

BUSINESS AND ENERGY

UK Innovation Survey 2017 – Results for Scotland

This report presents the Scottish findings from the UK Innovation Survey 2017, covering the three-year period from 2014 to 2016.

Key Points:

- In Scotland, 45.0% of businesses were innovation active in 2014-16, this compares to 49.0% for the UK as a whole.
- Between 2012-14 and 2014-16, the innovation active share in Scotland fell by 5.4 percentage points - this compares to a decrease of 4.0 percentage points for the UK as a whole.
- In Scotland, the share of businesses introducing product and/or process innovations rose from 23.3% in 2012-14 to 27.5% in 2014-16. Whereas, the share of businesses introducing wider innovations in business practices fell from 43.2% in 2012-14 to 33.3% in 2014-16.
- Large businesses (those with 250 or more employees) were more likely to be innovators compared to smaller businesses. In 2014-16, 43.2% of small (10-49 employees) businesses in Scotland were innovation-active, down from 50.5% in 2012-14. Whereas for large businesses the innovation-active share increased from 55.2% in 2012-14 to 62.5% in 2014-16.
- Businesses in the 'Research and experimental development on social sciences and humanities' sector were most likely to be innovation active in 2014-16. Business in the 'Accommodation and food services' sector were least likely to be innovation active in 2014-16.
- In 2014-16, the highest share of innovation expenditure in Scotland and the UK was spent on 'In-house research and development'.
- For both Scotland and the UK the main driver for innovation, in 2014-16, was improving the quality of goods or services.
- In Scotland, 55.3% of broader innovators reported co-operating with partners to support innovation in 2014-16. This is an increase of 12.9 percentage points since 2012-2014.

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The UK Innovation Survey

The UK Innovation Survey (UKIS) is the UK contribution to the tenth Europe-wide Community Innovation Survey. The questions are harmonised across Europe, so the data are directly comparable with those of other European countries.

The sample selection was conducted by the Office for National Statistics (ONS). The 2017 survey sampled 30,479 enterprises with ten or more employees and responses were received from 13,194 businesses UK-wide: 1,433 of these were from businesses based in Scotland.

Responses are weighted to the total business population using the Inter-Departmental Business Register (IDBR) in order to be representative of the business base.

This report summarises the key findings from this survey for Scotland. Further information about the survey, the main findings for the UK and past results for the UK can be found at the [Community Innovation Survey collection](#).

Definition of Innovation

The survey uses the following definitions of innovation drawing on those agreed with Eurostat:

‘Active’ innovators develop:

- new or significantly improved product (good or service) or process
- new or significantly improved forms of organisation, business structures, practices or marketing concepts/strategies
- innovation which is incomplete, reduced or abandoned

‘Broad’ innovators develop:

- new or significantly improved product (good or service) or process
- new or significantly improved forms of organisation, business structures, practices or marketing concepts/strategies
- engage in innovation which is incomplete, reduced or abandoned
- investment in internal research and development, training, external knowledge, machinery and equipment for innovation

‘Wider’ innovators develop:

- new or significantly improved forms of organisation, business structures, practices or marketing concepts/strategies

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 2014 to 2016, and makes comparisons with the results for the UK as a whole.

Figure 1 and Table 1 show the share of enterprises engaging in innovation activity for both Scotland and the UK as a whole. For 2014-16, the proportion of innovation active businesses in the UK (49.0%) was higher than in Scotland (45.0%) – and the UK outperformed Scotland across all the innovation activity types.¹

Figure 1: Proportion of enterprises engaging in innovation activity, 2014 – 2016

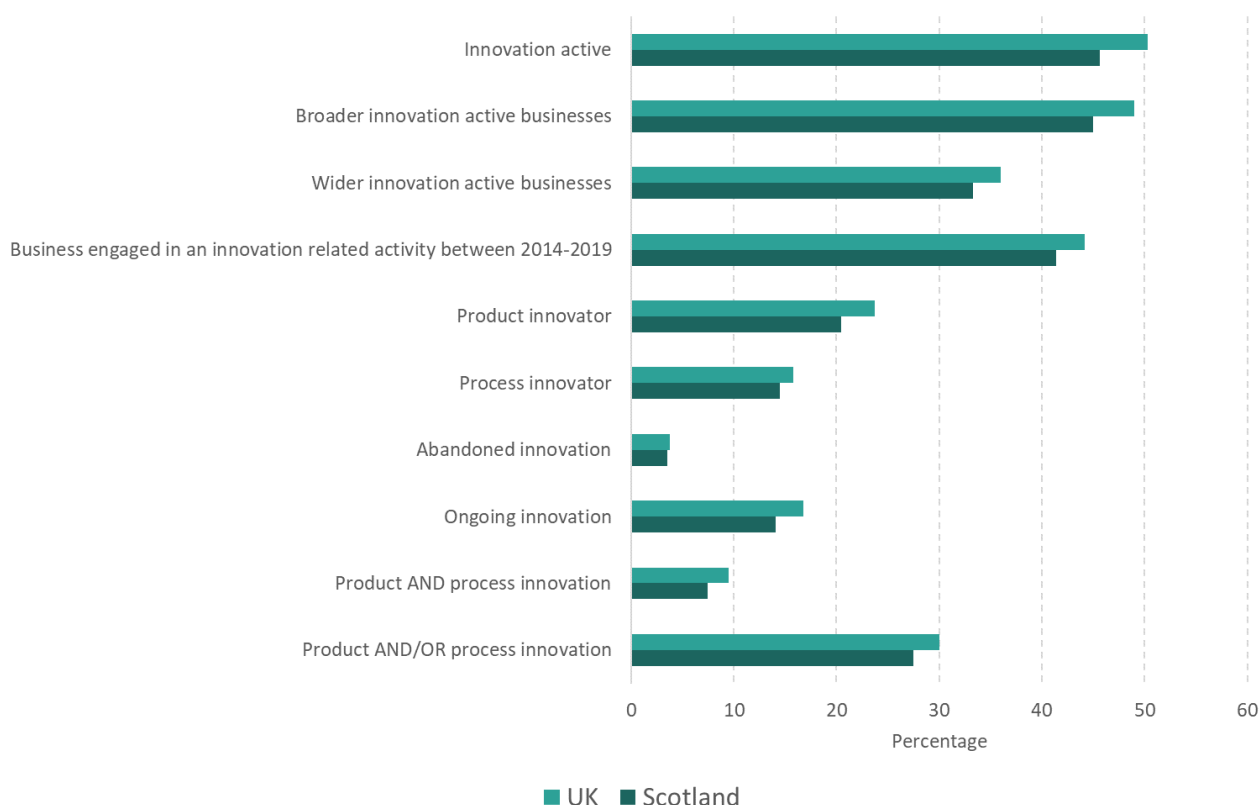
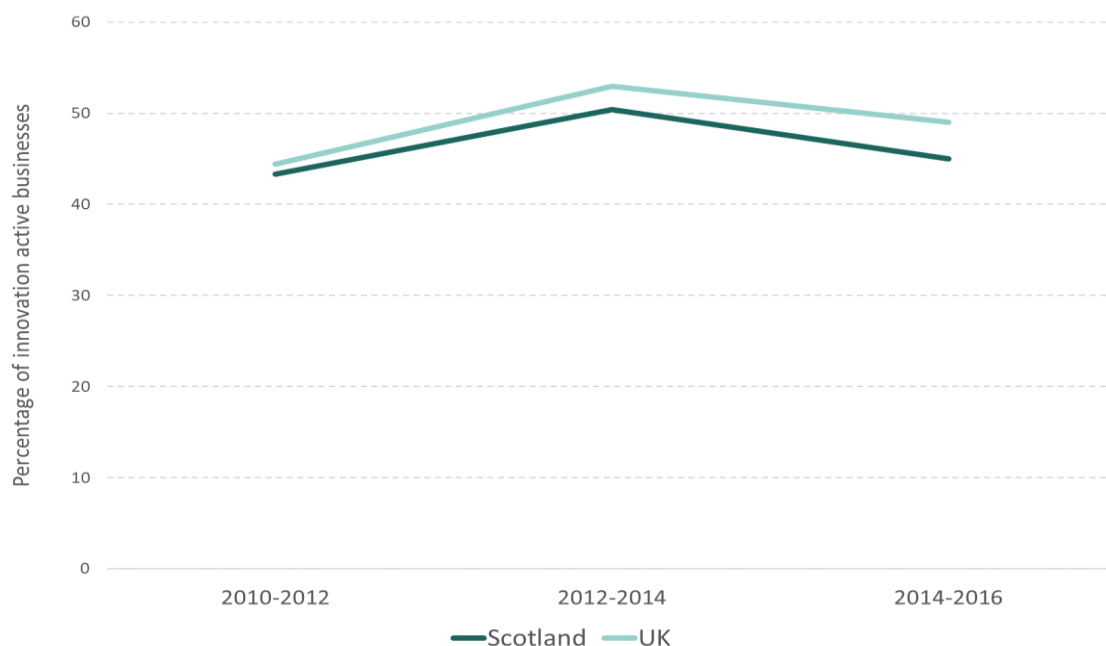


Figure 2 and Table 1 show that between 2012-2014 and 2014-2016 innovation activity dropped in both the UK (-4.0 percentage points) and Scotland (-5.4 percentage points), following strong growth in innovation activity over the 2010-2012 to 2012-14 periods.

¹ Although note that the difference between the UK and Scotland share for 'Abandoned innovation' was not statistically significant. When the differences between two proportions is said to be significant, in statistical terms, it means that the difference is unlikely to occur by chance (less than 5% chance: $p < 0.05$). See Annex A for more details.

Figure 2: Change in the share of innovation active enterprises in Scotland and the UK, 2010-2016



The fall in innovation activity over the latest period has been driven by a decline in wider innovation. Figure 3 and Table 1 show that the innovation activity exhibiting the largest decrease between 2012-2014 and 2014-2016 in both the UK and Scotland was wider innovation: the proportion of businesses performing wider innovation dropped by 9.9 percentage points in Scotland and by 6.0 percentage points in the UK.

The proportion of businesses involved in other innovation activities decreased by much less; indeed businesses performing product and/or process innovation experienced an increase of 4.2 percentage points in Scotland and 5.9 percentage points in the UK between 2012-14 and 2014-16.

Figure 3: Change in the share of enterprises performing innovation activities in Scotland and the UK, 2010 – 2016

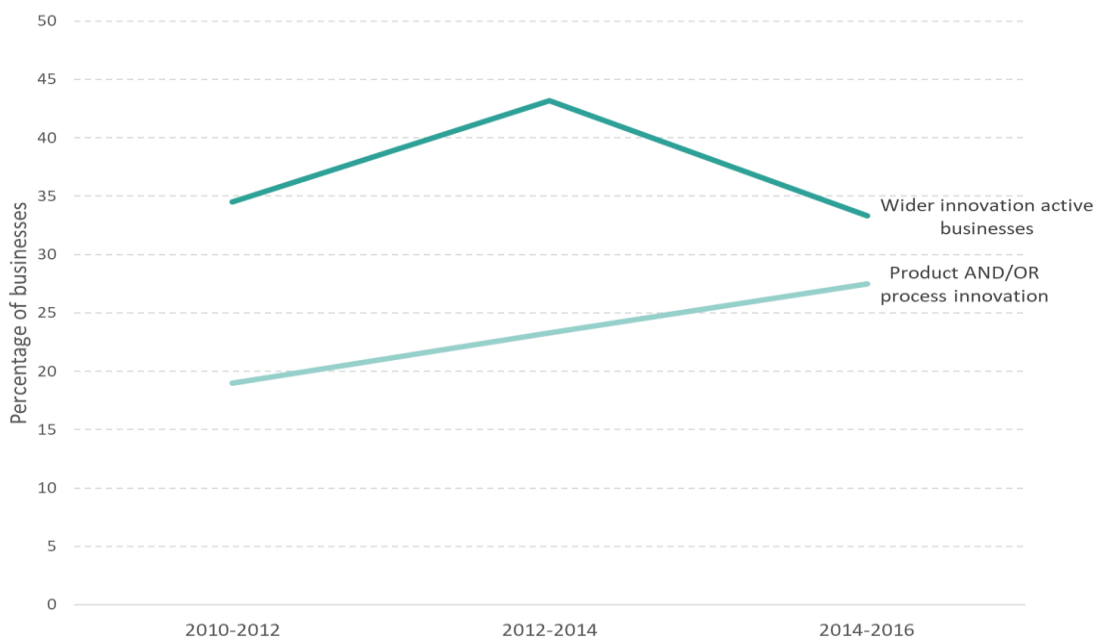
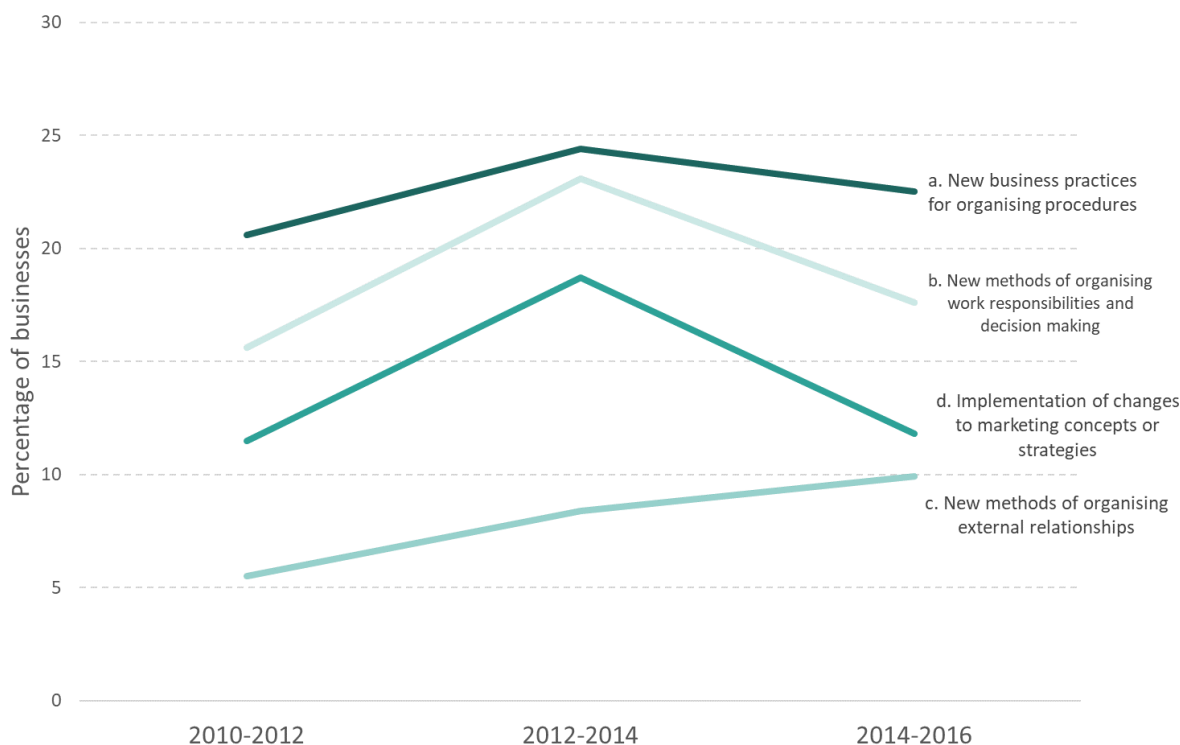


Figure 4 and Table 2 show that in Scotland the reduction in wider innovation was driven by large decreases in the percentage of businesses developing new methods of organising work responsibilities and decision making and implementing changes to marketing concepts or strategies.

Figure 4: Change in the share of enterprises performing wider innovation activities in Scotland and the UK, 2010 – 2016



Innovation Activities – by Size

Figure 5a and Table 3 show that in Scotland and the UK, businesses innovation activity increases with business size.

In Scotland, in 2014-16, small (10-49 employees) businesses were least likely to be innovation active (43.2% for Scotland) and large (250+ employees) businesses were most likely to be innovation active (62.5%); a similar pattern was found for broader innovators.

Wider innovation exhibited a slightly different pattern: the smallest businesses (10-49 employees) were less likely to be wider innovators (32.2%) than Scottish businesses overall (33.3%), businesses with 50-99 and 100-249 employees were most likely to be wider innovators (38.6% and 38.8% respectively), but there was not a statistically significant difference between the largest businesses (37.6%) and Scottish businesses in general (Table 3).

Small businesses (10-49 employees) were less likely to be involved in product and/or process innovation than Scottish businesses overall (26.3% vs 27.5%), whereas

businesses with 50-99 and 250+ employees were more likely (31.7% and 44.3% respectively).

Figure 5b and Table 3 show that innovation activity decreased between 2012-14 and 2014-16 among the smallest businesses (-7.3 percentage points), whereas the innovation active share increased for large businesses (+7.3 percentage points).

Figure 5a: Share of innovation active enterprises according to their size, in Scotland and the UK, 2014-2016

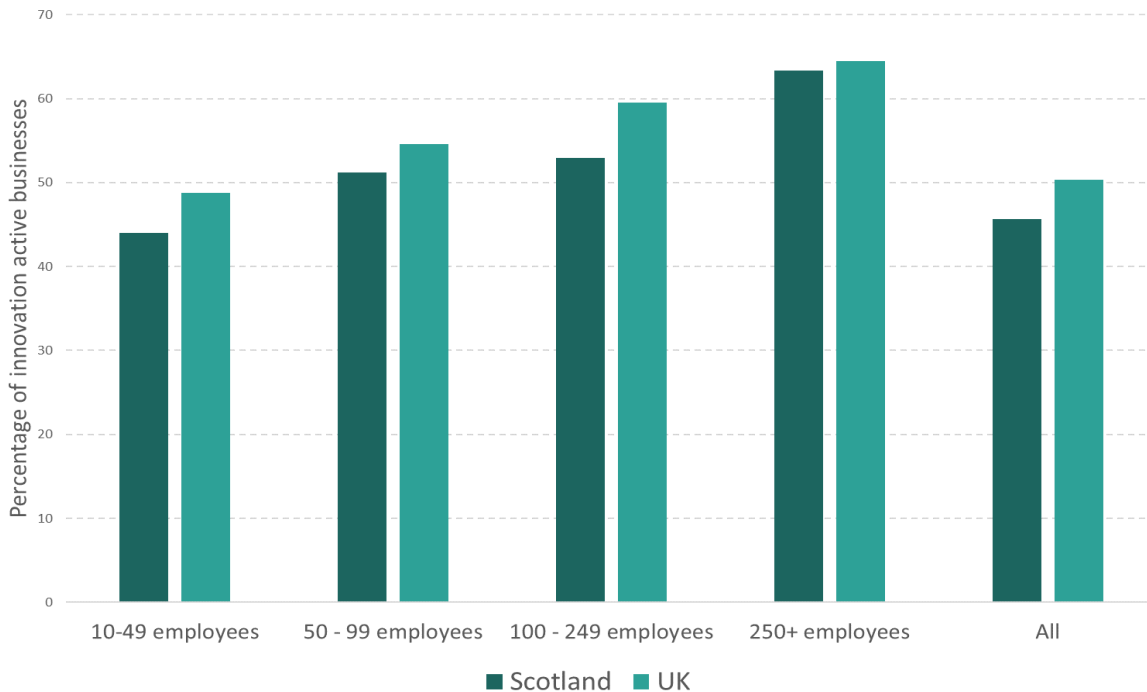
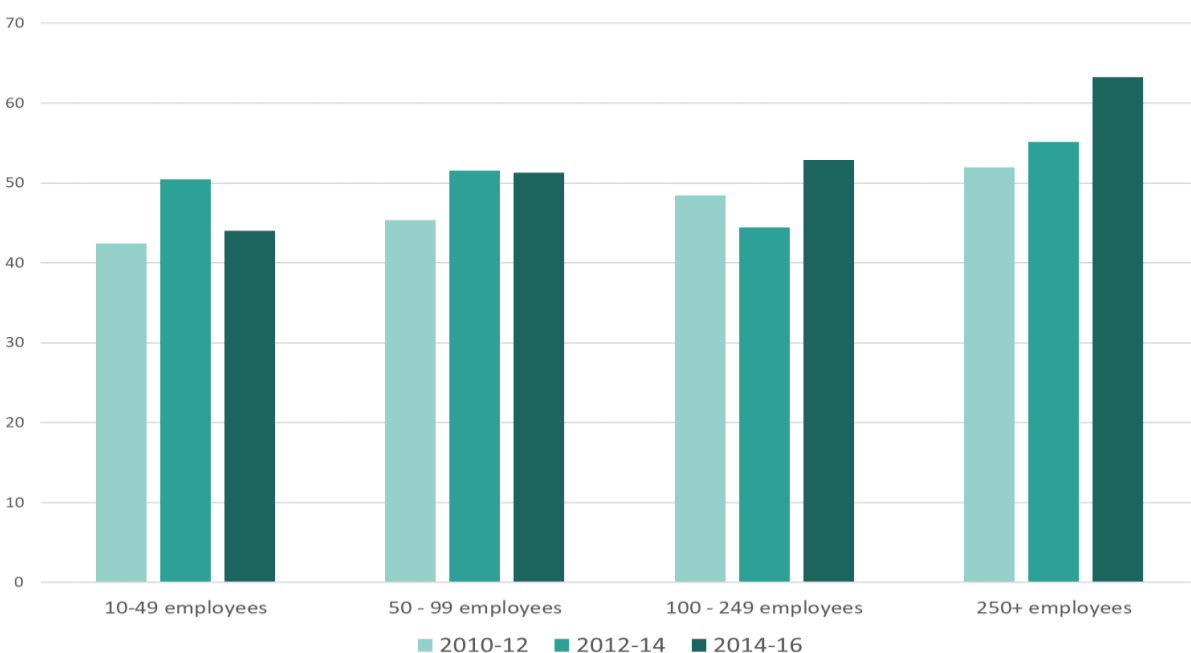


Figure 5b: Share of innovation active enterprises according to their size, in Scotland, 2010-2016



Innovation Activity – by Sector

Innovation activity varies between industry sectors as shown in Figure 6 and Table 4.

Businesses in the 'Research and experimental development on social sciences and humanities' sector were the most likely to be innovation active in Scotland (79.4%) and the UK (78.5%). Businesses in the 'Accommodation and food services' sector were the least likely to be innovation active.

Of the 17 sector groups that are shown in Figure 6, the 2014-16 innovation active share was significantly higher (than the Scottish average) for the following eight sectors:

- v) Research and experimental development on social sciences and humanities
- n) Computer and related activities/ICT, Motion picture, video and tv programme production/programming & broadcasting and Telecom
- t) Architectural and engineering activities and related technical consultancy
- d) Manufacture of computer, electrical and optical equipment
- y) Renting of machinery, equipment, personal and household goods
- u) Technical testing and analysis, Advertising and Market Research and Other professional, scientific and technical activities
- b) Manufacturing of food, clothing, wood, paper, publish & print
- c) Manufacture of fuels, chemicals, plastic, metals and minerals

Innovation activity was significantly lower than the Scottish average in the following sectors: 'm) Accommodation and food services', 's) Other services nec', 'g) Construction' and 'q) Financial intermediation and Real estate activity'.

Innovation activity was significantly higher in Scotland, than in the UK, for four sector groups: 'c) Manufacture of fuels, chemicals, plastic, metals and minerals', 'n) Computer and related activities/ICT, Motion picture, video and TV programme production/programming & broadcasting and Telecom', 't) Architectural and engineering activities and related technical consultancy' and 'y) Renting of machinery, equipment, personal and household goods'. In contrast, innovation activity was significantly lower in Scotland, than in the UK, for five sector groups: 'f) Manufacture: not elsewhere classified', 'g) Construction', 'm) Accommodation and food services', 'q) Financial intermediation and Real estate activities' and 's) Other services nec'.

In Scotland, businesses in the 'Computer and related activities/ICT, motion picture, video and TV program production/programming & broadcasting and Telecom' sector were most likely to be wider innovators (59.8%) and enterprises in 'Other services nec' were least likely (26.4%).

Businesses in the 'Manufacture of electrical and optical equipment' sector were most likely to be product and/or process innovators (59.5%).

Figure 6: Share of enterprises that are innovation active by sector² in the UK and Scotland 2014 – 2016

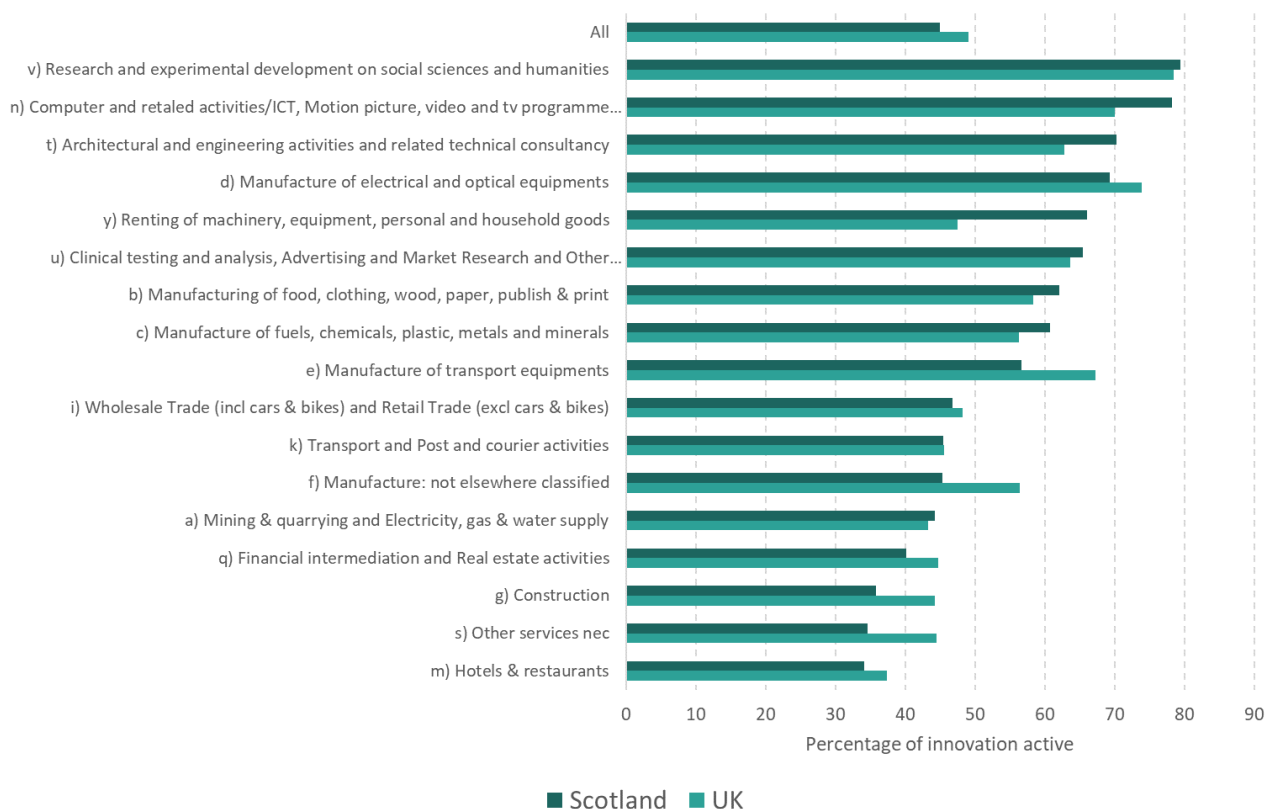


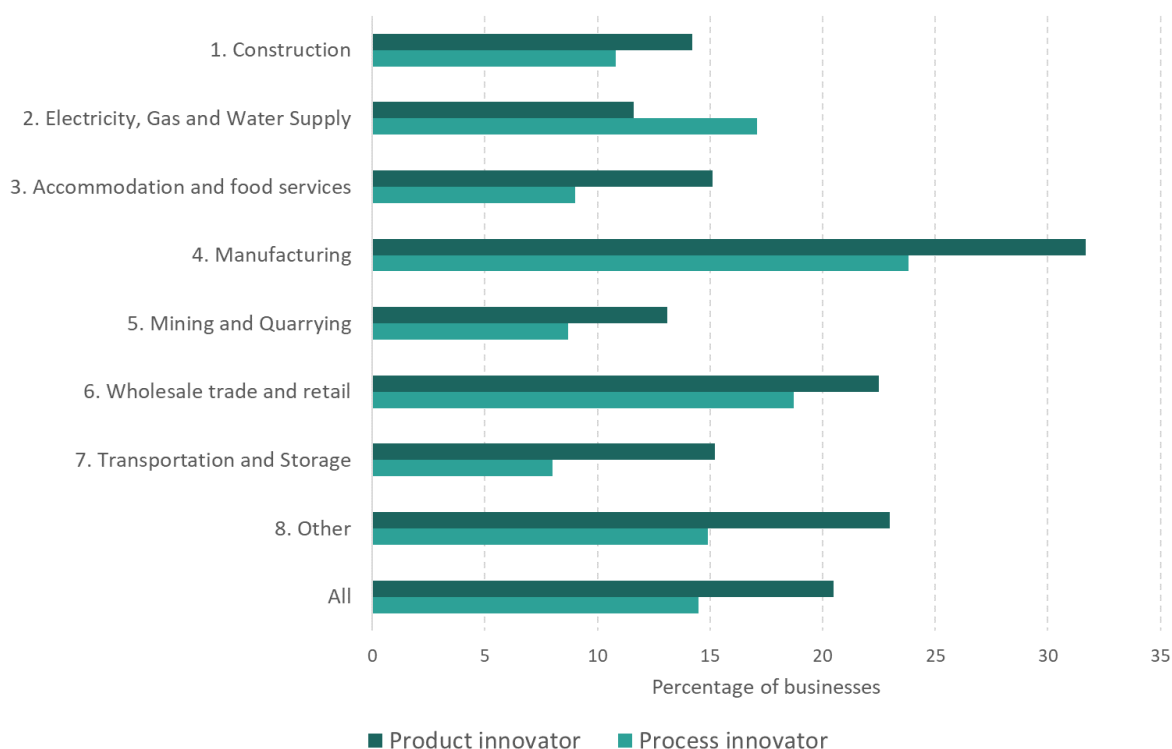
Figure 7 and Table 6 show that in 2014-2016, Scottish businesses within the broad sectors ‘Manufacturing’ (31.7%), ‘Wholesale trade and retail’ (22.5%) and ‘Other’ (23.0%) were most likely to be involved in product innovation; whereas businesses in ‘Construction’, ‘Electricity, gas and water supply’, ‘Accommodation and food services’ and ‘Transportation and Storage’ sectors were less likely to be involved in product innovation.

A similar pattern was found for process innovation: the proportion of Scottish businesses involved in process innovation was also higher in the ‘Manufacturing’ (23.8%) and ‘Wholesale trade and retail’ (18.7%) sectors than in Scottish businesses in general (14.5%); whereas a lower proportion of businesses in ‘Construction’, ‘Accommodation and food services’, ‘Mining and quarrying’ and ‘Transportation and Storage’ sectors were involved in process innovation.

Businesses in ‘Manufacturing’ were also most likely to be innovation active, wider innovators, broader innovators and product and/or process innovators (Table 7).

² Break down of sectors by SIC 2007 code available in Annex C

Figure 7: Share of enterprises involved in product/process innovation by broad sector, 2014-2016



Innovation Activity – Growth Sector

The six private sector dominated growth sectors³, as identified in Scotland’s Economic Strategy (SES) 2015, are:

- Food & Drink (including agriculture & fisheries)
- Creative Industries (including digital)
- Sustainable Tourism
- Energy (including renewables)
- Financial & Business Services
- Life Sciences

Figure 8 and Table 8 show that the innovation active share varied across the six growth sectors. In Scotland, businesses in the ‘Food and Drink’ growth sector were most likely to be innovation active (77.4%) and those in ‘Sustainable Tourism’ were least likely (33.7%).

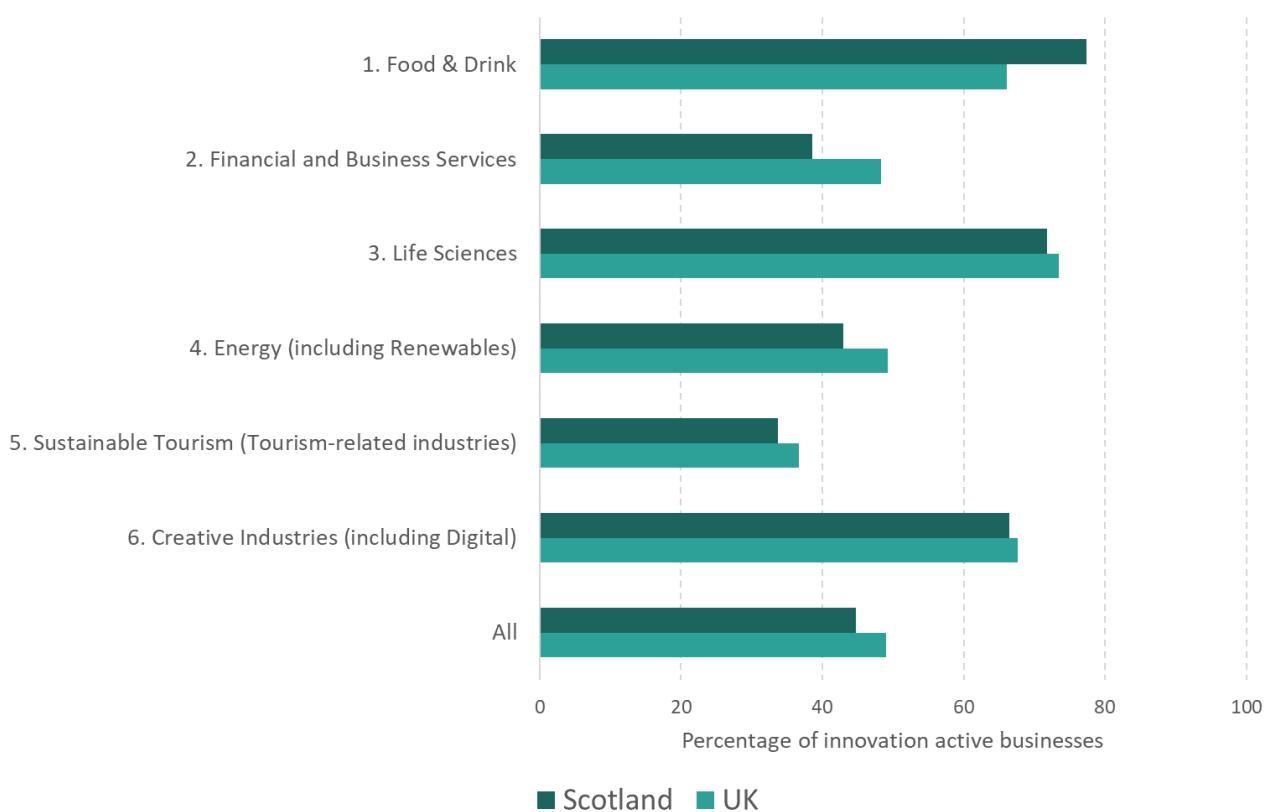
³ The UK Innovation survey does not include all SIC codes that would usually be covered in the Growth Sectors. Please refer to Annex C for a list of Growth Sector SIC codes included and not included in the UK Innovation survey.

Compared to the Scottish average, the innovation active share was significantly higher in: 'Food and drink' (77.4%), 'Life Sciences' (71.8%) and 'Creative Industries' (66.5%). In contrast, the shares of innovation active businesses in 'Financial and Business Services' (38.6%) and 'Sustainable Tourism' (33.7%) were significantly lower than the Scottish average.

Table 8 also shows that in Scotland, between 2012-14 and 2014-16, innovation activity increased in 'Life Sciences' (12.3 percentage points) and 'Creative Industries' (10.5 percentage points); however it decreased in the other four growth sectors. The steepest decline was in 'Financial and business services', where innovation activity dropped by 20.6 percentage points between 2012-14 and 2014-16.

When compared to the UK, enterprises in the Scottish 'Food and Drink' growth sector were significantly more likely to be innovation active, but the 'Financial and Business Services' and 'Sustainable Tourism' growth sectors were significantly less likely to be innovation active in Scotland than in the UK.

Figure 8: Proportion of innovation active enterprises by Growth Sector, in Scotland and the UK, 2014-2016



Geography of Innovation

Figure 9 and Table 10 show that in 2014-2016, the South West of the UK had the highest share of innovation active businesses in the UK (52.5%) and Northern Ireland had the lowest (38.8%). Innovation activity in Northern Ireland, the North East, Scotland, Wales and London was significantly lower than the UK overall, whereas in the South West, West Midlands, Eastern, East Midlands and South East it was significantly higher.

In 2014-16, Northern Ireland (38.8%) and the North East (42.0%) were the only regions of the UK that had a lower level of innovation activity than Scotland (45.0%); all other regions had a significantly higher share of innovation activity than Scotland. Scotland's share of innovation activity ranked 10th out of the 12 UK regions and countries; this represents a drop from 9th place in the previous Innovation Survey.

Figure 10 and Table 10 show that the only region of the UK to exhibit an increase in innovation activity, between 2012-14 and 2014-16, was the South West. All the other regions, including Scotland, saw a decrease in innovation activity. Yorkshire and the Humber saw the largest percentage point decrease (-15.4 percentage points) followed by the North East (-10.8 percentage points). In comparison the share of Scottish businesses that were innovation active decreased by 5.4 percentage points between 2012-14 and 2014-16.

Figure 9: Share of innovation active businesses across the UK, 2014-2016

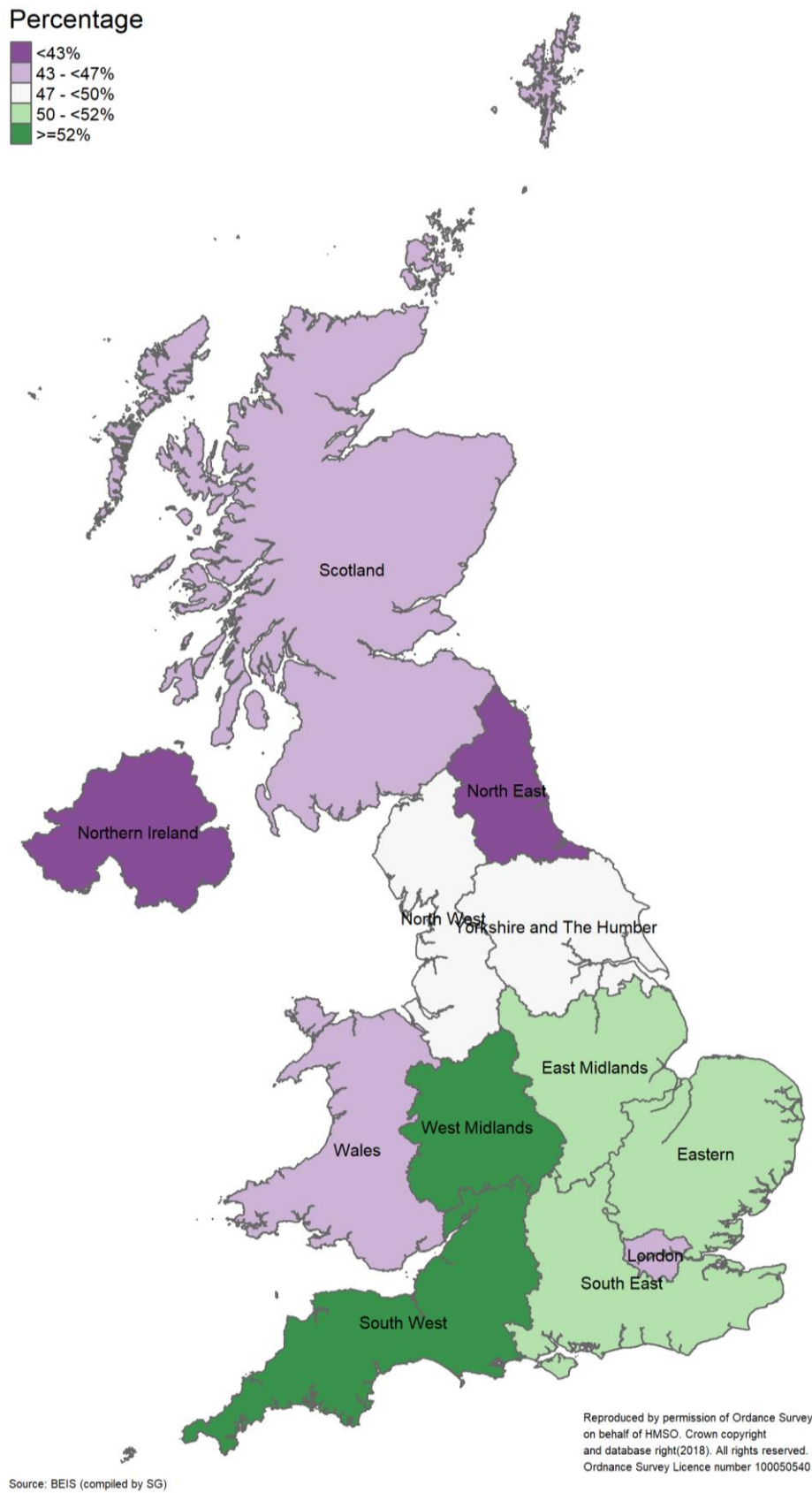


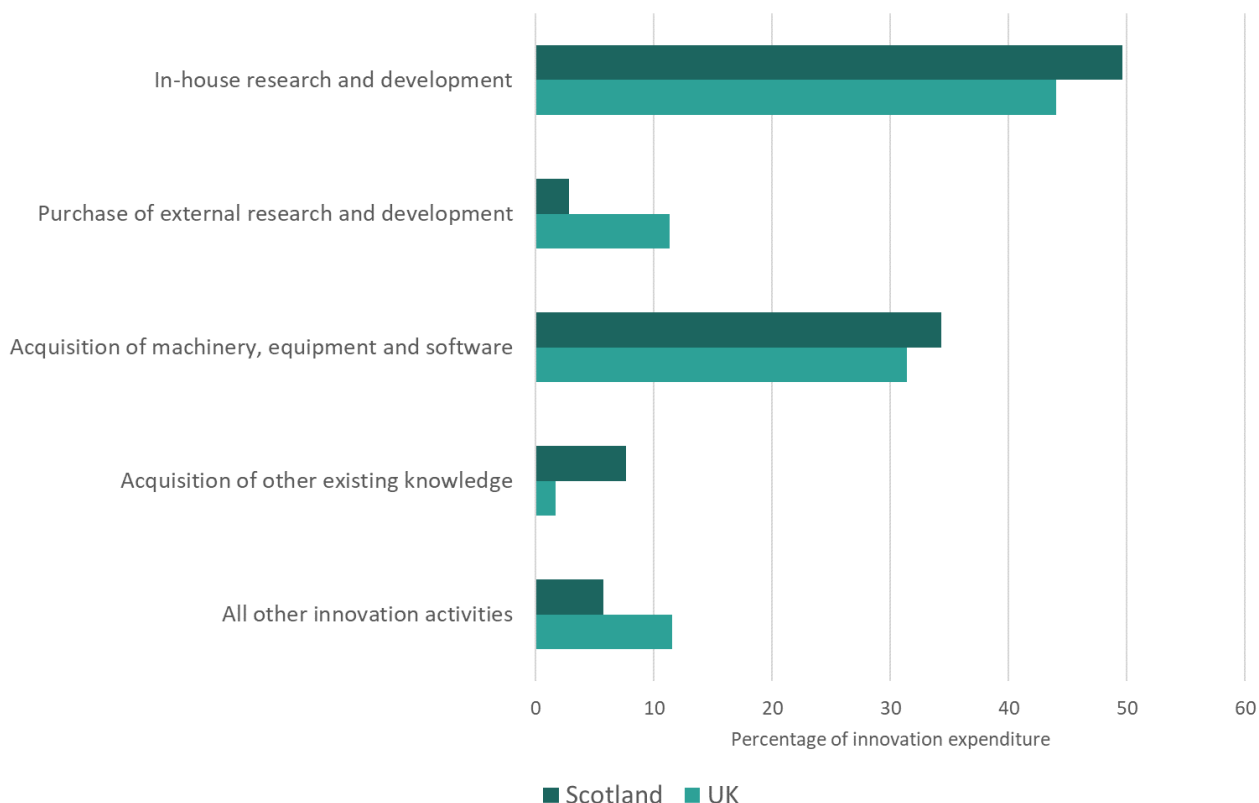
Figure 10: Change in the share of innovation active businesses across the UK between 2012-14 and 2014-16



Type of Innovation Expenditure

Results from 2014-2016 show that total spending on innovation activities for businesses in Scotland accounted for only 6.3% of the total UK expenditure. Figure 11 and Table 11 show that the largest proportion of expenditure for both Scotland and the UK as a whole was on 'In-house Research and Development', which represented 49.6% of spending for Scotland and 44.0% for the UK.

Figure 11: Percentage share of innovation expenditure by type of expenditure for all businesses



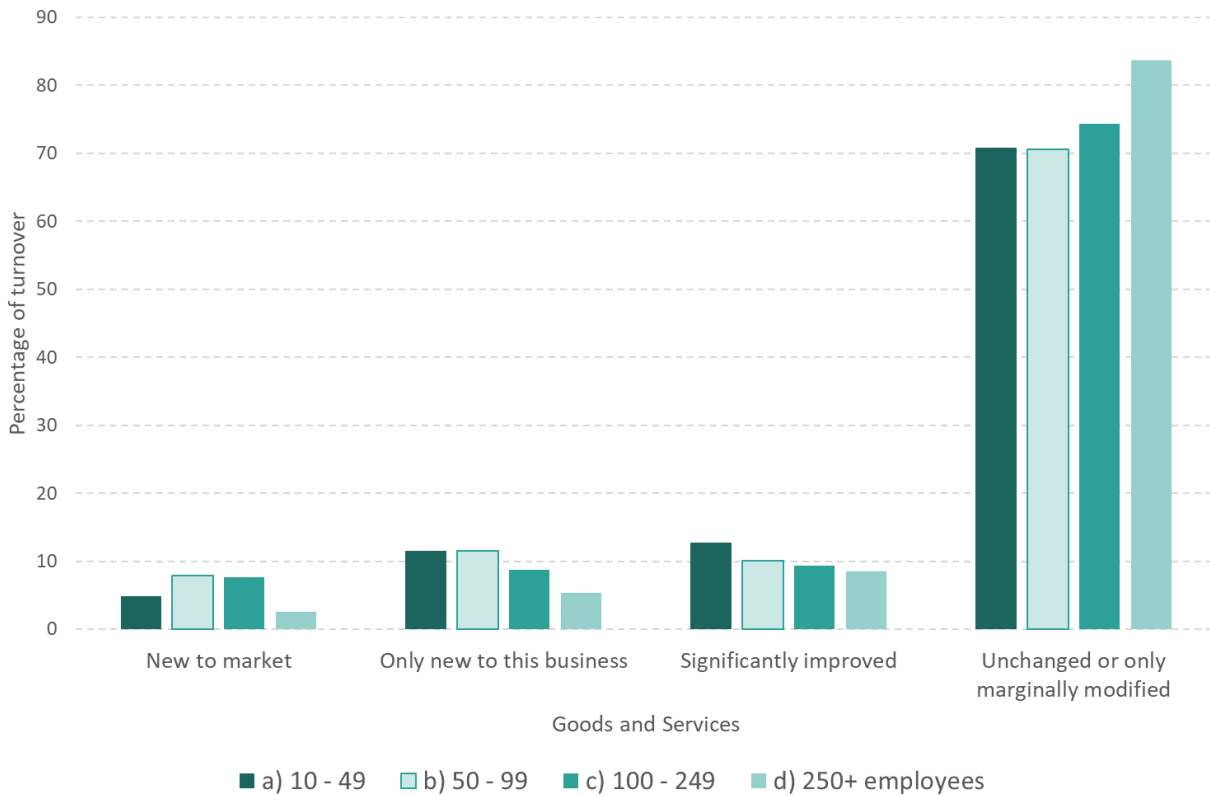
As well as asking about the main innovation related investments and the amount of expenditure in 2016, the UK Innovation Survey also asked the businesses to estimate the percentage of their 2016 turnover that related to goods and services that were;

- new to market in 2014-2016,
- only new to this business in 2014-2016,
- significantly improved in 2014-2016, and
- unchanged or only marginally modified.

Comparing these categories for Scotland and the UK as a whole (Table 12), the UK had a lower percentage of turnover related to unchanged or only marginally modified goods or services (70.4%) than Scotland (71.5%). The differences between Scotland and the UK for the other categories were not statistically significant.

In Scotland, smaller businesses (10-249 employees) had a larger percentage of turnover related to goods and services that were new to the market, new to the business or significantly improved than larger businesses (250 or more employees; Figure 12).

Figure 12: Percentage of business’s total turnover from goods and services in 2014-2016

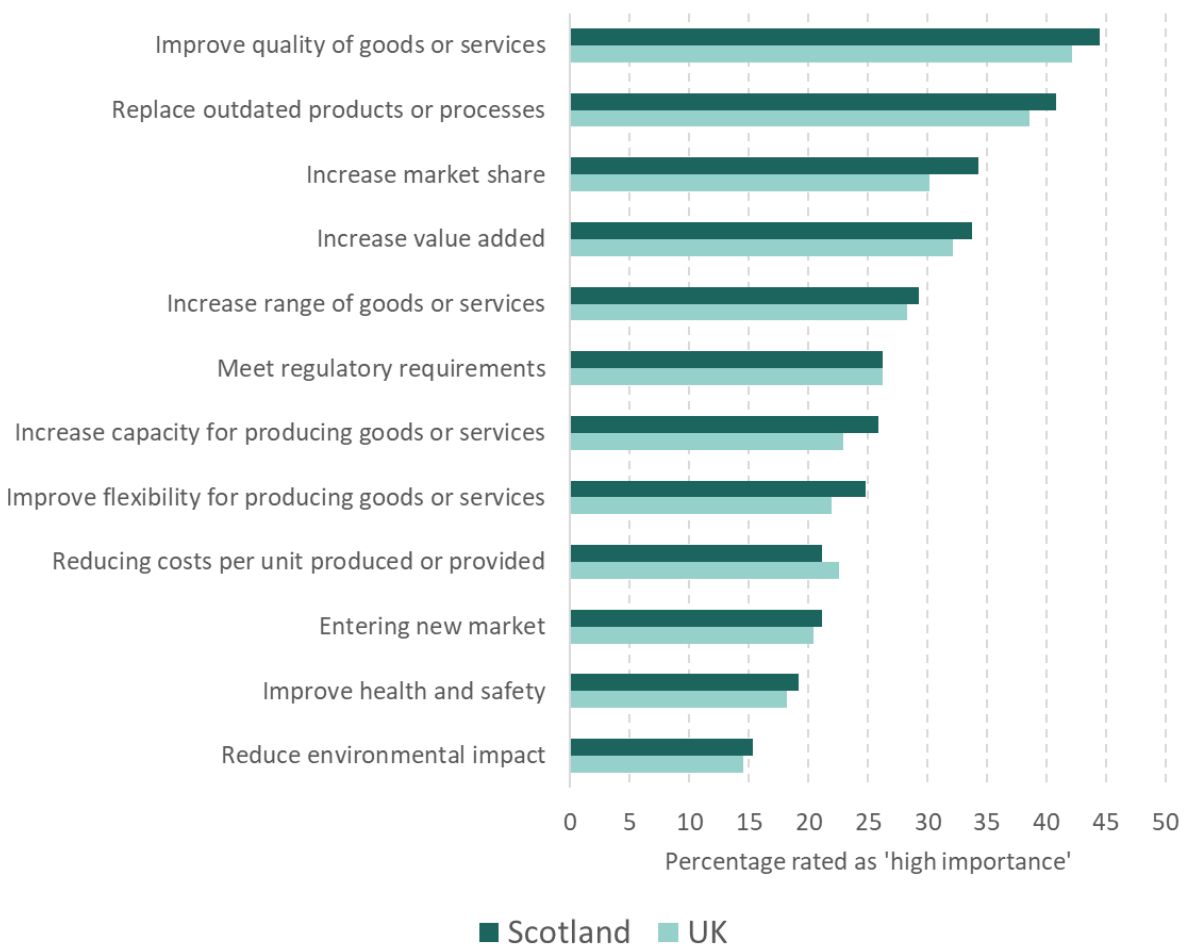


Context for Innovation

Figure 13 and Table 13 show that in both Scotland and the UK, ‘improving the quality of goods and services’ was the main driver of innovation: it was ranked as of high importance by the greatest proportion of businesses; this was followed by ‘replace outdated products or processes’.

For both the UK and Scotland, ‘improving health and safety’ was rated as ‘not important’ as a main innovation driver by the highest proportion of businesses, followed by ‘reduce environmental impact’ (Table 13).

Figure 13: Motivations for innovation: the share of broader innovators that rated factors as of ‘high importance’ in their decision to innovate, 2014-2016



Co-operation Arrangements

The proportion of broader innovators who reported having co-operation arrangements on innovation activities increased between 2012-2014 and 2014-2016 for both Scotland (from 42.4% to 55.3%) and the UK (from 39.7% to 57.4%). Of the businesses that had cooperation arrangements, most cooperated with suppliers of equipment, materials, services and software, in both Scotland and the UK (Figure 14 & Table 14); this was the same for businesses of all sizes (Figure 15).

Figure 14: The proportion of broader innovators that cooperated with various partners in Scotland and the UK, 2014-2016

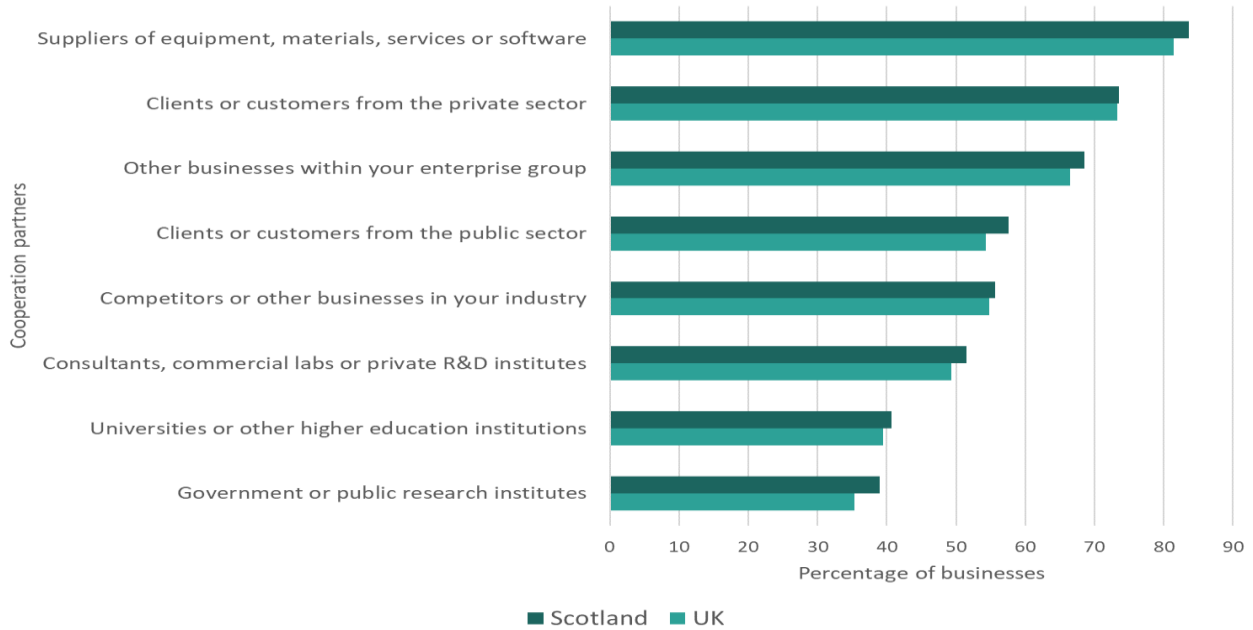


Figure 15: Share of broader innovators that cooperated with various partners in Scotland and the UK according to number of employees, 2014-2016

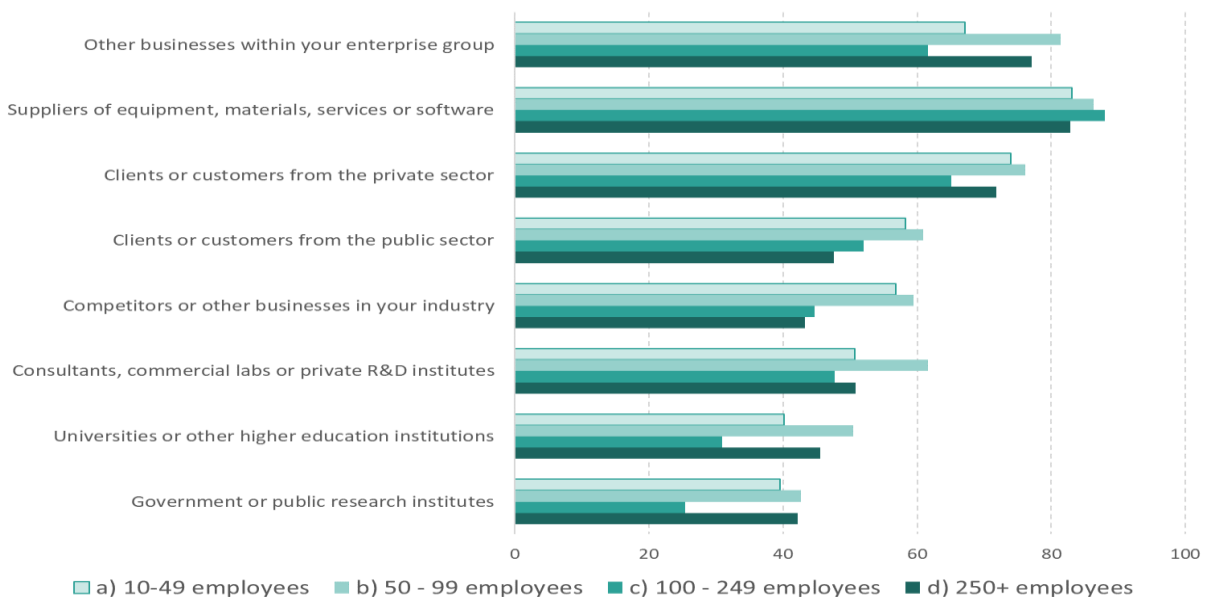
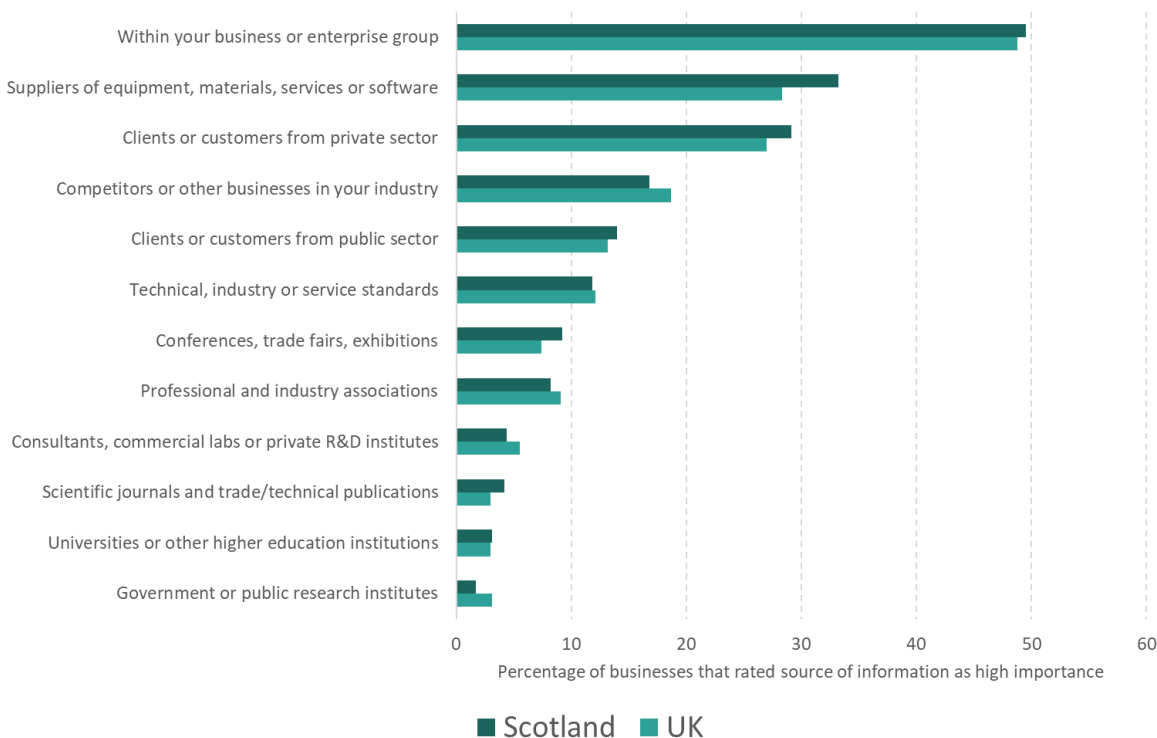


Figure 16 and Table 16 show that when considering sources of information for innovation activities, in both Scotland and the UK, the largest proportion of broader innovators ranked 'within your business or enterprise group' as of 'high importance'. In Scotland and the UK, 'Universities or other higher education institutions' were ranked as 'not important' as a source of information for innovation activities by the highest proportion of broader innovators (Table 16).

Figure 16: Share of broader innovators that ranked sources of information as of 'high importance' for innovation activities, 2014-2016

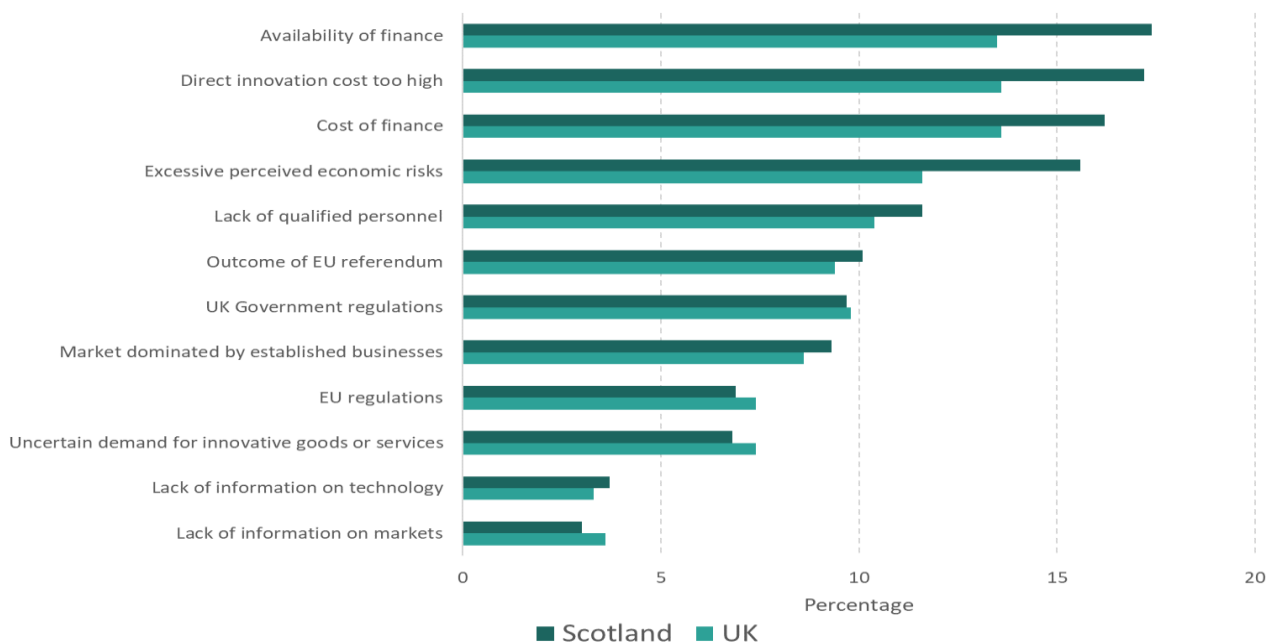


Constraints to Innovation

Figure 17 and Table 17 show that among various possible factors constraining innovation activities, 'availability of finance' was ranked as of 'high importance' by the largest proportion of Scottish broader innovators (17.4%), followed closely by 'direct innovation costs being too high' (17.2%) and then 'cost of finance' (16.2%). These were also the top three constraining factors for the UK as a whole.

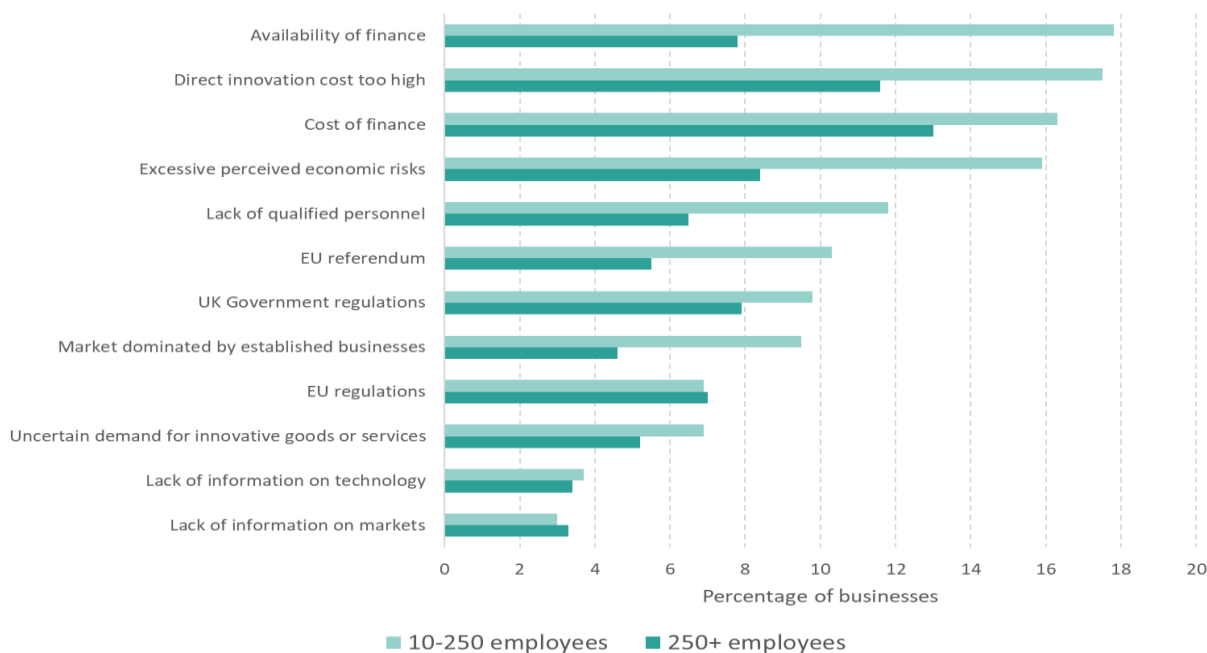
Among business in Scotland, 'EU regulations' and 'outcome of the EU referendum' were ranked as 'not important' as a constraining factor by the highest proportion of businesses (29.0% and 28.5% respectively); in the UK, the findings were similar with 32.5% of businesses rating 'outcome of the EU referendum' as 'not important' and 31.7% of businesses rating EU regulations as 'not important' (Table 17).

Figure 17: Share of broader innovators ranking factors as of 'high importance' to constraining innovation activities in Scotland and the UK, 2014-2016



The relative importance of these factors in constraining innovation activity varies with business size: Figure 18 and Table 19 show that, in Scotland, the highest proportion of smaller businesses (10-249 employees) rated 'availability of finance' as of 'high importance' as a constraint to innovation. Among larger businesses (250+ employees), 'cost of finance' was rated as of 'high importance' by the highest proportion.

Figure 18: Share of broader innovators ranking factors as of 'high importance' to constraining innovation activities in Scotland' according to number of employees, 2014-2016



Exports

In 2014-16, UK businesses were more likely to export outside the UK (25.8%) than Scottish businesses (20.9%; Figure 19).

In 2014-16, the proportion of Scottish businesses that exported goods or services outside of the UK was higher than in 2012-2014 (19.6%); the same was found for the UK.

For both the UK and Scotland, innovation active businesses were more likely to export their goods and/ or services outside the UK, compared to non-innovation active businesses (UK: 34.1% vs 16.6%; Scotland: 32.1% vs 10.2% in 2014-16).

UK innovation active businesses were also more likely to export outside the UK (34.1%) than Scottish innovation active businesses (32.1%), and the same was found for non-innovation active businesses (16.6% vs 10.2% respectively; Figure 19).

Figure 19: Proportion of businesses that exported their goods or services outside the UK by innovation activity in Scotland and the UK, 2014-2016

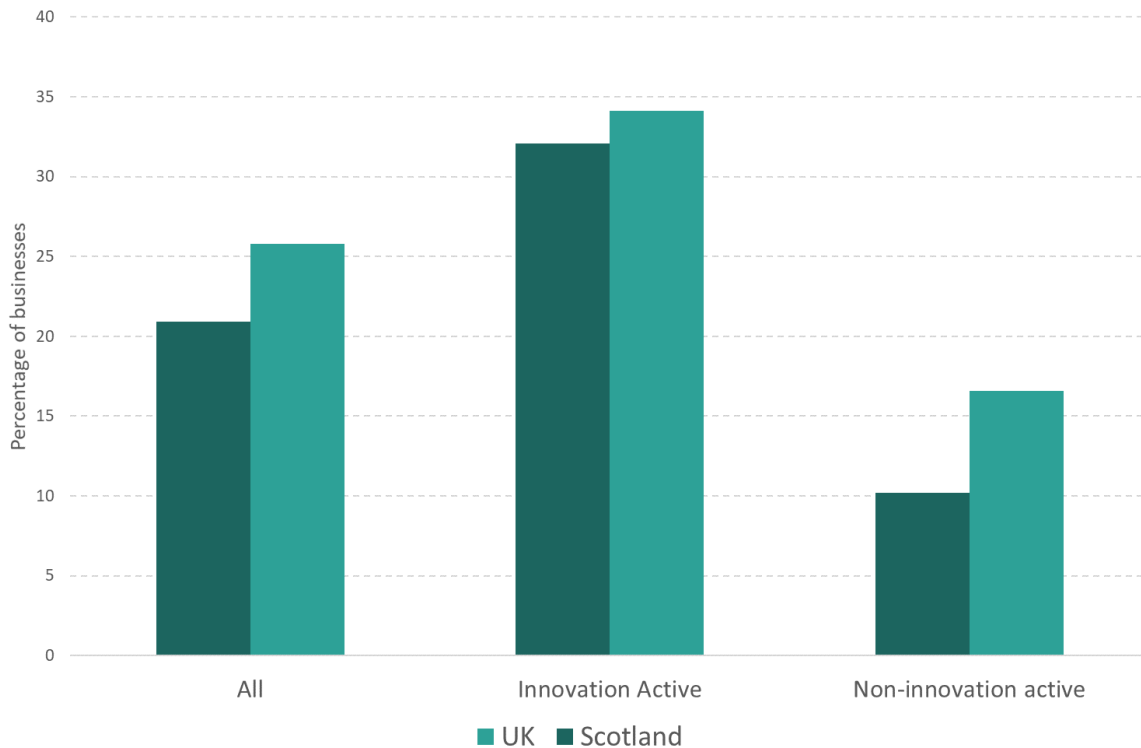
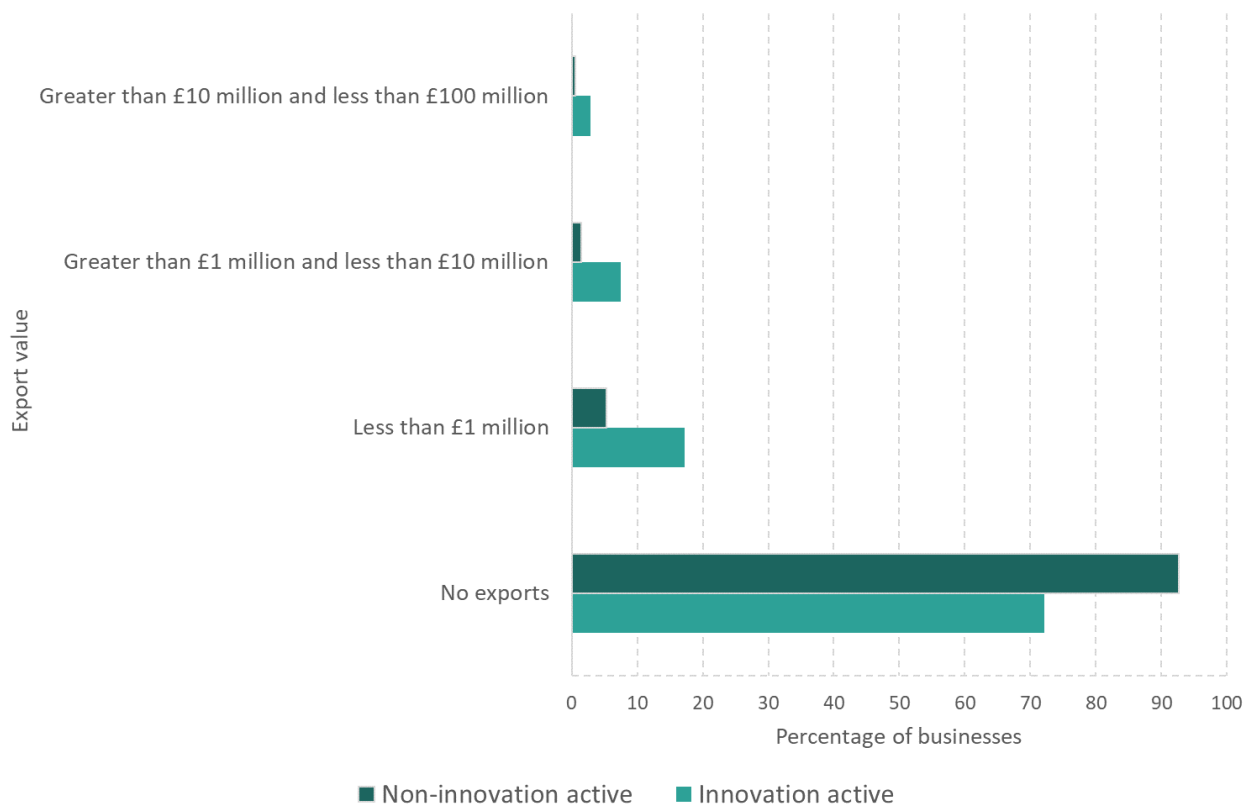


Figure 20 and Table 21 show that among businesses in Scotland, innovation active businesses were more likely to report higher export values than non-innovation active businesses.

Figure 20: Value of exports for businesses in Scotland and the UK, according to innovation activity in 2016



Turnover

Figure 21 and Table 22 show the differences in the percentage change in turnover between 2014 and 2016 for innovation active and non-innovation active enterprises in Scotland: a higher share of innovation active businesses than non-innovation active businesses had more than a 10% increase in turnover (43.1% vs 30.6%). Similarly, in the UK, a higher proportion of innovation active (51.5%), compared to non-innovation active businesses (36.8%), reported more than 10% increase in turnover.

Compared to the UK, the proportion of innovation active businesses with more than 10% increase in turnover was lower in Scotland. Furthermore, innovation active business in Scotland were more likely to report more than 10% decrease in turnover than the UK (Figure 22).

Figure 21: Change in turnover in businesses in Scotland by innovation activity, 2014 to 2016

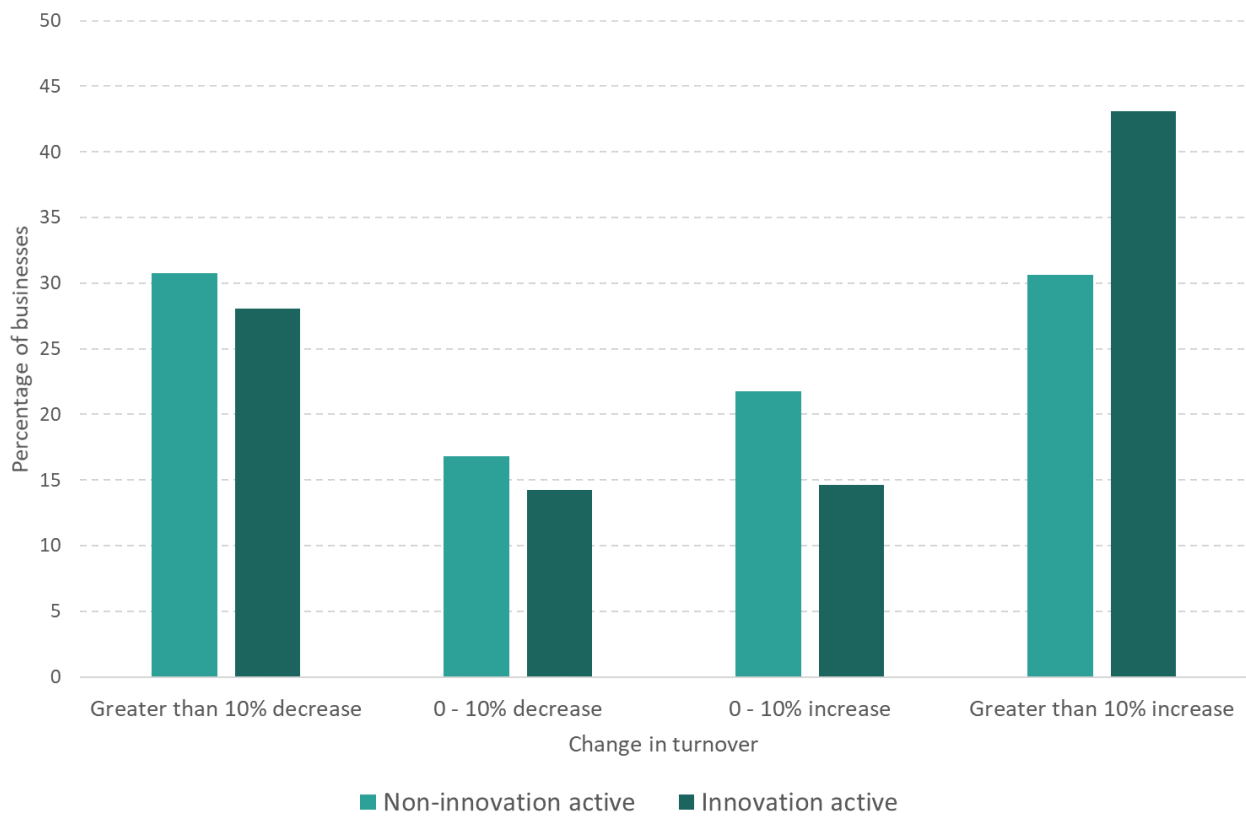
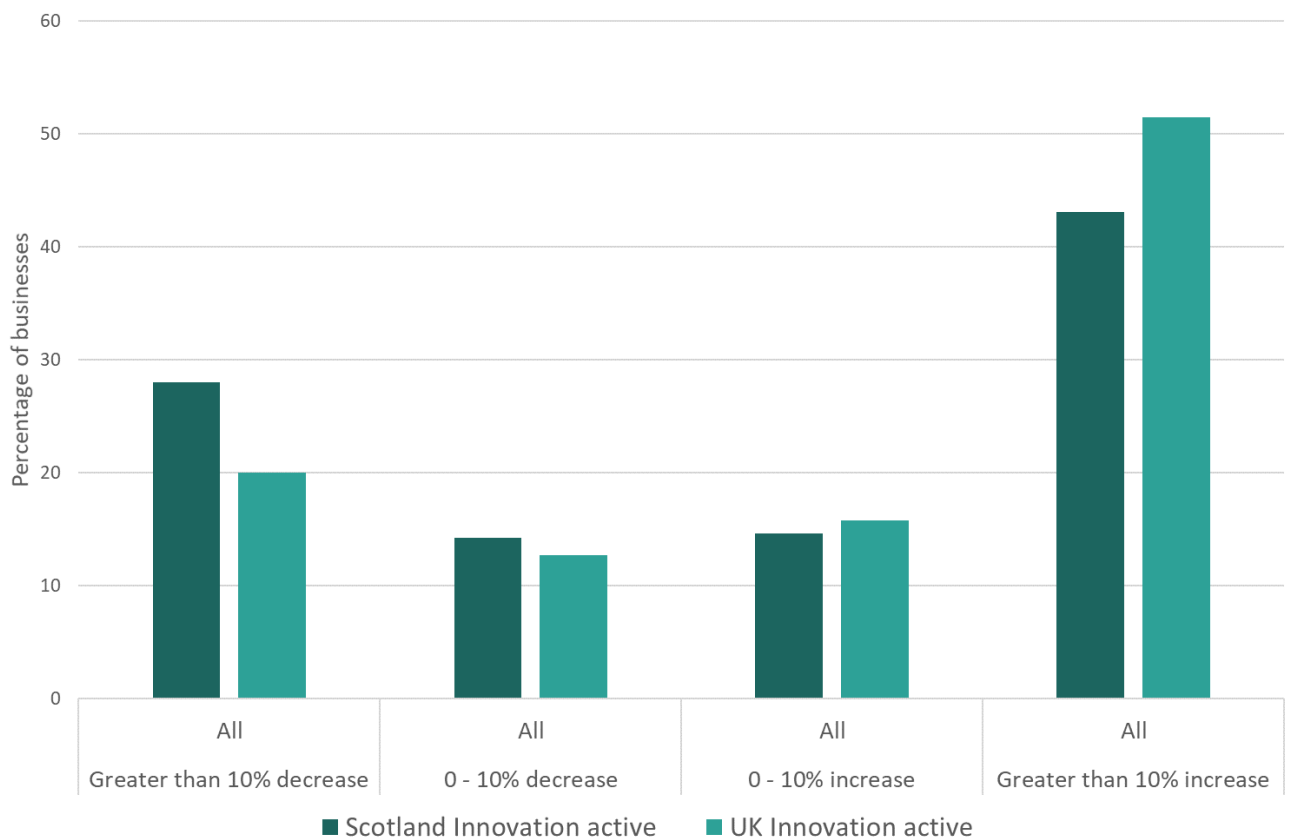


Figure 22: Change in turnover in innovation active businesses in Scotland and the UK, 2014 to 2016



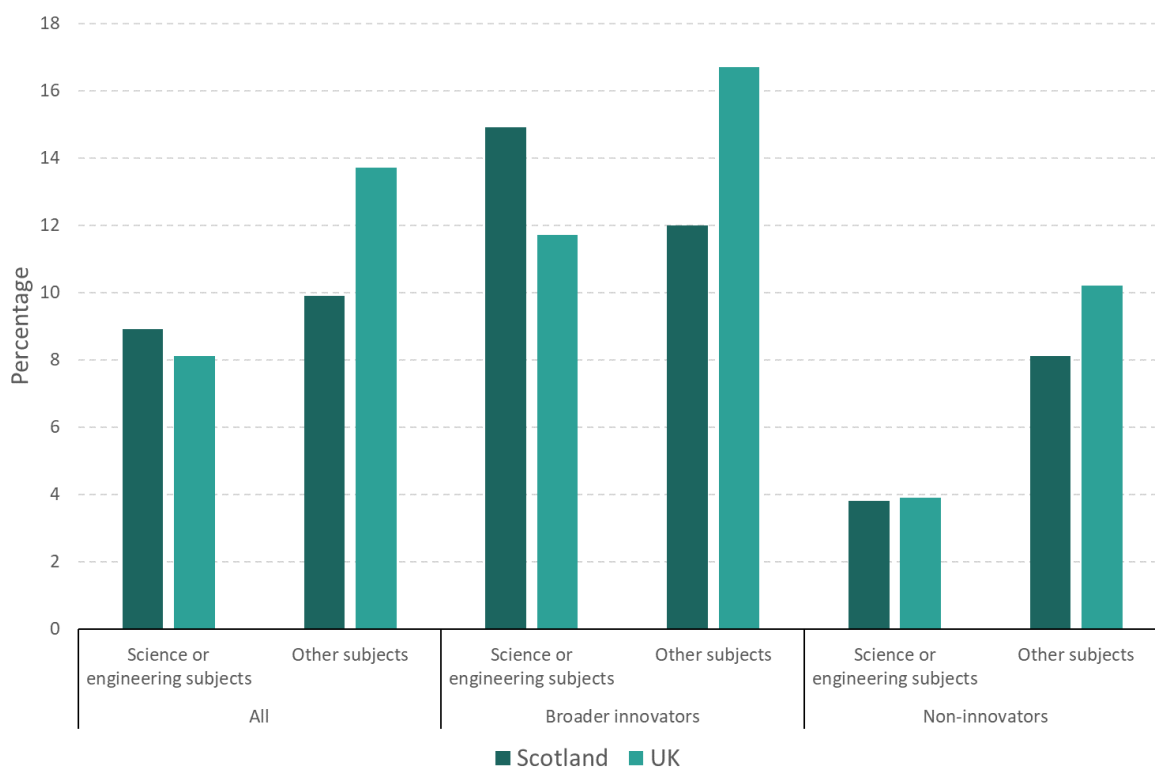
Qualifications and skills

Figure 23 and Table 23 show that in Scotland a higher proportion of the workforce had a degree or higher qualification⁴ in science or engineering subjects (8.9%) than in the UK (8.1%); but a lower proportion had higher qualifications in other subjects (9.9% vs 13.7%). In both Scotland and the UK, the proportion of employees holding higher qualifications in science or engineering, was lower than other subjects (Figure 23).

In Scotland businesses that were broader innovators had a higher proportion of employees holding a degree or higher level qualification, than non-innovators. Among non-innovators in Scotland, there was a lower proportion of employees with higher qualifications in science or engineering (3.8%) than in other subjects (8.1%); among broader innovators the reverse was true: broader innovators employed a larger proportion of people with higher qualifications in science and engineering (14.9%) than other subjects (12.0%).

In Scotland, in smaller businesses (10- 249 employees), which were broader innovators, a larger proportion of the workforce held higher qualifications than in non-innovators; this difference was not statistically significant among large businesses (250+ employees; Figure 24).

Figure 23: Average proportion of employees who held a degree or higher level qualification according to innovation activity in Scotland and the UK in 2016



⁴ Degree or higher level qualification refers to either a BA, BSc, MA, MSc, PhD etc.

Figure 24: Average proportion of employees who held a degree or higher level qualification according to innovation activity and number of employees in 2016

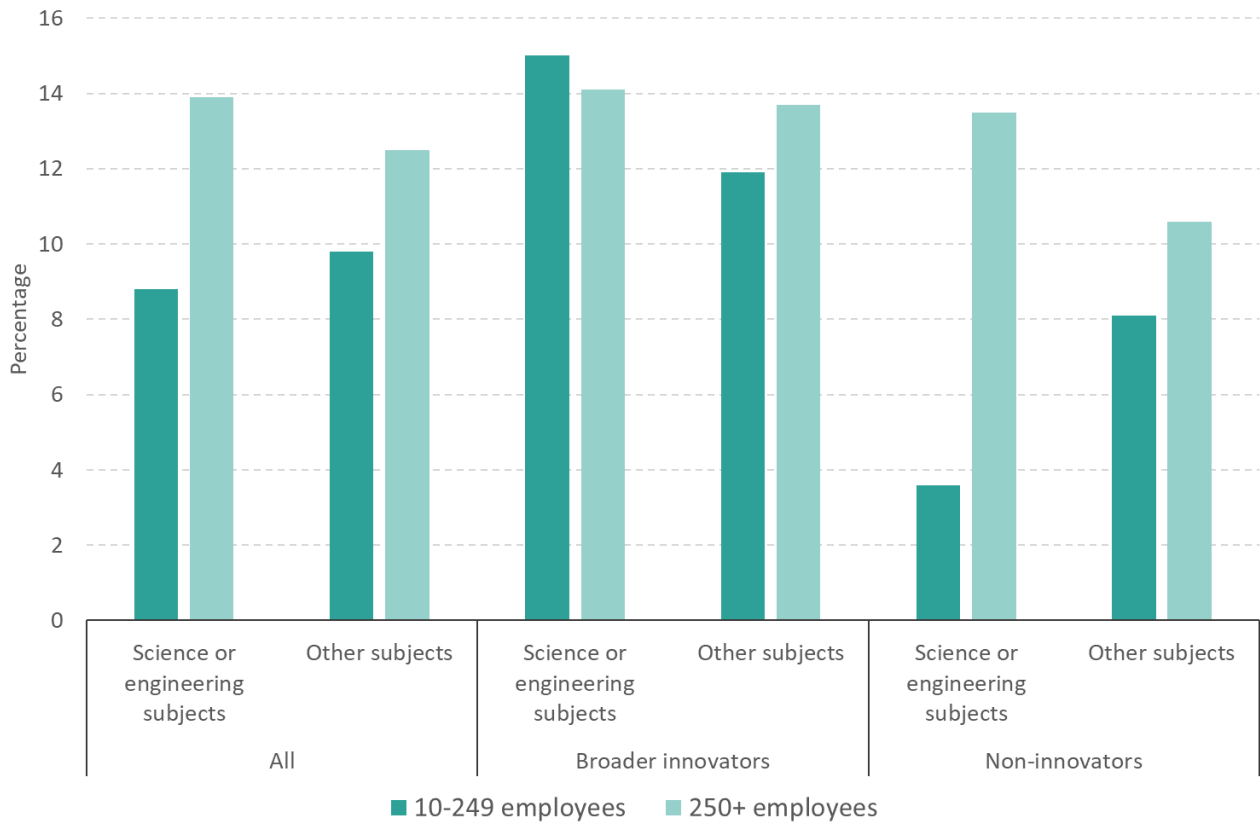


Figure 25 and Table 24 show that a higher proportion of businesses in Scotland employed individuals with (or obtained from external sources) skills in engineering/applied sciences (11.1%) than in the UK (10.2%); however, for all the other skills categories, the proportion of businesses in Scotland that employed individuals with (or obtained from external sources) skills was lower than in the UK.

Figure 25: Proportion of businesses that employed individuals in-house with particular skills or obtained these skills from external sources in Scotland and the UK, 2014-2016

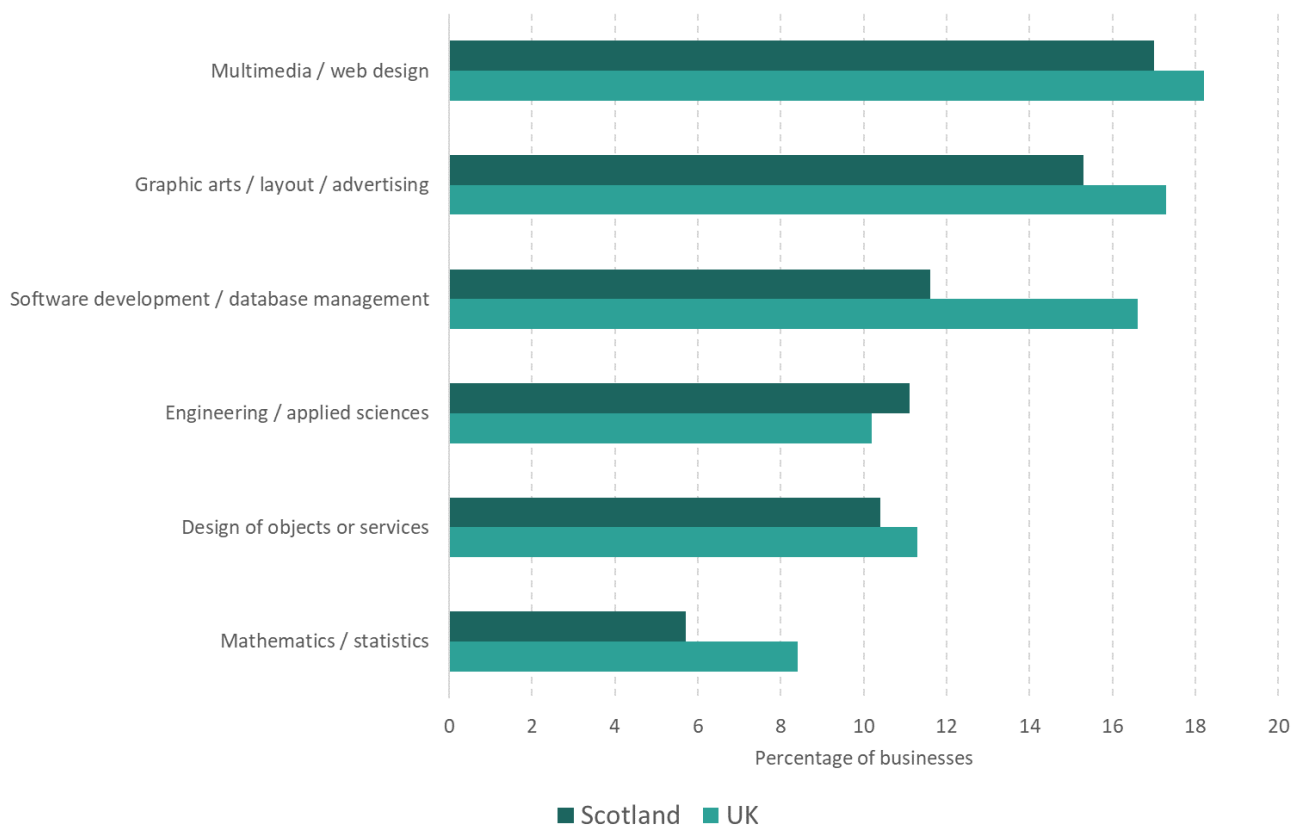


Figure 26 and Table 24 show that in Scotland, a higher proportion of large businesses (250+ employees) employed individuals (or obtained from external sources) with the displayed skills than smaller businesses (10 – 249 employees).

Figure 27 and Table 24 show that in Scotland, a higher share of businesses involved in broader innovation employed individuals (or obtained from external sources) with the displayed skills than businesses that did not innovate.

Figure 26: Proportion of businesses that employed individuals in-house with particular skills or obtained these skills from external sources according to number of employees, 2014-2016

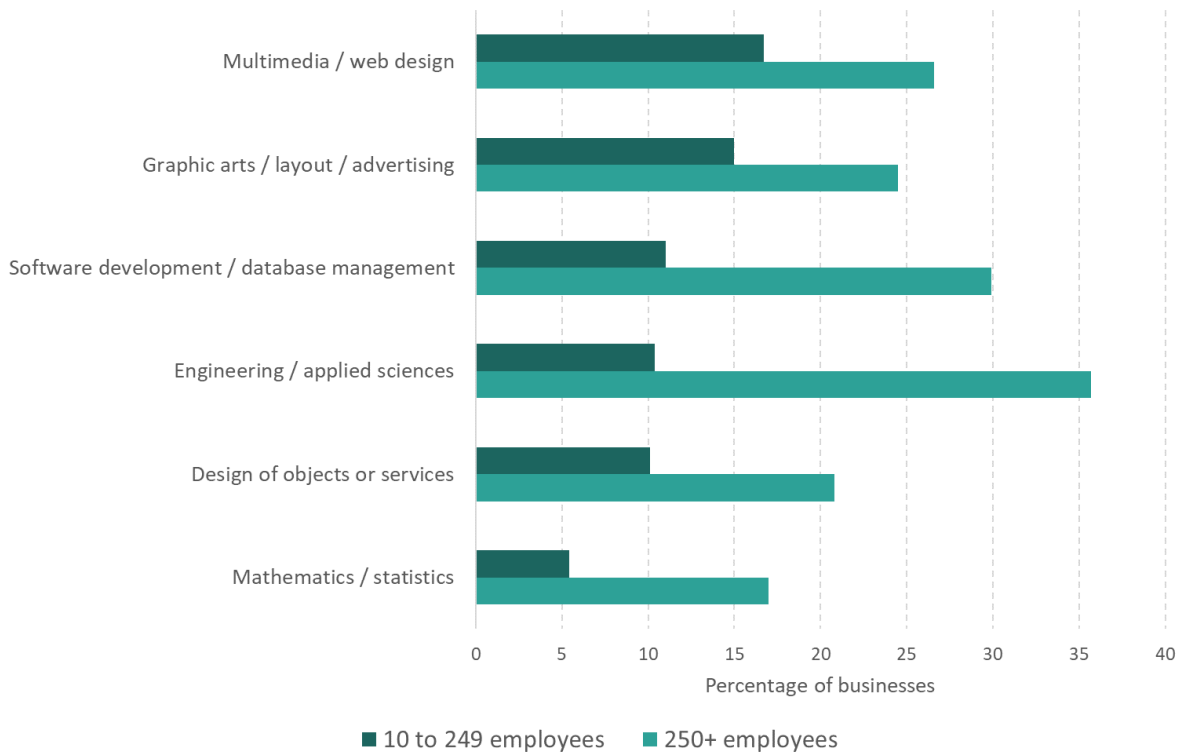
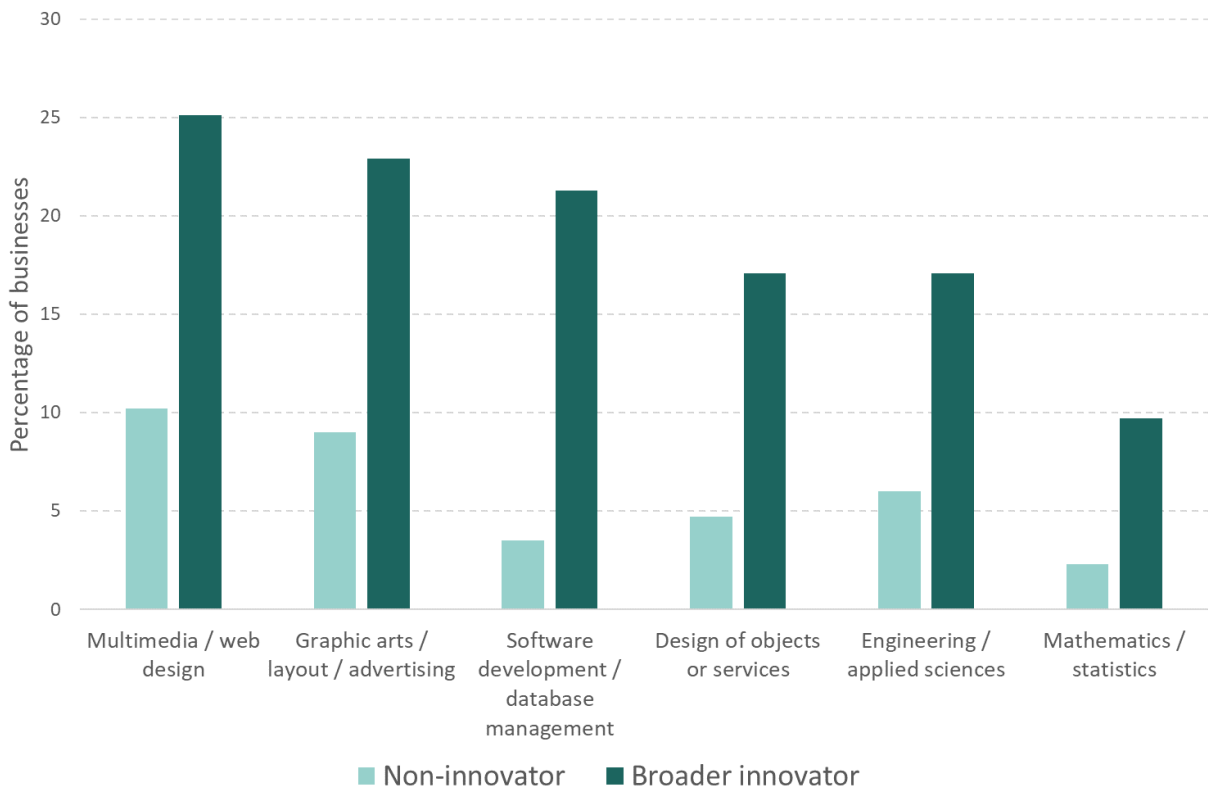


Figure 27: Proportion of businesses that employed individuals in-house with particular skills or obtained these skills from external sources according to innovation activity, 2014-2016



Annex A – Methodology

The UK Innovation Survey 2017 sample selection was conducted by the Office for National Statistics (ONS) and followed very similar sampling methodology to the previous surveys. The questionnaire used for the survey remained mostly the same as in the 2015 survey. The 2017 achieved sample composition was similar to the last survey, with 21 per cent made up of large firms, 49 per cent made up of businesses with 10 to 49 employees and 30 per cent from businesses with 50 to 249 employees.

Fieldwork was undertaken between 20 February and 31 October 2017. As the EU referendum took place in June 2016, users should not draw firm conclusions about the impact of the referendum on innovation. Comparisons are made with the UK Innovation Survey 2015 and 2013.

UKIS 2017 sampled 30,479 UK enterprises with ten or more employees. The survey was voluntary and was conducted primarily through an electronic questionnaire. The change in mode may have affected some responses over the past three survey waves so care should be taken when drawing comparisons since 2013. Businesses that did not complete an electronic response were offered a telephone interview. Responses were received from 13,194 businesses UK-wide - 1,433 of these responses were from businesses based in Scotland.

This report uses weighted data in order to be representative of the business population. The responses were weighted to the total business population using the Inter-Departmental Business Register (IDBR). They were not weighted by factors which would give more weight to larger firms, such as employment or turnover. The figures in this report are based on weights using the detailed 25 sectors required by Eurostat to enable international comparisons.

Due to smaller sample sizes for sub-groups, the survey's estimates may be affected by sampling errors and therefore apparent differences of a few percentage points may not reflect real differences in the population. Therefore, differences between groups/sub-groups were tested statistically: unless stated otherwise, all differences reported were statistically significant, i.e. there is less than a 5% chance that the difference would occur by chance ($p < 0.05$).

Statistical testing was performed in R, version 3.4.4 (R Core Team 2018). Differences in proportions were compared pairwise using binomial tests to compare two proportions and differences in mean percentages were compared using Wilcoxon rank sum tests.

Values were suppressed when the total unweighted bases were less than 20.

Annex B – Tables

Table 1. Proportion of businesses engaging in innovation activities in Scotland and the UK: 2010-2016

Region	Innovation activity	Percentage			Percentage points
		2010-2012	2012-2014	2014-2016	Change 2012-14 - 2014-16
Scotland	Innovation active	43.3	50.4	45.0	-5.4
	Broader innovation active businesses	43.8	51.2	45.7	-5.5
	Wider innovation active businesses	34.5	43.2	33.3	-9.9
	Business engaged in an innovation related activity between 2014-2016	36.2	42.5	41.4	-1.1
	Product innovator	16.1	19.8	20.5	0.7
	Process innovator	7.2	12.5	14.5	2.0
	Abandoned innovation	2.3	3.9	3.5	-0.4
	Ongoing innovation	12.7	15.5	14.0	-1.5
	Product AND process innovation	4.3	9.0	7.5	-1.5
Product AND/OR process innovation	19.0	23.3	27.5	4.2	
UK	Innovation active	44.4	53.0	49.0	-4.0
	Broader innovation active businesses	45.2	53.8	50.3	-3.5
	Wider innovation active businesses	36.9	42.0	36.0	-6.0
	Business engaged in an innovation related activity between 2014-2016	39.0	43.6	44.2	0.6
	Product innovator	18.0	19.2	23.7	4.5
	Process innovator	10.3	12.8	15.8	3.0
	Abandoned innovation	3.9	4.3	3.8	-0.5
	Ongoing innovation	14.5	17.2	16.8	-0.4
	Product AND process innovation	7.0	7.7	9.5	1.8
Product AND/OR process innovation	21.3	24.2	30.1	5.9	

Source: BEIS and Scottish Government

Table 2. Proportion of businesses engaged in wider innovation activities in Scotland and the UK: 2010-2016

Wider Innovation Activities	Scotland				UK			
	Percentage			Percentage points	Percentage			Percentage points
	2010-2012	2012-2014	2014-2016	Change 2012-14 - 2014-16	2010-2012	2012-2014	2014-2016	Change 2012-14 - 2014-16
Wider innovation active businesses	34.5	43.2	33.3	-9.9	36.9	42.0	36.0	-6.0
a. New business practices for organising procedures	20.6	24.4	22.5	-1.9	21.2	26.9	22.9	-4.0
b. New methods of organising work responsibilities and decision making	15.6	23.1	17.6	-5.5	17.4	19.4	19.3	-0.1
c. New methods of organising external relationships	5.5	8.4	9.8	1.4	7.6	7.1	10.4	3.3
d. Implementation of changes to marketing concepts or strategies	11.5	18.7	11.8	-6.9	15.7	15.6	13.3	-2.3

Source: BEIS and Scottish Government

Table 3. Percentage of businesses in Scotland and the UK engaged in innovation activities by number of employees: 2010-2016

Years	Innovation Activity	Scotland					UK				
		10-49	50 - 99	100 - 249	250+	All	10-49	50 - 99	100 - 249	250+	All
		employees	employees	employees	employees		employees	employees	employees	employees	
2014-2016 (percentage)	Innovation active	43.2	51.3	52.9	62.5	45.0	47.3	53.8	58.9	63.1	49.0
	Broader innovation active businesses	44.0	51.3	52.9	63.3	45.7	48.8	54.6	59.6	64.5	50.3
	Wider innovation active businesses	32.2	38.6	38.8	37.6	33.3	35.0	39.9	40.4	44.4	36.0
	Business engaged in an innovation related activity between 2014-2016	40.1	45.7	47.3	55.4	41.4	42.6	49.3	53.8	57.7	44.2
	Product innovator	19.7	21.1	24.2	33.4	20.5	23.1	26.4	25.7	29.3	23.7
	Process innovator	13.5	20.2	16.0	22.5	14.5	14.9	19.0	21.8	22.5	15.8
	Abandoned innovation	3.4	4.5	0.9	7.4	3.5	3.3	5.8	5.6	7.5	3.8
	Ongoing innovation	13.1	14.9	21.0	27.6	14.0	15.5	21.3	23.3	27.7	16.8
	Product AND process innovation	6.9	9.7	9.7	11.6	7.5	9.1	11.2	11.0	13.2	9.5
	Product AND/OR process innovation	26.3	31.7	30.4	44.3	27.5	28.9	34.2	36.5	38.7	30.1
2012-2014 (percentage)	Innovation active	50.5	51.6	44.5	55.2	50.4	52.0	57.9	54.5	61.3	53.0
	Broader innovation active businesses	51.1	52.8	46.0	55.6	51.2	52.8	59.1	55.2	62.1	53.8
	Wider innovation active businesses	44.4	37.8	34.1	40.4	43.2	41.6	44.6	42.7	44.9	42.0
	Business engaged in an innovation related activity between 2014-2016	43.0	40.8	37.1	42.0	42.5	42.5	50.4	45.9	49.6	43.6
	Product innovator	19.5	21.7	19.0	23.6	19.8	18.4	21.4	23.2	26.8	19.2
	Process innovator	11.9	14.4	16.5	16.9	12.5	11.9	15.8	16.4	20.2	12.8
	Abandoned innovation	3.7	4.9	5.3	5.4	3.9	4.1	5.3	5.7	6.8	4.3
	Ongoing innovation	14.7	20.4	17.5	19.1	15.5	16.2	21.9	21.9	24.3	17.2
	Product AND process innovation	9.2	7.1	9.3	10.1	9.0	7.3	8.9	9.9	12.7	7.7
	Product AND/OR process innovation	22.3	29.0	26.2	30.4	23.3	23.1	28.3	29.7	34.3	24.2
2010-2012 (percentage)	Innovation active	42.5	45.3	48.4	52.0	43.3	43.1	50.4	50.7	50.4	44.4
	Broader innovation active businesses	42.7	48.2	48.4	52.4	43.8	43.9	51.5	51.7	51.1	45.2
	Wider innovation active businesses	33.5	41.3	35.8	39.6	34.5	36.2	41.4	39.1	38.6	36.9
	Business engaged in an innovation related activity between 2014-2016	34.5	46.0	41.6	47.1	36.2	37.8	45.5	44.9	43.3	39.0
	Product innovator	15.7	15.2	20.7	21.8	16.1	17.2	20.8	22.7	23.5	18.0
	Process innovator	5.8	12.9	14.9	16.1	7.2	9.4	14.0	15.1	15.4	10.3
	Abandoned innovation	1.8	5.5	3.1	5.6	2.3	3.7	4.4	4.6	4.7	3.9
	Ongoing innovation	11.4	19.4	17.6	18.7	12.7	13.6	18.4	18.4	18.9	14.5
	Product AND process innovation	3.8	6.1	7.6	9.4	4.3	6.5	8.9	9.8	10.3	7.0
	Product AND/OR process innovation	17.8	22.0	28.0	28.5	19.0	20.1	25.9	28.0	28.6	21.3
Change between 2012-14 & 2014-16 (percentage points)	Innovation active	-7.3	8.4	7.3	-0.3	-5.4	-4.7	4.4	1.8	-4.1	-4.0
	Broader innovation active businesses	-7.1	6.9	7.7	-1.5	-5.5	-4.0	4.4	2.4	-4.5	-3.5
	Wider innovation active businesses	-12.2	0.8	4.7	-2.8	-9.9	-6.6	-4.7	-2.3	-0.5	-6.0
	Business engaged in an innovation related activity between 2014-2016	-2.9	4.9	10.2	13.4	-1.1	0.1	-1.1	7.9	8.1	0.6
	Product innovator	0.2	-0.6	5.2	9.8	0.7	4.7	5.0	2.5	2.5	4.5
	Process innovator	1.6	5.8	-0.5	5.6	2.0	3.0	3.2	5.4	2.3	3.0
	Abandoned innovation	-0.3	-0.4	-4.4	2.0	-0.4	-0.8	0.5	-0.1	0.7	-0.5
	Ongoing innovation	-1.6	-5.5	3.5	8.5	-1.5	-0.7	-0.6	1.4	3.4	-0.4
	Product AND process innovation	-2.3	2.6	0.4	1.5	-1.5	1.8	2.3	1.1	0.5	1.8
	Product AND/OR process innovation	4.0	2.7	4.2	13.9	4.2	5.8	5.9	6.8	4.4	5.9

Source: BEIS and Scottish Government

Table 4. Percentage of businesses engaging in innovation activities in Scotland and the UK by sector¹: 2014-2016

Sector ¹	Business engaged in an innovation related activity				Product AND/OR process innovation				Product AND/OR process innovation			
	Innovation active	Broader innovation active businesses	Wider innovation active businesses	between 2014-2016	Product innovator	Process innovator	Abandoned innovation	Ongoing innovation	Product AND process innovation	Product AND/OR process innovation		
Scotland	a) Mining & quarrying and Electricity, gas & water supply	44.2	44.2	30.2	32.6	12.2	13.7	2.5	15.3	5.2	20.6	
	b) Manufacturing of food, clothing, wood, paper, publish & print	62.0	62.0	40.7	55.5	33.7	27.7	11.6	22.1	13.7	47.7	
	c) Manufacture of fuels, chemicals, plastic, metals and minerals	60.7	63.0	40.8	50.8	24.2	18.3	8.4	24.5	11.0	31.6	
	d) Manufacture of computer, electrical and optical equipment	69.3	69.3	44.1	69.3	52.1	34.3	15.1	35.9	26.9	59.5	
	e) Manufacture of transport equipment	*	*	*	*	*	*	*	*	*	*	
	f) Manufacture: not elsewhere classified	45.3	48.4	30.9	41.6	22.1	14.7	2.5	21.8	6.7	30.1	
	g) Construction	35.8	39.4	28.1	38.3	14.2	10.8	*	5.1	4.3	20.7	
	i) Wholesale Trade (incl cars & bikes) and Retail Trade (excl cars & bikes)	46.8	46.8	32.9	44.4	22.5	18.7	3.2	14.9	10.1	31.1	
	k) Transport and storage, and Post and courier activities	45.4	45.4	30.0	39.1	15.2	8.0	0.6	9.9	2.2	21.0	
	m) Accommodation and food services	34.1	34.1	29.4	31.3	15.1	9.0	1.8	10.0	3.7	20.4	
	n) Computer and related activities/ICT, Motion picture, video and TV programme production/programming & broadcasting and Telecom	78.2	78.2	59.8	68.2	41.9	17.9	9.4	34.1	10.0	49.7	
	q) Financial intermediation and Real estate activities	40.1	42.5	30.5	35.6	21.4	16.7	2.5	13.8	12.3	25.8	
	s) Other services nec	34.6	34.6	26.4	30.7	11.0	8.9	1.1	7.3	3.2	16.7	
	t) Architectural and engineering activities and related technical consultancy	70.3	70.3	47.8	62.7	30.9	16.7	9.4	21.0	10.8	36.8	
	u) Technical testing and analysis, Advertising and Market Research and Other professional, scientific and technical activities	65.4	65.4	50.8	57.6	37.6	31.2	5.9	37.5	22.3	46.5	
	v) Research and experimental development on social sciences and humanities	79.4	79.4	40.2	79.4	40.4	22.8	17.4	51.1	16.3	46.9	
	y) Renting of machinery, equipment, personal and household goods	66.0	66.0	48.2	53.9	31.8	20.4	8.9	13.1	9.7	42.5	
	All	45.0	45.7	33.3	41.4	20.5	14.5	3.5	14.0	7.5	27.5	
	UK	a) Mining & quarrying and Electricity, gas & water supply	43.2	44.3	33.1	38.6	13.1	14.0	5.8	14.1	7.4	19.6
		b) Manufacturing of food, clothing, wood, paper, publish & print	58.3	59.3	37.4	51.9	29.1	26.8	6.4	21.8	14.9	41.0
c) Manufacture of fuels, chemicals, plastic, metals and minerals		56.3	56.9	33.8	51.6	27.3	21.4	7.2	21.9	12.8	35.9	
d) Manufacture of computer, electrical and optical equipment		73.9	75.0	44.1	72.7	48.4	26.9	10.4	45.6	20.1	55.1	
e) Manufacture of transport equipment		67.2	68.1	36.9	63.9	35.9	24.6	9.4	34.9	13.8	46.7	
f) Manufacture: not elsewhere classified		56.4	57.9	38.8	51.1	31.2	22.5	5.2	21.8	13.1	40.6	
g) Construction		44.2	46.3	35.2	43.1	18.7	14.6	2.5	10.4	7.8	25.5	
i) Wholesale Trade (incl cars & bikes) and Retail Trade (excl cars & bikes)		48.2	49.3	35.6	42.0	23.9	14.5	3.5	14.7	9.1	29.3	
k) Transport and storage, and Post and courier activities		45.5	46.3	34.4	41.4	18.7	12.1	1.6	9.1	6.2	24.7	
m) Accommodation and food services		37.4	38.8	29.2	34.3	17.5	9.2	2.0	9.7	5.5	21.2	
n) Computer and related activities/ICT, Motion picture, video and tv programme production/programming & broadcasting and Telecom		70.0	71.9	48.0	63.8	46.8	21.3	11.1	38.3	17.1	51.0	
q) Financial intermediation and Real estate activities		44.6	47.0	34.9	38.3	18.0	15.6	2.5	15.4	8.1	25.5	
s) Other services nec		44.5	45.7	36.3	38.4	16.8	14.1	1.1	12.8	6.9	24.0	
t) Architectural and engineering activities and related technical consultancy		62.8	64.6	45.2	58.0	32.4	25.9	4.2	24.8	15.8	42.5	
u) Technical testing and analysis, Advertising and Market Research and Other professional, scientific and technical activities		63.6	64.6	48.4	57.8	34.8	23.3	5.6	30.3	16.0	42.1	
v) Research and experimental development on social sciences and humanities		78.5	80.3	49.4	76.1	41.2	30.4	16.7	61.1	19.3	52.4	
y) Renting of machinery, equipment, personal and household goods		47.5	47.8	37.4	39.1	17.7	10.8	1.6	11.4	4.4	24.1	
All		49.0	50.3	36.0	44.2	23.7	15.8	3.8	16.8	9.5	30.1	

Notes:

1. Definition of sectors by Standard Industrial Classification 2007 code (SIC 2007) available in Annex C

Source: BEIS and Scottish Government

Table 5. Proportion of innovation active businesses by sector¹ in Scotland and the UK: 2010-2016

Sector ¹	Percentage			Percentage points	
	2010-2012	2012-2014	2014-2016	Change between 2012-14 & 2014-16	
Scotland	a) Mining & quarrying and Electricity, gas & water supply	56.1	58.8	44.2	-14.6
	b) Manufacturing of food, clothing, wood, paper, publish & print	61.4	76.9	62.0	-14.9
	c) Manufacture of fuels, chemicals, plastic, metals and minerals	28.5	51.5	60.7	9.2
	d) Manufacture of computer, electrical and optical equipment	64.2	60.1	69.3	9.2
	e) Manufacture of transport equipment	*	35.7	*	*
	f) Manufacture: not elsewhere classified	67.1	33.9	45.3	11.4
	g) Construction	44.3	57.7	35.8	-21.9
	i) Wholesale Trade (incl cars & bikes) and Retail Trade (excl cars & bikes)	36.9	45.8	46.8	1
	k) Transport and storage, and Post and courier activities	32.3	41.4	45.4	4
	m) Accommodation and food services	42.0	42.7	34.1	-8.6
	n) Computer and related activities/ICT, Motion picture, video and tv programme production/programming & broadcasting and Telecom	54.0	51.6	78.2	26.6
	q) Financial intermediation and Real estate activities	25.7	56.1	40.1	-16
	s) Other services nec	49.0	52.8	34.6	-18.2
	t) Architectural and engineering activities and related technical consultancy	49.6	63.1	70.3	7.2
	u) Technical testing and analysis, Advertising and Market Research and Other professional, scientific and technical activities	47.8	53.3	65.4	12
	v) Research and experimental development on social sciences and humanities	70.8	61.9	79.4	17.5
	y) Renting of machinery, equipment, personal and household goods	*	55.5	66.0	10.5
	All	43.3	50.4	45.0	-5.4
	UK	a) Mining & quarrying and Electricity, gas & water supply	41.1	45.8	43.2
b) Manufacturing of food, clothing, wood, paper, publish & print		52.8	61.3	58.3	-3
c) Manufacture of fuels, chemicals, plastic, metals and minerals		52.0	64.5	56.3	-8.2
d) Manufacture of computer, electrical and optical equipment		62.2	71.7	73.9	2.2
e) Manufacture of transport equipment		54.7	69.9	67.2	-2.7
f) Manufacture: not elsewhere classified		54.7	58.2	56.4	-1.8
g) Construction		41.2	46.1	44.2	-1.9
i) Wholesale Trade (incl cars & bikes) and Retail Trade (excl cars & bikes)		42.2	51.4	48.2	-3.2
k) Transport and storage, and Post and courier activities		39.5	47.2	45.5	-1.7
m) Accommodation and food services		37.5	47.3	37.4	-9.9
n) Computer and related activities/ICT, Motion picture, video and tv programme production/programming & broadcasting and Telecom		51.8	67.2	70.0	2.8
q) Financial intermediation and Real estate activities		40.3	47.3	44.6	-2.7
s) Other services nec		44.4	49.7	44.5	-5.2
t) Architectural and engineering activities and related technical consultancy		54.4	60.6	62.8	2.2
u) Technical testing and analysis, Advertising and Market Research and Other professional, scientific and technical activities		48.4	64.0	63.6	-0.4
v) Research and experimental development on social sciences and humanities		63.3	71.0	78.5	7.5
y) Renting of machinery, equipment, personal and household goods		35.1	52.4	47.5	-4.9
All		44.4	53.0	49.0	-4

Notes:

1. Definition of sectors by Standard Industrial Classification 2007 code (SIC 2007) available in Annex C

Source: BEIS and Scottish Government

Table 6. Percentage of businesses engaged in product or process innovation in Scotland and the UK by broad sector: 2010-2016

Region	Broad sector	2010-2012		2012-2014		2014-2016	
		Product innovator	Process innovator	Product innovator	Process innovator	Product innovator	Process innovator
Scotland	1. Construction	13.7	5.6	9.0	7.9	14.2	10.8
	2. Electricity, Gas and Water Supply	11.2	5.9	18.9	45.2	11.6	17.1
	3. Accommodation and food services	11.4	5.1	23.4	11.9	15.1	9.0
	4. Manufacturing	24.5	13.2	30.9	19.7	31.7	23.8
	5. Mining and Quarrying	3.8	13.1	24.9	16.6	13.1	8.7
	6. Wholesale trade and retail	12.7	3.5	13.7	8.8	22.5	18.7
	7. Transportation and Storage	10.2	6.1	12.9	4.7	15.2	8.0
	8. Other	21.6	9.7	22.2	14.9	23.0	14.9
	All	16.1	7.2	19.8	12.5	20.5	14.5
UK	1. Construction	10.7	5.3	13.2	8.7	18.7	14.6
	2. Electricity, Gas and Water Supply	22.1	12.9	14.5	19.6	12.9	14.6
	3. Accommodation and food services	12.5	6.6	13.8	6.5	17.5	9.2
	4. Manufacturing	28.4	17.2	31.5	21.6	32.1	24.1
	5. Mining and Quarrying	14.8	7.6	13.1	11.6	13.9	9.8
	6. Wholesale trade and retail	15.7	7.6	16.0	10.8	23.9	14.5
	7. Transportation and Storage	12.1	7.6	12.2	9.2	18.7	12.1
	8. Other	20.1	12.5	21.5	14.9	26.0	17.7
	All	18.0	10.3	19.2	12.8	23.7	15.8

Source: BEIS and Scottish Government

Table 7. Percentage of businesses engaged in innovation activities in Scotland and the UK by broad sector: 2014-2016

Region	Broad Sector	Innovation active	Broader innovation active businesses	Wider innovation active businesses	Business engaged in an innovation related activity between 2014-2016	Product innovator	Process innovator	Abandoned innovation	Ongoing innovation	Product AND process innovation	Product AND/OR process innovation
Scotland	1. Construction	35.8	39.4	28.1	38.3	14.2	10.8	*	5.1	4.3	20.7
	2. Electricity, Gas and Water Supply	47.3	47.3	28.3	30.3	11.6	17.1	1.2	16.4	7.6	21.1
	3. Hotels and Restaurants	34.1	34.1	29.4	31.3	15.1	9.0	1.8	10.0	3.7	20.4
	4. Manufacturing	60.4	61.7	39.6	54.3	31.7	23.8	9.8	24.8	13.9	41.6
	5. Mining and Quarrying	39.9	39.9	33.0	35.8	13.1	8.7	4.4	13.7	1.8	19.9
	6. Wholesale trade and retail	46.8	46.8	32.9	44.4	22.5	18.7	3.2	14.9	10.1	31.1
	7. Transportation and Storage	45.4	45.4	30.0	39.1	15.2	8.0	0.6	9.9	2.2	21.0
	8. Other	50.7	51.1	37.5	44.8	23.0	14.9	4.6	17.0	8.6	29.3
	All	45.0	45.7	33.3	41.4	20.5	14.5	3.5	14.0	7.5	27.5
UK	1. Construction	44.2	46.3	35.2	43.1	18.7	14.6	2.5	10.4	7.8	25.5
	2. Electricity, Gas and Water Supply	42.8	44.1	33.8	38.6	12.9	14.6	6.4	14.2	7.7	19.8
	3. Hotels and Restaurants	37.4	38.8	29.2	34.3	17.5	9.2	2.0	9.7	5.5	21.2
	4. Manufacturing	60.2	61.1	37.3	55.5	32.1	24.1	7.3	26.2	14.7	41.6
	5. Mining and Quarrying	45.2	45.5	28.8	39.1	13.9	9.8	2.4	13.6	5.5	18.2
	6. Wholesale trade and retail	48.2	49.3	35.6	42.0	23.9	14.5	3.5	14.7	9.1	29.3
	7. Transportation and Storage	45.5	46.3	34.4	41.4	18.7	12.1	1.6	9.1	6.2	24.7
	8. Other	53.2	54.7	40.3	47.1	26.0	17.7	4.1	21.2	10.7	32.9
	All	49.0	50.3	36.0	44.2	23.7	15.8	3.8	16.8	9.5	30.1

Source: BEIS and Scottish Government

Table 8. Proportion of innovation active businesses in Scotland and the UK according to Growth Sector¹: 2010-2016

Growth Sector ¹	Percentage			Percentage points	
	2010-2012	2012-2014	2014-2016	Change between 2012-14 & 2014-16	
Scotland	1. Food & Drink	65.5	84.2	77.4	-6.8
	2. Financial and Business Services	44.7	59.2	38.6	-20.6
	3. Life Sciences	78.7	59.5	71.8	12.3
	4. Energy (including Renewables)	50.2	50.2	43.0	-7.2
	5. Sustainable Tourism (Tourism-related industries)	42.0	45.4	33.7	-11.7
	6. Creative Industries (including Digital)	49.1	56.0	66.5	10.5
	All Growth Sectors	45.4	51.8	41.4	-10.4
UK	1. Food & Drink	52.5	65.0	66.1	1.1
	2. Financial and Business Services	45.4	53.5	48.3	-5.2
	3. Life Sciences	69.5	77.0	73.5	-3.5
	4. Energy (including Renewables)	56.2	48.2	49.3	1.1
	5. Sustainable Tourism (Tourism-related industries)	36.9	45.0	36.7	-8.3
	6. Creative Industries (including Digital)	48.0	64.5	67.6	3.1
	All Growth Sectors	43.7	52.8	48.4	-4.4

Source: BEIS and Scottish Government

Notes:

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.

Table 9. Proportion of businesses engaging in innovation activities in Scotland and the UK according to Growth Sector¹: 2014-2016

Growth Sector ¹	Innovation active	Broader innovation active businesses	Wider innovation active businesses	Business engaged in an innovation related activity between 2014-2016					Product AND process innovation	Product AND/OR process innovation	
				Product innovator	Process innovator	Abandoned innovation	Ongoing innovation				
Scotland	1. Food & Drink	77.4	77.4	37.4	58.1	48.7	38.3	11.4	35.5	19.9	67.1
	2. Financial and Business Services	38.6	39.1	27.5	35.6	15.8	11.6	0.5	11.0	5.9	21.5
	3. Life Sciences	71.8	71.8	41.8	71.8	30.8	29.7	11.0	41.2	16.0	44.5
	4. Energy (including Renewables)	43.0	43.0	26.5	39.2	11.4	12.1	6.7	18.8	5.3	18.3
	5. Sustainable Tourism (Tourism-related industries)	33.7	33.7	28.9	30.8	15.2	9.2	1.9	10.2	3.7	20.6
	6. Creative Industries (including Digital)	66.5	66.5	46.0	61.0	33.3	20.7	11.5	27.7	15.6	38.4
	All Growth Sectors	41.4	41.5	31.0	37.5	18.8	12.6	3.5	14.3	6.5	25.0
	UK										
1. Food & Drink	66.1	67.7	40.5	60.0	36.4	29.3	8.3	29.4	15.0	50.7	
2. Financial and Business Services	48.3	49.2	38.4	41.8	20.3	16.8	1.8	16.5	8.6	28.5	
3. Life Sciences	73.5	74.7	49.2	71.3	37.9	30.7	15.3	53.3	17.4	51.2	
4. Energy (including Renewables)	49.3	51.0	35.2	45.7	21.0	20.6	5.2	21.2	10.2	31.4	
5. Sustainable Tourism (Tourism-related industries)	36.7	38.1	28.6	33.5	17.9	9.2	2.0	10.0	5.7	21.4	
6. Creative Industries (including Digital)	67.6	69.3	49.3	63.1	41.2	23.2	6.9	32.7	17.0	47.5	
All Growth Sectors	48.4	49.8	36.6	43.9	24.5	15.7	3.5	18.3	9.5	30.7	

Source: BEIS and Scottish Government

Notes:

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.

Table 10. Proportion of innovation active businesses by region: 2010-2016

Region	Percentage			Percentage points
	2010-2012	2012-2014	2014-2016	Change 2012-14 - 2014-16
South West	47.2	43.4	52.5	9.1
West Midlands	43.4	55.0	52.0	-3.0
Eastern	46.0	56.4	51.6	-4.8
East Midlands	48.8	56.3	51.6	-4.7
South East	45.8	56.9	51.1	-5.6
Yorkshire and the Humber	43.0	64.7	49.3	-15.4
North West	41.8	52.6	48.7	-3.9
London	42.2	48.0	46.9	-1.1
Wales	46.6	50.8	46.5	-4.3
Scotland	43.3	50.4	45.0	-5.4
North East	46.6	52.8	42.0	-10.8
Northern Ireland	39.4	44.7	38.8	-5.9
UK	44.4	53.0	49.0	-4.0

Source: BEIS and Scottish Government

Table 11. Proportion of expenditure by type of innovation in Scotland and the UK: 2010-2016

Type of investment	Percentage			Percentage points	
	2010-2012	2012-2014	2014-2016	Change between 2012-14 & 2014-16	
Scotland	In-house research and development	31.7	48.5	49.6	1.1
	Purchase of external research and development	9.9	2.3	2.8	0.5
	Acquisition of machinery, equipment and software	49.3	37.9	34.3	-3.6
	Acquisition of other existing knowledge	1.0	1.4	7.6	6.2
	All other innovation activities	8.1	10.0	5.7	-4.3
UK	In-house research and development	39.1	35.1	44.0	8.9
	Purchase of external research and development	12.4	4.4	11.3	6.9
	Acquisition of machinery, equipment and software	26.9	36.4	31.4	-5.0
	Acquisition of other existing knowledge	4.4	1.2	1.7	0.5
	All other innovation activities	17.2	23.0	11.5	-11.5

Source: BEIS and Scottish Government

Table 12. Business turnover in Scotland and the UK by number of employees: 2014-2016

	Percentage of turnover from goods and services in 2014-2016 that were:	No. of employees				Total
		a) 10 - 49	b) 50 - 99	c) 100 - 249	d) 250+	
Scotland	New to market	4.9	7.9	7.7	2.5	5.2
	Only new to this business	11.5	11.5	8.7	5.4	11.1
	Significantly improved	12.8	10.1	9.3	8.5	12.2
	Unchanged or only marginally modified	70.8	70.6	74.3	83.7	71.5
UK	New to market	7.9	5.9	4.6	4.7	7.4
	Only new to this business	10.3	10.6	6.7	6.7	10.0
	Significantly improved	12.7	10.3	10.1	9.0	12.2
	Unchanged or only marginally modified	69.1	73.2	78.6	79.6	70.4

Source: BEIS and Scottish Government

Table 13. Importance of factors in broader innovators' decision to innovate: 2014-2016

Region	Criteria	Importance (%)				
		N/A	Not important	Low	Medium	High
Scotland	Reduce environmental impact	28.3	15.8	19.4	21.1	15.3
	Improve health and safety	28.1	16.3	14.3	22.0	19.2
	Entering new market	25.2	15.2	13.3	25.2	21.1
	Reducing costs per unit produced or provided	27.0	14.2	13.5	24.2	21.1
	Improve flexibility for producing goods or services	25.4	13.4	11.9	24.5	24.8
	Increase capacity for producing goods or services	22.6	13.7	13.4	24.4	25.9
	Meet regulatory requirements	27.8	14.8	9.8	21.3	26.2
	Increase range of goods or services	23.4	13.6	10.8	22.9	29.3
	Increase value added	25.1	10.4	6.1	24.7	33.7
	Increase market share	22.7	12.7	8.3	22.0	34.3
	Replace outdated products or processes	10.0	12.1	10.4	26.7	40.8
Improve quality of goods or services	19.6	10.2	4.3	21.5	44.5	
UK	Reduce environmental impact	23.4	20.9	18.9	22.2	14.5
	Improve health and safety	23.6	21.4	15.5	21.3	18.2
	Entering new market	21.6	18.0	15.6	24.3	20.4
	Reducing costs per unit produced or provided	22.7	18.0	13.1	23.6	22.6
	Improve flexibility for producing goods or services	21.3	16.4	13.4	27.0	21.9
	Increase capacity for producing goods or services	20.2	17.1	14.0	25.8	22.9
	Meet regulatory requirements	23.4	16.7	13.3	20.4	26.2
	Increase range of goods or services	19.0	16.1	11.5	25.1	28.3
	Increase value added	21.6	11.9	8.2	26.2	32.1
	Increase market share	17.9	15.8	11.5	24.6	30.2
	Replace outdated products or processes	8.9	14.4	11.6	26.5	38.6
Improve quality of goods or services	17.9	10.5	6.0	23.5	42.0	

Source: BEIS and Scottish Government

Table 14. Percentage of broader innovators that cooperate with partners by size and type of collaboration partner: 2014-2016

Region	Size	Co-operation partners							
		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	a) 10-49 employees	67.1	83.1	74.0	58.3	56.8	50.7	40.1	39.6
	b) 50 - 99 employees	81.4	86.3	76.1	60.9	59.4	61.6	50.5	42.7
	c) 100 - 249 employees	61.6	88.0	65.1	52.0	44.7	47.7	30.9	25.4
	d) 250+ employees	77.1	82.8	71.8	47.6	43.3	50.8	45.5	42.2
	All	68.5	83.7	73.5	57.6	55.6	51.5	40.7	39.0
UK	a) 10-49 employees	65.8	81.4	74.2	55.4	57.0	49.3	40.0	35.9
	b) 50 - 99 employees	67.7	81.4	71.3	51.6	48.1	49.5	36.7	33.0
	c) 100 - 249 employees	65.6	82.2	67.6	47.5	42.6	47.2	36.2	31.9
	d) 250+ employees	76.9	79.5	67.5	49.8	45.3	51.6	41.7	35.2
	All	66.5	81.4	73.2	54.3	54.8	49.3	39.5	35.3

Source: BEIS and Scottish Government

Table 15. Percentage of broader innovators that cooperate with partners: 2010-2016

Cooperation partners	Scotland			UK		
	2010-2012	2012-2014	2014-2016	2010-2012	2012-2014	2014-2016
Other businesses within your enterprise group	33.0	33.3	68.5	45.5	43.7	66.5
Suppliers of equipment, materials, services or software	47.6	65.0	83.7	59.9	67.4	81.4
Clients or customers from the private sector	57.9	55.6	73.5	60.5	58.2	73.2
Clients or customers from the public sector	30.8	37.2	57.6	30.5	30.7	54.3
Competitors or other businesses in your industry	19.3	40.1	55.6	29.2	31.4	54.8
Consultants, commercial labs or private R&D institutes	19.6	21.5	51.5	27.1	24.7	49.3
Universities or other higher education institutions	16.9	16.9	40.7	20.2	21.0	39.5
Government or public research institutes	16.1	15.7	39.0	15.4	14.2	35.3

Source: BEIS and Scottish Government

Table 16. Importance of sources of information for innovation activities among broader innovators: 2014-2016

Region	Information source	Importance (%)				
		N/A	Not important	Low	Medium	High
Scotland	Within your business or enterprise group	7.3	12.1	8.2	23.4	49.1
	Suppliers of equipment, materials, services or software	16.3	9.9	10.2	30.4	33.3
	Clients or customers from private sector	24.1	10.9	11.2	24.8	29.0
	Clients or customers from public sector	27.0	21.7	16.9	20.3	14.0
	Competitors or other businesses in your industry	26.5	10.5	14.2	32.0	16.9
	Consultants, commercial labs or private R&D institutes	28.3	31.9	23.5	12.0	4.4
	Universities or other higher education institutions	28.7	40.1	19.9	8.3	3.0
	Government or public research institutes	28.8	35.1	23.5	10.9	1.7
	Conferences, trade fairs, exhibitions	28.6	23.3	20.9	18.2	9.1
	Professional and industry associations	28.7	18.6	21.7	22.9	8.1
	Technical, industry or service standards	28.9	19.6	17.5	22.4	11.7
Scientific journals and trade/technical publications	28.9	30.5	24.0	12.5	4.1	
UK	Within your business or enterprise group	4.9	12.5	9.5	25.1	48.0
	Suppliers of equipment, materials, services or software	16.5	12.3	13.3	29.7	28.2
	Clients or customers from private sector	21.3	13.3	13.2	25.4	26.9
	Clients or customers from public sector	23.9	25.5	18.3	19.2	13.1
	Competitors or other businesses in your industry	22.6	12.8	16.1	29.8	18.6
	Consultants, commercial labs or private R&D institutes	23.6	34.1	22.6	14.3	5.4
	Universities or other higher education institutions	24.6	42.6	20.9	8.9	3.0
	Government or public research institutes	24.6	40.6	21.4	10.4	3.0
	Conferences, trade fairs, exhibitions	24.4	26.0	22.6	19.7	7.3
	Professional and industry associations	24.4	21.3	22.2	23.0	9.1
	Technical, industry or service standards	24.3	20.2	18.9	24.4	12.1
Scientific journals and trade/technical publications	25.0	36.0	22.7	13.3	2.9	

Source: BEIS and Scottish Government

Table 17. Importance of constraints to innovation activity among broader innovators: 2014-2016

Region	Constraint	Importance (%)				
		N/A	Not important	Low	Medium	High
Scotland	Availability of finance	28.9	18.8	17.3	17.6	17.4
	Direct innovation cost too high	28.8	16.0	11.1	26.8	17.2
	Cost of finance	28.7	17.2	15.7	22.2	16.2
	Excessive perceived economic risks	28.6	16.7	13.9	25.2	15.6
	Lack of qualified personnel	28.0	16.6	18.7	25.1	11.6
	Outcome of EU referendum	28.8	28.5	17.7	14.8	10.1
	UK Government regulations	28.8	20.3	26.0	15.2	9.7
	Market dominated by established businesses	28.2	19.3	21.4	21.8	9.3
	EU regulations	28.7	29.0	22.2	13.2	6.9
	Uncertain demand for innovative goods or services	28.2	19.6	20.9	24.6	6.8
	Lack of information on technology	28.6	20.1	29.7	18.0	3.6
	Lack of information on markets	28.6	19.9	28.6	19.8	3.0
UK	Direct innovation cost too high	24.1	21.0	14.0	27.3	13.6
	Cost of finance	24.5	24.8	16.3	20.8	13.6
	Availability of finance	24.3	25.6	19.1	17.4	13.5
	Excessive perceived economic risks	24.1	22.3	17.1	25.0	11.6
	Lack of qualified personnel	24.4	19.5	21.7	24.1	10.4
	UK Government regulations	24.4	25.8	24.7	15.4	9.8
	Outcome of EU referendum	24.6	32.5	18.3	15.2	9.4
	Market dominated by established businesses	24.5	24.5	21.0	21.4	8.6
	Uncertain demand for innovative goods or services	24.5	21.5	22.2	24.4	7.4
	EU regulations	24.5	31.7	22.6	13.8	7.4
	Lack of information on markets	24.9	24.2	29.5	17.8	3.6
	Lack of information on technology	24.8	23.5	31.0	17.4	3.3

Source: BEIS and Scottish Government

Table 18. Percentage of broader innovators that rated constraints as of 'high importance' in Scotland and the UK: 2012 - 2016

Constraint	Scotland		UK	
	2012-2014	2014-2016	2012-2014	2014-2016
Availability of finance	22.6	17.4	16.8	13.5
Direct innovation cost too high	21.6	17.2	14.4	13.6
Cost of finance	18.5	16.2	14.4	13.6
Excessive perceived economic risks	10.5	15.6	14.1	11.6
Lack of qualified personnel	8.9	11.6	8.1	10.4
Outcome of EU referendum	NA	10.1	NA	9.4
UK Government regulations	8.2	9.7	7.3	9.8
Market dominated by established businesses	5.8	9.3	9.8	8.6
EU regulations	9.3	6.9	6.2	7.4
Uncertain demand for innovative goods or services	6.3	6.8	7.5	7.4
Lack of information on technology	8.4	3.6	3.1	3.3
Lack of information on markets	6.1	3.0	2.4	3.6

Source: BEIS and Scottish Government

Table 19. Percentage of broader innovators that cited constraints as of 'high importance' by number of employees in Scotland the UK: 2014-2016

Constraints	Size	Scotland	UK
Excessive perceived economic risks	10-250 employees	15.9	11.6
	250+ employees	8.4	10.6
	All	15.6	11.6
Direct innovation cost too high	10-250 employees	17.5	13.7
	250+ employees	11.6	13.1
	All	17.2	13.6
Cost of finance	10-250 employees	16.3	13.8
	250+ employees	13.0	9.0
	All	16.2	13.6
Availability of finance	10-250 employees	17.8	13.8
	250+ employees	7.8	7.8
	All	17.4	13.5
Lack of qualified personnel	10-250 employees	11.8	10.6
	250+ employees	6.5	6.3
	All	11.6	10.4
Lack of information on technology	10-250 employees	3.7	3.2
	250+ employees	3.4	4.0
	All	3.6	3.3
Lack of information on markets	10-250 employees	3.0	3.6
	250+ employees	3.3	3.0
	All	3.0	3.6
Market dominated by established businesses	10-250 employees	9.5	8.7
	250+ employees	4.6	5.7
	All	9.3	8.6
Uncertain demand for innovative goods or services	10-250 employees	6.9	7.4
	250+ employees	5.2	6.8
	All	6.8	7.4
UK Government regulations	10-250 employees	9.8	9.8
	250+ employees	7.9	8.0
	All	9.7	9.8
EU regulations	10-250 employees	6.9	7.4
	250+ employees	7.0	7.1
	All	6.9	7.4
EU referendum	10-250 employees	10.3	9.5
	250+ employees	5.5	6.6
	All	10.1	9.4

Source: BEIS and Scottish Government

Table 20. Percentage of businesses selling goods to geographic markets: 2010-2016

Years	Geographic Area	Scotland			UK		
		Non-innovation active	Innovation Active	All	Non-innovation active	Innovation Active	All
2014-16	UK regional within 100 miles of business	74.6	56.4	65.7	63.3	51.7	57.2
	UK national	30.5	56.8	43.4	42.4	58.9	51.1
	European counties	7.6	27	17.1	13.3	28.6	21.3
	All other countries	6.4	23.2	14.6	10.6	22.7	17
	Outside UK	10.2	32.1	20.9	16.6	34.1	25.8
2012-14	UK regional within 100 miles of business	82.4	70.9	76.2	81.3	70.1	75.1
	UK national	44.8	52.6	49	50	56.7	53.7
	European counties	13.4	21.7	17.8	15.9	28.6	23
	All other countries	10.3	17.2	14	10.7	21.4	16.7
	Outside UK	14.7	23.9	19.6	17.3	31.9	25.4
2010-12	UK regional within 100 miles of business	69.9	77.4	73.5	67.3	70.2	68.7
	UK national	46.3	46.4	46.4	53.2	59.8	56.4
	European counties	11.4	20.4	15.7	14.1	30.3	22.1
	All other countries	6.1	16	10.9	8.9	22.1	15.4
	Outside UK	11.6	22.4	16.8	15.4	34.1	24.7
Change between 2012-14 & 2014-16 (percentage points)	UK regional within 100 miles of business	-7.8	-14.5	-10.5	-18	-18.4	-17.9
	UK national	-14.3	4.2	-5.6	-7.6	2.2	-2.6
	European counties	-5.8	5.3	-0.7	-2.6	0	-1.7
	All other countries	-3.9	6	0.6	-0.1	1.3	0.3
	Outside UK	-4.5	8.2	1.3	-0.7	2.2	0.4

Source: BEIS and Scottish Government

Table 21. Value of exports for businesses in Scotland and the UK according to innovation activity: 2016

Region	Export value	Percentage of businesses	
		Innovation active	Non-innovation active
Scotland	No exports	72.3	92.8
	Less than £1 million	17.2	5.1
	Greater than £1 million and less than £10 million	7.4	1.5
	Greater than £10 million and less than £100 million	2.9	0.5
	Greater than £100 million	*	*
UK	No exports	70.8	88.7
	Less than £1 million	18.5	7.1
	Greater than £1 million and less than £10 million	8.3	3.1
	Greater than £10 million and less than £100 million	2.2	0.9
	Greater than £100 million	0.2	0.1

Source: BEIS and Scottish Government

Table 22. Change in turnover by size band and region: 2014-2016

Change in turnover between 2014 and 2016	Number of employees	Scotland		UK	
		Non-innovation active (%)	Innovation active (%)	Non-innovation active (%)	Innovation active (%)
Greater than 10% decrease	10-250 employees	31.1	28.0	26.1	20.1
	250+ employees	18.3	29.3	15.1	18.0
	All	30.8	28.0	25.9	20.0
0 - 10% decrease	10-250 employees	16.9	14.0	16.8	12.6
	250+ employees	13.9	18.9	12.9	14.2
	All	16.8	14.2	16.7	12.7
0 - 10% increase	10-250 employees	21.7	14.8	20.6	15.7
	250+ employees	24.1	11.1	21.2	17.9
	All	21.8	14.6	20.7	15.8
Greater than 10% increase	10-250 employees	30.3	43.2	36.4	51.6
	250+ employees	43.7	40.7	50.8	49.9
	All	30.6	43.1	36.8	51.5

Source: BEIS and Scottish Government

Table 23. Average proportion of employees in 2016 who hold a degree or higher level qualification¹

Businesses	Subject	Scotland			UK		
		10-249 employees	250+ employees	All	10-249 employees	250+ employees	All
All	Science or engineering subjects	8.8	13.9	8.9	8.0	11.5	8.1
	Other subjects	9.8	12.5	9.9	13.6	15.9	13.7
Broader innovators	Science or engineering subjects	15.0	14.1	14.9	11.6	13.7	11.7
	Other subjects	11.9	13.7	12.0	16.7	17.0	16.7
Non-innovators	Science or engineering subjects	3.6	13.5	3.8	3.8	6.9	3.9
	Other subjects	8.1	10.6	8.1	10.1	13.8	10.2

Notes:

Source: BEIS and Scottish Government

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

Table 24. Percentage of businesses employing people with skills according to size and innovation activity in Scotland and the UK: 2014-2016

Type of skills	Businesses	Scotland			UK		
		10 to 249 employees	250+ employees	All	10 to 249 employees	250+ employees	All
Graphic arts / layout / advertising	Non-innovation active	8.8	18.1	9.0	9.5	22.0	9.8
	Innovation active	22.6	28.2	22.9	24.2	36.1	24.6
	All	15.0	24.5	15.3	16.8	31.1	17.3
Design of objects or services	Non-innovation active	4.6	9.8	4.7	4.7	9.9	4.8
	Innovation active	16.7	27.2	17.1	17.2	26.7	17.6
	All	10.1	20.8	10.4	10.9	20.7	11.3
Multimedia / web design	Non-innovation active	10.0	19.4	10.2	9.8	21.7	10.1
	Innovation active	24.8	30.8	25.1	25.7	36.4	26.2
	All	16.7	26.6	17.0	17.7	31.2	18.2
Software development / database	Non-innovation active	3.2	13.7	3.5	7.3	24.9	7.7
	Innovation active	20.5	39.3	21.3	24.6	45.9	25.5
	All	11.0	29.9	11.6	15.9	38.5	16.6
Engineering / applied sciences	Non-innovation active	5.6	25.6	6.0	4.8	11.7	5.0
	Innovation active	16.1	41.6	17.1	14.8	31.0	15.4
	All	10.4	35.7	11.1	9.8	24.2	10.2
Mathematics / statistics	Non-innovation active	2.2	10.4	2.3	4.6	14.3	4.8
	Innovation active	9.3	20.8	9.7	11.2	28.8	12.0
	All	5.4	17.0	5.7	7.9	23.7	8.4

Source: BEIS and Scottish Government

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

Accommodation and food services

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
		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
	Audio-Visual	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 59.11/3: 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
	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>

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