

# Business investment performance in Scotland

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## Abstract

Business investment (including spending on machinery, buildings, ICT, R&D) is a key driver of productivity. New data shows that Scotland's business investment rate has been lower than nearly all other OECD countries for a number of years, resulting in a low level of capital stock per worker. Scotland's low business investment is likely due to a number of factors, including: industrial structure: a small manufacturing sector and larger public sector; weak business R&D expenditure; low levels of competition, reducing the incentives to invest; management short-termism in some companies; low productivity reducing potential returns from investment; and, low wage growth reducing the cost of labour relative to capital. Business investment by Scottish-owned companies appears to be particularly low. Low business investment is likely a major reason for Scotland's low productivity levels and growth.

## I Introduction

Business investment - in machinery, buildings, ICT, R&D etc. - is a key driver of productivity, competitiveness and economic growth. This paper uses new Scottish Government data that allows, for the first time, a more robust assessment of Scotland's business investment performance and how it compares to other OECD economies.

## II Why is business investment important?

Business investment is defined as expenditure on<sup>1</sup>:

- transport equipment
- information and communication technology (ICT) equipment
- other machinery and equipment
- cultivated assets (livestock for breeding, tree plantations etc.)
- intellectual property products (including investment in software, research & development, artistic originals and mineral exploration)
- buildings and other structures.

Research shows that business investment is essential to improving labour productivity<sup>2</sup>. Investment in ICT, software, machinery & equipment and R&D allows the adoption and diffusion of new technologies, which are crucial to increasing labour efficiency and productivity. Through investment, workforces can be equipped with the latest technologies,

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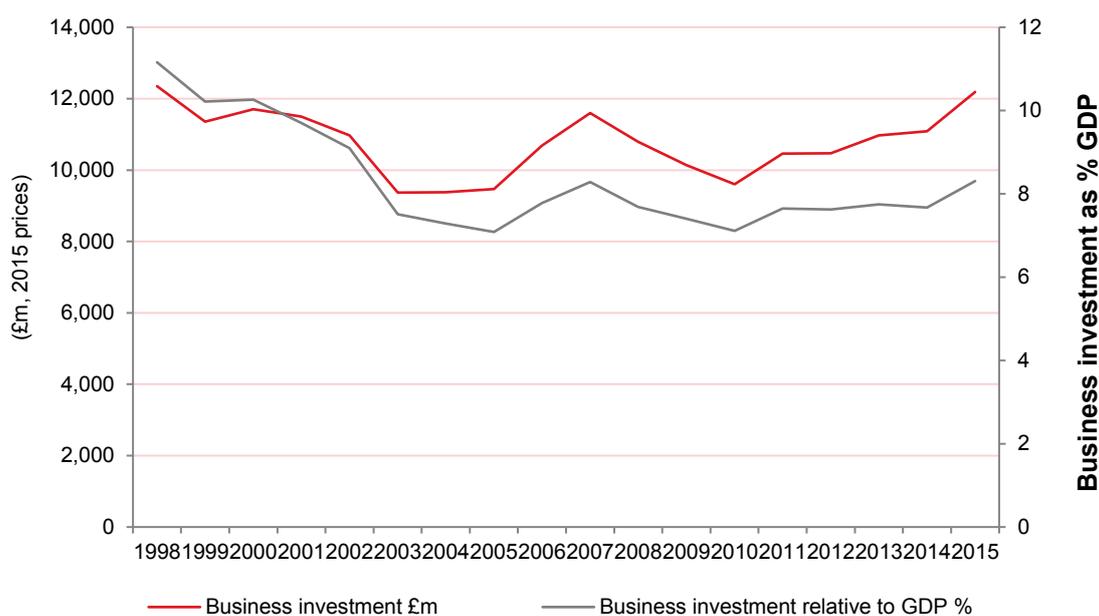
<sup>1</sup> ONS, *Business Investment in the UK*

<sup>2</sup> *The UK Productivity Puzzle*, Bank of England (2014)

which, in turn, allow them to improve their business processes and produce more and higher-quality goods and services per unit of input<sup>3</sup>. Investment can increase the levels of capital stock per worker, and industries with a larger stock of capital per worker tend to have higher levels of productivity<sup>4</sup> (e.g. chemical manufacturing etc.).

### III Scotland's business investment performance

**Figure 1:** Business investment in Scotland, £m (2015 prices) and relative to GDP



Source: Scottish Government

New data from the Scottish Government allows an assessment of business investment trends since 1998<sup>5</sup>. In real terms (i.e. taking into account inflation), Scotland's business investment has ranged from £9.3bn a year to £12.3bn - and was £12.2bn in 2015, the latest year of data. Business investment fell following the financial crisis and only returned to pre-crisis levels in 2015. However, relative to the size of the Scottish economy, business investment is lower than pre-2001 levels.

By comparing business investment relative to an economy's GDP (the business investment rate), performance across countries can be assessed. The data shows that Scotland's business investment rate (7.7%) is the second lowest across all OECD countries - the UK also performs poorly. This has been the case for quite a number of years; in 2004 Scotland

<sup>3</sup> *Investment and Productivity*, Conference Board of Canada

<sup>4</sup> *Economic Review*, ONS (2014)

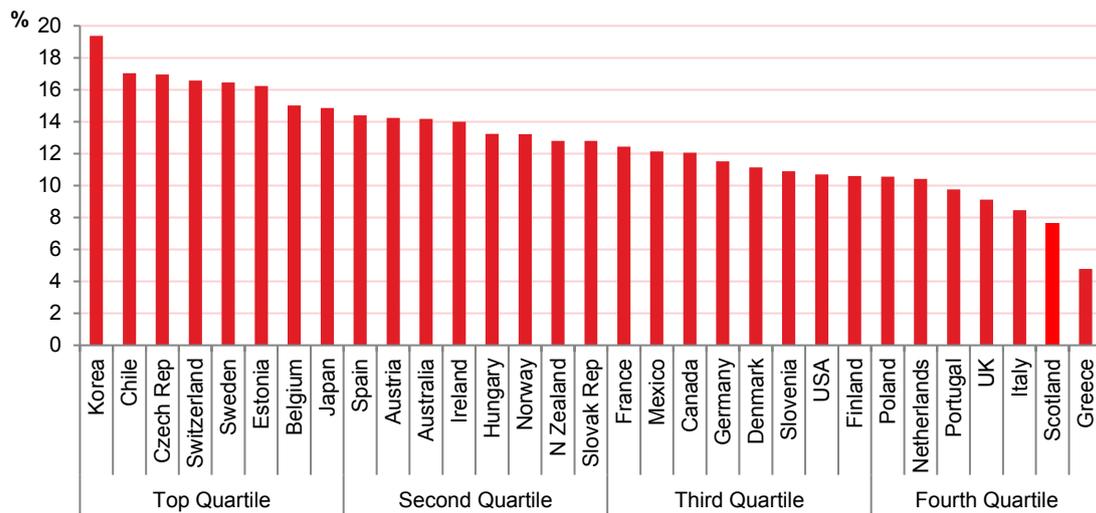
<sup>5</sup> The data has been included in the *Quarterly National Accounts Scotland Quarter 1 2016* publication, and are classed as 'Experimental' (Table X1)

also had the second lowest business investment rate. Scotland has, however, narrowed the business investment rate performance gap with both the UK and OECD averages since 2004 (by 0.6 and 1.2 percentage points respectively).

For Scotland to match the OECD top quartile average performance, business investment in Scotland would need to be £10bn a year more, 90% higher than it is currently; and to match the UK rate, it would need to be £2b a year more, or 20% higher than at present.

To illustrate the size of this business investment ‘gap’ – and excluding self-employed businesses – a business with 50 employees would need to invest an additional £55,000 investment per annum to match the average UK business investment rate, and fully £270,000 per annum to match the OECD Q1 average.

**Figure 2:** Business investment relative to GDP (%), Scotland and OECD, 2014



Source: OECD, Scottish Government

Scotland’s low business investment rate over a number of years relative to other countries suggests that the level of capital stock per worker is also lower, negatively affecting productivity performance.

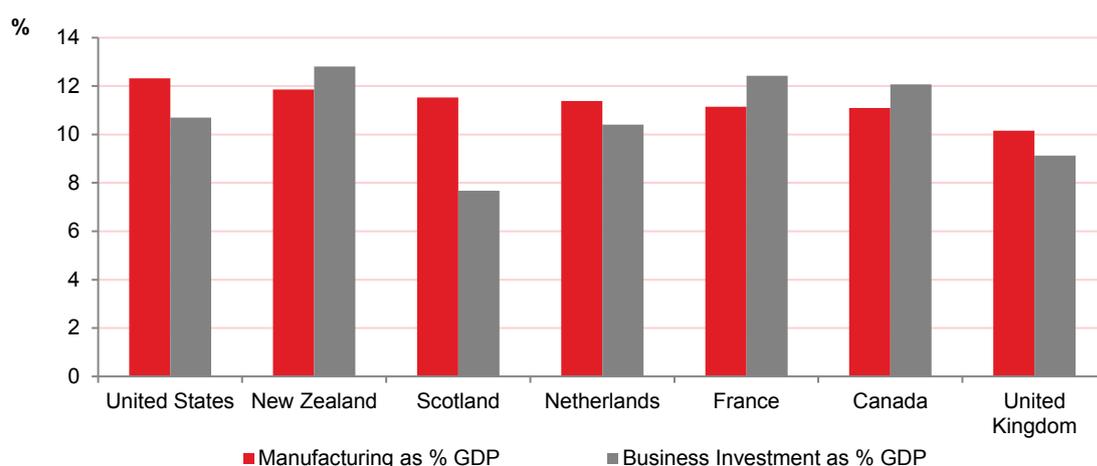
#### IV Reasons for Scotland’s low business investment rate?

There are a number of potential reasons for Scotland’s low business investment rate compared to other EU and OECD countries.

##### *Industrial structure*

Countries with a larger manufacturing sector (relative to the overall economy) tend to have higher business investment rates, as R&D and capital equipment spend tends to be higher in manufacturing than in services companies<sup>6</sup>. Scotland has a smaller manufacturing sector than many other OECD countries. However, even when compared to countries with a similar sized manufacturing sector, Scotland's business investment rate is still considerably lower.

**Figure 3:** Business investment rates for countries with similar-sized manufacturing sectors, 2014



Source: OECD, Scottish Government

Research by Scottish Enterprise<sup>7</sup> on Scotland's manufacturing sector highlights that companies in Scotland typically invest less in capital equipment than those in other countries, particularly smaller and medium-sized businesses which make up most of Scotland's manufacturing base. This is due to a number of factors:

- Scottish companies generally "sweat their capital assets" for longer periods with investment spend tending to be focused on maintenance, repair and improvement of existing capital assets rather than on acquiring new more productive assets.
- Scottish companies tend to face a different return on investment (ROI) parameters for capital expenditure with a shorter payback period being than that faced by companies in other countries, who take a longer term approach to investment.
- The culture of 'early sell-on' in some Scottish companies limits a longer term outlook and, therefore, commitment to capital investment.

<sup>6</sup> *Economic Outlook, OECD 2015*

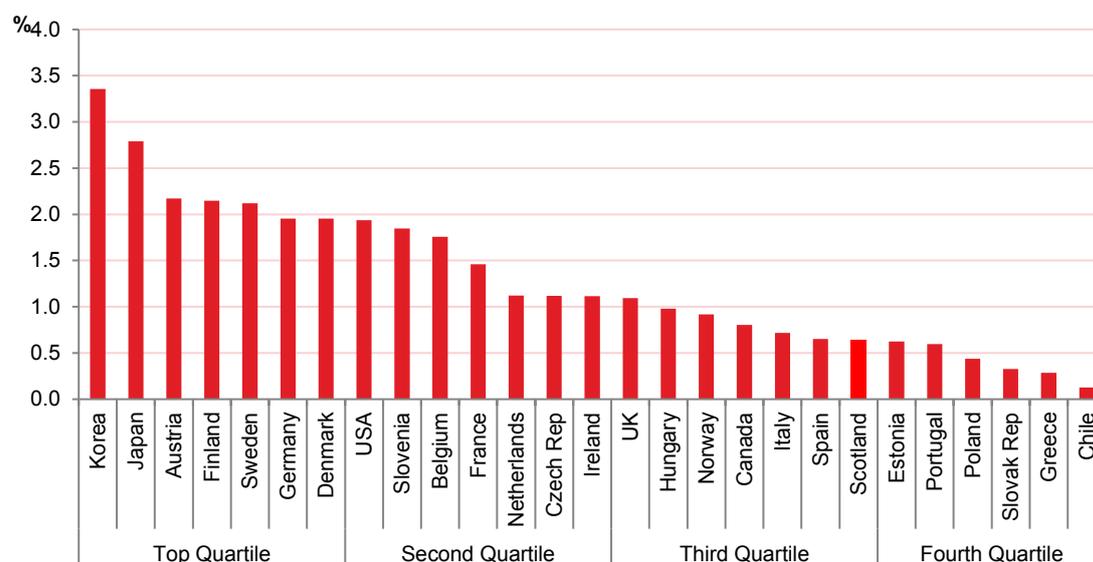
<sup>7</sup> *Scottish manufacturing research study, Scottish Enterprise (2014)*

- Investing in the right capital expenditure confidently and consistently needs to be based on coherent and robust long term business planning; this is a gap in many Scottish SMEs.
- Reluctance by a number of companies to take on long term debt.

There is some evidence that, for the UK as a whole, investment by the manufacturing sector in ICT is similar to other countries<sup>8</sup>, and if this is the same for Scotland, it suggests that it is low investment in physical machinery and equipment and in R&D that is pulling down Scotland’s overall business investment rate.

*Low R&D spend*

**Figure 4:** Business R&D expenditure relative to GDP (%), 2014



R&D expenditure is a component of overall business investment (generally between 10% and 20% for many countries). Scotland’s business R&D performance lags most other OECD countries and is at the bottom of the third quartile. Reasons include Scotland having a smaller manufacturing sector compared to other countries (R&D tends to be concentrated in manufacturing) and having few companies in high R&D intensive sectors (such as automotives and electronics). As with overall business investment, Scotland’s business R&D rate has been low for a number of years.

<sup>8</sup> *Short-termism, impatient capital and finance for manufacturing innovation in the UK*, UK Government Office for Science (2013)

### *Weaker competition*

Scotland has fewer businesses per head of population than most other EU countries. Moreover, a lower proportion of Scottish companies export overseas. This may reduce their exposure to higher levels of competition and therefore reduce their incentive to invest to meet such competition. Also, the public sector makes up a slightly higher proportion of the economy in Scotland than some other OECD countries<sup>9</sup> (measured in terms of employment); economies with a larger public sector - and hence a smaller private sector - tend to have a lower business investment rate<sup>10</sup>.

### *Management short termism and 'shareholder value'*

Research shows that investment levels are significantly higher in privately-owned companies than publicly-listed ones with the same characteristics<sup>11</sup> and a number of studies have concluded that this is a result of 'short termism' within management teams. This, it is argued, is due to 'shareholder primacy' where managers put the interests of shareholders first. This can result management teams focusing on maximising the short term value of shares and dividends at the expense of longer term investment<sup>12</sup>.

An example of this is the use of profits for 'share buy-backs' in order to boost share prices, or to pay dividends, rather than to fund capital investment as although investment can improve a company's long-term performance, in the short-term it can result in a decline in a company's share price<sup>13</sup>. Management remuneration schemes can further incentivise a focus on short-term share performance<sup>14</sup>.

There is a view that 'the mantra of shareholder value' has gone further in the UK than other countries, and that management teams pay (in particular bonuses) is more closely linked to short term profits than elsewhere<sup>15</sup>.

There is limited data on the number of companies in Scotland that are publicly-listed. The business database FAME identifies 94 publicly-listed companies that are headquartered or have a registered office in Scotland. Of these, 71 employ almost 525,000 people, although a number are likely to be employed outside Scotland<sup>16</sup>. So although an exact figure is not available, it does suggest that perhaps a relatively large proportion of private sector activity

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<sup>9</sup> *Government at a Glance, OECD 2015 and Public sector employment in the UK, ONS*

<sup>10</sup> *Source: SE analysis of OECD data*

<sup>11</sup> *Who owns a company? Bank of England 2015*

<sup>12</sup> *Who owns a company? Bank of England 2015*

<sup>13</sup> *Short-termism in business: causes, mechanisms and consequences, Ernst & Young*

<sup>14</sup> *Overcoming Short-termism within British Business, Labour Policy Review (2013)*

<sup>15</sup> *Britain is held back by its business culture, not the EU, Centre for European Reform (2013)*

<sup>16</sup> *Data was not available for the other 24. FAME does not provide a geographical breakdown of the location of companies' employment.*

in Scotland is within publicly-listed or owned companies that are more liable perhaps to the short termism noted above.

New research by the Bank of England<sup>17</sup> further highlights extent of short-termism. Of 1,200 UK companies they surveyed, three-quarters put investment behind distribution to shareholders and investment in financial assets when assessing the most important use of internally generated funds. A third of companies reported they had invested too little in recent years, and many of these reported constraints on using internal rather than external funds (ie using profits) for investment rather than for distribution to shareholders or purchasing financial assets (including M&A).

Research by McKinsey<sup>18</sup> of US companies suggests that those that take a 'long-term view' invested more than their 'short-term' peers, and reported better performance on measures such as revenue, jobs and earnings growth, and has less revenue volatility. This highlights the benefits to companies that focus on long-term investment.

#### *Low productivity and wage growth*

The UK (and Scotland's) relatively weak productivity (both growth and level) compared to some other countries may be a factor in deterring investment if future returns (profits) are expected to be low. Also, recent weak wage growth following the recession has reduced the cost of labour relative to capital, and this may have led some businesses to actively use more labour-intensive forms of production rather than investing in capital<sup>19</sup>.

#### *Low business investment by indigenous businesses*

For the UK as a whole, tangible capital investment (so excluding Intellectual Property (IP) and R&D spend) by foreign-owned businesses accounts for a significant proportion (28%) of total business investment; this is higher than in many other OECD countries<sup>20</sup>. It is likely to be similar for Scotland<sup>21</sup>.

The business investment rate in the UK and Scotland is lower than in most other countries, and a high proportion of the business investment that is undertaken is by foreign-owned businesses. This suggests that investment in the UK and Scotland by domestically-owned businesses is particularly weak compared to other countries. For example, we know that for

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<sup>17</sup> *The financial system and productive investment: new survey evidence*, Bank of England 2017

<sup>18</sup> *Where companies with a long-term view outperform their peers*, McKinsey 2017

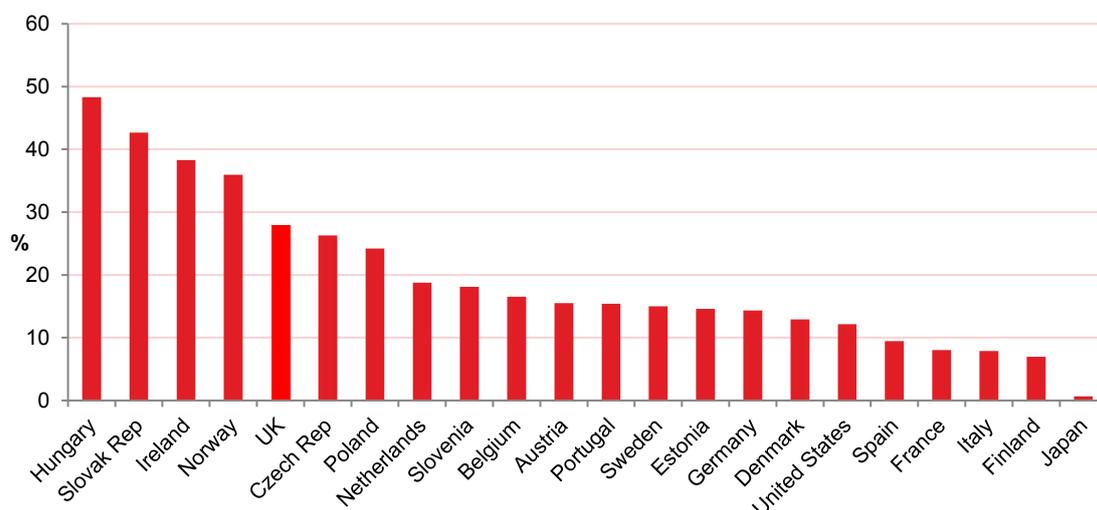
<sup>19</sup> *The great British jobs and productivity mystery*, Royal Economic Society 2014

<sup>20</sup> *Economic Outlook*, OECD 2015

<sup>21</sup> *Data for Scotland is not available.*

business R&D in Scotland, 68% is carried out by overseas-owned companies<sup>22</sup> despite them accounting for just 35% of Scotland's GVA<sup>23</sup>.

**Figure 5:** Tangible capital investment by foreign owned businesses as % total business investment, 2012



Source: OECD

There are, therefore, likely to be a number of reasons for Scotland's low business investment rate compared to nearly all other OECD countries:

- Scotland's small manufacturing sector, relative to the overall economy
- Scotland's relatively large public sector, compared to many other countries
- Low R&D investment, particularly by Scottish-owned businesses
- Weak competition reducing the incentives to invest
- Management team short-termism in some companies, particularly publicly-owned ones.
- Low wage growth, reducing the cost of labour relative to capital.
- Low business investment by Scottish-owned businesses.

#### *Investment in intangible 'knowledge based capital'*

Research shows that investment by businesses in intangible 'knowledge based capital' such as brand equity, design, human capital development, training and organisational capital is important to economic and productivity growth<sup>24</sup>.

<sup>22</sup> Scottish Government

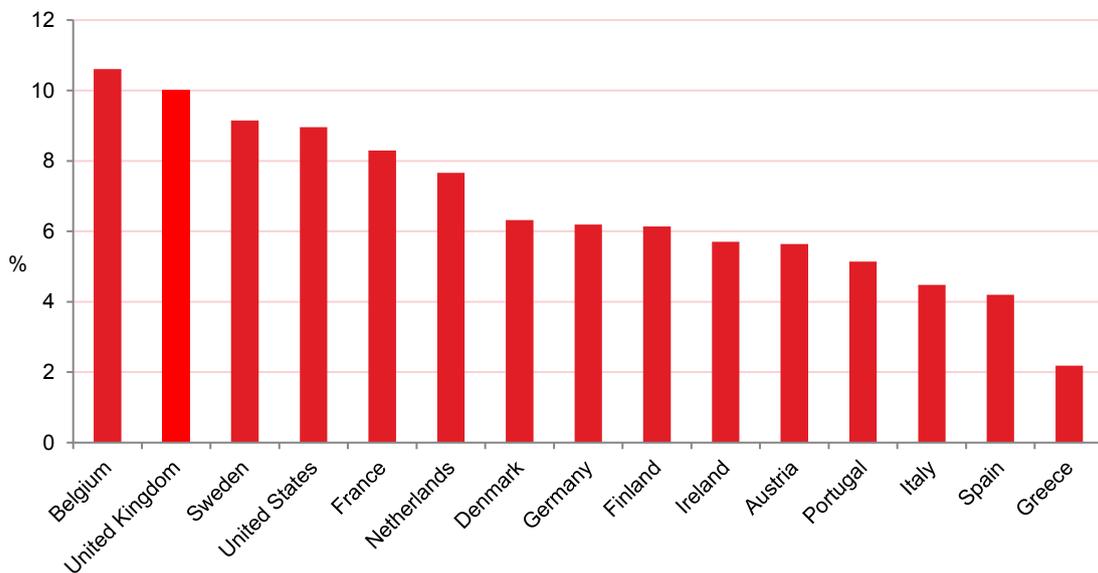
<sup>23</sup> Who owns businesses in the UK? ONS

<sup>24</sup> OECD Science, Technology and Industry Scoreboard, 2013

Investment in intangible knowledge based assets in the UK is higher than most other OECD countries<sup>25</sup>, and this may reflect that the service sector here accounts for a higher proportion of the economy. It is likely that Scottish rates of intangible investment are around the same level as the UK's as Scotland's economic structure is broadly similar to that of the UK.

However, it is unclear the extent to which higher intangible investment offsets weak tangible and R&D investment in terms of the UK's productivity performance.

**Figure 6:** Investment in intangible knowledge assets (brand equity, design, human capital development, training and organisation capital) as % of industry sector GVA, 2013



Source: OECD

## V Conclusions and implications for Scotland

This new data allows, for the first time, a more robust assessment of Scotland's poor business investment performance. They show that Scotland's business investment rate has lagged that of the UK and other OECD countries for many years – and that the gap between Scotland and the better performing OECD countries is very significant.

As a result, the level of accumulated capital stock per employee in Scotland is very likely to be lower than in other countries thereby negatively affecting both the competitiveness and productivity performance of many Scottish companies.

<sup>25</sup> *OECD Science, Technology and Industry Scoreboard, 2013 and OECD Science, Technology and Industry Scoreboard, 2015*

The data does not allow a detailed assessment of business investment activity (for example, by sector or business size), but the available evidence suggests a range of potential causes of Scotland's relatively poor performance including its industrial structure (relatively small manufacturing and relatively large public sector), low R&D, weak inter-firm competition and short-termism among some management teams in Scotland's publically-owned – and large - companies.

### **Policy implications and responses**

Scottish Enterprise supports businesses to invest; its Account Management support raises business growth ambition and helps businesses realise their growth plans through increased innovation, internationalisation, and business efficiency, which in turn help stimulate business investment.

For Scotland's industrial sector, the Manufacturing Action Plan<sup>26</sup> sets out a number of key actions to encourage and support investment. This includes growing the ambition and strategic skills of business leaders and management teams to increase investment; developing workforce skills to better use and deploy technology and equipment; promoting the productivity benefits of investing in modern and more energy-efficient equipment and SMART manufacturing technologies; and supporting and encouraging increased innovation and R&D.

As part of the Action Plan, the Scottish Manufacturing Advisory Service (SMAS) has launched the Manufacturing Capital Asset Review service to assist companies to assess the benefits of investing in advanced manufacturing technologies and equipment, and providing investment case support. This includes financial readiness support to help secure investment from funders. SMAS aims to complete over 600 reviews over the three years to 2020. The benefits of these reviews, in terms of increased business investment, will be monitored over time.

Other examples of support to encourage Scotland's businesses to invest include grants such as Regional Selective Assistance, Environmental Aid, property support, as well as access to funding support, for example through Scottish Investment Bank funds. Over the past three years (2013/4 to 2015/16), Scottish Enterprise support has resulted in over £830m of planned capital expenditure by Scottish businesses.

R&D support to companies includes grants and the key sector funding programmes (such as the Renewable Energy Investment Fund), and the development of sector assets - such as the Scottish Innovation Centres and the Advanced Forming Research Centre (AFRC) - that

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<sup>26</sup> *Scotland's manufacturing action plan*

attract and stimulate business R&D. Over the past three years (2013/4 to 2015/16), Scottish Enterprise support has resulted in almost £495m of planned R&D expenditure by Scottish businesses.

This suggests that on an annual basis, Scottish Enterprise direct capital and R&D support has increased business investment in Scotland by around £450m a year, contributing 3.5% - 4% to overall Scottish business investment. However, Scottish Enterprise support alone will not make a significant impact in closing Scotland's business investment performance gap with other EU or OECD countries.

To achieve such a step change in Scotland's business investment rate would require significant growth in R&D and capital investment, in particular by Scotland's domestically-owned companies. Were this to happen, it would raise capital stock levels, positively contributing to productivity. More businesses need to be encouraged to take a longer term view and invest in new technology, machinery and equipment rather than 'sweating' existing assets, and to invest in R&D and innovation to improve processes and introduce new products and services. Raising the ambition and skills of management teams to develop and implement long-term growth plans, and to recognise the long-term benefits of business investment, will be key to closing Scotland's business investment performance gap.

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