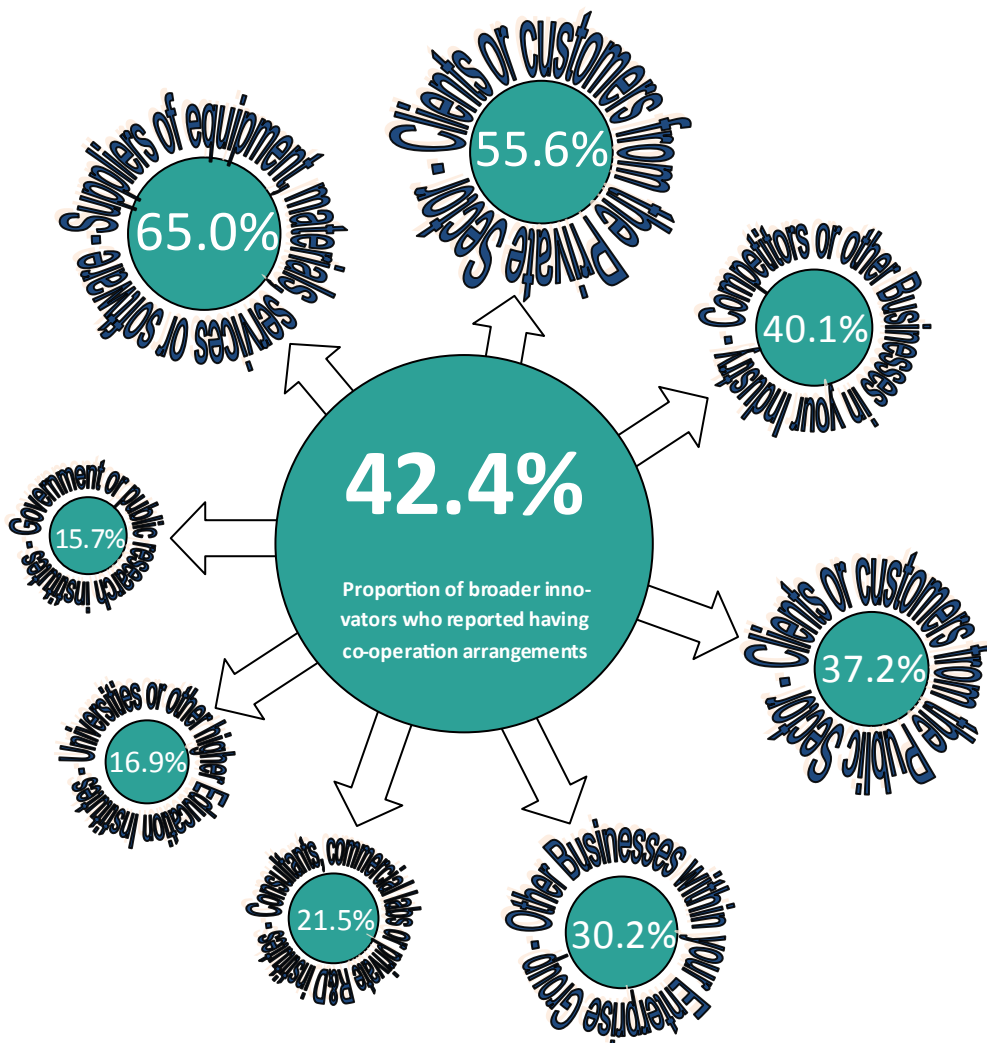


Table 5 breaks down the enterprises into size bands. For Scotland, enterprises with between 50 and 99 employees are most likely to co-operate with their suppliers of equipment, materials, services or software on innovation activities. Enterprises based in Scotland with more than 250 employees are most likely to co-operate with clients and customers from the private sector.

Table 5: Cooperation by enterprise size

Region	Enterprise Size	Other businesses within your enterprise group	Suppliers of equipment, materials, services or software	Clients or customers from the private sector	Clients or customers from the public sector	Competitors or other businesses in your industry	Consultants, commercial labs or private R&D institutes	Universities or other higher education institutions	Government or public research institutes
Scotland	10 - 49 employees	30.2	63.9	55.7	39.1	42.9	18.4	15.1	15.4
	50 - 99 employees	43.9	74.3	50.0	34.7	32.8	28.9	23.7	19.9
	100 - 249 employees	49.3	64.4	52.0	18.4	22.7	35.3	19.6	11.1
	250+ employees	49.2	65.1	74.2	30.0	20.0	49.5	36.3	19.9
	Total	33.3	65.0	55.6	37.2	40.1	21.5	16.9	15.7
UK	10 - 49 employees	42.0	67.5	58.8	31.9	32.7	22.8	20.1	13.8
	50 - 99 employees	45.8	66.3	53.6	26.4	26.6	28.4	24.7	15.9
	100 - 249 employees	51.1	67.9	57.9	24.4	26.8	32.4	22.9	14.3
	250+ employees	58.0	68.4	58.5	29.4	26.0	37.3	26.7	18.3
	Total	43.7	67.5	58.2	30.7	31.4	24.7	21.0	14.2

As well as asking who enterprises cooperate with, enterprises were asked to rate how important to the business's innovation activities was information from the various categories shown above, plus a couple of additions. For both Scotland and the UK as a whole enterprises seemed to agree with the order of importance when it came to information.

Table 6: Importance of information for innovation activities

How important to this business's innovation activities was information from:	Scotland			UK		
	High	Medium	Low	High	Medium	Low
Within your business or enterprise group	48.0	24.5	5.9	47.2	21.1	8.2
Suppliers of equipment, materials, services or software	22.8	21.1	22.9	23.6	22.7	17.2
Clients or customers from the private sector	17.1	23.2	19.1	20.1	22.0	11.9
Competitors or other business in your industry	15.1	27.1	18.5	13.4	26.7	15.6
Clients or customers from the public sector	8.3	19.2	20.1	8.9	10.4	20.2
Professional and industry associations	6.6	14.4	22.1	5.7	15.6	19.7
Technical, industry or service standards	5.5	18.3	19.1	5.9	15.8	18.4
Conferences, trade fairs or exhibitions	4.6	16.8	17.8	5.6	13.6	22.1
Consultants, commercial labs or private R&D institutes	3.0	9.7	22.7	4.4	9.8	20.2
Scientific journals and trade/technical publications	1.9	8.3	20.9	1.5	8.6	21.0
Universities or other higher education institutes	1.8	5.0	20.7	1.9	4.2	18.9
Government or public research institutes	1.3	6.8	19.3	2.0	3.8	19.3

Constraints to Innovation

One of the questions in the UK Innovation Survey was 'How important were the following factors in constraining innovation activities?', broader innovators were asked to rank the constraints in terms of 'high', 'medium', 'low' or 'not applicable'.

Table 7 presents the proportion of businesses that provided a 'high' rating to each of the constraint categories. The cost related factors category was the most highly rated, with 23 per cent of businesses indicating 'availability of finance' in Scotland, compared with 17% for the UK as a whole. Only 6 per cent of businesses in Scotland highly ranked 'market dominated by established businesses' as a constraint, this compares to 10 per cent in the UK as a whole.

Table 7: Factors in Constraining Innovation Activities for Broader Innovators Active Enterprises (% of enterprises rating ‘high’)

Self-reported potential barriers	Scotland			UK		
	10 - 250 employees	250+ employees	All (10+ employees)	10 - 250 employees	250+ employees	All (10+ employees)
Cost factors						
Availability of finance	23%	12%	23%	17%	8%	17%
Direct innovation cost too high	22%	13%	22%	15%	11%	14%
Cost of finance	19%	9%	19%	15%	8%	14%
Excessive perceived economic risks	11%	9%	11%	14%	9%	14%
Knowledge factors						
Lack of qualified personnel	9%	5%	9%	8%	6%	8%
Lack of information on technology	9%	3%	8%	3%	3%	3%
Lack of information on markets	6%	3%	6%	2%	2%	2%
Market factors						
Uncertain demand for innovative goods or services	6%	8%	6%	8%	7%	7%
Market dominated by established businesses	6%	8%	6%	10%	6%	10%
Other factors						
EU regulations (including standards)	9%	4%	9%	6%	6%	6%
UK government regulations	8%	3%	8%	7%	6%	7%

Exports

The first question of this iteration of the UK Innovation Survey was ‘During the 3 year period 1 January 2012 to 31 December 2014: in which geographic markets did this business sell goods and/ or services?’

Table 8 shows the percentage of businesses that sell their goods and/ or services split by geographic markets, Scotland and the UK and by innovation and non-innovation active. Innovation active businesses are more likely to sell their goods and/ or services beyond a regional market compared to non-innovation active businesses.

Table 8: Geographic markets that businesses sell their goods and/ or services

Geographic Markets	Scotland			UK		
	Innovation Active	Non-Innovation Active	All	Innovation Active	Non-Innovation Active	All
UK Regional	70.9%	78.6%	74.6%	70.0%	80.4%	74.6%
UK National	52.6%	42.9%	48.0%	56.6%	49.5%	53.4%
European Countries	21.7%	12.8%	17.5%	28.6%	15.8%	22.8%
Rest of the World	17.2%	9.9%	13.7%	21.4%	10.6%	16.6%

Over fifteen per cent of businesses provided an estimate for the value of exports for the year 2014, for Scotland. This compares to nearly twenty per cent of businesses for the UK as a whole.

The findings indicated that compared to non-innovators, innovators are more likely to export. For Scotland, while 20 per cent of broader innovators reported engaging in exports, only 9 per cent of non-innovators did so. For the UK as a whole these figures are 27 per cent and 9 per cent respectively (Figure 12).

Figure 12: Innovators are more likely to Export

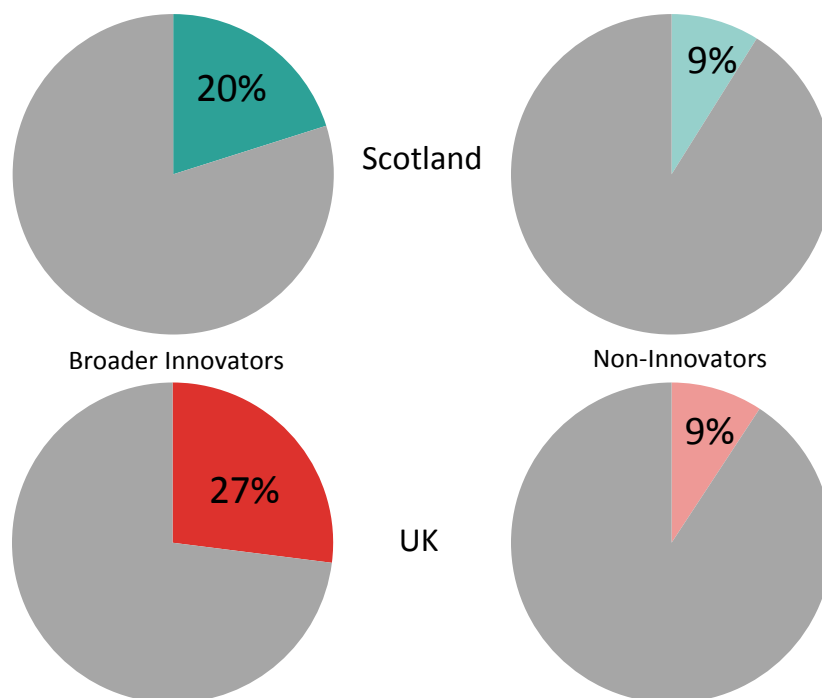


Table 9 shows the value of exports for 2014 in Scotland and the UK as a whole.

Table 9: Export value for 2014 for Scotland and the UK by Innovation Active and Non-innovation Active

Export Value	Scotland		UK	
	Broader Innovator	Non-Innovative	Broader Innovator	Non-Innovative
No Exports	79.9%	91.1%	73.0%	90.8%
Less than £1 million	12.4%	5.8%	16.7%	5.8%
Greater than £1 million and less than £10 million	5.9%	2.0%	7.8%	2.6%
Greater than £10 million and less than £100 million	1.7%	1.1%	2.2%	1.0%
Greater than £100 million	0.2%	0.1%	0.2%	0.1%

Turnover

Part of the UK Innovation Survey asks the enterprises to estimate their total turnover for the year, excluding VAT for 2012 and 2014. Table 10 looks at the percentage change in turnover between 2012 and 2014 for innovation active and non-innovation active enterprises split by sizeband. Total response rate for these questions is around 65 per cent.

The link between innovation and turnover growth appears to be stronger in Scotland compared to the UK as a whole. For example, just over half of enterprises in Scotland that were innovation active had an increase in turnover of over 10 per cent between 2012 and 2014 - compared to less than a third who were non-innovation active.

Table 10: Change in turnover by size band and region, 2012 to 2014

Percentage change in turnover between 2012 and 2014	Size of enterprise	Scotland		UK	
		Innovation Active	Non-Innovation Active	Innovation Active	Non-Innovation Active
Greater than 10% decrease in turnover	10 - 250 employees	13.6%	24.8%	15.0%	15.9%
	250 + employees	13.2%	*	11.2%	9.9%
	All	13.6%	24.3%	14.9%	15.7%
Between a 10% decrease and 10% increase	10 - 250 employees	36.4%	46.0%	31.0%	37.2%
	250 + employees	28.4%	48.2%	34.9%	36.9%
	All	36.1%	46.1%	31.1%	37.2%
Greater than 10% increase in turnover	10 - 250 employees	50.0%	29.2%	54.0%	47.0%
	250 + employees	58.5%	*	53.9%	53.2%
	All	50.3%	29.6%	54.0%	47.2%

*denotes disclosive data

Unweighted base for Scotland= 1,052

Qualifications

Table 11 presents the results for the average proportion of employees who hold a degree or higher level qualification⁶. For all enterprises the proportion of people with a degree in any subject is higher in the UK as a whole than it is in Scotland. The one exception to this is the proportion of people with Science or engineering subjects in enterprises with 250+ employees.

The average proportion of employees with a degree in 'science or engineering subjects' for enterprises that are broader innovators is greater in Scotland, 10.6 per cent, compared with the rest of the UK, 10.0 per cent. This is due to the fact that for both the smallest (10 – 49 employees) and the largest (250 + employees) enterprises the proportion is greater in Scotland than in the UK, 10.5 per cent vs. 10.0 per cent and 14.7 per cent vs. 11.3 per cent respectively.

Table 11: Average proportion (%) of 2014 employees who hold a degree or higher level qualification

	Scotland			UK		
	10 - 249 employees	250 + employees	All (10+ employees)	10 - 250 employees	250 + employees	All (10+ employees)
All						
Science or engineering subjects	7.5	12.4	7.6	8.0	9.7	8.1
Other subjects	9.8	10.4	9.8	13.1	13.6	13.1
Broader innovators						
Science or engineering subjects	10.5	14.7	10.6	10.0	11.3	10.0
Other subjects	10.4	11.3	10.5	14.8	14.0	14.8
Non- innovators						
Science or engineering subjects	2.4	6.6	2.5	3.7	4.9	3.7
Other subjects	8.7	8.0	8.7	9.4	12.1	9.4

As well as the proportion of 2014 employees that hold a degree or higher level qualification the businesses are also asked if they employed in-house or obtained from external sources individuals with various skills. Table 12 compares the listed skills for employees in-house or brought in by size of enterprise for both Scotland and the UK.

⁶ Degree or higher level qualification refers to either a BA, BSc, MA, MSc, PhD etc.

Table 12: Skill Type employed in Scotland and the UK, by size of enterprise, 2015

Listed skills for employees in-house or brought in	Scotland			UK		
	10 - 249 employees	250+ employees	All (10+ employees)	10 - 249 employees	250+ employees	All (10+ employees)
Graphic artists/ layout/ advertising	13.7%	28.2%	14.2%	17.6%	29.1%	17.9%
Design of objects or services	8.7%	19.5%	9.0%	10.8%	19.5%	11.0%
Multimedia/ web design	14.0%	27.0%	14.4%	18.7%	30.3%	19.0%
Software development/ database management	12.0%	28.6%	12.5%	14.5%	35.1%	15.2%
Engineering/ applied sciences	12.0%	28.6%	12.5%	9.1%	21.8%	9.5%
Mathematics/ statistics	3.6%	14.5%	3.9%	6.9%	17.5%	7.2%

Methodology

The UK Innovation Survey is funded by the Department for Business, Energy and Industrial Strategy (BEIS). The survey was conducted on behalf of BEIS by the Office for National Statistics (ONS).

The UK Innovation Survey 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 results form part of various EU benchmarking exercises for international comparisons.

The UK Innovation Survey 2015 sampled almost 29,732 UK enterprises. The total sample included a boost element for Scotland which meant including around 1,000 additional businesses from Scotland in the sample selected for the survey. The boost was funded by the Scottish Government. The survey was voluntary and conducted by means of both a postal questionnaire and telephone interview for businesses that had not yet completed a postal response.

Coverage and sampling

The survey covered enterprises with 10 or more employees in sections B-N of the Standard Industrial Classification (SIC) 2007. This was the third time survey data was collected using a sample based on the Standard Industrial Classification 2007 (SIC 2007).

The sample was drawn from the ONS Inter-Departmental Business Register (IDBR) in January 2015.

Response and weighting

The questionnaires for the survey were dispatched between 23 and 25 February 2015 and the survey was in the field until November 2015.

Valid responses were received from 15,091 enterprises which gives a response rate of 51 per cent for the UK as a whole, with a response rate of 51.2 per cent for Scotland (1,616 responses from Scotland-based businesses). The results in this report are based on weighted data in order to be representative of the population of firms. The responses were weighted back to the total business population of those in the IDBR. On average each respondent represents 12 enterprises in the population.

Annex A Innovation Activity – EU Comparison

The following section compares business innovation performance for the UK and Scotland with other countries within the EU. It should be noted that there will be some variation in the figures quoted for the UK and Scotland in this section compared to the previous sections due to the classification of industries included by EuroStat. Below is the link to the metadata taken from the EuroStat website as well as the section relating to sectors included.

(http://ec.europa.eu/eurostat/cache/metadata/en/inn_cis8_esms.htm).

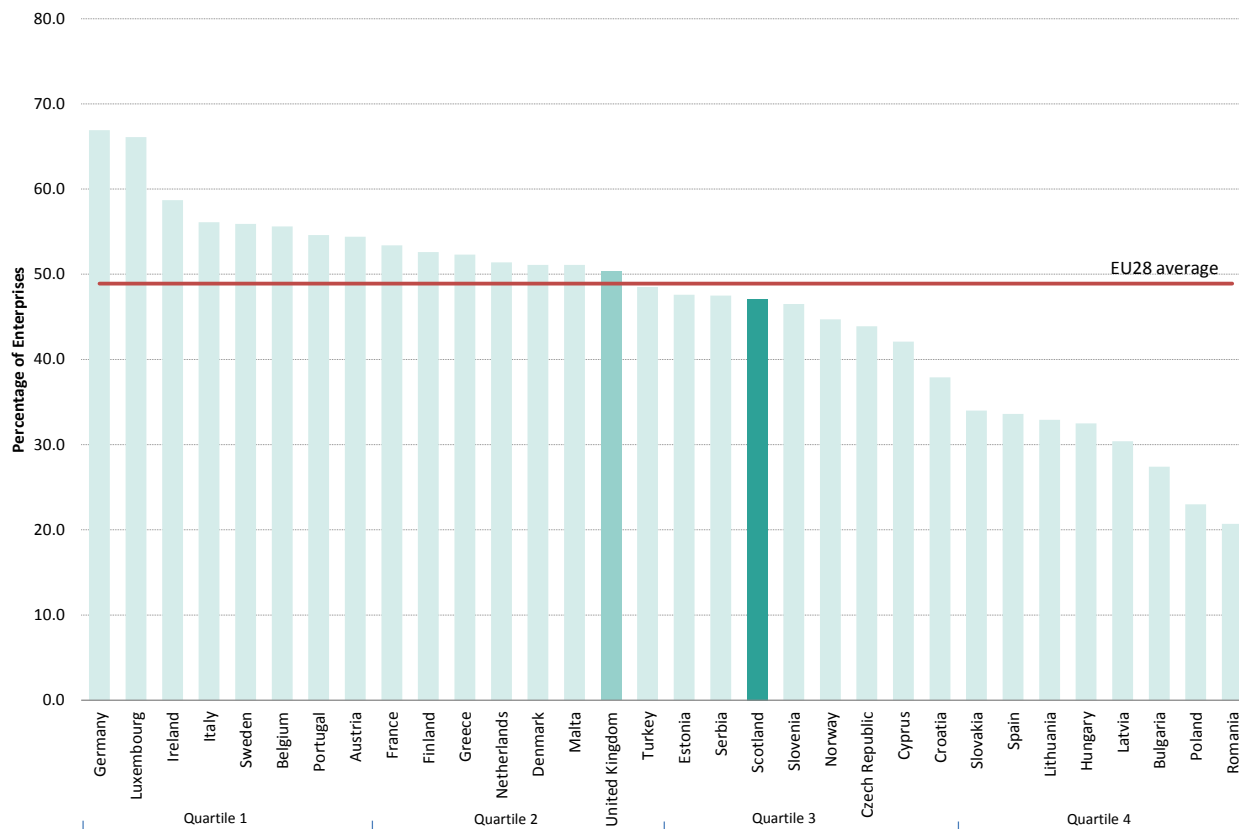
In accordance with Commission Regulation N° 995/2012, the following industries and services are included in the Core target population and results are made available with these presented breakdowns:

- Core NACE (NACE Rev. 2 sections & divisions B-C-D-E-46-H-J-K-71-72-73) (NACE code in the tables = B-M73_INN)
- B MINING AND QUARRYING
- C MANUFACTURING
- D ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY
- E WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES
- 46: Wholesale trade, except of motor vehicles and motorcylces
- H TRANSPORTATION AND STORAGE
- J INFORMATION AND COMMUNICATION
- K FINANCIAL AND INSURANCE ACTIVITIES
- 71: Architectural and engineering activites; technical testing and analysis
- 72: Scientific research and development
- 73: advertising and market research

Note also that figures from the 2015 Community Innovation Survey are not yet available from EuroStat and, therefore, this section uses the 2013 survey results for Scotland, the UK and other EU countries.

Figure 13, below, compares the percentage of Innovation Active Enterprises (included on the EuroStat website for the available countries) as well as the EU28 average. Scotland's business base tends to be less involved in innovation activities than other European countries, this can be seen as Scotland falls below the EU28 average (47.1 per cent for Scotland compared to 48.9 per cent for the European Union 28 average). Compared to the UK as a whole which is just above the EU28 average (50.3 per cent compared to 48.9 per cent).

Figure 13: Innovation Active Enterprises, % of Total Enterprises, 2010 – 2012



Continuing to compare the Innovation Active Enterprises for UK and Scotland against the EU 28, but this time looking at the sizes of the enterprises, those with between 10 and 49 employees, those with between 50 and 249 employees and those with 250 and more employees.

- For enterprises with between 10 and 49 employees, both the UK (48.7 per cent) and Scotland (46.3 per cent) are above the EU28 average of 45.2 per cent (Figure 14). However this is the only size bracket that Scotland is above the EU28 average;
- For enterprises with between 50 and 249 employees the EU 28 average is 60.5 per cent of enterprises. Scotland falls quite a bit short of this mark at only 48.2 per cent of enterprises, the UK (56.7 per cent) as a whole falls short but not by as much as Scotland does (Figure 15).
- For enterprises with more than 250 employers the UK and Scotland have the 2nd and 3rd lowest percentage of enterprises participating in innovation activities out of the countries listed, with 56.2 and 58.6 per cent respectively. This is below the EU28 average of 76.4 per cent and well below the top two countries of Luxembourg and Germany which have 92.8 and 92.2 per cent respectively (Figure 16).

Figure 14: Innovation Active Enterprises, % of Enterprises with 10 – 49 employees, 2010 – 2012

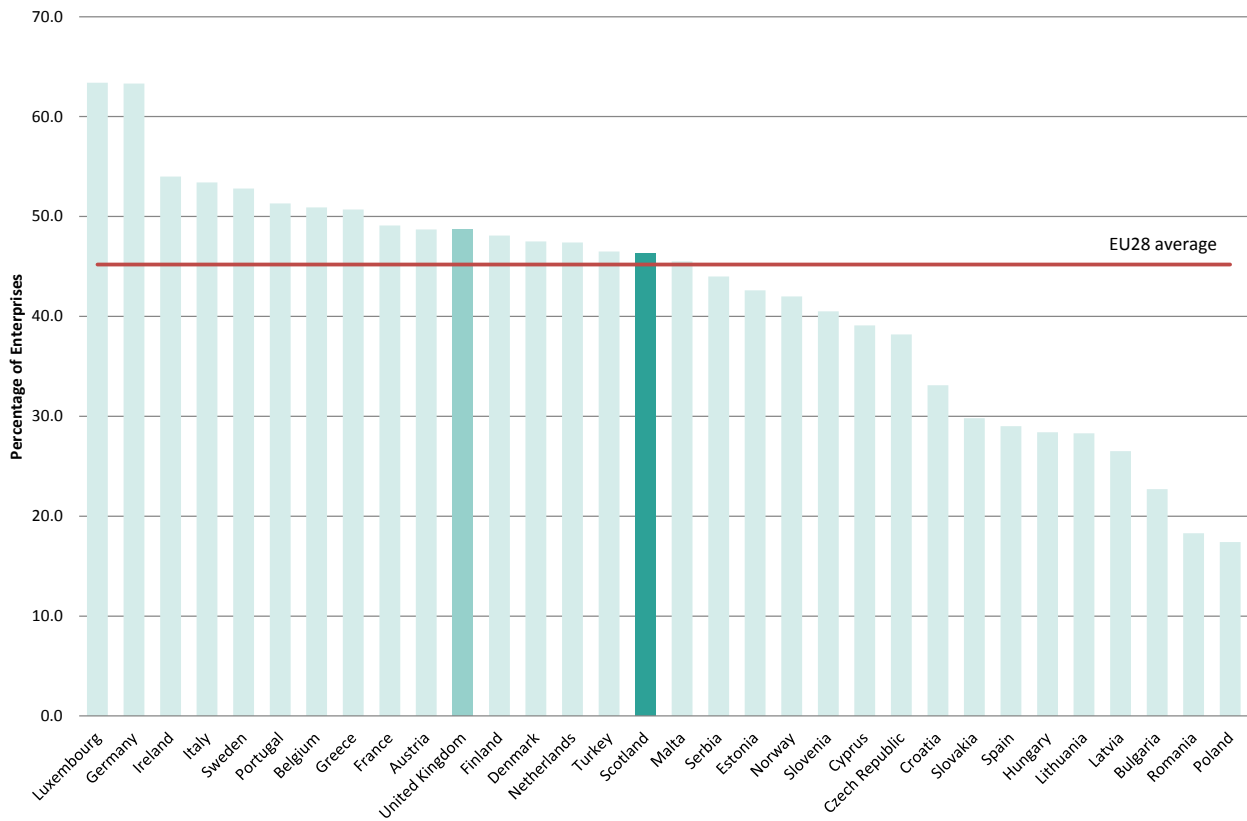


Figure 15: Innovation Active Enterprises, % of Enterprises with 50 – 249 employees, 2010 – 2012

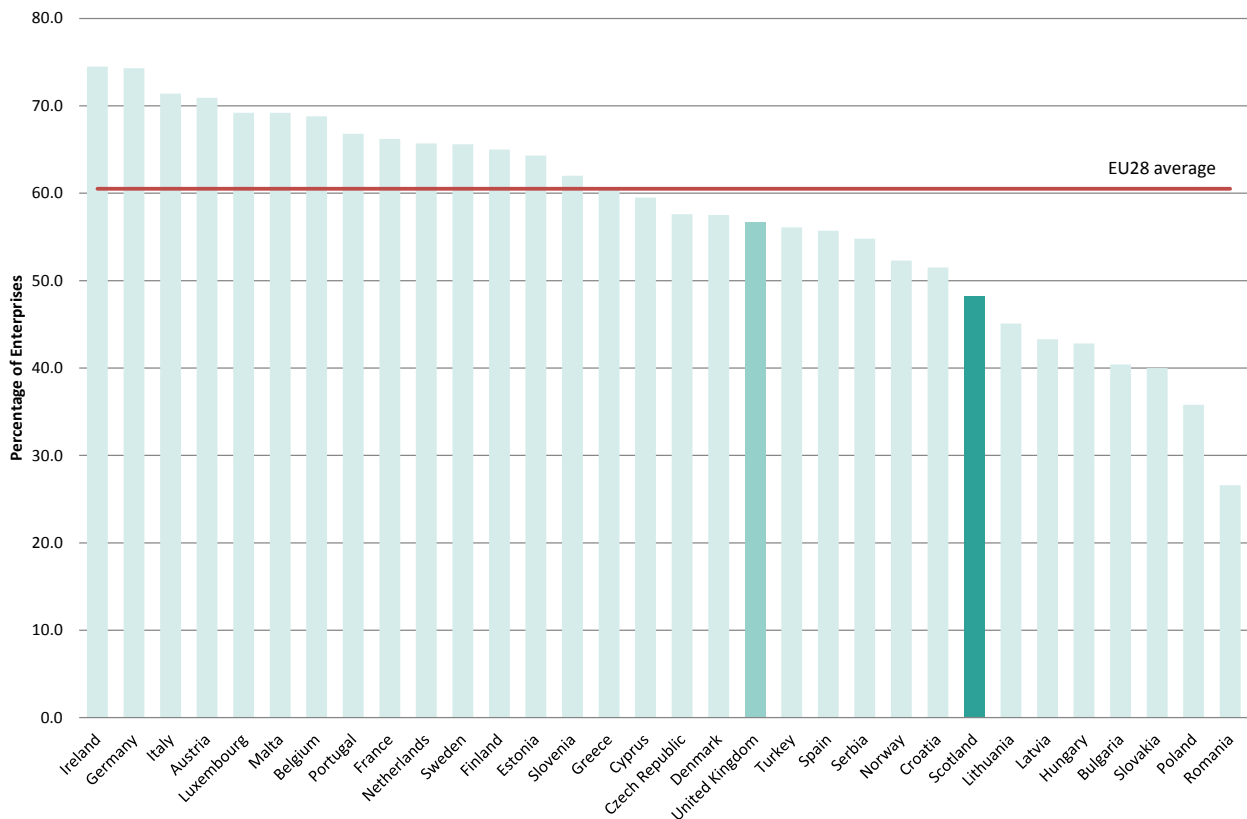
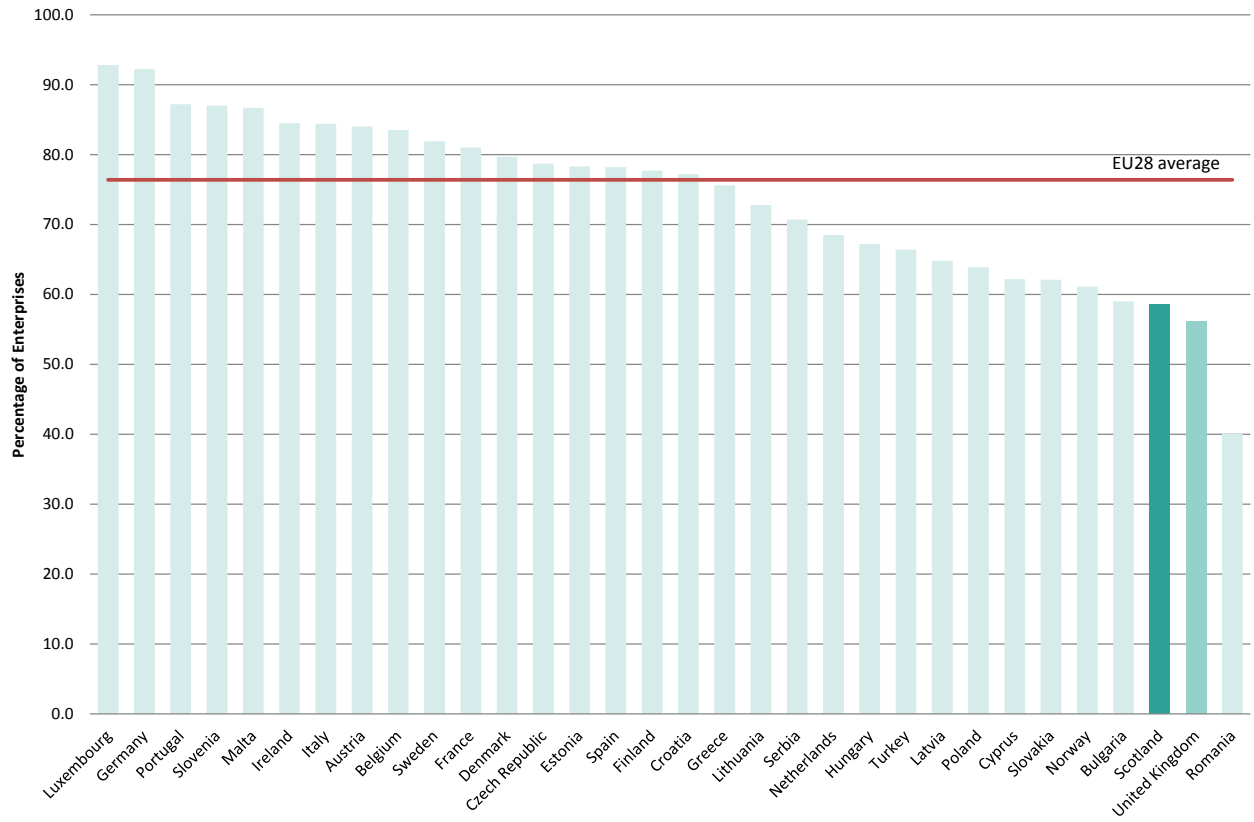


Figure 16: Innovation Active Enterprises, % of Enterprises with 250+ employees, 2010 – 2012



Annex B –Tables

The following pages include the tables that have been used to produce the figures throughout this report.

Figure 4: Percentage of Enterprises that are Innovation Active by Sector, UK and Scotland 2012 – 2014

	Sample Size	Innovation Active	
		Scotland	UK
Mining & quarrying and electricity, gas & water supply	65	58.8%	45.8%
Manufacture of foods, clothing, wood, paper, publish & print	103	76.9%	61.3%
Manufacture of fuels, chemicals, plastic, metals and minerals	92	51.6%	64.5%
Manufacture of electrical and optical equipments	55	60.1%	71.7%
Manufacture of transport equipments	21	35.7%	69.9%
Manufacture: not elsewhere classified	41	33.9%	58.2%
Construction	116	57.7%	46.1%
Wholesale Trade (incl cars & bike) and Retail Trade (excl cars & bikes)	406	45.8%	51.4%
Transport and post & courier activities	92	41.4%	47.2%
Hotels & restaurant	85	42.7%	47.3%
Computer & related activities/ICT and motion picture, video and tv programme production/ programming & broadcasting and telecommunications	67	51.6%	67.2%
Financial intermediation and real estate activities	58	56.1%	47.3%
Other services n.e.c	233	52.8%	49.7%
Architectural and engineering activities and related technical consultancy	74	63.1%	60.6%
Clinical testing & analysis, advertising & market research and other professional, scientific and technical activities	39	53.4%	64.0%
Research and experimental development on social sciences and humanities	45	61.9%	71.0%
Renting of machinery, equipment, personal and household goods	24	55.5%	52.4%

Figure 5: Innovation Active Enterprises by Growth Sector, 2015, for Scotland and the UK

Growth Sector	Scotland	UK
1. Food & Drink	84.2%	65.0%
2. Financial and Business Services	59.2%	53.5%
3. Life Sciences	59.5%	77.0%
4. Energy (including Renewables)	50.2%	48.2%
5. Sustainable Tourism (Tourism-related industries)	45.4%	45.0%
6. Creative Industries (including Digital)	56.0%	64.5%

Figure 6: Percentage change in Innovation Active Enterprises by Region, between 2013 UK Innovation Survey and 2015 Survey

Geographic Region	2013	2015	Percentage point change between 2013 and 2015
East Midlands	48.8%	56.3%	7.5
Eastern	46.0%	56.4%	10.4
London	42.2%	48.1%	5.9
North East	46.6%	52.8%	6.2
North West	41.8%	52.6%	10.8
Northern Ireland	39.4%	44.7%	5.3
Scotland	43.3%	50.4%	7.1
South East	45.8%	56.9%	11.1
South West	47.2%	43.4%	-3.8
Wales	46.7%	50.8%	4.1
West Midlands	43.4%	55.0%	11.6
Yorkshire and the Humber	43.0%	64.7%	21.7

Figure 7: Percentage of Enterprises that are Innovation Active by 2013-2014 Urban Rural 3 fold classification

	Innovation Active	Broader Innovation	Wider Innovation	Activities	Product Innovation	Process Innovation	Both Product AND Process Innovation	Either Product OR Process Innovation	Abandoned Activities	Ongoing Activities
Scotland	50.4	51.2	43.2	42.5	19.8	12.5	9.0	23.3	3.9	15.5
Accessible Rural Areas	40.1	40.2	34.1	32.4	17.1	11.6	9.1	19.6	2.9	13.1
Remote Rural Areas	61.3	62.5	58.7	46.5	33.3	15.6	14.7	34.2	2.5	7.9
Rest of Scotland	50.8	51.6	42.9	43.7	18.6	12.3	8.3	22.6	4.2	16.8
UK	50.4	51.2	43.2	42.5	19.8	12.5	9.0	23.3	3.9	15.5

Figure 8: Composition of Innovative Enterprises by Urban Rural 2013-14 Classification

	Innovation Active	Broader Innovation	Wider Innovation	Activities	Product Innovation	Process Innovation	Both Product AND Process Innovation	Either Product OR Process Innovation	Abandoned Activities	Ongoing Activities
Rest of Scotland	78.0	78.1	76.7	79.6	72.7	76.0	71.2	75.0	84.2	84.1
Accessible Rural Areas	10.4	10.2	10.3	9.9	11.2	12.1	13.1	10.9	9.7	11.0
Remote Rural Areas	11.6	11.7	13.0	10.5	16.1	11.9	15.6	14.0	6.2	4.9

Figure 9: Percentage share of Innovation Expenditure by type of Expenditure for all Enterprises

	In-House Research and Development	Purchase of External Research and Development	Acquisition of Machinery, Equipment and Software	Acquisition of Other Existing Knowledge	All Other Innovation Activities
Scotland	48.5%	2.3%	37.9%	1.4%	10.0%
UK	35.1%	4.4%	36.4%	1.2%	23.0%

Figure 10: Innovation Factors (% of innovation active enterprises rating 'high', 'medium' or 'low')

Innovation factors	Scotland			UK		
	High	Medium	Low	High	Medium	Low
Improving quality of goods or services	34.3%	18.5%	8.5%	33.5%	20.4%	6.1%
Replacing outdated products or processes	32.5%	22.0%	9.9%	31.5%	18.6%	14.0%
Increasing market share	27.9%	18.0%	10.4%	25.6%	18.7%	7.6%
Increasing value added	25.3%	15.9%	14.2%	23.9%	20.7%	8.5%
Increasing range of goods or services	25.3%	16.8%	10.2%	28.8%	20.6%	7.5%
Entering new markets	24.2%	18.9%	10.9%	19.2%	19.2%	12.5%
Reducing costs per unit produced or provided	22.9%	16.5%	13.8%	18.4%	15.9%	13.1%
Improving capacity for producing goods or services	19.9%	13.7%	14.4%	18.4%	18.0%	12.9%
Meeting regulatory requirements (including standards)	16.9%	18.1%	13.7%	16.3%	14.9%	16.4%
Improving flexibility for producing goods or services	15.4%	24.0%	13.6%	17.0%	18.5%	13.8%
Reducing environmental impacts	13.3%	20.3%	13.6%	9.2%	14.9%	17.2%
Improving health and safety	12.4%	17.0%	16.2%	11.8%	14.3%	18.3%

Appendix A – EU Comparison Figure 13, 14, 15 and 16 based on 2013 Innovation Survey

Country	Total	10 to 49 employees	50 to 249 employees	250 or more employees
Scotland	47.1%	46.3%	48.2%	58.6%
United Kingdom	50.3%	48.7%	56.7%	56.2%
Austria	54.4%	48.7%	70.9%	84.0%
Belgium	55.6%	50.9%	68.8%	83.5%
Bulgaria	27.4%	22.7%	40.4%	59.0%
Croatia	37.9%	33.1%	51.5%	77.2%
Cyprus	42.1%	39.1%	59.5%	62.2%
Czech Republic	43.9%	38.2%	57.6%	78.7%
Denmark	51.1%	47.5%	57.5%	79.7%
Estonia	47.6%	42.6%	64.3%	78.3%
Finland	52.6%	48.1%	65.0%	77.7%
France	53.4%	49.1%	66.2%	81.0%
Germany	66.9%	63.3%	74.3%	92.2%
Greece	52.3%	50.7%	60.7%	75.6%
Hungary	32.5%	28.4%	42.8%	67.2%
Ireland	58.7%	54.0%	74.5%	84.5%
Italy	56.1%	53.4%	71.4%	84.4%
Latvia	30.4%	26.5%	43.3%	64.8%
Lithuania	32.9%	28.3%	45.1%	72.8%
Luxembourg	66.1%	63.4%	69.2%	92.8%
Malta	51.1%	45.5%	69.2%	86.7%
Netherlands	51.4%	47.4%	65.7%	68.5%
Norway	44.7%	42.0%	52.3%	61.1%
Poland	23.0%	17.4%	35.8%	63.9%
Portugal	54.6%	51.3%	66.8%	87.2%
Romania	20.7%	18.3%	26.6%	40.1%
Serbia	47.5%	44.0%	54.8%	70.7%
Slovakia	34.0%	29.8%	40.0%	62.1%
Slovenia	46.5%	40.5%	62.0%	87.0%
Spain	33.6%	29.0%	55.7%	78.2%
Sweden	55.9%	52.8%	65.6%	81.9%
Turkey	48.5%	46.5%	56.1%	66.4%
European Union (28 countries)	48.9%	45.2%	60.5%	76.4%

Annex C – Broad Sector break down

SIC codes allow businesses to be classified by the type of economic activity in which they are mainly engaged. The broad sectors in Figure 4 are defined by SIC codes as follows;

Mining, quarrying and electricity, gas & water supply

SIC 05 : Mining of coal and lignite

SIC 06 : Extraction of crude petroleum and natural gas

SIC 07 : Mining of metal ores

SIC 08 : Other mining and quarrying

SIC 09 : Mining support service activities

SIC 35 : Electricity, gas, steam and air conditioning supply

SIC 36 : Water collection, treatment and supply

SIC 37 : Sewerage

SIC 38 : Waste collection, treatment and disposal activities; materials recovery

SIC 39 : Remediation activities and other waste management services

Manufacturing of food, clothing, wood, paper, publish & print

SIC 10 : Manufacture of food products

SIC 11 : Manufacture of beverages

SIC 12 : Manufacture of tobacco products

SIC 13 : Manufacture of textiles

SIC 14 : Manufacture of wearing apparel

SIC 15 : Manufacture of leather and related products

SIC 16 : Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials

SIC 17 : Manufacture of paper and paper products

SIC 18 : Printing and reproduction of recorded media

Manufacture of fuels, chemicals, plastic, metals and minerals

SIC 19 : Manufacture of coke and refined petroleum products

SIC 20 : Manufacture of chemicals and chemical products

SIC 21 : Manufacture of basic pharmaceutical products and pharmaceutical preparations

SIC 22: Manufacture of rubber and plastic products

SIC 23: Manufacture of other non-metallic mineral products

SIC 24: Manufacture of basic metals

SIC 25: Manufacture of fabricated metal products, except machinery and equipment

Manufacture of electrical and optical equipments

SIC 26 : Manufacture of computer, electronic and optical products

SIC 27 : Manufacture of electrical equipment

SIC 28 : Manufacture of machinery and equipment n.e.c.

Manufacture of transport equipments

SIC 29 : Manufacture of motor vehicles, trailers and semi-trailers

SIC 30 : Manufacture of other transport equipment

Manufacture: not elsewhere classified

SIC 31 : Manufacture of furniture

SIC 32 : Other manufacturing

SIC 33 : Repair and installation of machinery and equipment

Construction

SIC 41 : Construction of buildings

SIC 42 : Civil engineering

SIC 43 : Specialised construction activities

Wholesale trade (incl. cars & bikes) and retail trade (excl. cars & bikes)

SIC 45 : Wholesale trade and retail trade and repair of motor vehicles and motorcycles

SIC 46 : Wholesale trade, except of motor vehicles and motorcycles

SIC 47 : Retail trade, except of motor vehicles and motorcycles

Transport and post and courier activities

SIC 49 : Land transport and transport via pipelines

SIC 50 : Water transport

SIC 51 : Air transport

SIC 52 : Warehousing and support activities for transportation

SIC 53 : Postal and courier activities

Hotels and restaurants

SIC 55 : Accommodation

SIC 56 : Food and beverage service activities

Computer and related activities/ ICT, motion picture, video and tv programme production/ programming broadcasting and telecommunications

SIC 58 : Publishing activities

SIC 59 : Motion picture, video and television programme production, sound recording and music publishing activities

SIC 60 : Programming and broadcasting activities

SIC 61 : Telecommunications

SIC 62 : Computer programming, consultancy and related activities

SIC 63 : Information service activities

Financial intermediation and real estate activities

SIC 64 : Financial service activities, except insurance and pension funding

SIC 65 : Insurance, reinsurance and pension funding, except compulsory social security

SIC 66 : Activities auxiliary to financial services and insurance activities

SIC 68 : Real estate activities

Other services n.e.c.

SIC 69 : Legal and accounting activities

SIC 70 : Activities of head offices; management consultancy activities

SIC 78 : Employment activities

SIC 80 : Security and investigation activities

SIC 81 : Services to buildings and landscape activities

Architectural and engineering activities and related technical consultancy

SIC 711 : Architectural and engineering activities and related technical consultancy

Clinical testing and analysis, advertising and market research and other professional, scientific and technical activities

SIC 712 : Technical testing and analysis

SIC 73 : Advertising and market research

SIC 74 : Other professional, scientific and technical activities

Research and experimental development on social sciences and humanities

SIC 72 : Scientific research and development

Renting of machinery, equipment, personal and household goods

SIC 77 : Renting and leasing activities

Annex D – Growth Sectors

SIC codes allow businesses to be classified by the type of economic activity in which they are mainly engaged. The Growth sectors are defined by SIC codes as follows, those SIC codes in red italics are not surveyed as part of the Innovation Survey;

Energy (including renewables)

SIC 05: Mining of coal and lignite

SIC 06: Extraction of crude petroleum and natural gas

SIC 09: Mining support service activities

SIC 19: Manufacture of coke and refined petroleum products

SIC 20.14: Manufacture of other organic based chemicals

SIC 35: Electricity, gas, steam and air conditioning supply

SIC 36: Water collection, treatment and supply

SIC 38.22: Treatment and disposal of hazardous waste

SIC 71.12/2: Engineering related scientific and technical consulting activities

SIC 74.90/1: Environmental consulting activities

Financial and Business Services:

SIC 64.1: Monetary intermediation

SIC 64.3: Trusts, funds and similar financial entities

SIC 64.9: Other financial service activities, except insurance and pension funding

SIC 65: Insurance, reinsurance and pension funding, except compulsory social security

SIC 66: Activities auxiliary to financial services and insurance activities

SIC 69.1: Legal activities

SIC 69.2: Accounting, bookkeeping and auditing activities; tax consultancy

SIC 70.2: Management consultancy activities

SIC 71.129: Other engineering activities (not including engineering design for industrial process and production or engineering related scientific and technical consulting activities)

SIC 73.2 Market research and public opinion polling

SIC 74.3: Translation and interpretation activities

SIC 78.109: Activities of employment placement agencies (other than motion picture, television and other theatrical casting) n.e.c.

SIC 78.3: Other human resources provision

SIC 82.1: Office administrative and support activities

SIC 82.2: Activities of call centres

SIC 82.3: Organisation of conventions and trade shows
SIC 82.91: Activities of collection agencies and credit bureaus
SIC 82.99 Other business support service activities n.e.c.

Food and Drink:

SIC 01: Crop and Animal Production, Hunting and Related Service Activities
SIC 03: Fishing and Aquaculture
SIC 10: Manufacture of Food Products
SIC 11: Manufacture of Beverages

Life Sciences

SIC 21: Manufacture of basic pharmaceutical products and pharmaceutical preparations.
SIC 26.6: Manufacture of irradiation, electromedical and electrotherapeutic equipment.
SIC 32.5: Manufacture of medical and dental instruments and supplies.
SIC 72.11: Research and experimental development on biotechnology.
SIC 72.19: Other research and experimental development on natural sciences and engineering.

Sustainable Tourism (Tourism related Industries)

SIC 55.1: Hotels and similar accommodation
SIC 55.2: Holiday and other short-stay accommodation
SIC 55.3: Camping grounds, recreational vehicle parks and trailer parks
SIC 56.1: Restaurants and mobile food service activities
SIC 56.3: Beverage serving activities
SIC 79.12: Tour operator activities
SIC 79.9: Other reservation service and related activities
SIC 91.02: Museum activities
SIC 91.03: Operation of historical sites and buildings and similar visitor attractions
SIC 91.04: Botanical and zoological gardens and nature reserves activities
SIC 93.11: Operation of sports facilities
SIC 93.199: Other sports activities (not including activities of racehorse owners) nec
SIC 93.21: Activities of amusement parks and theme parks
SIC 93.29: Other amusement and recreation activities

Creative Industries

Cultural Domains	Scottish Creative & Cultural Industries	SIC 2007
Visual Art	1. Advertising	SIC 73.11: Advertising agencies SIC 73.12: Media representation
	2. Architecture	SIC 71.11: Architectural activities
	3. Visual art	<i>SIC 90.03: Artistic creation (70%)</i> SIC 47.78/1: Retail sale in commercial art galleries
	4. Crafts and Antiques	SIC 31.09: Manufacture of other furniture SIC 16.29: Manufacture of other wood products (30%) SIC 32.12: Manufacture of jewellery and related products SIC 32.13: Manufacture of imitation jewellery and related articles SIC 23.41: Manufacture of ceramic household and ornamental articles (35%) SIC 23.49: Manufacture of other ceramic products (35%) SIC 23.13: Manufacture of hollow glass (15%) SIC 23.19: Manufacture of other glass (15%) SIC 47.79/1: Retail sale of antiques and antique books <i>SIC 95.24: Repair of furniture and home furnishings</i>
	5. Fashion and textiles	SIC 13: Manufacture of textiles (25%) SIC 14: Manufacture of wearing apparel (20%) SIC 15: Manufacture of leather and related products (20%) SIC 74.1: Specialised design activities (25%)
	6. Design	SIC 71.12/1: Engineering design activities for industrial process and production SIC 74.1: Specialised design activities (75%)
Performance	7. Performing arts	<i>SIC 90.01: Performing arts</i> <i>SIC 90.02: Support activities to performing arts</i> <i>SIC 90.04: Operation of arts facilities</i> SIC 78.10/1: Motion picture, television and other theatrical casting
Audio-Visual	8. Music	SIC 59.2: Sound recording and music publishing activities SIC 18.20/1: Reproduction of sound recording SIC 32.2: Manufacture of musical instruments
	9. Photography	SIC 74.20/1: Portrait photographic activities SIC 74.20/2: Other specialist photography (not including portrait photography) SIC 74.20/9: Other photographic activities (not including portrait and other specialist photography and film processing) n.e.c.
	10. Film and video	SIC 18.20/2: Reproduction of video recording SIC 59.11/1: Motion picture production activities SIC 59.11/2: Video production activities SIC 59.12: Motion picture, video and television programme post-production activities (25%) SIC 59.13/1: Motion picture distribution activities SIC 59.13/2: Video distribution activities SIC 59.14: Motion picture projection activities
	11. Computer Games	SIC 58.21: Publishing of computer games SIC 62.01/1: Ready-made interactive leisure and entertainment software development
	12. Radio and TV	SIC 58.11/3: Television programme production activities SIC 59.13/3: Television programme distribution activities SIC 59.12: Motion picture, video and television programme post-production activities (75%) SIC 60.1: Radio broadcasting SIC 60.2: Television programming and broadcasting activities
Books and Press	13. Writing and Publishing	<i>SIC 90.03: Artistic creation (30%)</i> SIC 58.11: Book publishing SIC 58.13: Publishing of newspapers SIC 58.14: Publishing of journals and periodicals SIC 58.19: Other publishing activities SIC 18.11: Printing of newspapers SIC 18.129: Other printing (not labels) SIC 18.13: Pre press and media services SIC 63.91: News agency activities
Heritage	14. Libraries and archives	<i>SIC 91.01: Libraries and archive activities</i>
Digital Industries	15. Software/electronic publishing	SIC 58.29: Other software publishing SIC 62.01/2: Business and domestic software development SIC 62.02: Computer consultancy activities
Cultural Education	16. Cultural education	<i>SIC 85.52: Cultural Education</i>