Productive investment decisions in Scottish firms

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Executive summary

In 2024, the Enterprise Research Centre (ERC), funded by the Productivity Institute (TPI), surveyed a nationally representative sample of 1,623 UK firms exploring business investment decisions. The central focus of the survey was to understand why and how firms make investment decisions. This is important as the UK's low level of business investment is often cited as one explanation for slow productivity growth.

The survey was limited to private firms with 10+ employees that made significant investments (≥£5,000) between 2019 and 2024. Scottish Enterprise (SE) commissioned ERC to increase the coverage of Scottish firms in this survey and analyse the findings specifically for Scotland. Therefore, the survey covers the investment decisions of 251 Scottish firms.

The key results, based on weighted survey data, are as follows:

Profile of firms that made significant investments in 2019 - 2024

- Scottish firms typically had on average, 49 staff, £4.9m turnover, were 37 years old, 58% family-owned, 8% foreign-owned, and 30% exported. The most common sectors were administrative and support services, education, health, recreation and other services (23%) and wholesale and retail trade (18%).
- Scottish firms prioritised financial goals as important business objectives, especially sustaining cash flow and increasing profit margins (97%). Social objectives such as generating social or community benefits were less often considered important (66%).
- Scottish firms focused on selling to new customers and selling more to existing customers to achieve their business objectives.
- Across a range of business characteristics and business objectives, Scottish firms were similar to the rest of the UK.

Significant investment patterns

- Scotland is similar to the rest of the UK in terms of the average number of people involved in making business investment decisions (5) and the share of investment decision-makers who were women (34%). However, its share of investment decision-makers from ethnic minority groups is lower (6% vs. 12%).
- In 2019 – 2024, Scottish firms made an average of 4 significant business investments, same as the rest of the UK (accounting for outliers). Like the rest of the UK, Scottish firms mainly made tangible investments (47%) or a combination of tangible and intangible investments (43%).
- Over the period of 2019 – 2024, Scottish firms invested an average of 13% of their turnover in tangible investments and 11% in intangible investments. Internal company funds were the most common source of investment funding, and Scottish firms were more likely to use grants to fund investments.
- Scottish firms made significant investments of any type for various purposes, most often to introduce new goods or services or to improve existing ones (cited by 85% of firms). Increasing company profit and growth was the primary

purpose for making tangible investments (23%), and increasing efficiency was the primary purpose for intangibles (29%). Overall, the objectives of investment were similar in Scotland and the rest of the UK.

- 63% of Scottish firms reported that the COVID-19 pandemic negatively impacted their significant investments (compared to 51% in the rest of the UK). Brexit and the cost-of-doing-business crisis negatively affected just under 50% of Scottish firms' investments, similarly to the rest of the UK.

Process of investing (focused on firms' most strategically significant investment)

- Most Scottish firms (66%) identified tangible investments, primarily machinery, as the most strategically significant investment to their business in 2019 – 2024. 36% of Scottish firms involved external stakeholders in this investment, mainly private consultants and other private firms (other than the suppliers of equipment or other assets for the investment).
- People in Scottish firms who came up with an idea to invest typically had the highest level of responsibility, including company directors, owners, founders, managing directors or CEOs. These people tended to have substantial work experience and a high level of education.
- 64% of Scottish firms planned their investment in less than 1 year, with 92% completing planning in under 3 years. 68% of Scottish firms evaluated their proposed investment, considering various factors, primarily costs (95%) and expected returns (93%).
- Scottish firms expected to make multiple returns from their investment, primarily increased profit and growth (83%). They also expected the returns to be relatively quick (within 5 years for 79% of firms) and certain (94%). Scottish firms mostly considered costs (86%) and expected returns (79%) when approving strategic investments.
- For c. 80% of firms, the people involved in the investment decision tended to stay the same across the process of investing. The one exception is 49% of firms that changed some or all of the people to evaluate the proposed investment.
- At the time of the survey, 35% of Scottish firms reported fully achieving their expected returns. For 29% of firms, the investment provided unintended benefits, including improved staff welfare and higher employment. About 90% of firms were satisfied with the investment process and the returns achieved to date.
- The findings on the investment process are similar to those for the rest of the UK.

1. Introduction

Since the global financial crisis of 2008, Scotland and the rest of the UK have experienced a sharp decline in productivity growth, which has been slow to recover compared to other advanced economies. [1] This phenomenon is often referred to as the "productivity puzzle". While the exact causes of the productivity puzzle remain unclear,[2] one frequently cited explanation is the low level of business investment.[3] Alongside low productivity growth, Scotland and the UK show some of the lowest business investment rates among OECD countries.[4]

Therefore, understanding why and how firms make investment decisions is of key interest to academics and policymakers, including Scottish Enterprise (SE). As Scotland's national economic development agency and a non-departmental public body of the Scottish Government, SE recognises the significant impact of productivity on the wellbeing of people in Scotland. It explores productivity drivers to determine strategies to improve productivity growth in Scotland.

The Enterprise Research Centre (ERC), based at the University of Warwick and Aston University, is the UK's leading national centre of excellence for research into growth, innovation and productivity of small and medium-sized enterprises (SMEs). ERC was funded by the Productivity Institute (University of Manchester) to conduct a research study on productive business investment decisions in 2023 – 2025. A core element of this study is a large-scale "Productive Investment Decisions" survey with a sample of 1,623 nationally representative UK firms. SE commissioned ERC to increase the coverage of Scottish firms within the "Productive Investment Decisions" survey and to analyse the findings on business investment decisions specifically for Scotland.

This report summarises the findings from the ERC/TPI "Productive Investment Decisions" survey, focusing on the subsample of 251 Scottish firms and comparing their results to those of the rest of the UK.

2. Methodology

This section describes research methodology for the "Productive Investment Decisions" business survey and its analysis.

2.1. Survey

This report summarises findings from a nationally representative survey of 1,623 UK businesses, specifically focusing on the 251 Scottish firms covered in the survey. The survey explored topics related to business investment decision-making, including

[1] For example, see Rincon-Aznar et al 2022, UK Government 2019, Tsoukalas 2021, PwC UK Productivity Tracker
[2] McCann and Vorley 2020
[3] For example, see Karmakar et al 2022
[4] Tsoukalas 2021

business staff and other stakeholders involved in business investment, investment patterns over the last five years (2019 – 2024), purposes of investing, and the process of investing. The survey questionnaire was informed by a rapid literature review on factors affecting productive investment by firms, which was conducted by ERC in 2023.

The survey used a computer-assisted telephone interview (CATI) approach. Respondents were senior business investment decision-makers within UK firms. The fieldwork, including piloting the survey instrument, took place from June to October 2024.

The "Productive Investment Decisions" survey was limited to private firms that had been trading for at least 5 years at the time of the survey (2019 – 2024) and had a minimum of 10 employees. Firms could participate if they made at least one investment of at least £5,000 in 2019 – 2024. To better represent all groups of businesses, the survey oversampled larger firms, smaller business sectors and smaller regions such as Scotland and Wales. Responses were weighted by sector, location and region to adjust for oversampling in the survey design. This process is known as applying design weights.

Due to its length and to improve response rates, the survey was divided into two sections. One section covered significant investment patterns in 2019 – 2024, and the other focused on the process of making the most strategically significant investment. Firms were randomly assigned to either section in a 50/50 split. For Scotland, these sections included 112 and 139 firms, respectively. There were no statistically significant differences in business characteristics between these two sections among Scottish firms, which indicates that random assignment was successful.

2.2. Analysis

This report presents survey results based on weighted data for Scotland and the rest of the UK. Differences between Scotland and the rest of the UK were analysed using statistical significance tests appropriate to the data type. All statistically significant differences are reported.

Some respondents could not provide an exact value for some questions requiring a numeric response (e.g., turnover). In these cases, respondents were asked to estimate their numeric response using bands. A mean value for each band (rounded up) was then used to substitute for a missing specific numeric value to minimise data loss. Qualitative comments from the survey were analysed thematically.

3. Profile of firms that made investments

This section presents an overview of the key business characteristics of Scottish firms that made significant investments in the last five years (2019 – 2024). The survey considered significant investments to be single investments of at least £5,000.

Scottish firms that made significant investments had, on average, 98 staff (in 2024), an average business turnover of £9m (in 2023) and had been trading for an average of 37 years (as of 2024). These characteristics are comparable to those of the rest of the UK (107 staff and 33 years of age, not statistically significantly different). Firms in the rest of the UK had an average business turnover of £20m. However, this difference is not statistically significant, most likely due to the presence of major outliers in the data.[5] Without the major outliers, an average turnover of Scottish firms in 2023 was £4.9 mil compared to £5.5mil of the rest of the UK firms. Similarly, without the major outliers in business size, in 2024 Scottish firms on average had 49 staff (comparable to the UK's 47).[6] There are no major outliers in business age.

By business size category, 80% of Scottish firms were small (10 – 49 employees), 16% were medium (50 – 249 staff), and 4% were large (250+ employees). This distribution is similar to the rest of the UK.

The most common business sectors of Scottish firms that made significant investments in 2019 – 2024 were support and other services (including education, health and social work, arts and entertainment), wholesale and retail trade, professional activities, real estate, and information and communication (see Table 1). This sectoral distribution is similar to that of the rest of the UK.

Table 1. Business sector distribution of Scottish firms that made significant investments in 2019 – 2024 (UK SIC 2007 codes)

Business sector	**%**
Primary (A B D E)	4%
Manufacturing (C)	14%
Construction (F)	6%
Wholesale and retail trade (G)	18%
Transport and Storage (H)	4%
Accommodation and food service (I)	14%
Financial and insurance (K)	2%
Information and communication / Real estate / Professional activities (J L M)	16%
Administrative and support services / Education / Health and social work / Art, entertainment and recreation / Other services (N P Q R S)	23%

[5] About 1.5% of firms in the entire sample reported turnover of over £100m, with more numerous extreme values reported by the firms in the UK.
[6] About 1% of firms reported 1000 or more staff.

Forty-five per cent of Scottish firms reported selling services, 25% sold goods, and 30% sold both goods and services. Scottish firms that sold goods or both goods and services mainly sold consumer goods (69%), followed by intermediate goods (27%), raw materials (22%) and capital goods (18%). There was slightly more variability among the firms that sold services or both goods and services. They sold the following services: business or professional services (for example, consultancy, IT, legal) (37%), property, vehicle or other maintenance services or logistics (31%), other services such as education, health or leisure (27%), hospitality or food services (26%), digital services (for instance, web site support or digital accounting) (6%) and, lastly, personal services such as hairdressing (5%). Product or service characteristics were comparable between Scotland and the rest of the UK.

In terms of customer types, Scottish firms were mainly business-to-consumer (B2C) (69%) and business-to-business (B2B) (61%) firms, though 28% were business-to-government firms (B2G).[7] Compared to the rest of the UK, Scottish investing firms were more likely to sell directly to consumers (61% in the rest of the UK).

Finally, 58% of Scottish investing firms were family-owned, and 8% were foreign-owned. Thirty per cent of Scottish firms exported goods or services in any year in 2019 - 2024. For exporting firms, export sales made up an average of 25% of their turnover in their most recent exporting year. These business characteristics and export sales averages are comparable to the rest of the UK.

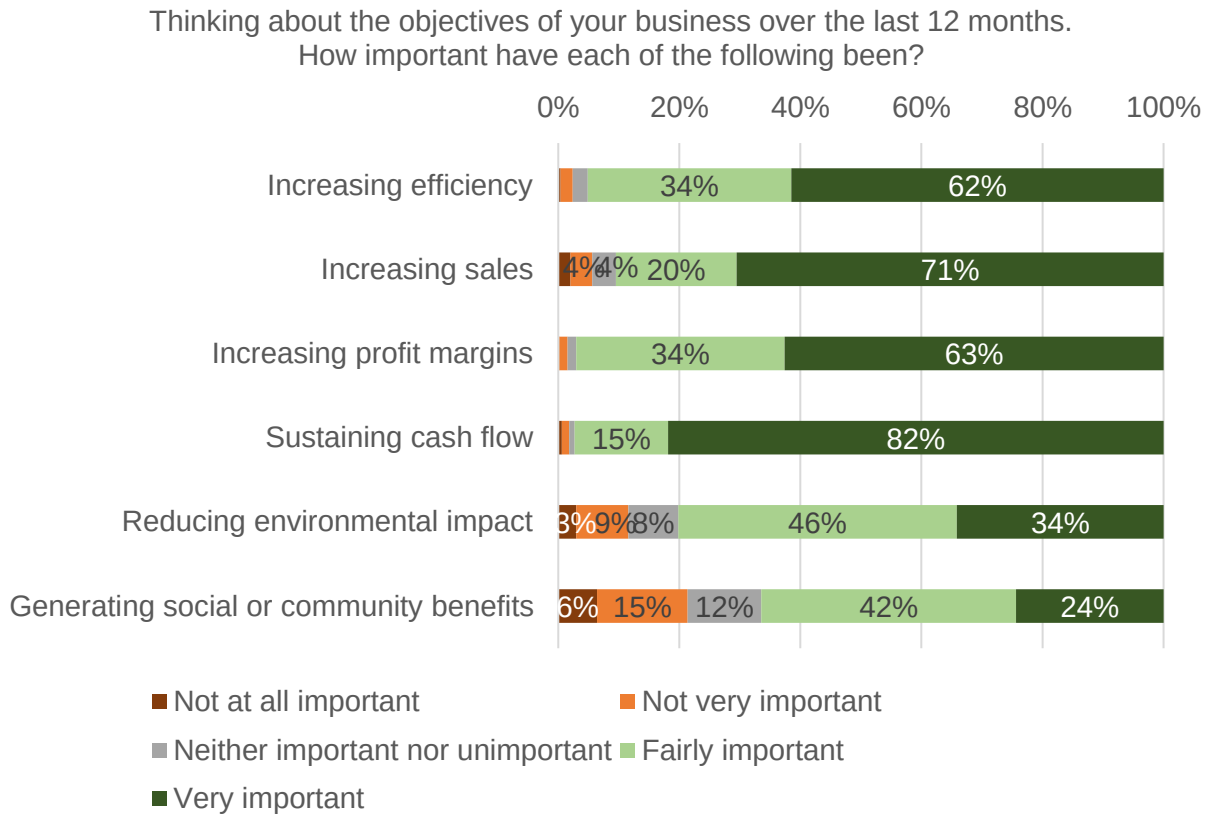
3.1. Business objectives

The “Productive Investment Decisions Survey” explored business objectives and how firms aimed to achieve them. Over 90% of Scottish firms regarded financial goals (increasing sales, increasing profit margins, sustaining cash flow) and increasing efficiency ‘fairly’ or ‘very important’. Sustaining cash flow was considered ‘very important’ by most Scottish firms. Meanwhile, social objectives - reducing environmental impact and generating social or community benefits – were less likely to be considered ‘fairly’ or ‘very important’ (by 80% and 66% of firms, respectively). Social objectives were also much less likely to be considered ‘very important’.

To illustrate, 34% of Scottish firms regarded reducing environmental impact as ‘very important’ compared to 62% of firms considering increasing efficiency ‘very important’. Figure 1 provides more detail on the importance of different business objectives. Across all objectives, Scottish firms did not differ significantly from the rest of the UK.

[7] Multiple selections possible

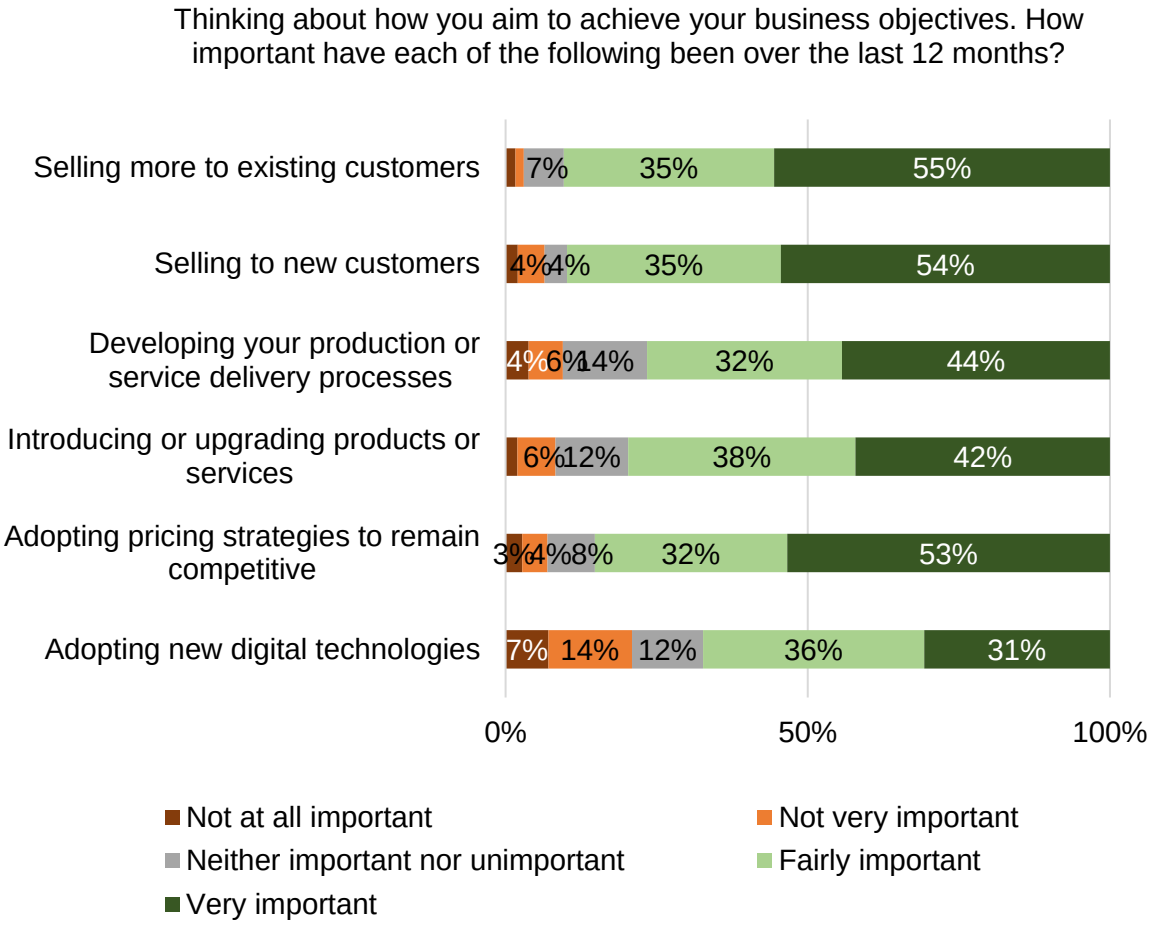
Figure 1. Importance of business objectives over the last 12 months as reported by Scottish firms



Note: responses of 2% or less are not labelled in the chart

Scottish firms found various approaches important in achieving their business objectives. Selling to new customers and selling more to existing customers was seen as particularly important (90% of Scottish firms mentioned both). Over 75% of Scottish firms considered all approaches explored in the survey important, except adopting new digital technologies (67%). Figure 2 provides more information on approaches to achieving business objectives. There were no significant differences with the rest of the UK.

Figure 2. Importance of different means of achieving business objectives over the last 12 months as reported by Scottish firms

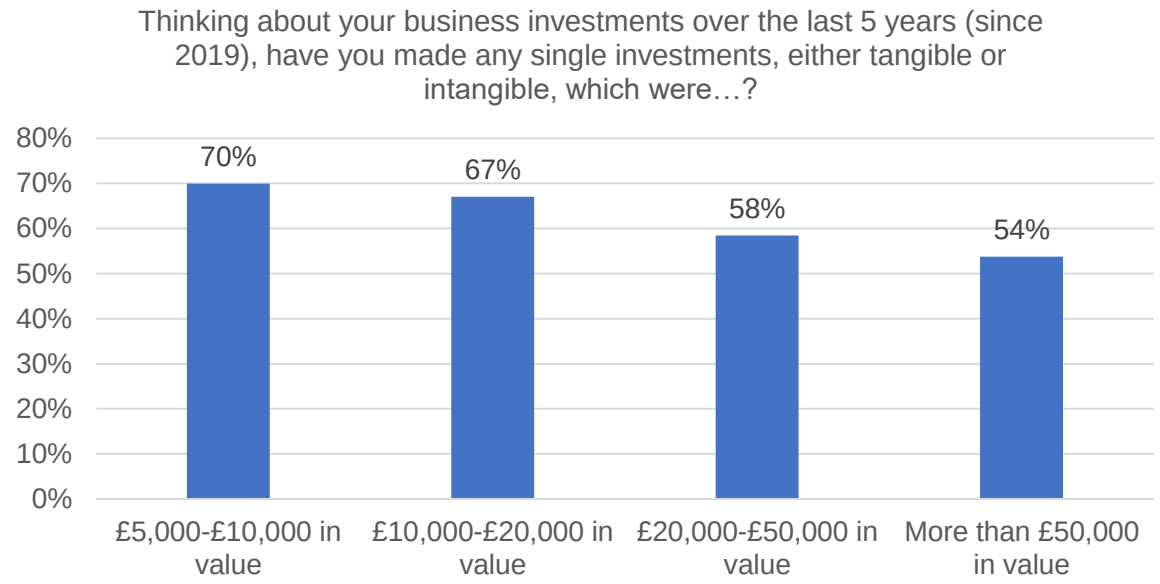


Note: responses of 2% and less are not numbered in the chart

4. Investment findings

Most Scottish firms made at least one single investment of different values, including 54% of firms that made at least one single investment of more than £50k (Figure 3, no significant differences with the rest of the UK). For the largest investments, there is an association with business size, albeit it is not straightforward. Namely, larger firms were more likely to invest more than £50k per single investment: 88% of large firms made these investments compared to 63% of medium and 50% of small firms. For investments of £20k - £50k in value, medium firms were more likely to invest than small firms (72% vs. 56%), though there was no statistically significant difference with large firms (59%). There was no further statistically significant difference by size for investments of lower values. The same pattern is observed in firms from the rest of the UK.

Figure 3. Share of Scottish firms that made single investments of the following value in the last 5 years (2019 – 2024)



4.1. Investment patterns

This survey section summarises findings on Scottish firms' significant investment patterns and decision-makers in the last 5 years (2019 – 2024).

4.1.1. Investment decision-makers

On average, Scottish firms reported that five people in their firm were involved in making business investment decisions (the same as the rest of the UK). Only 5% of firms reported having only one investment decision-maker (similar to the rest of the UK's 4%). As expected, this number is related to business size: larger firms reported that more people were involved in investment decisions. For instance, large Scottish firms reported that, on average, 13 staff were investment decision-makers, compared to 6 in medium firms and 4 in small firms.[8]

On average, 34% of Scottish firms' investment decision-makers were women, similar to the rest of the UK (36%). Six per cent of Scottish firms' investment decision-makers were from ethnic minority groups, lower than the rest of the UK (12%).

4.1.2. Investment planning

About half of Scottish firms (48%) reported having a business investment plan in 2024, a slightly higher share than in 2019 (39%). The current business investment plan typically covered a timeline of 2 to 5 years (73% of firms), similar to plans that firms had in 2019 (67% as per Table 2). There were no statistically significant differences with the rest of the UK.

[8] The difference between medium and small firms is not statistically significant

Table 2. Timeline of the business investment plan among Scottish firms that reported having one, a comparison between 2019 and 2024

Investment timeline	% in 2019	% in 2024
Less than 1 year	22%	14%
2 – 3 years	45%	42%
4 – 5 years	22%	31%
6 years or more	10%	7%
Don't know / refused	1%	6%

Note: percentages might not equal 100% due to rounding

4.1.3. Investment characteristics

Scottish firms reported making an average of nine significant business investments of any value in 2019 - 2024 compared to the rest of the UK's six. However, this difference is not statistically significant, most likely due to major outliers. Within the whole sample, c. 3% of firms reported more than 20 significant investments (up to a maximum of 400). Major outliers were present in both the Scottish and other UK firms, but they had a more significant effect on the Scottish sub-sample due to its smaller size. Without the major outliers, both Scottish firms and the rest of the UK firms made on average four significant business investments in 2019 – 2024. To put it differently, 41% of Scottish firms made 1 – 2 investments compared to 49% of rest of the UK firms.

Scottish firms mainly made tangible investments (47%) or a combination of both tangible and intangible investments (43%). A minority of firms (7%) made solely intangible investments in 2019 - 2024.[9] These figures were comparable and not statistically significantly different from the rest of the UK (49%, 36% and 13% respectively). Plus, there is a relationship between the number of significant investments and their type. Scottish firms that made solely intangible investments made fewer investments. They made, on average, two significant investments compared to three in firms that made only tangible investments and compared to five in firms that made both tangible and intangible investments.[10] This trend is also observed in the rest of the UK.

In terms of sub-types of investment, Scottish firms mainly made tangible investments into machinery and IT equipment or systems excluding software, and intangible investments in staff training or education, branding or brand recognition and computer software or databases (see Table 3). These results are comparable to the rest of the UK.

[9] The remaining 3% were "don't know" responses

[10] The difference between firms making tangible investments and those making both tangible and intangible investments is not statistically significant. This analysis accounts for outliers.

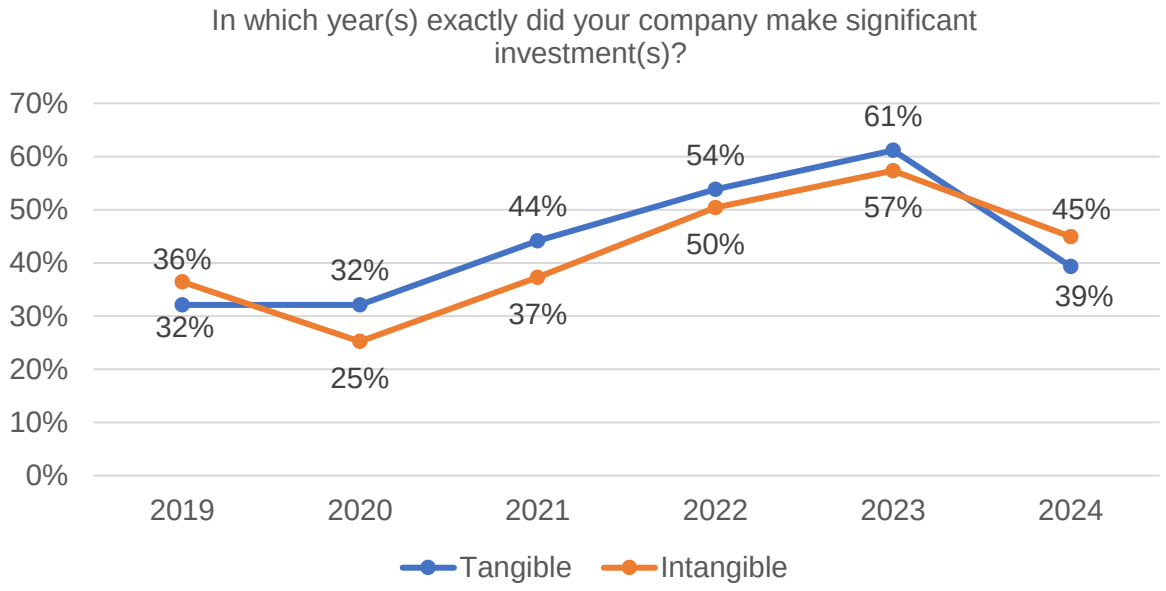
Table 3. Share of Scottish firms that made tangible and intangible investments, by sub-types (multiple selection possible)

Tangible	%	Intangible	%
Machinery	64%	Staff training or education	75%
IT equipment or systems excluding software	50%	Branding or brand recognition	63%
Buildings or plants	47%	Computer software or databases	62%
Vehicles	47%	R&D	39%
Other equipment (excl. IT)	43%	Customer goodwill	39%
Inventory or stock	43%	Business structure or organisation	34%
Land	4%	Entertainment, literary and artistic originals	19%
Other	2%	Intellectual property products	12%
		Other	7%

4.1.4. Investment timeline

In the period 2019 - 2024, Scottish firms invested, on average, in three out of six years, both in tangible and intangible assets. A higher share of Scottish firms invested in 2022 and 2023 than 2019 - 2021. The share of firms investing in 2024 was lower than in 2022 - 2023, though the survey fieldwork took place before the end of the year. See Figure 4 for the entire timeline. These trends are similar to those of the rest of the UK.

Figure 4. A share of Scottish firms that made significant investments from 2019 to 2024

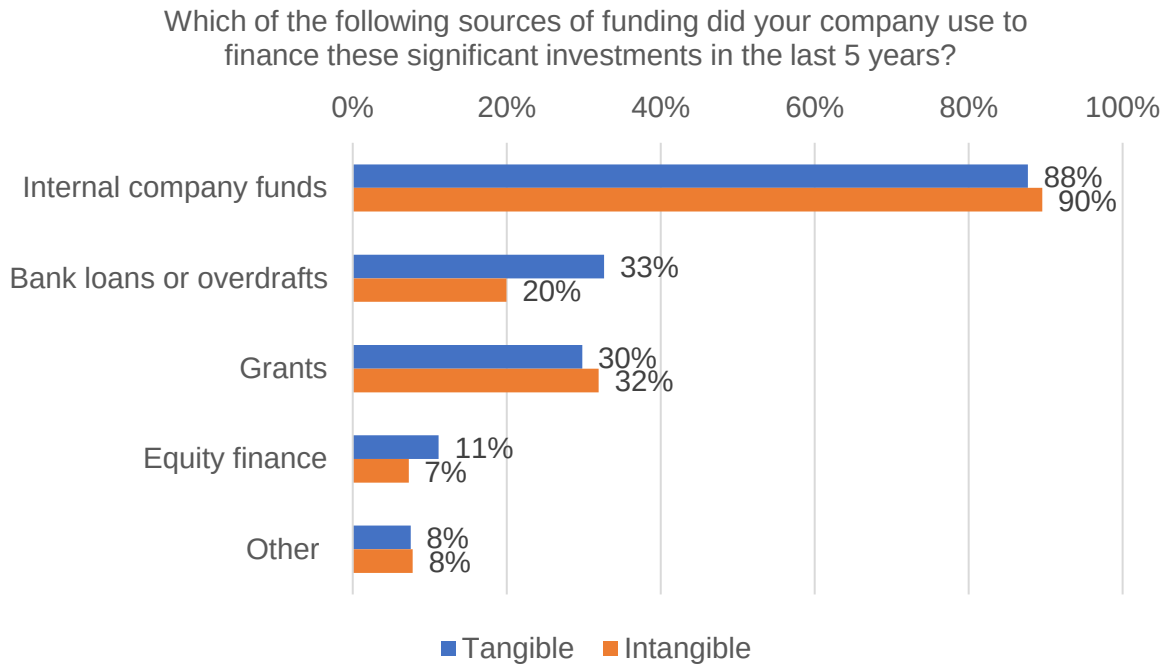


4.1.5. Financing investment

Over the last five years (2019 – 2024), Scottish firms invested an average of 13% of their turnover in tangible and 11% in intangible investments.[11] These percentages are similar to those of the rest of the UK, which are 13% and 10%, respectively.

Internal company funds were the most common funding source for any type of investment reported by Scottish firms. Meanwhile, bank loans or overdrafts were somewhat more likely to be used to fund tangible investments (see Figure 5 for full details). Examples of other funding sources for investments include investors and brokers, finance agreements, hire purchase agreements, donations, funding circles and decision-makers' personal finances. Compared to the rest of the UK, Scottish firms were more likely to use grants to fund tangible (30% vs 17%) and intangible investments (32% vs 16%).

Figure 5. Funding sources of tangible and intangible investments in Scottish firms (multiple selections possible)



4.1.6. Purpose of investing

Scottish firms reported making significant investments for a number of purposes, which were fairly similar between tangible and intangible investments. Most commonly, firms invest to introduce new goods or services or to improve existing ones, and the least common reason was to improve environmental sustainability (see Figure 6 for more detail). Eighty-four per cent of Scottish firms making tangible investments, and 86% of firms making intangible investments reported that they invested to enhance business productivity. However, less than 10% of firms considered

[11] This includes firms that made both tangible and intangible investments, i.e., they were asked about each type separately.

enhancing business productivity as the most important reason for making significant investments. Instead, Scottish firms mentioned increasing company profit and growth to be the most important purpose of tangible investments (cited by 23%), and increasing the efficiency of business processes as the most important aim of intangible investments (cited by 29%). Figure 7 provides more detail on the most important purpose of investments.

Scottish firms also mentioned other purposes for investing in tangibles, such as replacing existing equipment, hiring new staff (thus needing more equipment), expanding premises, maintaining them, and ensuring employee satisfaction. Other examples of investing in intangibles were staff development, keeping the business running, and changing customer demand from physical to digital products.

Figure 6. Purpose for which Scottish firms made tangible and intangible investments (multiple selections possible)

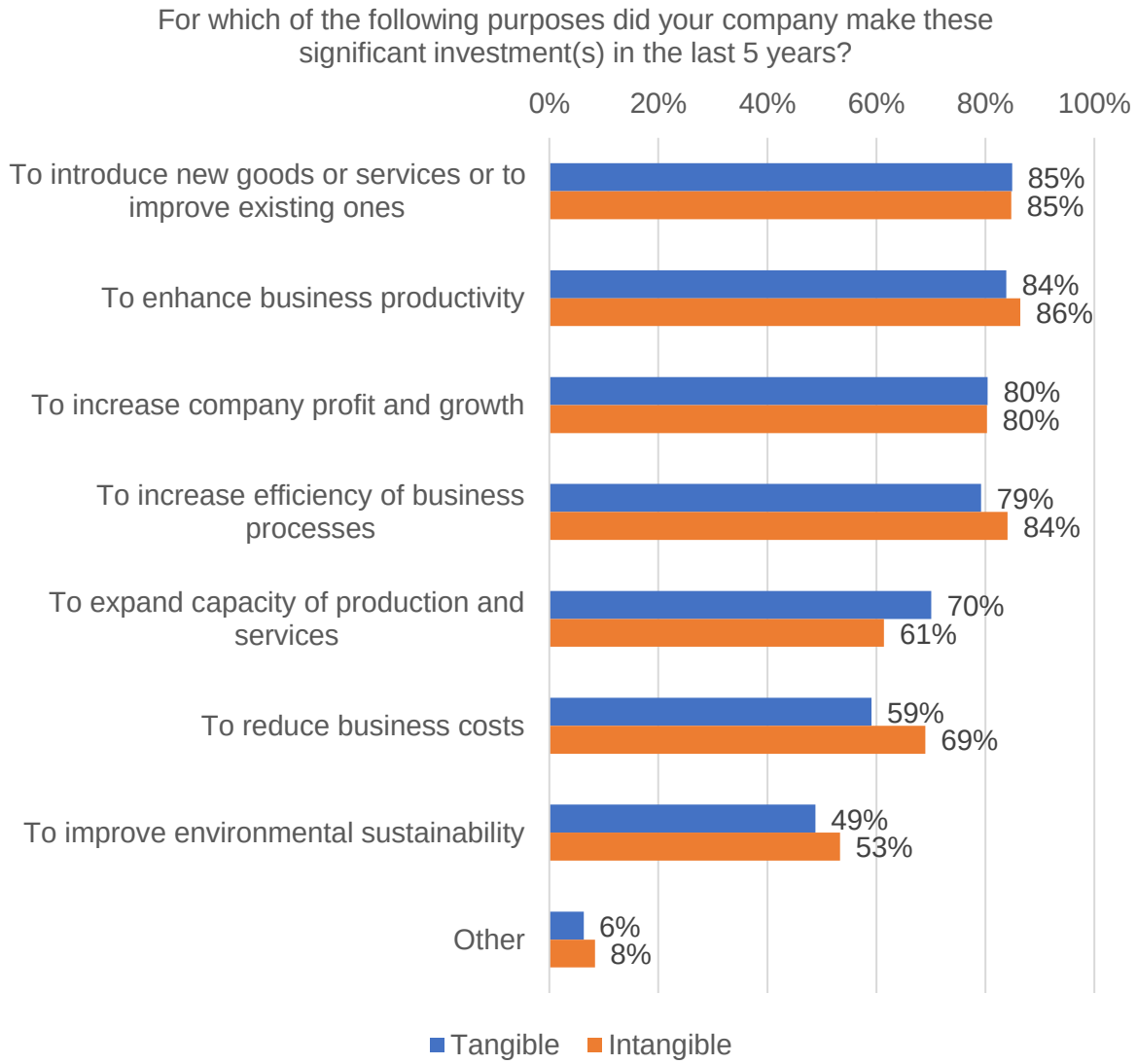
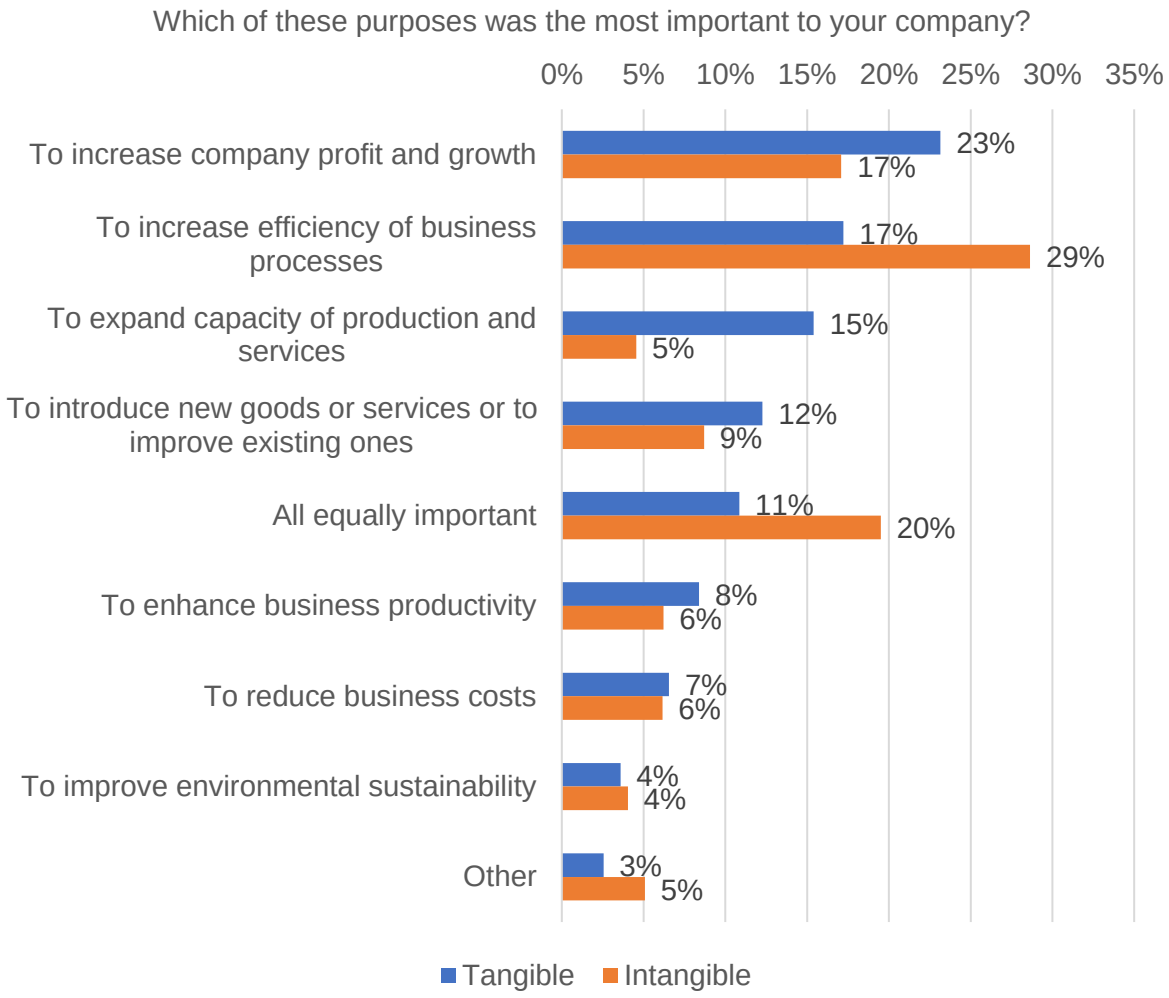


Figure 7. The most important purpose of making tangible and intangible investments among Scottish firms



Note: includes firms that cited only one purpose of investing and treats it as the most important purpose

There were no statistically significant differences between Scottish firms and the rest of the UK regarding tangible investment purposes. However, Scottish firms were more likely to report making intangible investments to improve environmental sustainability than the rest of the UK (53% vs. 37%). When asked to select the most important purpose of making intangible investments, Scottish firms were also more likely to cite all purposes as equally important (20% vs. 8% in the rest of the UK).

4.1.7. Annual rate of return

For 49% of Scottish firms making tangible investments and 24% making intangible investments, achieving a specific rate of return was necessary. This was similar to the share of firms in the rest of the UK (42% and 32% respectively). Among those Scottish firms for whom it was necessary to achieve a specific rate of return, 15% of firms making tangible and 6% of firms making intangible investments expected an annual

rate of return of up to 8%. However, many firms reported not knowing the expected annual rate of return (see Table 4 for more detail).

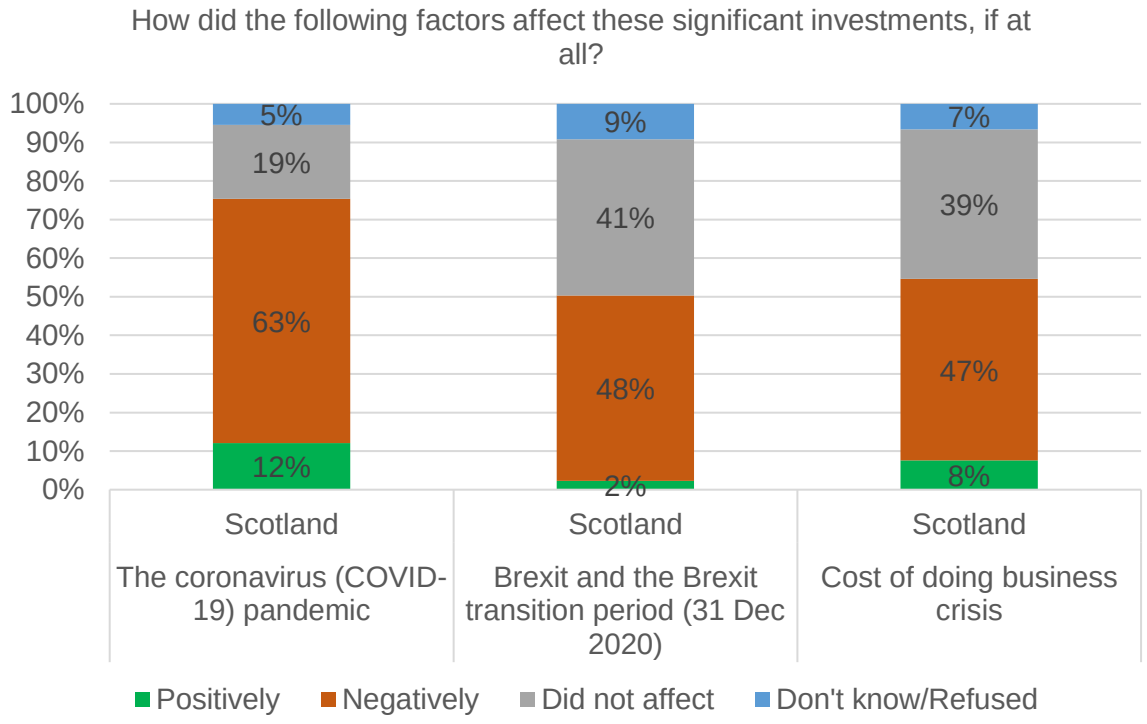
Table 4. Annual rate of return that Scottish firms expected to achieve from tangible and intangible investments (% of firms for whom it was necessary to achieve a specific rate of return)

Expected annual rate of return	Tangible	Intangible
Less than 5 %	10%	3%
5-8%	5%	3%
9-10%	19%	28%
11-12%	6%	3%
12-14%	0%	0%
More than 14%	25%	18%
Don't know	35%	45%

4.1.8. Other factors of influence

The majority of Scottish firms (63%) reported that the coronavirus (COVID-19) pandemic negatively affected their significant investments in the last 5 years (2019 – 2024). This share was higher than in the rest of the UK (51%). Close to half of Scottish firms also reported that Brexit, the Brexit transition, and the cost of doing business crisis affected their significant investments negatively (there is no statistically significant difference with the rest of the UK). Unlike the coronavirus pandemic, for a large share of firms, these events did not have an impact (see Figure 8 for more detail).

Figure 8. Impact of external factors on significant investments reported by Scottish firms



4.2. Process of making the investment

This section examines the process of making the investment that firms considered as having the most strategic significance.

Most Scottish firms identified tangible investments as having the most strategic significance to their business (66%), followed by a combination of tangible and intangible (22%) and intangible investments (12%). Regarding investment sub-types, Scottish firms most commonly cited machinery in tangible investments and staff training or education in intangible investments as their most strategically significant investment. Scottish firms, like the rest of the UK, selected multiple investment sub-types when asked to identify their investment of the most strategic significance (see Table 5 for more detail).

Table 5. The most strategically significant investment among Scottish firms by sub-type (multiple selections possible)

Tangible	**%**	**Intangible**	**%**
Machinery	57%	Staff training or education	72%
Buildings or plants	46%	Computer software or databases	69%
IT equipment or systems excl. software	40%	Branding or brand recognition	45%
Other equipment (excl. IT)	39%	R&D	40%
Vehicles	30%	Business structure or organisation	37%
Land	6%	Customer goodwill	37%
Other	4%	Intellectual property products	17%
		Entertainment, literary and artistic originals	11%
		Other	6%

4.2.1. External collaboration on investment

About a third of Scottish firms (36%) involved partners, collaborators, or consultants outside the company in their strategic investments.[12] This is comparable to the rest of the UK (34%).

Scottish firms, as in the rest of the UK, involved the following stakeholders in their most strategically significant investment:

- private consultants (58%)
- other private firms (44%)
- business networks, trade organisations or associations (17%)
- local authorities (9%)
- higher or further education institutions (6%)

[12] Other than the suppliers of any equipment or other assets

- government agencies (3%)

Eleven per cent of Scottish firms also mentioned other types of external partners involved in their most significant investments, such as lawyers, investors, customers and finance companies.

4.2.2. Process of investing

This section describes the process of making firms' most strategic investments, from ideation to performance monitoring.

Ideation stage

Like the rest of the UK, Scottish firms tended to move quickly when planning their most strategic investment. Most firms (64%) reported that it took them less than 1 year to plan the investment before actually making it, while for 92% of firms, it took less than 3 years (see Table 6). Sixty-one per cent of Scottish firms developed a business case to make the proposed investment (62% in the rest of the UK).[13]

Table 6. Time it took Scottish firms to plan to make the most strategically significant investment prior to actually making it

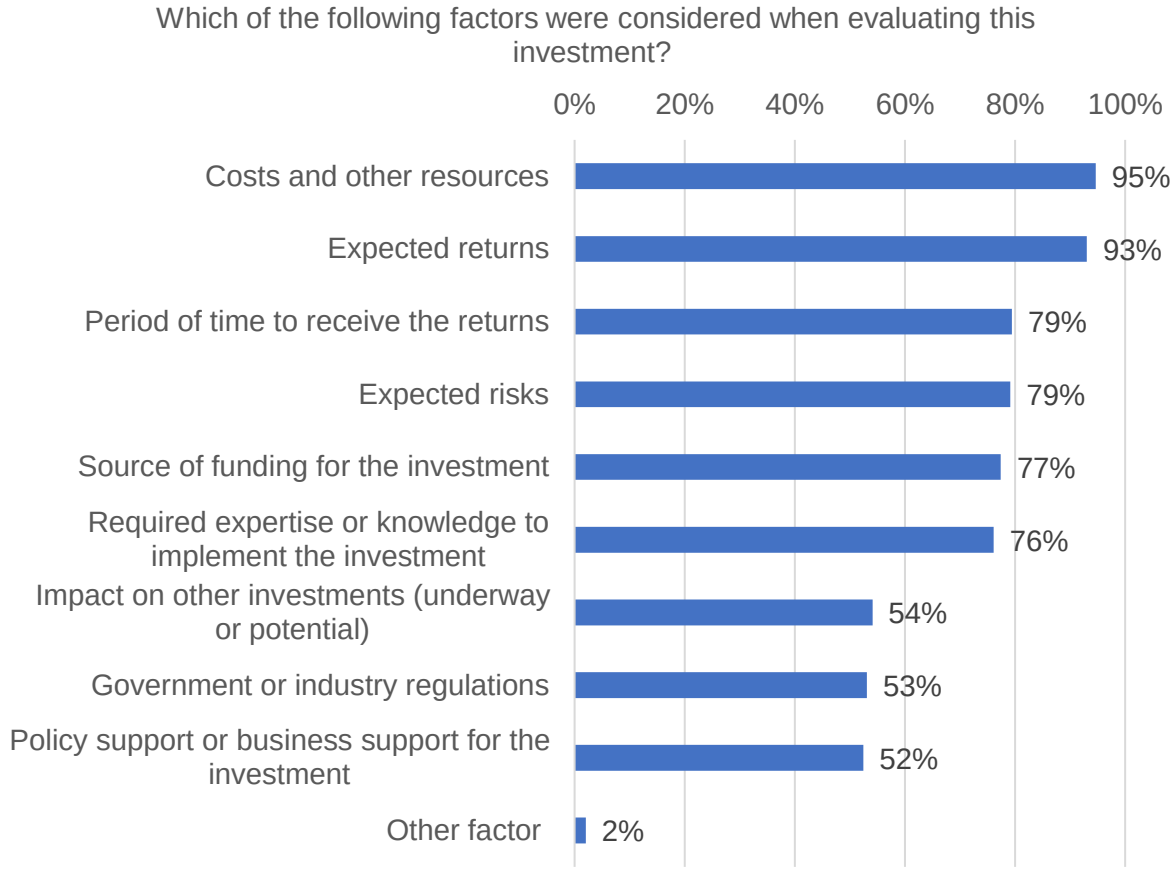
Time taken	**%**
Less than 1 year	64%
2 – 3 years	28%
4 – 5 years	2%
5 years or more	3%
Don't know	2%

Legitimation stage

Sixty-eight per cent of Scottish firms evaluated the proposed investment after its inception (similar to the rest of the UK's 72%).[14] Those firms that evaluated their proposed investment considered multiple factors. They nearly always considered costs and other resources (cited by 95% of Scottish firms) and expected returns (93%). Government or industry regulations and policy support or business support for the investment were considered less commonly but still by over half of all firms (53% and 52% respectively). Figure 9 presents all factors considered in the evaluation stage. There were no statistically significant differences with the rest of the UK.

[13] 32% of Scottish firms did not develop a business case and 7% did not know if they did.
[14] 29% of Scottish firms did not evaluate and 3% did not know if they did

Figure 9. Factors considered when evaluating the most strategically significant investment among Scottish firms that evaluated the said investment (multiple selections possible)



Scottish firms expected to make multiple returns from their most significant investment. Most often, firms expected to increase company profit and growth (83%) and less frequently to improve environmental sustainability (47%) (see Figure 10 for the complete list of expected returns). Firms identified increased company profit and growth as the most important expected return to the company (cited by 30% of Scottish firms), followed by expanded capacity of production and services (16%), increased efficiency of business processes (14%) and new goods or services or improved existing ones (13%). Improved business productivity was the most important expected return for 9% of Scottish firms, while 5% cited reduced business costs and 4% cited improved environmental sustainability.[15] These findings on expected returns and the most important expected return are comparable to the rest of the UK.

[15] Remaining 9% of Scottish firms considered all of their expected returns equally as important and 1% did not know which one was the most important.

Figure 10. Expected returns reported by Scottish firms from the most strategically important investment (multiple selections possible)

Firms were also asked to specify which expected returns they measured. Twenty-nine per cent of Scottish firms said that none of the expected returns were measured (similar to the rest of the UK's 23%). The share of firms that measured each specific return is presented below:

- Reduced business costs (61%)
- Increased company profit and growth (59%)
- Increased efficiency of business processes (56%)
- Improved business productivity (55%)
- Improved environmental sustainability (53%)
- New or improved goods or services (50%)
- Expanded capacity of production and services (47%)

In line with the research literature, Scottish firms had expected returns from their investment to be quick and predictable. Seventy-nine per cent of firms had expected that returns would be achieved in under five years, and 94% were 'somewhat' or 'very certain' that returns would be achieved (see Table 7). These trends were consistent with the rest of the UK.

Table 7. Timeline and certainty of expected returns from the strategic investment

How long did you anticipate that it would take for this investment to achieve all its expected returns?	%	How certain, if at all, were you that the investment would achieve its expected returns?	%
Less than 1 year	23%	Very certain	52%
1 – 2 years	30%	Somewhat certain	42%
3 – 5 years	26%	A little certain	3%
5 – 10 years	4%	Not certain at all	2%
More than 10 years	3%	Don't know	1%
No specific timeline anticipated	13%		
Don't know	1%		

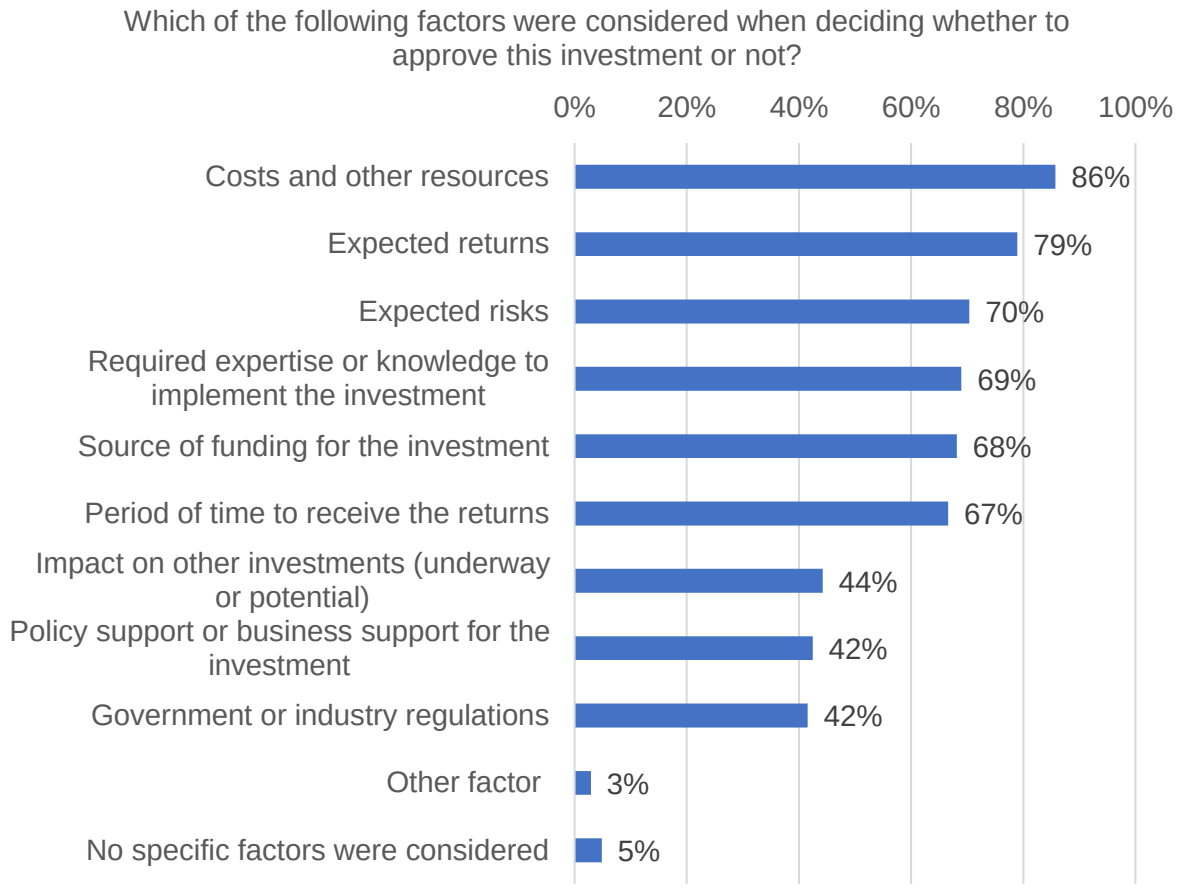
Note: percentages might not add up to 100% due to rounding

Approval stage

Scottish firms reported considering a variety of factors when deciding whether to approve the strategic investment. They most commonly considered costs and other resources (86% of Scottish firms) and expected returns (79%). Less than half but still a substantial share of firms also considered policy or business support for the investment (42%) and government or industry regulations (42%) in their approval. See Figure 11 for the complete list of all considered factors. There were no statistically significant differences between Scotland and the rest of the UK.

Among Scottish firms that had evaluated their proposed investment earlier (68% of all Scottish firms), nearly all (98%) mentioned that the factors considered when deciding whether to approve the investment were more or less the same as those considered when evaluating it.

Figure 11. Factors that Scottish firms considered when deciding whether to approve the investment or not (multiple selections possible)



Forty-four per cent of Scottish firms reported that the impact on other investments was one of the factors considered in approving their most strategic investment. Among these firms, the majority (59%) said that this applied to potential investments, 26% said it applied to investments already made and 21% to investments that were in the process of being made.[16] This consideration at the approval stage mainly applied to tangible investments (cited by 49% of Scottish firms) or both tangible and intangible investments (37%).[17] Seventy-two per cent of Scottish firms who considered other investments at the approval stage expected a complementary impact from the proposed investment on other investments (for example, that the proposed investments would help to make other investments or increase their returns). Twenty-three per cent of firms said that they expected a restrictive impact, for instance, that the proposed investment would interfere with or prevent other investments from being made (fully or partially).[18] These results are similar to those in the rest of the UK.

[16] Multiple selections possible
[17] 12% intangible and 1% did not know
[18] 3% said impact would have been something else to complementary or restrictive and 2% did not know what it would be

In addition, 35% of Scottish firms needed to achieve a specific rate of return when making the most strategic investment. The expected annual rate of return among these firms varied, but nearly a third (32%) expected it to be more than 14% (see Table 8).

Table 8. Annual rate of return that Scottish firms expected to achieve from the proposed investment, % of firms for whom it was necessary to achieve a specific rate of return

Expected annual rate of return	% of firms
Less than 5 %	5%
5-8%	11%
9-10%	13%
11-12%	11%
12-14%	8%
More than 14%	32%
Don't know	19%

Finally, in the approval stage, nearly all (90%) of Scottish firms reported that the proposed budget for their most strategically significant investment was approved fully. For 8% of Scottish firms, the budget was approved partially.[19]

Implementation stage

Thirty-five per cent of Scottish firms reported that they fully achieved their expected returns from the strategic investment, and 27% achieved them partially. However, a substantial share of firms (34%) said it was too early to tell if their expected returns were achieved.[20] Additionally, 29% of Scottish firms reported that their most strategic investment provided other benefits that had not been expected. These firms mentioned unexpected benefits such as improved staff welfare, customer satisfaction, freed-up resources, better public relations, higher employment and better working culture. These findings are consistent with those in the rest of the UK.

Monitoring stage

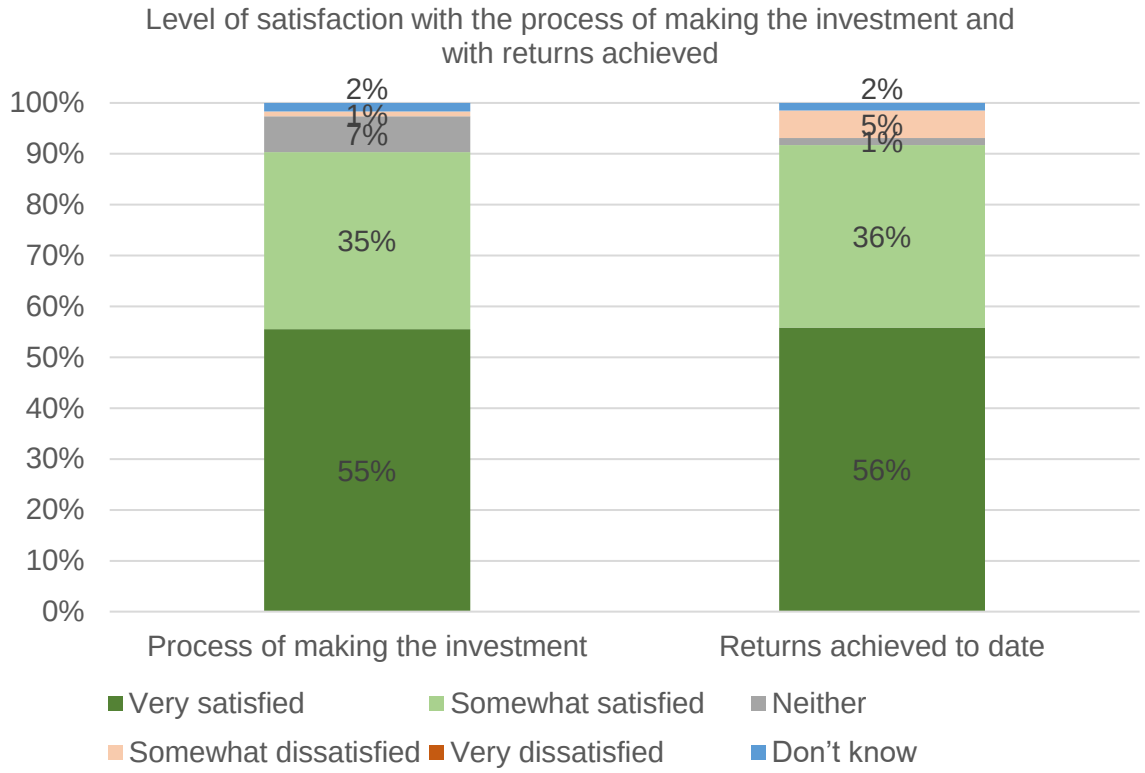
Sixty-eight per cent of Scottish firms reported that performance of the most significant investment was monitored after its project completion (similar to the rest of the UK's 72%). About a quarter (26%) of Scottish firms did not monitor the investment's performance and for 4% of firms the investment project was still underway at the time of the survey.[21]

The majority of Scottish firms were satisfied with the entire process of making the most strategically important investment (90%) and with its returns achieved to date (92%)[22] (see Figure 12). This is comparable the rest of the UK. Twenty-six per cent of Scottish firms reported that their overall level of satisfaction with this strategic investment

[19] Remaining 2% did not know the extent to which the budget was approved
[20] Remaining 4% did not know to what extent expected returns were achieved
[21] Remaining 2% were "don't' know" response
[22] Excluding firms for which it is "too early to tell" if returns were achieved or not

positively affected other investments made since then, though a similar share of firms reported that it had no effect (27%). Remaining 44% of Scottish firms did not make any investment since the strategic investment discussed in the survey, while only 1% of firms said that the strategic investment had a negative effect on other investments made since then.[23] These trends are consistent with those in the rest of the UK.

Figure 12. Satisfaction level of Scottish firms with the process and returns of the most strategically significant investment



4.2.3. Decision-makers throughout the investment

The survey explored key decision-makers at every stage of the most strategically significant investment process, from ideation to monitoring of its results. In Scottish firms, the people who came up with an idea to make the most strategically significant investment tended to be, unsurprisingly, people with the highest level of responsibility:

- Company directors or board of directors (44%)
- Owners or founders (31%)
- Managing directors or CEOs (24%)
- Department heads or senior managers (20%)
- Other staff (4%)
- External partners, consultants or collaborators (2%)
- Other external people (2%)

[23] Remaining 2% did not know what impact the most strategic investment had on other investments

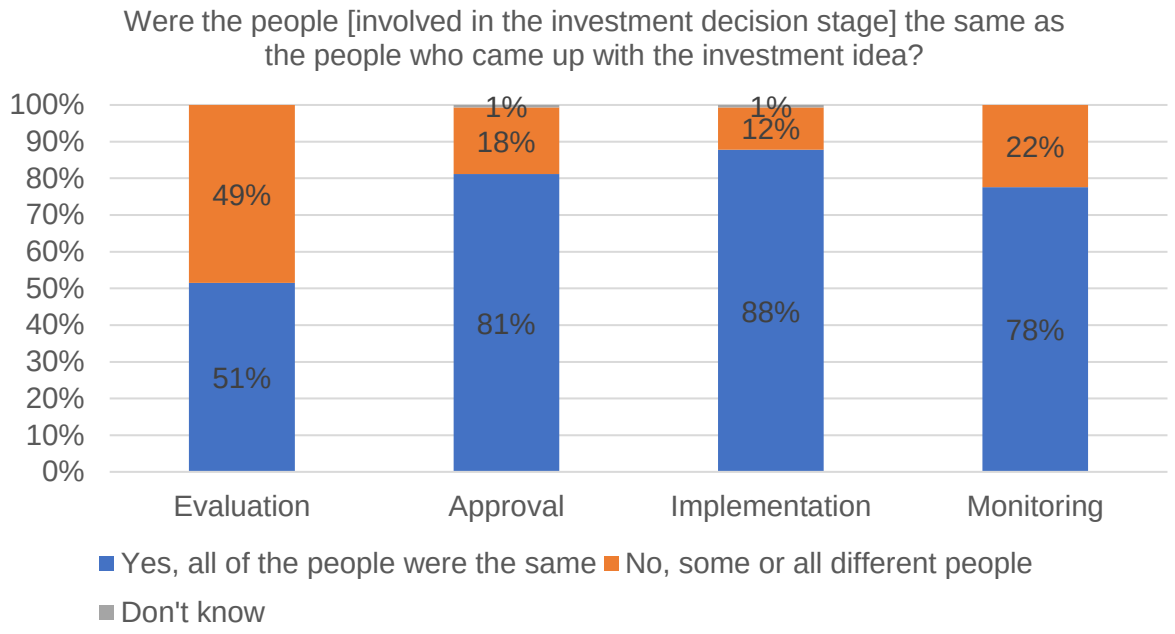
In Scottish firms, the most senior people involved in the most strategic investment tended to have a high level of education and experience. On average, most senior people had 29 years of work experience (including in other firms) when they came up with the idea to make the most strategic investment. Over half (58%) of the most senior people had a university degree, and only 3% had no formal qualifications. The job roles of people who came up with the idea of making the most strategic investment and their education and experience were similar among Scottish firms and the rest of the UK.

Key decision-makers tended to stay the same across the whole process of investing. Eighty-one per cent of Scottish firms reported that people who approved the investment were all the same as those who came up with its idea. In 88% of firms, the people who carried out the investment were the same and in 78% of firms, the people who monitored the investment were all the same.[24] However, at the evaluation stage, 51% of Scottish firms reported that the same people who came up with the investment idea evaluated the proposed investment, a lower share than in other process stages.[25] See Figure 13 for more detail on decision-makers at different process stages.

In some cases, key decision-makers were more likely to stay the same in small firms. In 85% of small firms people who approved the investment were all the same compared to 67% in medium and large firms. Similarly, in 92% of small firms the people who carried out the investment were the same (vs. 75% in medium and large firms). These trends in how key decision-makers changed during the investment process are similar between Scotland and the rest of the UK.

[24] Note that the 78% figure was calculated from 68% of Scottish firms that reported monitoring the investment's performance after its completion.
[25] Note that 51% figure was calculated from 68% of Scottish firms that evaluated the proposed investments.

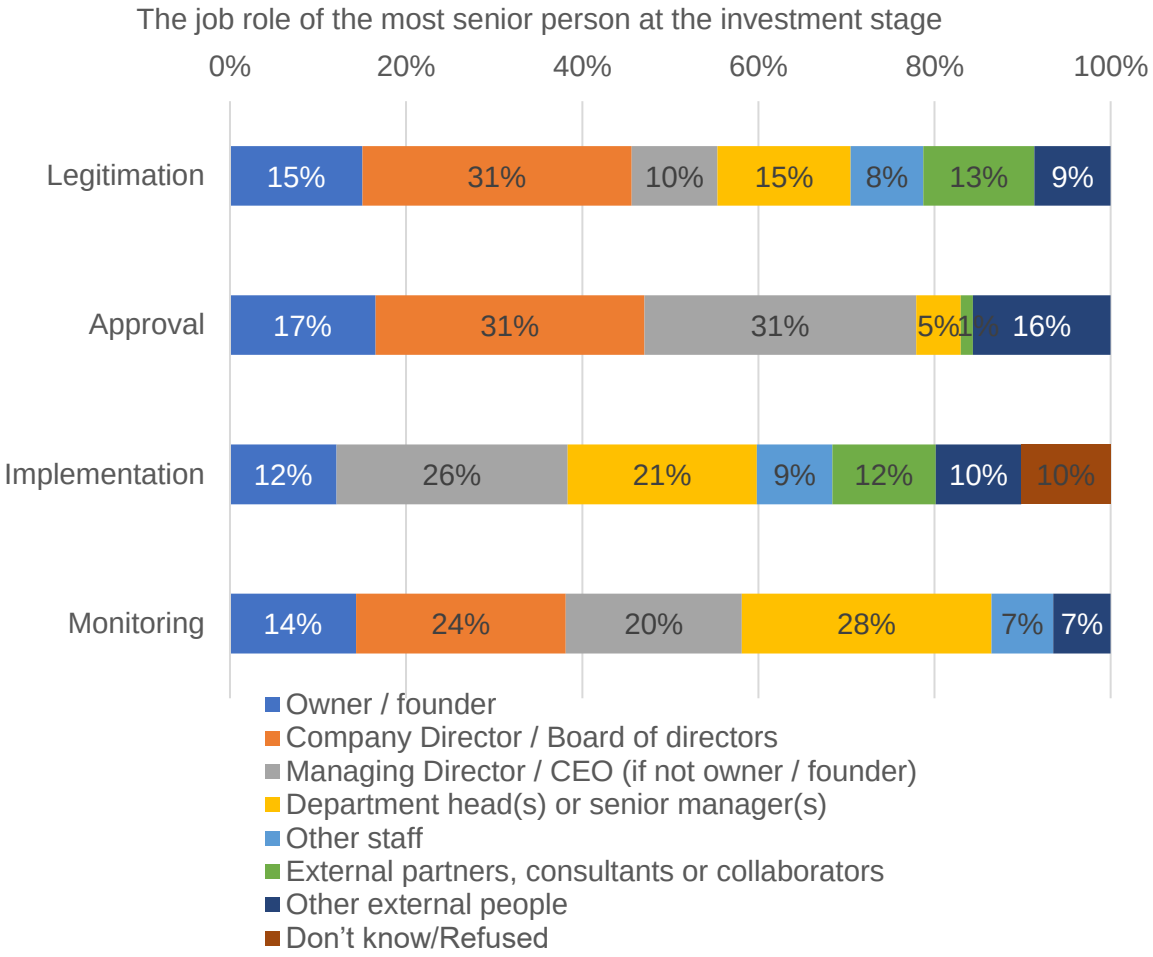
Figure 13. Change of investment decision-makers across the process of investing among Scottish firms compared to the ideation stage



For Scottish firms that involved different people throughout the investment process, owners or founders and company directors are typically less likely to be involved. The roles of managing directors or CEOs, department heads, and senior managers vary during the investment process. For instance, managing directors or CEOs are less likely to be the most senior people when evaluating the investment, while department heads or senior managers are less likely to approve the investment but slightly more likely to monitor its performance.

The number of other people involved—other staff, external partners, and other external people—increased during the investment process after its ideation, especially at the implementation stage. Figure 14 provides more information on the job roles of the most senior people in Scottish firms, which involved different people from those who came up with the idea of the investment over the course of this investment. Examples of other staff involved in the investment include office managers and vice presidents. Examples of other external people include specialists and consultants.

Figure 14. The job role of the most senior person in the investment stage in those Scottish firms that changed decision-makers during the process of investing



5. Conclusions

The ERC/TPI "Productive Investment Decisions" survey explored the profile of Scottish firms that made significant investments (that is, investments of at least £5,000) in 2019 – 2024. It also examined their patterns of significant investments, including investment decision-makers, investment planning, sources of funding and purposes of investing, and the process of making the investment. Additionally, Scotland-specific findings were compared to the rest of the UK, highlighting statistically significant differences.

Which Scottish firms invest?

On average, Scottish firms that made significant investments in 2019 – 2024 had 49 employees, a £4.9m turnover, and were 37 years old (accounting for outliers). The majority were family-owned and domestically owned. Firms that made significant investments came from all sectors, though mainly from support and other services (including education, health and recreation) and wholesale and retail trade. Seventy-five per cent of firms sold services or both goods and services. Scottish firms making significant investments were also highly motivated by financial business objectives and increasing efficiency. Meanwhile, fewer firms considered social objectives such as reducing environmental impact as important. To achieve business objectives, firms are especially focused on selling to customers and less focused on adopting new digital technologies.

Scottish firms are very similar to those in the rest of the UK in terms of business characteristics, objectives, and the means to achieve them. There was one statistically significant exception: Scottish firms were slightly more likely to be business-to-consumer (B2C) firms. However, in percentages, this difference was minor.

Similarities between Scottish and other UK firms that make significant investments suggest that findings from UK-specific samples might apply to Scottish firms. That said, a few comparisons between the two regions in this study approached statistical significance, which indicates that a larger Scottish sample might highlight more differences with the rest of the UK.

How do Scottish firms invest?

As in the rest of the UK, Scottish firms mainly invested in tangible investments or a combination of tangible and intangible investments. Fewer than 1 in 10 firms invested solely in intangible investments, and they tended to make fewer investments. Most common sub-types of tangible investments were, perhaps as expected: machinery, buildings or plants and IT equipment or systems (excluding software). Besides traditional forms of intangible investments such as R&D, a substantial proportion of Scottish firms invested in assets not captured in UK national accounts, including staff

and training, branding or brand recognition, customer goodwill, and business structure or organisation.[26] This is a positive finding because intangible investments are associated with higher productivity.[27] However, intangible assets cannot be as easily used as collateral for debt finance, which might affect firms' access to funding.

On average, Scottish firms made nine significant investments in 2019 – 2024. Due to outliers this was not statistically significant from the rest of the UK's six investments. Potentially, exploring if Scottish firms make more investments is an area for future research. Without the major outliers, both Scottish firms and the rest of the UK firms made on average four significant business investments in 2019 – 2024. Survey findings further showed that Scottish firms continued to invest across several years in 2019 – 2024, highlighting significant investment as a regular business activity. External shocks, including the Brexit transition and the costs of doing business crisis, disrupted investment by a large share of firms, with Scottish firms in particular negatively affected by the coronavirus (COVID-19) pandemic. So, while significant investment appeared consistent and included various investment types, external factors could undermine it to an extent and have a knock-off effect on productivity growth.

How do Scottish firms plan investment?

Investment planning appeared to be fast-paced, as most Scottish firms planned their most strategically significant investments in less than one year. In accordance with the scientific literature, Scottish firms expected returns from significant investments to be relatively quick and predictable.[28]

The findings from the survey indicate that a large proportion of Scottish firms do not use formalised approaches to investment planning. For instance, about half of firms had a business investment plan and about half needed to achieve a specific rate of return from their significant tangible investment (this share was lower for intangible investments). Even for the most strategically significant investment about a third of firms needed to achieve a specific rate of return, did not measure any of their expected returns, did not evaluate the proposed investment and did not monitor its performance post-completion. The absence of formalised strategies did not prevent firms from making significant investments, but this could potentially result in misallocated investments or under-investment for some firms which would reduce the productivity benefits of the investment.[29]

How do Scottish firms fund investment?

Though large Scottish firms were more likely to make investments of higher value, a substantial proportion of small and medium firms made large investments. Scottish

[26] Wilkes 2022
[27] Karmakar et al. 2022
[28] Klemick et al., 2019, Jones et al., 2021, Knuutila & Vuorio, 2023
[29] Dhyne et al. 2021

firms invested about 10% of their turnover in 2019 – 2024. Firms mostly used internal company funds to finance their investments. Plus, costs and other resources were key considerations when evaluating and approving the proposed investment, highlighting the importance of sufficient funding. The academic literature explored fairly well the link between firms' financial situation and the likelihood of making investments.[30]

One of the few statistically significant differences with the rest of the UK found by this study was that Scottish firms were more likely to use grants to fund both tangible and intangible investments. This might indicate better availability or better advice and information about grant funding to finance investments in Scotland. However, the distribution of other funding sources and a share of turnover invested are similar to the rest of the UK. This seems to suggest that Scottish firms were not compensating for a shortfall in other funding sources with grants, though perhaps Scottish firms used a small amount of funding from each source.

Why do Scottish firms invest?

Exploring purposes and expected returns from significant investments highlighted three key findings. First, firms emphasised multiple purposes and expected multiple returns from their most significant investments. Second, core business objectives including product innovation (goods or services), productivity, efficiency, and profit and growth, tended to dominate firms' reasons for investing. Meanwhile, environmental sustainability and reducing business costs were less often mentioned. However, Scottish firms were more likely to report making intangible investments to improve environmental sustainability than the rest of the UK. Third, the largest proportion of Scottish firms highlighted increasing profit and growth (for tangibles) and increasing business efficiency (for intangibles) as the primary purposes of investment. These primary purposes were emphasised by less than a third of firms, which indicates variability in what firms considered to be the most important purposes and expected returns. Plus, Scottish firms were more likely to cite all purposes as equally important when making intangible investments than the rest of the UK. Highlighting multiple benefits of business investment and multiple reasons for investing might be more successful in driving business investment than focusing on one or two key areas.

Who gets involved in investment in Scottish firms?

In Scottish firms, on average five people were involved in making business investment decisions (this is positively related to business size, as expected). Just over a third of Scottish firms reported having women investment decision-makers, and less than 10% reported investment decision-makers from ethnic minority groups. The latter share is lower than in the rest of the UK, which can be most likely attributed to a different population demographic profile between the regions.

[30] Bank of England 2022, Lai et al 2015, Fernandez de Guevara et al 2021

Exploring the process of investing shed more light on the stakeholders involved in business investment decision-making. People who came up with an idea to make significant investments tended to have senior positions, including directors and CEOs, extensive work experience and high levels of education. This is consistent with existing literature which indicates that business leaders with more education and experience are more likely to make business investments.[31] In most cases, the key people who came up with the idea of the investment tended to continue to be involved in the whole investment process. One exception to this was firms that evaluated the proposed investment who were more likely to involve different people in evaluations. Additionally, roughly a third of Scottish firms involved external stakeholders, such as private consultants and other private firms in their most strategically significant investment.

This suggests that the main points of influence in business investment remain the same throughout the investment process. However, depending on the process stage and for some Scottish firms, other stakeholders, especially those outside the firm, might also exert influence.

Do investments interact in Scottish firms?

Some existing scientific literature shows that different past or present business investments interact, which can influence business decisions.[32] The "Productive Investment Decisions" survey found evidence of such interaction for some Scottish firms. In approving their most strategically significant investment, nearly half of the firms considered (the largely complementary) effects of the proposed investment on other business investments. About a quarter of firms said that their overall high satisfaction with their investment positively affected other investments. Only 1% of firms reported that their satisfaction negatively affected other investments made since then, highlighting a relationship between high satisfaction with current and subsequent investments. This indicates that helping firms to improve the process of making investments and to maximise their benefits might encourage future investments.

Interestingly, when asked to identify their most strategically significant investment, firms mainly listed a number of investment sub-types, contrary to one or two that could have been expected. This could indicate synergies or interactions between investment types and sub-types in the group of investments that firms consider the most strategically significant. This could also mean that specific business investments should not be treated in isolation in efforts to promote business investment. When making one investment or one type of investment, firms might want or need to make other investments. This could mean additional needs or barriers in terms of funding and implementation which investment promotion efforts should take into account.

[31] Zhang & Islam, 2020, Moreno-Mondejar & Cuerva, 2020
[32] Ikonnikova et al. 2022, Teresa Costa-Campi et al. 2019, Carboni & Medda 2021

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