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Scotland analysis: Business and microeconomic framework

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Scotland analysis: Business and microeconomic framework

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Introduction

In September 2014 people in Scotland will take one of the most important decisions in the history of Scotland and the whole of the United Kingdom (UK) – whether to stay in the UK, or leave it and become a new, separate and independent state.

Today, businesses operate freely within and between Scotland and the rest of the UK. If Scotland votes in favour of leaving the UK there would be profound consequences for those businesses, their employees and those who benefit from their goods and services.

In advance of the referendum, the UK Government will ensure that the debate is properly informed by analysis, and that the facts that are crucial to considering Scotland's future are set out.

This paper looks at the implications for business and the microeconomic framework. It sets out the benefits of the current UK framework, which minimises the costs and risks to which Scotland would otherwise be exposed.

Why does the current UK business framework matter?

As it stands, the UK is a true domestic single market – with free movement of goods and services, capital and people. Businesses are able to trade freely across the whole of the UK; consumers benefit from a greater number and variety of goods and services at lower prices; and workers are able to access a greater number of jobs allowing them to maximise their skills and realise their range of aspirations. It is one market with no internal barriers to the flow of goods, capital and labour.

A shared business framework underpins this extensive domestic market. It is based on effective common regulations and institutions, a unified labour market, a shared knowledge base and integrated infrastructure.

The UK's current business framework is a foundation for every stage in the life of a business – from starting up to hiring employees; accessing capital at home and abroad; inventing, developing and patenting new ideas and technologies; moving products across the UK and beyond; and accessing marketplaces, whether online or on the high-street.

It also benefits individuals, as employers, employees and consumers. It impacts on every day activities that are fundamental to our personal and professional relationships – from posting a letter to using a mobile phone.

The UK's shared business framework helps drive growth and competitiveness across the UK, and is at the centre of Scotland's success in creating businesses that can compete on the world stage. This UK-wide framework and guaranteed access to the whole of the UK's domestic market, underpins FDI in Scotland. According to Ernst & Young (E&Y), the UK was the leading recipient of FDI projects in Europe.[1] Scotland is part of this success. E&Y estimates that in 2012 Scotland secured 76 FDI projects (10.9 per cent of all UK projects), accounting for around 4,867 jobs (16.1 per cent).[2]

This strong performance has been consistent over recent years and is a perfect demonstration of what Scotland can achieve within the UK, where Scottish skills and expertise, taking advantage of the large UK domestic market, gives Scotland the best of both worlds. Splitting the UK market, by introducing a border of whatever form, will introduce a barrier to the free flow of goods, capital and labour to the detriment of firms, workers and consumers in both states and risks making it more challenging to attract overseas investors.

An extensive domestic market

Businesses in Scotland have free access to customers across all parts of the UK. Trade within the UK flourishes, without the additional costs and bureaucracy caused by working across separate systems or collaborating across borders.

The close trade links between Scotland and the rest of the UK are clear:

- In 2011 Scotland sold goods and services to the rest of the UK worth £45.5 billion, double the levels exported to the rest of the world and four times as much as to the rest of the European Union (EU);
- Between 2002 and 2011, the value of Scottish trade with the rest of the UK increased by 62 per cent, compared with a 1 per cent increase in value of exports to the rest of the EU combined;[3]
- Demand from the rest of the UK for Scottish-produced goods and services resulted in sales to the rest of the UK representing 29 per cent of Scottish GDP in 2011.[4] The financial services and insurance sector, for example, sold nearly half (47 per cent) of its output to the rest of the UK in 2009;[5] and
- Exports to Scotland represent 3.5 per cent of the rest of the UK's GDP.

The unified market is viewed as a key driver for businesses in Scottish sectors such as financial services, professional services, food and drink and energy.[6]

In the event of independence trade will, of course, continue, but the introduction of an international border would almost certainly have a negative impact. Just a 1 per cent reduction in exports by Scotland to the rest of the UK equates to £450 million of sales. The economic integration of the

1 Ernst &Young, *No room for complacency,* p.8, retrieved June 2013, <http://www.ey.com/UK/en/Issues/Business-environment/2013-UK-attractiveness-survey>.

2 Ernst & Young, *No room for complacency Scotland,* p.3, retrieved June 2013, <http://www.ey.com/UK/en/Issues/Business-environment/2013-Scotland-attractiveness-survey>.

3 Scottish Government, *Scotland's Global Connections Survey 2011*, January 2012, retrieved January 2013, <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Exports/GCSIntroduction>.

4 BIS calculations based on Scottish National Accounts Tables. Note the figure for Scottish exports to the rest of the UK presented in the Scottish National Accounts Project (SNAP) of £35,651 million is lower than the estimate presented in Scotland's Global Connections Survey 2011.

5 BIS calculations based on Scottish Input-Output tables 2009 data, retrieved May 2013, <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Input-Output/Downloads>.

6 Scottish Council for Development and Industry, *Future Scotland Discussions and Priorities*, p.19, May 2013.

UK is not replicated in the EU Single Market. Evidence clearly demonstrates many barriers to trade remain between EU Member States, particularly in the services sector that accounts for around three-quarters of Scotland's output and an even higher share of employment (82 per cent).[7] Small companies with little cross-border experience are likely to be hampered most by the creation of barriers to trade and added bureaucracy. For example, through the need to complete an EC sales list, having to use the EU VAT refund scheme for expenditure on the other side of the international border, or taking the time to understand and comply with the regulatory requirements of each state. The scale of the possible border effect will be considered in a future paper in the Scotland analysis series.

Common regulations and institutions

The UK's common regulations and institutions combine to create what the Organisation for Economic Co-operation and Development (OECD) recognise as the most market-oriented economic and regulatory environment among its membership.[8] Economies of scale make it cheaper to provide services, including those requiring specialist knowledge and experience, benefitting businesses, their employees and consumers.

As set out in the UK Government's first Scotland Analysis paper, *Scotland analysis: Devolution and the implications of independence,*[9] in the event of a vote for independence the UK's national institutions would continue to operate on behalf of the continuing UK. An independent Scottish state would therefore need to decide whether to set up new institutions and mirror the services and protections that the existing national institutions would continue to provide for the continuing UK.

As will be seen in Chapter 2, in the event of independence there would be substantial direct costs arising from creating a new institutional framework for an independent Scottish state and extra annual operational costs. There would be uncertainties for businesses and investors on the direction of new regulations. Different regulatory and tax systems are likely to diverge over time, increasing the barriers to trade on both sides of the border and increasing the cost of compliance for firms who have to comply with two different systems. The implications could be wide ranging – from changes to the competition regime, to the collection of taxes and to rules on buying and running motor vehicles.

Unified labour market

Integrated and highly regarded flexible labour markets enable the UK to have among the highest employment rates in the world. Scotland has prospered within the UK – often having the highest employment rate of the four parts of the UK during the last decade.[10]

Scotland benefits from being part of the UK's mobile, flexible and large unified national labour market, which enables workers to move freely between jobs in Scotland and the rest of the UK and minimises employment costs for businesses. It is easier for employers to recruit people with the skills they require from across the UK and for workers to find jobs that match their skills and aspirations. Over the past ten years around 95,000 UK residents a year have moved into or out

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7 Scottish Government, *State of Economy Annex: Overview of the Scottish Economy,* July 2011, retrieved April 2013, <http://www.scotland.gov.uk/Resource/Doc/919/0119249.pdf>.

8 OECD, *Productivity and Long Term Growth Indicators of Product Market Regulation 2008*, retrieved March 2013, www.oecd.org/economy/pmr>.

9 HM Government, *Scotland anaylsis: Devolution and the implications of independence*, February 2013, retrieved March 2013, <https://www.gov.uk/government/publications/scotland-analysis-devolution-and-the-implications-of-scottish-independence>.

10 Labour Force Survey (Seasonally Adjusted data), ONS; Scotland had the highest employment rate of the four countries in the UK 22 quarters out of the last 40.

of Scotland,[11] and around 30,000 people travel in and out of Scotland each day to work.[12] In the event of a vote for Scottish independence, differences between regulatory and tax regimes would risk reducing the movement of labour. It could become more complex for workers and families to move and live or work on the other side of the border.

Shared knowledge base

Innovation and technology are vital to economic growth. Businesses in Scotland currently have the best of both worlds – access to large-scale, UK-wide support as well as specific opportunities, targeted and funded by the Scottish Government.

The UK Government directly supports the sharing of ideas and knowledge across the UK. For example, the Technology Strategy Board helps leading businesses and universities work together, to apply new knowledge and technologies and develop innovative goods and services. UK-wide programmes encourage many businesses and universities to work together and generous tax credits encourage more business-led research and development (R&D). In the event of a vote for independence the extent of current collaborations could be difficult to maintain. Valuable partnership opportunities between organisations in the different states could be lost. This could hinder the development of new goods and services, and potential new sources of economic growth and employment. And any differences between national standards and intellectual property protection could reduce trade opportunities between an independent Scottish state and the continuing UK.

Integrated infrastructure

The UK's shared communications network and transport infrastructure connects individuals and businesses across all parts of the UK. The UK Government is investing in large long-term infrastructure projects, funded through the wide UK tax base. For example the UK Government has committed to improving high speed internet coverage and Scotland's large rural areas are benefiting from the UK's Rural Broadband Programme, receiving £100.8 million of the £530 million budget.[13]

The UK's universal postal service provides for the same standards of service throughout the UK. Over 90 per cent of Scottish rural or small businesses use or rely on the universal service, which exceeds the EU minimum universal service requirement (for example the Royal Mail's six days a week service). And the cost of posting a letter is the same across the UK whether it be across a small town or to the remotest island. Scotland has a large number of people living in rural areas where managing mobile networks and communications infrastructure is more expensive. Should Scotland leave the UK, an independent Scottish state would have a higher proportion of rural areas than the UK as a whole and maintaining these services could result in higher costs being passed to consumers. Transport links might also be impacted. Decisions on transport infrastructure projects in England and Wales are made on the basis of the benefits they bring to users in the whole of the UK, including Scotland. If Scotland votes for independence, then the benefits to Scotland are unlikely to be included in decisions on major schemes such as the East Coast Main Line rail route and wider infrastructure projects.

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[11] BIS own calculations based on the data from the General Register Office for Scotland; retrieved February 2013, <http://www.gro-scotland.gov.uk/statistics/theme/migration/mig-stats/scotland-rest-of-uk.html>.

[12] Office for National Statistics, Annual population survey, January to December 2011.

[13] Department for Culture, Media and Sport, *Broadband Delivery UK*, retrieved April 2013, <http://www.gov.uk/broadband-delivery-uk>.

Institutional and economic consequences of an independent Scottish state

In the event of a vote for independence, the UK's national institutions would continue to operate on behalf of the continuing UK. This is also true for the UK business framework. Key UK regulatory institutions, such as Companies House and the Intellectual Property Office, would operate on behalf of the continuing UK as before.

This means the institutions behind the current integration of the UK domestic market would not continue to operate in the same way across an international border – with potentially different rules, interpretation and enforcement there would be additional costs from doing business on both sides of the border. Even if both an independent Scottish state and the continuing UK were part of the European Union's Single Market, this would not be enough to prevent new barriers to the movement of goods, services and people. Additional costs and burdens remain when trading across EU Member States, mainly due to differences in regulations (particularly in the services sector) and their enforcement. Trade between an independent Scottish state and the continuing UK would suffer from having to work across separate, diverging markets. Economies of scale, and potentially connectivity of crucial infrastructure, would be reduced between an independent Scottish state and the continuing UK, with potentially higher costs to business and households.

Conclusion

Currently, Scotland's integration within the UK's domestic market brings benefits to all. The size and scale of that market brings opportunities to trade, move jobs, collaborate to develop new and future technologies, travel and communicate with each other efficiently and benefit from economies of scale. The analysis in this paper shows that effective common regulations and institutions, a unified labour market, a shared knowledge base and integrated infrastructures are central to the success of this unified domestic market.

In the event of a vote for independence bodies that support the UK in its present form would continue to undertake their functions on behalf of the remainder of the UK. However much an independent Scottish state sought to stay aligned with regulations and institutions in the continuing UK, a single market between two separate states is not the same as a fully integrated domestic market. Divergence and fragmentation would be likely to lead to short-term and long-term costs, and prolonged uncertainties, for businesses and consumers.

Introduction

The 300-year union between Scotland and the rest of the UK has resulted in deep economic integration. It has created a large domestic market, bringing economic benefits to businesses, consumers and workers across the UK. Bringing this union to an end would have considerable implications for the economic relationship between an independent Scottish state and the continuing UK.[1] The UK Government believes that Scotland is better off as part of the UK, and that the UK is stronger with Scotland as part of it.

The referendum on independence presents one of the most important decision points in Scotland's and the UK's history. It is important that the debate ahead of the referendum is informed by wider analysis, and that the facts that are crucial to considering Scotland's future are set out.

The onus is on those who want Scotland to leave the UK to set out their proposals for independence and address some of the key questions relating to the implications. Not all of the answers to these questions can be known in advance of the referendum. This is because some of the details can only be established through negotiations between the representatives of an independent Scottish state, the continuing UK, and other bodies, for example the European Union (EU). These negotiations would have to take place in the event of a vote for Scottish independence.

The objective of the UK Government's Scotland analysis programme is to provide comprehensive and detailed analysis of Scotland's place in the UK and how that would be affected by independence. The outputs of the analysis will provide sources of information and aim to enhance understanding on the key issues relating to the referendum. As such, the programme should be a major contribution to the independence debate.

The scope of this paper

This is the fourth paper in the Scotland analysis programme. It presents the UK Government's analysis of the business environment and microeconomic policy implications of the debate on Scottish independence. It first reviews how the current arrangements have resulted in strong economic integration between Scotland and the rest of the UK, before examining four key components of the UK business environment:

[1] Under the current arrangements, the UK without Scotland (England, Wales and Northern Ireland) is referred to as "the rest of the UK" and Scotland is referred to as "Scotland". When discussing possible implications in the event of independence, the UK without Scotland is referred to as the "continuing UK" and Scotland as the "independent Scottish state".

- The common regulatory, institutional and taxation framework;
- The integrated labour market;
- A shared knowledge base; and
- An integrated communications and transport infrastructure.

Other important factors affecting the Scottish business environment are being addressed in separate areas of the Scotland analysis programme.

The UK Government's first Scotland analysis paper, *Scotland analysis: Devolution and the implications of independence,* set out that the UK's key national institutions would operate on behalf of the continuing UK as before, but would have no power to act in or on behalf of an independent Scottish state, and no obligation to create the structures to do so.

The government of an independent Scottish state would therefore have to set up many new institutions and establish their credibility. During that time businesses, employees and consumers would be faced with considerable uncertainty. Regulation – and its enforcement – in an independent Scottish state and the continuing UK would be highly likely to diverge. The third paper in the Scotland analysis programme, *Scotland analysis: Financial services and banking*, set out the significant benefits for Scotland from being part of the UK financial services market, supporting a domestic market, maintaining international competitiveness, protecting households and businesses, and managing financial sector risks.[2] Future Scotland analysis publications will also examine wider areas of Government policy that impact on the business environment.

Assessing the Scottish and UK business environment

This paper explores the current extent of economic integration between Scotland and the rest of the UK, and the joint benefits from the key components of the business framework shared across the UK.

The four key strengths of the UK's business framework examined in this paper include a common regulatory, institutional and taxation framework; a unified labour market; a shared knowledge base; and an open and integrated communications and transport infrastructure.

The evidence presented in the paper demonstrates that Scotland, as part of the UK, is an attractive place to invest and to do business. Some data on the Scottish economy, as separate from the UK's economy, does already exist – including data on trade with the rest of the UK and beyond, inward investment and employment rates – and have been used wherever possible.

The leading rankings of international competitiveness do not provide separate assessments for Scotland, and there is comparatively little Scotland-specific business environment data. As set out in the second Scotland analysis paper, *Scotland analysis: Currency and monetary policy,* the structure of the Scottish economy is very close to that of the UK as a whole and Scotland and the rest of the UK follow very similar business cycles.[3] Accordingly, where Scotland-specific data or assessments do not exist, it has been necessary to draw conclusions from the wider UK and international data. For example, it is reasonable to infer that the key strengths of the UK business environment also apply to Scotland's business environment, and that Scotland's current ability to attract foreign investors is a good indication of the attractiveness of that business environment.

The Scottish Government have published some proposals for an independent Scottish state. *Economic and Competition Regulation in an Independent Scotland* suggested that a separate

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[2] HM Government, *Scotland analysis: Financial services and banking,* May 2013, available at <www.gov.uk/scotlandanalysis>.

[3] HM Government, *Scotland analysis: Currency and monetary policy*, April 2013, retrieved May 2013, <https://www.gov.uk/government/publications/scotland-analysis-currency-and-monetary-policy>.

Scottish regulatory framework would have fewer regulatory bodies (including a combined utility regulator), leading to cost savings and creating greater stability and consistency in regulatory decisions.[4] *Scotland's economy: the case for independence,* also suggested that an independent Scottish state would aim to support specific sectors and further simplify regulation (e.g. potentially by bringing together labour market regulation and other employment-related policies in a combined Employment Rights Authority).[5] Although this analysis considers some policy options that could be available in the event of a vote for independence, the conclusions do not attempt to anticipate final decisions, some of which could depend on the outcome of political negotiations between representatives of the continuing UK and an independent Scottish state.

The term 'UK domestic market' is used throughout this paper to signify the large UK market for goods, labour, services and capital created through common rules and institutions. Scotland is an integral part of this UK domestic market.

As a part of the UK, Scotland is also part of the EU Single Market. As set out in *Scotland analysis: Devolution and the implications of Scottish independence,* the continuing UK's EU membership would continue automatically should Scotland become independent. However, for an independent Scottish state, negotiations would be needed. This analysis considers the implications of independence for the Scottish business framework on the hypothetical basis that an independent Scottish state would eventually succeed in negotiating membership of the EU. In that case, an independent Scottish state and the continuing UK would remain part of the EU Single Market.

While the EU Single Market also shares some common rules and institutions, overall it is less complete and well-integrated than the UK's domestic market. Barriers to trade remain between EU Member States. A Single Market between two separate states is not the same as a fully integrated domestic market.

Structure of the paper

Chapter 1 discusses economic integration between Scotland and the rest of the UK. It focuses on the free flow of goods and services in the domestic market and how this might be impacted in the event of a vote for Scottish independence, drawing on experience from the many remaining barriers to trade in the EU.

Chapter 2 analyses the strengths of the UK's common regulatory, institutional and taxation framework and the benefits for businesses, employers and households. It sets out the likely implications of fragmenting the UK framework and the difficulties establishing new public service institutions.

Chapter 3 considers how a shared regulatory framework in the UK has created an integrated national labour market and a more transparent and efficient allocation of resources.

Chapter 4 sets out how businesses in Scotland have benefitted from access to the shared knoweldge base and UK-wide programmes and services.

Chapter 5 explores how having an integrated and comprehensive communications and transport infrastructure benefits businesses and individuals across the UK.

The annexes provide detailed information that supplements the analysis in Chapters 1, 2, 3 and 5.

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[4] Scottish Government, *Economic and Competition Regulation in an Independent Scotland,* 2013, retrieved April 2013, <http://www.scotland.gov.uk/Publications/2013/02/1911/0>.

[5] Scottish Government, *Scotland's economy: the case for independence,* May 2013, retrieved May 2013, <http://www.scotland.gov.uk/Publications/2013/05/4084>.

Chapter 1:
Economic integration between Scotland and the rest of the UK

Trade between Scotland and the rest of the UK is important for many businesses and workers.

The rest of the UK is, by far, Scotland's biggest economic partner. **In 2011, Scotland sold goods and services worth £45.5 billion to the UK, double the levels exported to the rest of the world. It is also four times greater than Scottish sales to the rest of the European Union**. Overall, exports to the UK represent 29 per cent of Scottish Gross Domestic Product but the importance of the UK market is even higher in some sectors. For example, financial and insurance services in Scotland sold nearly half their output in the rest of the UK in 2009.

Both Scotland and the rest of the UK benefit from the strong economic links. Despite its smaller size, **Scotland is estimated to be the second biggest market for goods and services produced in the rest of the UK** (after the United States). It is also an important investment destination for firms from England, Northern Ireland and Wales.

The large UK domestic market is also a key driver in attracting foreign direct investment (FDI) to the UK. Scotland is part of this success. Ernst and Young estimates that in 2012 Scotland secured 76 projects (10.9 per cent of all UK projects), accounting for around 4,867 jobs (16.1 per cent). This strong performance has been consistent over the recent years.

The UK domestic market supports these high levels of intra-UK trade and investment **through making it easy for companies and individuals to buy, sell and operate in all parts of the UK**. Currently businesses in the UK do not incur costs which are typically associated with trading across international borders such as customs formalities, border controls or costs arising from currency exchange risk.

This would change in the event of an independent Scottish state. Differences between regulatory and taxation schemes would increase the costs of trade exchange. There would also be added bureaucracy, for example to reclaim VAT for activities in the separate state. Small companies with little international experience are likely to be most affected.

The experience of businesses that currently operate across different EU Member States clearly shows that **there are still many barriers to cross-border activity within the European Single Market**, especially in the services sector. 55 per cent of companies trading in the EU encountered a high level of administrative burdens.

Introduction

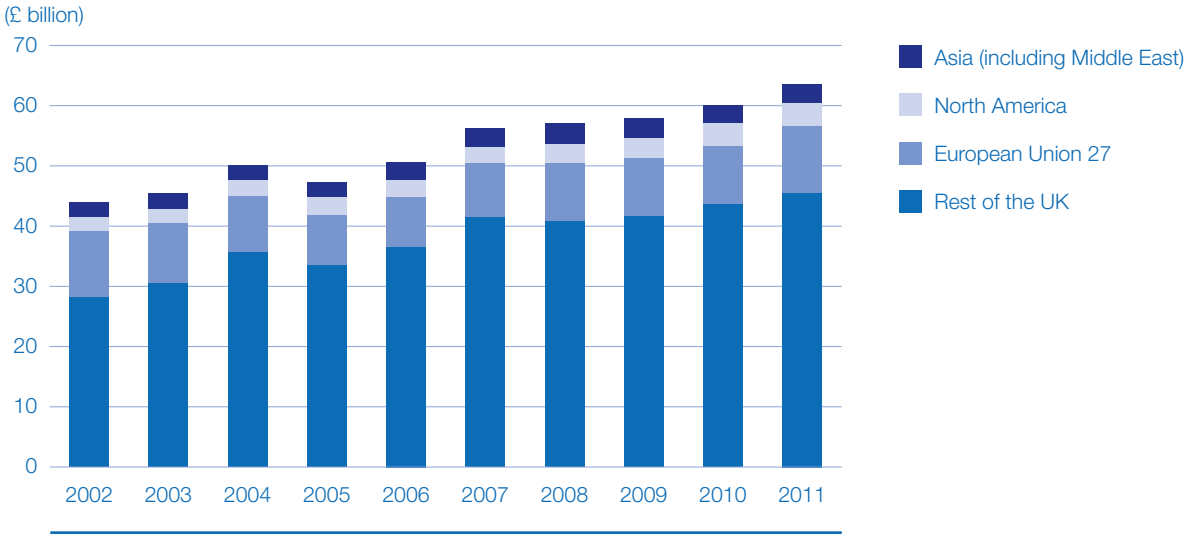
1.1 This chapter discusses economic integration between Scotland and the rest of the UK. The first section examines trends in Scottish exports and the importance of the UK market for Scottish products and services. It shows that the rest of the UK is not only Scotland's biggest trading partner, but also its most important investor.[1] The opposite is also true – Scotland is an important market for goods and services from the rest of the UK.

1.2 The second part of the chapter analyses how the UK domestic market supports these high levels of trade within the UK.[2] The analysis shows that the EU Single Market is much less advanced than the UK domestic market in minimising trade costs. It identifies the key differences in doing trade between Scotland and the rest of the UK, compared with trade between European Member States. This comparison helps demonstrate how, in the event of a vote for Scottish independence, differences in regulation are likely to increase the cost of cross-border economic exchange, even if an independent Scottish state joins the EU.

Trade flows

1.3 Scotland and the rest of the UK are highly integrated. England, Wales and Northern Ireland are the biggest market for Scottish goods and services sold outside Scotland. In 2011, Scottish exports to the rest of the UK totalled £45.5 billion (excluding oil and gas).[3] As shown in Figure 1.1, this is more than double levels to the rest of the world and four times as much as to the rest of the EU. Scottish exports to the UK represent 29 per cent of Scottish GDP.[4]

Figure 1.1: Scottish exports by main destination (2002-2011), nominal terms



Source: Scotland's Global Connections Survey 2011.

1 Issues related to the integration of the labour market will be discussed in Chapter 3.

2 Issues related to the cost of differences in regulation are discussed in more detail in Chapter 2.

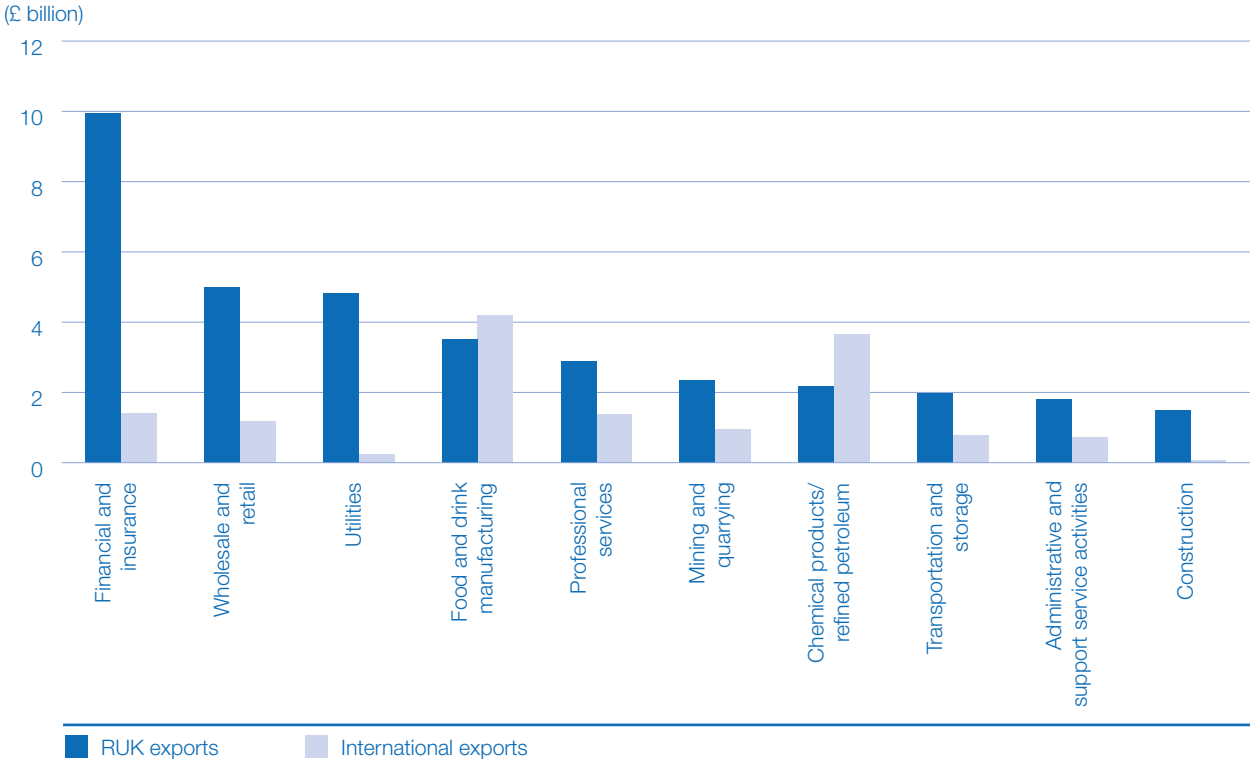
3 The exports data discussed in the paper are based on the results of Scotland's Global Connections Survey 2011, retrieved January 2013, <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Exports/GCSIntroduction>. Note that the data on exports to the rest of the UK need to be interpreted with some caution, as it is much more difficult to ascertain the final destination of sales within the UK. More information can be found at <http://www.scotland.gov.uk/Resource/0038/00385828.pdf>. A different publication by the Scottish Government (Scottish National Account Project (SNAP)) estimates Scottish exports to the rest of the UK amounted to £35.6 billion in 2011, <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/SNAP/expstats/aggregates>.

4 Note that goods and services produced in Scotland and sold in the rest of the UK are not technically classified as exports. The term "exports" is used in this paper for simplicity.

1.4 The rest of the UK is not only the biggest market for Scottish goods and services but also one of the fastest growing. Between 2002 and 2011, the value of exports to the rest of the UK increased by 62 per cent (an increase of £17.3 billion). This compares with a 1 per cent increase in the value of exports to the EU[5] (£0.1 billion), and increases of 38 per cent (£0.9 billion) and 59 per cent (£1.4 billion) to Asia[6] and North America respectively.

1.5 Scotland exports a diverse range of products to the rest of the UK.[7] Scottish companies in the services sectors account for £24.5 billion of annual exports to the rest of the UK. Figure 1.2 shows finance and insurance was the main export (£10 billion), followed by retail and wholesale (£5.0 billion)[8] and utilities (£4.8 billion). In total £11.6 billion are attributable to manufacturing sectors, with the food and drink sector being the largest contributor (£3.5 billion). Analysis of Scottish exports shows the rest of the UK is an important market for Scottish firms of all sizes.[9] Figure 1.2 also shows that international exports of these sectors were considerably lower, with the food and drink industry, chemical products and refined petroleum and professional services being the exceptions.

Figure 1.2: Top 10 Scottish exports to the rest of the UK compared with Scottish international exports (2011, industry groupings)



Source: Scotland's Global Connections Survey 2011.

1.6 The importance to Scottish business of the rest of the UK market for goods and services can clearly be seen from Table 1.1. This shows the proportion of output by sector exported

5 The EU figure excludes the UK.

6 Including the Middle East.

7 Scottish Government (2013), *Scotland's Global Connections Survey 2011.*

8 Includes wholesale, retail trade, repair of motor vehicles and motorcycles.

9 Scotland's Global Connections Survey 2011 (GCS) data suggests that large companies account for £28.4 billion of all exports to the rest of the UK (64%), compared with £7.9 billion for medium (19%) and £7.3 billion for small companies (17%). Exports by small companies are relatively more important in the services sector (22%) than in the production and construction sectors (10%). Source: Scottish Government (2013) *Scotland's Global Connections Survey 2011.*

to the rest of the UK. In 2009, the financial and insurance sector sold 47 per cent of its output to the rest of the UK, making it the second most dependent sector on sales to the rest of the UK (after mining and quarrying). Other sectors selling a large proportion of their output in the rest of the UK include administrative and support services (31 per cent), professional, scientific and technical activities (27 per cent) and manufacturing (23 per cent).

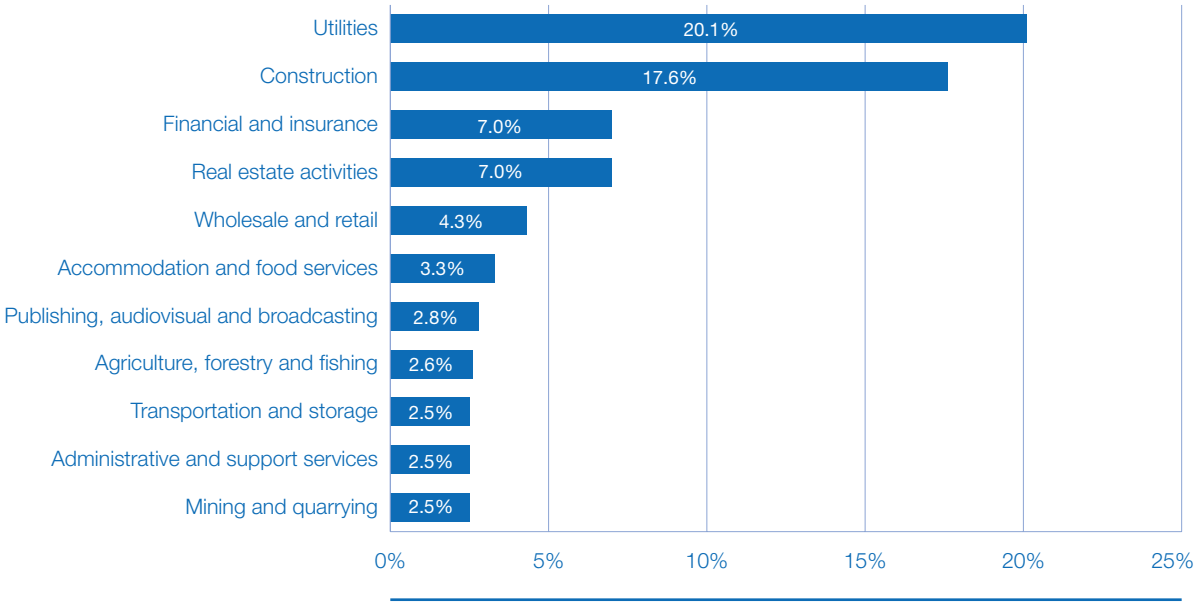
Table 1.1: Top 10 Scottish sectors with the highest proportion of total output accounting for exports to the rest of the UK in 2009 (in basic prices)

	Proportion of total output exported to the rest of the UK
Mining and quarrying	72%
Financial and Insurance activities	47%
Administrative and support services activities	31%
Professional, scientific and technical activities	27%
Manufacturing	23%
Electricity, gas, steam and air conditioning	20%
Information and communication	18%
Agriculture, forestry and fishing	17%
Transportation and storage	12%
Water supply, sewerage, waste management and remediation	9%

Source: BIS calculations based on Scottish Input-Output tables 2009 data, retrieved May 2013, <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Input-Output/Downloads>.

1.7 The importance of the demand from the rest of the UK is also illustrated in Figure 1.3. It demonstrates how much Scottish international exports would need to increase to compensate for a 1 per cent drop in exports to the continuing UK. Excluding utilities, construction and real estate activities (which due to their nature are mostly not internationally tradable), the biggest expansion would be required in the financial and insurance sector (7.0 per cent) and wholesale and retail (4.3 per cent).

Figure 1.3: Required increase in Scottish international exports to compensate for a 1 per cent reduction in the exports to the continuing UK

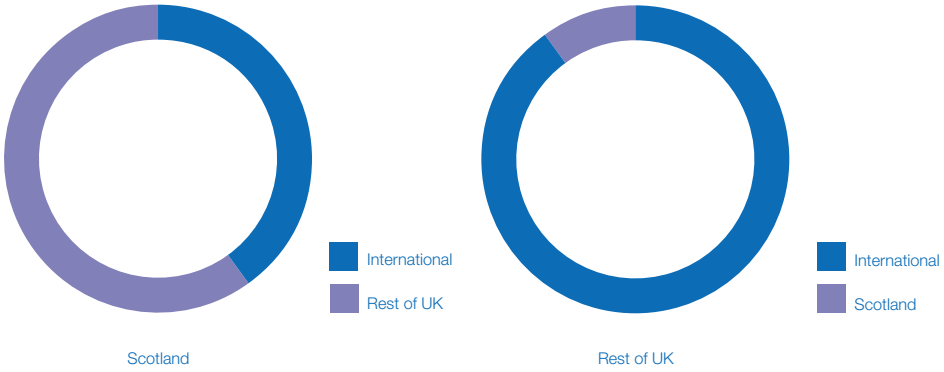


Source: BIS calculations based on Scotland's Global Connection Survey (2012).

1.8 It is clear that businesses and consumers both in Scotland and in the rest of the UK benefit from this deep integration. However, a lack of detailed data on exports from the rest of the UK to Scotland does not permit a similarly comprehensive analysis of the importance of the Scottish market for companies in the rest of the UK.

1.9 Experimental statistics from the Scottish National Accounts Project (SNAP) indicate that exports from the rest of the UK to Scotland amounted to £48.5 billion in 2011 (3.5 per cent of the rest of the UK's GDP).[10] This would place Scotland as the second biggest market for goods and services produced in England, Wales, and Northern Ireland (after the United States (US)).[11] However, as can be seen from Figure 1.4, exports to Scotland, account for a relatively small share of all goods and services sold outside England, Wales and Northern Ireland.[12]

Figure 1.4: Destination of Scottish and the rest of the UK exports (2011)



Source: BIS calculations based on the Pink Book 2012 published by the Office for National Statistics and the Scotland's Global Connections Survey.[13]

1.10 The economic integration can be also seen in the ownership of registered enterprises. The number of registered enterprises in Scotland with ultimate ownership in the rest of the UK totalled 2,665 in 2012. These companies accounted for 18.7 per cent of employment in registered enterprises.[14] At the same time Scottish owned enterprises employed 283,000 workers in England, Wales and Northern Ireland.[15]

[10] As noted before, the exports data from the Scottish National Account Project (SNAP) is not entirely consistent with the data presented in the Global Connections Survey. According to the SNAP, Scottish exports to the rest of the UK were £34.2 billion, which is less than the £45.5 billion estimated by the Scotland Global Connections Survey (2012). The trade data in the SNAP is an implied estimate, generated through the quarterly balancing process. Therefore, the Scotland Global Connections Survey is used as the main source of Scottish trade data in this paper.

[11] According to Scottish National Accounts 2012 (Quarter 3), Scotland's imports from the rest of the UK exceeded exports by around £12.9 billion in 2011.

[12] The rest of the UK international exports were calculated using the data from the Office for National Statistics Pink Book and the Scottish National Account Project.

[13] The Office for National Statistics, *The Pink Book 2012*, 2012, retrieved June 2013, <http://www.ons.gov.uk/ons/publications/all-releases.html?definition=tcm:77-21551> and the Scotland's Global Connections Survey 2011.

[14] Scottish Government, Growth Sector Statistics Database, 2013, retrieved June 2013, <http://www.scotland.gov.uk/Topics/Statistics/Browse/Business/Publications/GrowthSectors>.

[15] BIS calculations based on the data on the Inter-Departmental Business Register. Includes private sector registered enterprises only.

Box 1A: The UK domestic market as a key driver in attracting foreign direct investment

The UK has a very good record in attracting foreign direct investment (FDI). According to data collected by UNCTAD, the stock of FDI in the UK totalled $1.2 trillion in 2011. This made it the second biggest destination for FDI in the world, behind only the US.[1] Ernst & Young's (E&Y) survey estimates that in 2012 the UK secured the second highest number of FDI projects in Europe and is the leading recipient of FDI-generated jobs.[2]

Scotland, as part of the UK, is also very successful in attracting foreign investors. E&Y estimates that in 2012 Scotland secured 76 projects (10.9 per cent of all UK projects) accounting for around 4,867 jobs (16.1 per cent). This strong performance has been consistent over the recent years.[3]

Benefits of the UK domestic market in attracting foreign investors

Some of the key factors attracting foreign investors to the UK, including Scotland, are:

- **Access to large domestic market** – The level of demand in the UK was considered by foreign executives as the most important factor when evaluating the UK as a potential investment location (35 per cent).[4] The same is true when looking just at Scotland. According to fDi Intelligence, domestic market growth potential and proximity to markets and customers were among the top three motives for investing in Scotland.[5] Scotland, as part of the UK, has a much larger domestic market.
- **Availability of skilled labour** – Access to skilled labour is also a key factor.[6] According to E&Y, the availability and skills of the local labour force was the most important consideration when investing in parts of the UK.[7] Free and easy labour mobility across the UK provides access to a larger pool of labour, making it more attractive to invest in the UK.
- **Easy access to foreign markets and international influence** – the ability to use the UK as a base to export to other markets was the second most commonly cited motive for investing in the UK according to the 2011 E&Y survey. Overall, 64 per cent of foreign executives believe that the position of the UK as an influential member of the EU makes the UK an attractive place to invest.[8] Scotland, as part of the UK, benefits from the UK's strong relationship with many international partners, which is supported by an extensive diplomatic and business promotion network.
- **Stable and respected business environment** – the UK is valued for providing a stable and competitive environment in which companies can operate and invest with confidence. Scotland, as part of the UK, benefits from this established reputation.[9]

Box 1A: The UK domestic market as a key driver in attracting foreign direct investment (continued)

- **An integrated research and innovation base** – the integrated nature of the UK's research and innovation framework promotes research collaboration across the UK, creates benefits of scale and drives up standards. These all help attract investment and top talent from across the world. According to E&Y, research and innovation quality is the top feature the UK should display to remain a major destination for FDI.[10]

1 UNCTAD statistics, <http://unctad.org/en/Pages/Statistics.aspx>.

2 Ernst &Young, *No room for complacency*, p.8, retrieved June 2013, <http://www.ey.com/UK/en/Issues/Business-environment/2013-UK-attractiveness-survey>.

3 Ernst & Young, *No room for complacency Scotland*, p.3, retrieved June 2013, <http://www.ey.com/UK/en/Issues/Business-environment/2013-Scotland-attractiveness-survey>. Please note that the methodological differences in the official definition of FDI and E&Y's approach is explained on page 7.

4 Ernst & Young, *Staying ahead of the game: 2012 UK Attractiveness Survey*, 2012, p.26.

5 fDi Intelligence database.

6 Ernst & Young, *Staying ahead of the game: 2012 UK Attractiveness Survey*, 2012, p.18, retrieved February 2013, <http://www.ey.com/UK/en/Issues/Business-environment/2012-UK-attractiveness-survey>.

7 Ernst & Young, *Staying ahead of the game*, p.27.

8 Ernst & Young, *Staying ahead of the game: 2012 UK Attractiveness Survey*, p.27.

9 A more detailed discussion of the quality of the UK's institutions and regulations framework is discussed in Chapter 2, but for example, according to E&Y survey 86 per cent of international investors surveyed thought the stable political environment in the UK was attractive.

10 Ernst & Young, *Staying ahead of the game*, p.27.

Benefits of trade between Scotland and the rest of the UK

"The key driver of a unified single GB market was raised frequently during interviews as a stimulus to business for key Scottish sectors such as financial services, professional services, food and drink and energy. Some of these sectors, and individual organisations within, have very substantial business in the rest of the UK which they felt may be undermined, or severely eroded, by operating different systems in the future. This may depend to a large degree on the nature of change in significant issues such as taxation regimes, regulation, currency and monetary policy, and EU membership. However, any potential new barriers to trade between an independent Scotland and the rest of the UK (rUK) were seen to be unwelcome in sectors where there is currently a high interdependence in a single market."

Scottish Council for Development and Industry, May 2013[16]

1.11 A highly integrated UK domestic market brings substantial benefits to the UK economy – including the Scottish economy. Some of the key channels through which the gains occur include:

- **Easy access to a large market:** As part of the UK domestic market businesses can trade freely within, and between, Scotland and the rest of the UK. This easy access to a large marketplace with over 60 million people reduces costs to businesses, and benefits consumers from a wider choice of products. Also, by expanding opportunities for sales, it helps businesses to benefit from increased specialisation;

16 Scottish Council for Development and Industry, *Future Scotland Discussions and Priorities*, p.19, May 2013.

- **Strong competition:** Common rules create a level-playing field for businesses in the UK. The UK's open market encourages fair competition, which in turn, incentivises firms to provide cheaper and better quality goods and services. Competition also encourages businesses to be innovative, thereby helping raise productivity growth across the economy;[17] and
- Finally, being part of the larger domestic market enhances the **attractiveness of all parts of the UK to foreign investors:** The ability to sell and buy goods and services anywhere in the UK expands opportunities for companies that invest in Scotland and the rest of the UK. In addition, established and effective regulations and institutions create favourable conditions for businesses to invest and do business.

1.12 Overall, it is difficult to quantify the total benefit from the existence of a highly integrated UK domestic market. Academic literature and international experience can provide some indication of the scale of the impact. For example, the long-term evidence from a broad sample of OECD[18] countries suggests that an increase of 10 per cent in trade (in relation to the size of the economy and consumption)[19] was associated with a 4 per cent increase in output per working-age person.[20] A large number of studies also show considerable benefits from reducing barriers to trade within the European Union. For instance, the European Commission estimated that the creation of the Single Market raised EU GDP by 2.13 per cent between 1992 and 2002.[21]

1.13 These macroeconomic benefits mean real gains for businesses and consumers on both sides of the border. An example, which clearly demonstrates this, is the financial services sector (see Box 1B). The UK domestic market enables financial services firms to take advantage of the benefits that can be achieved in larger markets such as more efficient risk diversification and greater economies of scale. In addition, Scottish financial services firms benefit from being part of the UK with its globally-respected regulatory regime, strong tax base and economic stability.

[17] Increased competition in the UK has been considered a major factor in explaining the narrowing in the productivity gap between British and German manufacturing. Crafts, N., and Mills, T., 'TFP growth in British and German manufacturing', *1950-96. Discussion Paper, Centre for Economic Policy Research* (Great Britain), retrieved June 2013, <http://wrap.warwick.ac.uk/1675/>.

[18] The Organisation for Economic Co-operation and Development (OECD).

[19] The index of trade exposure is calculated as follows: Trade Exp = Xi + (1 – Xi)*Mp, where Xi is the ratio of exports to GDP and Mp is the ratio of imports to apparent consumption (domestic production minus exports plus imports). For more information on the methodology see the OECD paper.

[20] OECD, *The sources of economic growth in OECD countries*, 2003, retrieved June 2013, <http://browse.oecdbookshop.org/oecd/pdfs/free/1103011e.pdf>.

[21] European Commission, *Single Market Act II. Together for new growth*, 2012, retrieved June 2013, <http://ec.europa.eu/internal_market/smact/docs/single-market-act2_en.pdf>.

Box 1B: The Scottish financial services sector

The financial services sector is one of the most important in the Scottish economy. It contributed £8.8 billion to Scottish GDP in 2010 – more than eight per cent of Scottish onshore economic activity.[1] 85,000 people in Scotland are directly employed in financial services, and a further 100,000 are employed indirectly – around seven per cent of Scottish employment.[2] The Scottish financial services sector is also highly integrated within the UK domestic market, and benefits from unrestricted access to a market of 60 million people. The Scottish financial service industry estimates that 90 per cent of its customers are located in the rest of the UK.[3] This point is further illustrated by considering specific financial products – for example 89 per cent of stocks and share Individual Savings Accounts (ISAs) provided by Scottish firms are sold to customers based in the rest of the UK, and 33 per cent of the ISAs opened by Scottish customers in 2011-12 were with non-Scottish firms.[4]

1 Office for National Statistics, *Regional accounts*, retrieved June 2013, <www.ons.gov.uk/ons/rel/regional-accounts>.

2 TheCItyUK, *Regional Contribution of UK Financial and Professional Services*, January 2013, retrieved June 2013, <http://www.thecityuk.com/financial-services-in-the-uk/uk-by-region/scotland/>.

3 Speech by Owen Kelly, Chief Executive of Scottish Financial Enterprise, at the Scotsman Conference, *A Question of Independence: The Economics of Independence*, June 2012.

4 HMT analysis of FSA product sales data for the financial year ending March 2012, available at <www.gov.uk/scotlandanalysis>.

How an independent Scottish state would impact on the cost of trade with the UK

1.14 In the event of a vote for independence, the cost of selling and buying goods across the UK-Scottish border would increase. This section will consider the main channels through which trade could be affected. These include:

- Differences in regulation between two separate states;
- Reduced knowledge and information of the separate market;
- Introduction of new administrative procedures for companies that sell and buy across the border;
- Separate currencies; and
- Any international border controls.

1.15 The analysis below shows that the cost of buying and selling goods across the Scottish border would increase even if an independent Scottish state is part of the EU Single Market. The size of the impact would depend on the terms and conditions of any Scottish membership of the EU (decisions on currency membership would be key in relation to trade) and the future economic and regulatory policies of the separate governments.[22]

Differences in regulation

1.16 In the event of a vote for Scottish independence, a government of an independent Scottish state would be responsible for setting up its own institutions and regulatory framework. This would need to cover policies that are currently reserved to the UK Government.

22 For the purpose of this analysis, no further integration at the EU level is assumed. Potential future improvements to the functioning of the Single Market may reduce the scope for the creation of non-tariff barriers between the UK and an independent Scottish state.

The Scottish Government[23] has indicated it will set out its positions on some key fiscal (e.g. corporation tax) and non-fiscal levers (including consumer protection and industrial relations).[24] If the Scottish Government proposes to introduce different policies, differences in regulation are likely in the event of the vote for independence. Such differences could make it more expensive for companies to buy and sell goods and services across the Scottish border (which would become an international border in the event of a vote for independence).

1.17 Alternatively, the government of an independent Scottish state might decide to try to mirror UK regulations. In practice, it would be very difficult to avoid differences in regulation (see Chapter 2). In addition, this would represent a loss of influence for Scotland – moving from the current situation where the UK Government acts on behalf of people in all parts of the UK, to simply replicating legislation decided in the best interests of the continuing UK.

1.18 If an independent Scottish state succeeded in negotiating EU membership this would ensure some level of regulatory consistency. Although the EU Single Market, has made it much easier to trade within the EU, business continue to encounter difficulties.[25]

1.19 Some barriers encountered by companies in the EU relate to poor or uneven implementation of European rules. The most recent Internal Market Scoreboard[26] shows that, as of November 2012, 73 directives had not been transposed on time in at least one Member State. The most transposition delays are in the areas of transport, environment and financial services. Overall, there are currently over 800 pending infringement cases against Member States related to incorrect transposition and implementation of EU directives.

1.20 The evidence shows that even if EU legislation is transposed and implemented correctly at the national level, there could be some problems with enforcement and compliance 'on the ground'. For example, SOLVIT (an online network for settling cross-border disputes informally over the incorrect and inaccurate application of the Single Market rules across EU Member States) handles around 1,300 cases a year.[27] According to the 2011 data, the most business cases were related to taxation, followed by problems in the area of free movement of goods and services.

1.21 For example, in 2009, UK SOLVIT assisted a company that was unable to sell a micro-sewage system in one Member State due to costly testing requirements which failed to take into account tests based on harmonised EU standards that the product had already passed. This prevented the company from entering new markets that could have resulted in up to €160million in extra turnover.[28]

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[23] Scottish Government, *Scotland's Economy: the case for independence*, May 2013, retrieved June 2013, <http://www.scotland.gov.uk/Publications/2013/05/4084/0>.

[24] The Scottish Government has set out its position on economic and competition regulation and this is discussed in Chapter 2.

[25] The overall cost of the existence of non-tariff barriers in the EU is estimated to be very high. CEPII (2011) calculations show that non-tariff obstacles to trade in goods amount on average to 45.0 per cent of the value of production in the EU for those sectors for which data is available. The average tariff equivalents of obstacles to intra-EU trade in services are above 45 per cent in maritime transport, above 35 per cnet in insurance and construction, and above 20 per cent in finance and business services, communication and public services. The tariff equivalents of non-tariff barriers to trade are produced by comparing real trade flows against a benchmark estimated using an empirical gravity equation. The estimates for the intra-EU trade are calculated by Aussilloux *et al*., *What benefits from completing the Single Market?*, CEPII, December 2011, retrieved March 2013, <http://www.cepii.fr/PDF_PUB/lettre/2011/let316ang.pdf>, based on the estimations by L. Fontagné, A. Guillin & C. Mitaritonna, 'Estimation of Tariff Equivalent for the service sectors', *Document de travail 2011-23* CEPII, 2011.

[26] European Commission, *Internal Market Scoreboard 26*, February 2013, retrieved April 2013, <http://ec.europa.eu/internal_market/score/docs/score26_en.pdf>.

[27] http://ec.europa.eu/solvit/site/index_en.htm.

[28] UK Government, *Response to European Commission Consultation on the Single Market Act*, p.27.

Box 1C: Trade between Northern Ireland and the Republic of Ireland

A study by PWC and InterTradeIreland, based on interviews with businesses, business organisations and regulatory bodies, found that companies who buy and sell goods across the border between Ireland and Northern Ireland may experience difficulties due to differences in regulation.

The main issues identified include:

- Access to information and signposting – keeping up-to-date with changing and new legislation was reported as a challenge for businesses, SMEs in particular;
- Differences in VAT rates and VAT regulations across the border;
- Other tax and insurance related issues such as insuring commercial vehicles in two jurisdictions or dealing with two tax authorities when employing people on both sides of the border;
- Additional costs related to currency fluctuations;
- Pricing issues covering a range of different issues such as variations in energy prices, payment practices, debt collection;
- Repetition and duplication of data requirements;
- Recognition of accreditations and qualifications, for example, in the construction industry.

Source: PWC & InterTradeIreland, *Regulatory barriers to cross-border trade and business,* 2009, retrieved February 2013, <http://www.intertradeireland.com/media/intertradeirelandcom/researchandstatistics/publications/tradeandbusinessdevelopment/Regulatory%20Barriers%20to%20Cross-Border%20Trade%20and%20Business.pdf>.

1.22 Many companies and individuals are also affected by restrictions on the movement of professionals imposed by regulated professions (i.e. the Member State only permits the service to be conducted by holders of a specific professional qualification).[29] Currently there are around 4,800 regulated professions across the EU.[30] As the list of regulated professions varies significantly between EU countries, this creates barriers to mobility, particularly in the case of professionals moving from a Member State in which a given profession is not regulated, to one in which it is regulated.[31]

1.23 Professional and business services is one of the key sectors where many barriers to the free movement of professionals continue to exist. According to the European Commission, EU Member States retained nearly 3,000 regulatory requirements, specifically for professional and business services, which inhibit free access to the EU Single Market. Some of the barriers include requirements for shareholding, specific legal forms, tariffs and restrictions on multidisciplinary activities.[32]

[29] For example, in 2010, UK SOLVIT dealt with a case of a qualified tax adviser and member of a leading professional body for taxation specialists, who was unable to register as a tax adviser in another Member State. The relevant authority refused to register him because he did not have a degree in economics and would not recognise qualifications he had obtained in the UK. Source: UK Government, *Response to European Commission Consultation on the Single Market Act,* p.26.

[30] European Commission database <http://ec.europa.eu/internal_market/qualifications/regprof/index.cfm>.

[31] Some examples of professions which are not regulated in the UK, but are regulated in some other Member States include accountants, tour guides or ski instructors.

[32] Department for Business, Innovation and Skills, *UK Government response: European Commission consultation on the Single Market*, 2011, p.14, retrieved March 2013, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32275/11-760-uk-response-single-market-act.pdf>.

1.24 Currently, there is a high degree of consistency of how professions are regulated across the UK, although there are some differences e.g. legal professions, social care.[33] Overtime, it is highly likely that an independent Scottish State's regulations would diverge from those of the rest of the UK, making it more difficult for affected professionals to provide their services freely in all parts of the UK. For example, if affected, professionals may be required to register with two professional regulators (and pay fees) in order to provide their services in an independent Scottish state and the continuing UK.

Box 1D: The Scottish business services sector

The business services sector, along with financial services, is one of the key growth sectors of the Scottish economy. The latest figures produced by the Scottish Government suggest there are around 20,000 registered (mainly small) enterprises in the business services sector in Scotland, employing around 123,000 people.[1] In 2010, the sector's turnover amounted to £9.4 billion. Engineering activities made the largest contribution (£3.6 billion) followed by management consultancy (£1.4 billion) and legal activities (£1.3 billion).

The sector exports a substantial amount both to the rest of the UK and the rest of the world. In 2011 the exports of professional, scientific and technical activities amounted to £4.9 billion, of which £2.9 billion was to the rest of the UK (around 60 per cent of the sector's exports).[2]

[1] The diversity of the sector means that estimates of its contribution to the Scottish economy vary depending on what activities are included. For the basis of these calculations the sector includes the following SIC codes: 69.1, 69.2, 70.2, 71.129, 73.2, 74.3, 78.109, 78.3, 82.1, 82.2, 82.3, 82.91, 82.99. The figures were obtained by excluding financial services activities from the financial and business services data included in the Scottish Government's Growth Sector Statistics Database 2013.

[2] Scottish Government, *Scotland's Global Connections Survey 2011*, January 2012, retrieved January 2013, <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Exports/GCSIntroduction>.

1.25 The existence of barriers to free trade in services is confirmed by the experiences of UK businesses exporting to the EU. Research undertaken by UK Trade and Investment (UKTI) shows that despite the existence of the EU Single Market, 26 per cent of businesses attempting to trade across the EU still encounter legal or regulatory barriers to trade.[34]

1.26 According to the UKTI survey, the most common regulatory barriers to trade within the EU are: ensuring workers get paid and enforcing contracts (18 per cent); and dealing with legal or tax regulations and standards (13 per cent).[35] The available breakdowns by country suggest that barriers vary significantly between different EU markets. For example, on average, fewer UK businesses report barriers to operate in Germany compared with Ireland or France (Table 1.2).[36]

[33] The list of all regulated professions in the UK can be found at: <http://www.ecctis.co.uk/uk%20ncp/Organisations/Regulated%20professions.aspx>.

[34] UKTI, *International Business Strategies, Barriers & Awareness Monitoring Survey*, 2011, p.143, retrieved March 2013, <http://www.ukti.gov.uk/uktihome/aboutukti/item/393900.html>.

[35] Note that the detailed breakdowns of regulatory barriers are not included in the final 2012 report.

[36] UKTI, *International Business Strategies, Barriers & Awareness Monitoring Surveys,* 2012, 2011 and 2010 editions, retrieved March 2013, <http://www.ukti.gov.uk/uktihome/aboutukti/item/393900.html>.

Table 1.2: Proportion of UK businesses who reported the existence of legal and regulatory barriers to trade in selected European countries and the Economic European Area as a whole

	France	Germany	Ireland	EEA
2012	29%	12%	16%	26%
2011	34%	18%	51%	36%
2010	34%	33%	44%	31%
Average 2010-2012	32%	21%	37%	31%

Source: UKTI, *Business Strategies, Barriers & Awareness Monitoring Surveys 2010, 2011 and 2012*. Some variation in the results could be due to a small sample size. European Economic Area (EEA) includes all EU countries plus Iceland, Lichtenstein and Norway.

1.27 Cross-European surveys of businesses paint a similar picture. For example, the 2009 European Business Test Panel survey of 440 companies from across the EU, found that 55 per cent of them encounter a high level of administrative burdens when doing business in other EU countries. 39 per cent think there is discrimination between national and foreign businesses.[37] A more detailed 2011 survey shows that these barriers apply to many areas of cross-border business activity (see Box 1E).

Box 1E: Business obstacles in the EU Single Market

In 2011 the European Commission conducted a European Business Test Panel survey to gather businesses' views and experiences on the obstacles they face in the EU Single Market. The survey was based on replies from 359 companies from various sectors, representing all Member States. According to the results, companies encountered many specific problems when doing businesses across the EU. Some of the areas of main concern include:*

- Participating in a public tender from another EU country (73%)
- Debt/equity financing in another EU country (67%)
- Obtaining licences (62%)
- Obtaining recognition of professional qualification (61%)
- Enforcing contracts (60%)
- Applying for a patent in another EU country (57%)
- Using a signature in a cross border transaction (50%)
- Reclaiming VAT from another country (50%)
- Finding information on business transfer possibilities (50%)
- Employing staff from another EU country (32%); even if it requires only commuting across national borders (39%)
- Providing services to another EU country (33%)**
- Selling goods to another EU country (21%)**

* Figures in brackets show the proportion of companies which reported that it is difficult or very difficult to conduct a certain activity, if relevant to the company.

** Excluding online transactions.

Source: European Commission, European Business Panel Test, *Help us identify business obstacles in the internal market*, retrieved June 2013, <http://ec.europa.eu/yourvoice/ebtp/consultations/2011/obstacles/report_en.pdf>.

[37] European Commission, European Business Panel Test, *Solvit*, retrieved June 2013, <http://ec.europa.eu/yourvoice/ebtp/consultations/2009/solvit/report_en.pdf>.

Understanding separate markets

1.28 In the event of an independent Scottish state, companies that operate across the Scottish border would also face extra familiarisation costs. The cost associated with understanding regulations in both states would arise even if regulations remain the same. SMEs, in particular, may have difficulty in distinguishing the comparable legislation as they will not necessarily have the in-house expertise or the resources to spend significant amounts of time exploring the obligations on them (see Chapter 2 for more detail).

1.29 In addition, the knowledge of the market and partners across the border may gradually be affected. Some of the contacts are likely to be facilitated through business networks and informal contacts. These may weaken over time as a result of the existence of the international border. For example, a study by the Centre for Economic Research at University of Dublin suggests that some of the long-term decline of the relative importance of the UK in Irish trade after independence may be explained by the weakening of social and cultural links.[38]

1.30 The UKTI survey suggests that 8 per cent reported problems when obtaining information about doing businesses in the EU/EEA market and 16 per cent of UK businesses experienced contact barriers. As expected, contact and information barriers are found to be much lower in Ireland (6 per cent), which has strong cultural ties with the UK, including a common language.[39]

1.31 The InterTrade Ireland and PWC study suggests a greater impact of contact and information barriers. The report classifies "access to information and signposting as one of the main general barriers to cross-border trade between the Republic of Ireland and Northern Ireland". According to one business quoted in the study "The main barriers are knowledge, information and signposting about regulations. Information itself is not hard to find but it is time consuming to work through".[40]

Box 1F: Scotland's food and drink sector

The food and drink sector is among the most successful and dynamically growing sectors of the Scottish economy. In 2010 turnover in the food and drink sector reached £12.3 billion, an increase of 8 per cent compared with 2008.[1] The food and drink sector is the largest manufacturing employer in Scotland with 20 per cent of all manufacturing jobs.[2] In total, 117,700 people were employed across the sector in 2011.

Strong performance of the Scotland's food and drink sector is closely linked to its growing exports. In 2011, its combined international and rest of UK exports totalled £8.5 billion, an increase of 56 per cent since 2002.[3] As can be seen from the figure below, the rest of the UK is an important market for many sectors of the Scottish food and drink industry. For example, exports to the rest of the UK accounted for more than a third of output of meat, fish and fruit processing, and bakery and dairy production.

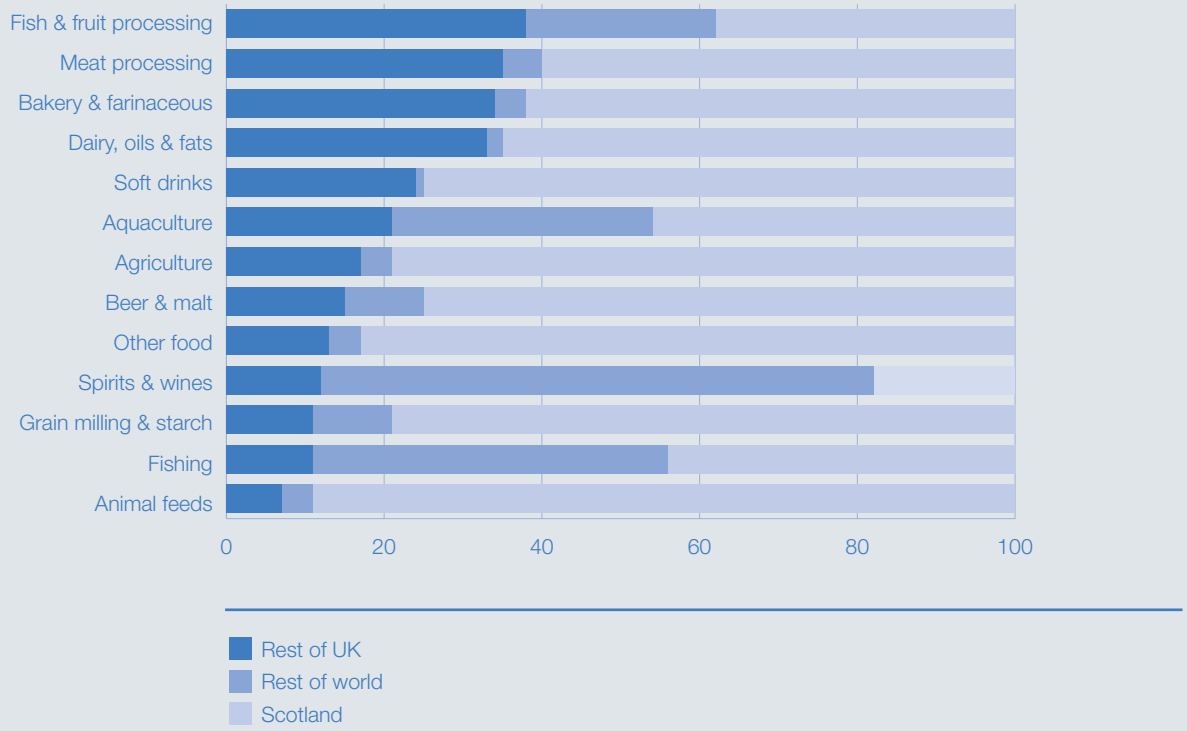
[38] Thom, R., Walsh, B., 'The effect of a common currency on trade: Ireland before and after the Sterling Link', Centre for Economic Research, Working Paper Series, 2001, retrieved June 2013, <http://www.ucd.ie/economics/research/papers/2001/WP01.10.pdf>.

[39] UKTI, *International Business Strategies, Barriers & Awareness Monitoring Survey*, p.142–143.

[40] PWC & InterTradeIreland, *Regulatory barriers to cross-border trade and business.*

Box 1F: Scotland's food and drink sector (continued)

Figure 1.5: Output of Scottish food and drink industry: domestic and foreign demand (2009)



Source: BIS calculations based on Input-Output tables 2009 produced by the Scottish Government.

In the event of an independent Scottish state, food producers may find it more difficult to compete in the continuing UK market. As discussed in Chapters 1 and 2, extra bureaucracy and the likely emergence of differences in regulation could lead to the creation of additional costs for Scottish businesses who sell their products in England, Wales and Northern Ireland.

In addition, the creation of an international border may lead to changes in consumer preferences. For example, the empirical literature on consumer attitudes in the UK shows that the origin of goods, especially food products, is an important consideration for buyers. According to the recent survey by Mintel, British origin (34 per cent) was the most important issue to UK shoppers when buying food and non-alcoholic drinks.[4] In the same survey, 74 per cent of all consumers felt that it is the duty of the retailers to support British farmers and growers. Currently, goods produced in Scotland are seen as national products throughout the UK.[5] If consumer perceptions in the continuing UK were to change over time, in the event of an independent Scottish state, this could impact Scottish firms which currently export their products to the rest of the UK.

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1 Scottish Government, Growth Sector Statistics Database, 2013.

2 Scottish Government, *Scottish Economy: Key Facts April 2013*, 2013.

3 Scottish Government, Growth Sector Statistics Database, 2013.

4 Talking Retail, *New research shows one in two Brits now feel British food is better quality than imported*, 22 March 2013, retrieved April 2013, <http://www.talkingretail.com/news/industry-news/new-research-showsone-in-two-brits-now-feel-british-food-is-better-quality-than-imported>.

5 For example see: Lobb,A.,E., Buttler, L.,T., Harvey K., N., 'UK Focus Group Evidence: Consumer Attitudes to Local, National and Imported foods', *The University of Reading*, Workpackage No. 2, Report No.1, July 2005.

Administrative costs

1.32 Cross-border trade between an independent Scottish state and the continuing UK would incur additional administrative costs, which could reduce the attractiveness of operating across the border (particularly for small and medium sized companies).

1.33 Where companies decided to sell goods and services across the border, they would need to change their systems to distinguish between domestic and cross-border sales in order to comply with differing tax and regulatory requirements. The precise rules would depend on whether the sale involved goods or services and whether the customer was a VAT-registered business or not.

1.34 For example, businesses operating cross-border would have increased VAT reporting requirements and would need to reclaim VAT incurred on either side of the border separately. These ongoing requirements would be the same as those currently incurred by UK companies when exporting to another EU country (groups with businesses established in both countries would have to register with two tax authorities).

1.35 UK firms with customers in another Member State currently have to complete an EC sales list return on a quarterly basis. Where trade exceeds £250,000 per annum they also are required to complete a monthly Intrastat declaration.[41]

1.36 The compliance cost for an individual company would be strongly dependent on the volume of trade and whether the submission process is done internally. Outsourcing of the process to a specialised tax company could significantly increase the cost, as illustrated in Table 1.3.

Table 1.3: Indicative annual cost of meeting Intrastat requirements (2011)

Firm Size	Type	Average annual burden
Small	in-sourced	£195
Small	out-sourced	£263
Medium	in-sourced	£1,600
Medium	out-sourced	£3,761
Large	in-sourced	£2,258
Large	out-sourced	£6,171

Source: HMRC, Standard Cost Model.

1.37 The figures in Table 1.3 do not include one-off familiarisation and staff training costs, which are likely to occur for businesses with no experience of trade with customers in another EU Member State. For example, it has been estimated that companies in the services sector who need to start submitting EC Sales List returns would need to spend around 6 hours per company to familiarise themselves with the new rules.[42] The cost of familiarisation with Intrastat forms could be more.

1.38 In addition, businesses in the rest of the UK can currently reclaim VAT on goods and services bought from Scotland to use in their business through their VAT return (as can Scottish businesses buying goods and services in other parts of the UK). In the event of an independent Scottish state, this would not be possible. Instead businesses would have to reclaim such VAT (e.g. for things such as hotel bills or petrol) through the EU VAT

[41] Intrastat is the system for collecting statistics on the trade in goods between EU Member States.

[42] HMRC, VAT: Implementing EC legislation regarding the place of supply of services and measures to combat VAT, 2009, retrieved June 2012, <http://webarchive.nationalarchives.gov.uk/20100407044034/http://hmrc.gov.uk/budget2009/cross-border-vat-2805.htm>.

refund scheme. This process is designed to be sufficiently straightforward to encourage and support cross-border trade. However, it would represent a change to the way that businesses currently operating only within the UK reclaim VAT.

1.39 Although the EU VAT rules are largely common across jurisdictions, they do provide Member States with choices, most obviously over the standard rate of VAT. There could be further tax impacts and administrative costs to the extent that an independent Scottish state made different choices from the continuing UK, including choices over the way in which to counter VAT fraud, for example.

Box 1G: Impact of different duty regimes

Currently the duty regime is the same for alcohol products wherever they are sold in the UK. However, if there was a vote for independence, then producers would face higher costs from having to comply with two different duty regimes. Businesses would require new administrative systems to pay and reclaim duty every time the product crossed the international border. Alternatively, producers would need to pay for warehouses to store and process their drinks on either side of the border. This could be a particular issue for firms that had significant trade across the border. For these distillers (and other spirits manufacturers), there would also be additional costs to ensure the fiscal stamps on bottles of Scotch whisky clearly show whether duty was paid in Scotland (if the government of an independent Scottish state chose to retain them) or the continuing UK.

Currency

1.40 The currency adopted by an independent Scottish state, and the volatility of this currency, would also influence future levels of trade with the UK. As set out in *Scotland Analysis: Currency and monetary policy*,[43] if an independent Scottish state were to choose to adopt the euro or introduce an independent Scottish currency, transaction costs with the rest of the UK would increase. This would apply to all Scottish businesses (and households) that trade or operate with the continuing UK, and for all businesses (and households) located in the continuing UK that currently trade with Scotland. The exact implications would depend on the choice of the exchange rate regime.

1.41 Under a floating exchange rate regime the value of the Scottish currency relative to other currencies, including sterling, would be subject to fluctuations (this would also apply if Scotland were to adopt the euro). One immediate effect would be the introduction of exchange rate risk between an independent Scottish state and the continuing UK. Larger businesses, with access to capital markets, would be able to "hedge"[44] this exchange rate risk, limiting its cost, but it is less likely that smaller companies and households would be able to do so.

1.42 Demonstrating this point, a survey by the Federation of Small Businesses in the UK showed that fluctuating exchange rates/foreign currency is the most commonly highlighted challenge for small businesses when exporting goods overseas (as discussed above, small companies account for 17 per cent of Scottish exports to the rest of the UK).[45]

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[43] HM Government, *Scotland Analysis: Currency and monetary policy*, April 2013, retrieved May 2013, <http:www.gov.uk/government/publications/scotland-analysis-currency-andmonetary- policy>.

[44] Using financial instruments to reduce the costs of adverse movements in the exchange rate for future transactions.

[45] Federation of Small Businesses, *Made in the UK: Small businesses and an export-led recovery*, 2010, retrieved June 2013, <http://www.fsb.org.uk/policy/assets/fsb_exporting_web.pdf>.

1.43 Transaction costs would not increase to the same extent if an independent Scottish state were to adopt a managed exchange rate regime.[46] More constraining forms of a peg (with a fixed peg rather than a band) would help reduce exchange rate risks.

Border controls

1.44 The Scottish Government has indicated that it intends to remain in the Common Travel Area (CTA).[47] The UK Government's paper, *Scotland analysis: Devolution and the implications of Scottish independence* notes that membership of the CTA would be subject to negotiation with the continuing UK and all existing CTA members. In addition, it made clear that membership of the Schengen area is not compatible with membership of the CTA.

1.45 Although the CTA is an immigration agreement, potential border controls would affect not only movement of people but also have an impact on the costs of transportation of goods across the continuing UK-independent Scottish state border. The main economic costs for businesses could arise from stoppage time at the border due to the introduction of border checks such as searches for illicit goods, illegal immigrants and radioactive material.[48] Border controls will be considered in a future paper of the Scotland analysis series.

Conclusion

1.46 The chapter demonstrates the value of the large domestic market and how the Scottish and wider UK economies are deeply integrated. Trade within the UK makes a significant contribution to the Scottish economy and the value of sales is rising. The existence of the UK domestic market supports these high levels of trade, provides a level-playing field and makes it easy to buy, sell and operate across the whole UK.

1.47 The UK domestic market and close economic integration between all parts of the UK makes Scotland a more attractive place to invest. Scotland benefits from being part of a large market, and sharing the same stable and respected business environment.

1.48 In the event of a vote for an independent Scottish state, costs to businesses trading across the border would be likely to increase. The biggest costs for businesses could arise from differences in regulation between an independent Scottish state and the continuing UK. Even Scottish membership in the EU would not guarantee the same level of consistency in regulations and requirements, especially in the services sector. An international border between an independent Scottish state and the continuing UK would also create extra administrative burdens, especially if the former joins the European single currency. These costs are likely to be more substantive, if considered as an aggregate. Smaller firms and those with little international experience would be disproportionately affected.

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[46] An exchange rate regime where the value of the exchange rate is pegged or set within a band against a foreign currency or basket of currencies.

[47] Deputy First Minister Nicola Sturgeon's statement to Scottish Parliament on an independent Scotland's continuing membership of the EU, 13 December 2012, in which she indicated that: "Just like Ireland, we would not enter Schengen but would instead look to co-operate with Ireland and the rest of the UK in the common travel area".

[48] For example, it is estimated that around 5 per cent of freight vehicles at Coquelles (the Eurotunnel terminal) are subject to checks before entering France.

Chapter 2:
Regulations and institutions

The UK domestic market is underpinned by a set of shared business regulations and institutions. Having **common rules and institutions reduces burdens for business, and benefits employees and consumers** across the UK.

These common rules and institutions are fundamental to the integrated nature of the Scottish and wider UK economies and the functioning of the UK-wide market. **It offers businesses the most market-oriented economic and regulatory environment in the OECD, and is regarded as one of the best in the world.**

The UK's integrated tax system helps promote simplicity, minimising burdens associated with buying, selling and producing across the border. Burdens on business from UK tax administration are low – **in 2012 the World Bank ranked the UK ahead of every EU country except Luxembourg, Denmark and the Republic of Ireland for ease of paying taxes.**

A single set of institutions promotes lower costs per capita through increased economies of scale.[1] In the event of the creation of an independent Scottish state, **the UK's national institutions would operate on behalf of the continuing UK as before. They would have no automatic power or obligation to act in or on behalf of an independent Scottish state,** and any future request to make use of arrangements that exist in the continuing UK would be subject to negotiation.

New regulations and institutions would create uncertainties for businesses and investors during the transitional phase and long term difficulties for businesses operating across an independent Scottish state and the continuing UK. **Businesses would have to absorb the burden of regulatory divergence, which is likely to increase over time.** Smaller businesses could be disproportionately affected.

The implications could be wide ranging: from changes to the competition regime, to the collection of taxes and to rules on running motor vehicles.

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[1] The information was obtained from <http://discuss.bis.gov.uk/focusonenforcement/list-of-regulators-and-their-remit/>, retrieved March 2013.

Introduction

2.1 The previous chapter discussed the benefits and importance of the UK's domestic market for trade and investment, and some of the potential implications of the fragmentation of this market if there is a vote for an independent Scottish state. This chapter, and the remainder of the paper, look in more detail at these implications through an examination of some key components of the UK market – shared regulations and institutions, the UK labour market, innovation, communications and transport infrastructure.

2.2 This chapter looks at the strength of the UK's regulatory and institutional framework compared with leading competitors, the benefits of the current approach and the potential impacts on business and individuals in the event of the creation of an independent Scottish state. It also considers these points against the proposals set out by the Scottish Government in its February 2013 paper *Economic and Competition Regulation in an Independent Scotland*.[1] This chapter does not attempt to cover all UK regulations and institutions. Rather the aim is to highlight the current benefits and the potential impact on businesses and consumers if a new regulatory and institutional framework is established in an independent Scottish state.

The importance of effective business regulations and institutions

2.3 Every business is subject to a set of rules and regulations, for example rules on starting up a business, hiring workers, health and safety, protecting consumers and paying taxes. These rules help to protect employees, consumers and, if done well, ensure a competitive business framework. But excessive or complex regulation increases business costs, hinders innovation and can result in fewer products and higher prices for consumers. An important measure of a country's competitiveness is the ease of doing business – in other words the effectiveness of the regulatory regime. It is therefore a key driver of growth. The focus of the EU over the last 20 years on the creation of a Single Market in order to drive growth is testament to the importance to businesses of a shared and stable business environment.

2.4 Where markets fail, consumers can suffer. Ensuring that companies are incentivised to become more efficient, and find ways to offer consumers better quality and relatively cheaper products and services, is also an important element of the UK regulatory and institutional framework.

2.5 That is why Scotland benefits from its position within the UK. Devolution provides Scotland with the power to make decisions on important policy areas, including health, education, environment and policing.[2] However, most regulations which impact on businesses in Scotland – including, tax, company law, competition and health and safety – are currently reserved to the UK Government due to the benefits from having consistent rules across the UK. Chapter 1 demonstrated how having a level playing field in the UK has created a successful UK domestic market. Administering these reserved areas of policy at a UK level helps to create and maintain this level playing field. Devolution therefore gives Scotland the best of both worlds.

2.6 Evidence from the World Bank also suggests that the quality of regulation has a positive impact on growth. The World Bank finds the impact of improving the quality of business

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1 Scottish Government, *Economic and Competition Regulation in an Independent Scotland, 2013,* retrieved April 2013, <http://www.scotland.gov.uk/Publications/2013/02/1911/0>.

2 HM Government, *Scotland analysis: Devolution and the implications of independence*, February 2013.

regulations could be larger than improving other determinants of growth.[3] This is backed by the OECD's findings that the individual economic gains from improving regulatory policy are likely to be small in the short-run, but bigger in the long-term as the quality of regulation improves.[4]

2.7 The regulatory regime is supported by a corresponding set of institutional infrastructure – public bodies such as Companies House, the Intellectual Property Office as well as economic regulators such as the Office of Fair Trading. The institutional and political environment has a strong bearing on a country's ability to develop a stable and competitive economy. It determines the legal, administrative and business framework within which individuals and businesses operate, influencing almost all areas of business activity. The evidence shows that mature democracies with strong institutions tend to enjoy stable and balanced growth over the long term.[5]

2.8 The role of institutions goes beyond merely putting in place the required legal frameworks. Government attitudes toward markets and market freedoms and the efficiency of its operations are also key. Overregulation and excessive bureaucracy impose significant economic costs to business and slow the process of economic development.

2.9 *Scotland analysis: Devolution and the implications of independence* makes clear that, in the event of a vote for independence, the UK's national institutions would operate on behalf of the continuing UK as before.[6] They would have no power or obligation to act in or on behalf of an independent Scottish state. An independent Scottish state would therefore need to set up its own institutional arrangements. It would be open to representatives of a new Scottish state to seek to make use of arrangements that exist within the continuing UK but the principle and terms of any such arrangements would be subject to negotiation with the continuing UK.

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3 Such as primary school enrolment, improvements in secondary education, inflation and government consumption. Djankov, S., McLiesh, C., Ramalho, R., *Regulation and Growth*, World Bank, 2006, retrieved April 2013, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=893321> find that improving from the worst to the best quartile of business regulations implies a 2.3 percentage point increase in average annual growth.

4 OECD, *The Economic Impact of Regulatory Policy: A Literature Review of Quantitative Evidence*, 6th meeting of the Regulatory Policy Committee, 11-12 April 2012, retrieved March 2013, <http://www.oecd.org/gov/regulatory-policy/3_Kirkpatrick%20Parker%20web.pdf>.

5 Siddique et al, *Institutions & Economic Growth: cross-country evidence*, 2009, retrieved March 2013, <http://ideas.repec.org/p/pra/mprapa/19747.html>.

6 HM Government, *Scottish analysis: Devolution and the implications of independence*, p54, February 2013.

Box 2A: The UK competition regime

At present, the UK has two main competition authorities: the Office of Fair Trading (OFT), which is responsible for investigating anti-competitive behaviours and enforcing competition law, and the Competition Commission (CC) which is involved where more detailed investigations are warranted. Both institutions operate on a UK-wide basis.

The performance of the UK competition regime

Independent evaluations of the effectiveness of the UK competition regime show that it is perceived as one of the best regimes in the world and as having world-class analytical capability. In Rating Enforcement 2013, the Global Competition Review awarded the CC its highest rating of 5 stars and the OFT 4 stars.[1] The merger regime is particularly highly regarded, and was ranked by KPMG in its 2007 Peer Review of Competition Policy as being the world's second best.

The value of the consumer benefits of the competition regime

The strong performance of the UK competition regime translates into direct financial savings to all UK consumers. The OFT and CC estimate that the UK competition regime produced direct benefits to consumers of around £810 million in 2011/12, and £3.7 billion since 2007/08.[2]

Although these numbers cannot be broken down below the UK level, many of the CC and OFT market studies and investigations directly benefited Scottish consumers. For example, the CC investigation into the ownership of airports by BAA in the UK culminated in the requirement for sale of one BAA owned airport in Scotland. Consumer benefits from separating ownership of Edinburgh and Glasgow are estimated to amount to at least £40 million over the next 30 years.[3]

Ensuring effectiveness of the competition regime

To improve the effectiveness and efficiency of the UK competition regime the UK Government has decided to set up a new Competition Market Authority which will bring together the CC functions and the competition functions of the OFT. This should boost the efficiency of the regime and will enable the competition authority to take forward more cases and reduce the length of time taken over market studies, market investigations, merger cases and anti-trust enforcement. Business will also benefit from having just one streamlined organisation to deal with.

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1 Global Competition Review Ranking, *Rating Enforcement 2013*, retrieved June 2013, <http://globalcompetitionreview.com/rating-enforcement/>.

2 Department for Business, Innovation and Skills, *The value of the consumer benefits of the competition regime*, October 2012, retrieved May 2013, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/85952/The_value_of_the_consumer_benefits_of_the_competition_regime.pdf>.

3 Competition Commission, *Customer benefits from competition between Edinburgh and Glasgow airports*, retrieved May 2013, <http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/rep_pub/reports/2009/fulltext/545_10_4.pdf>.

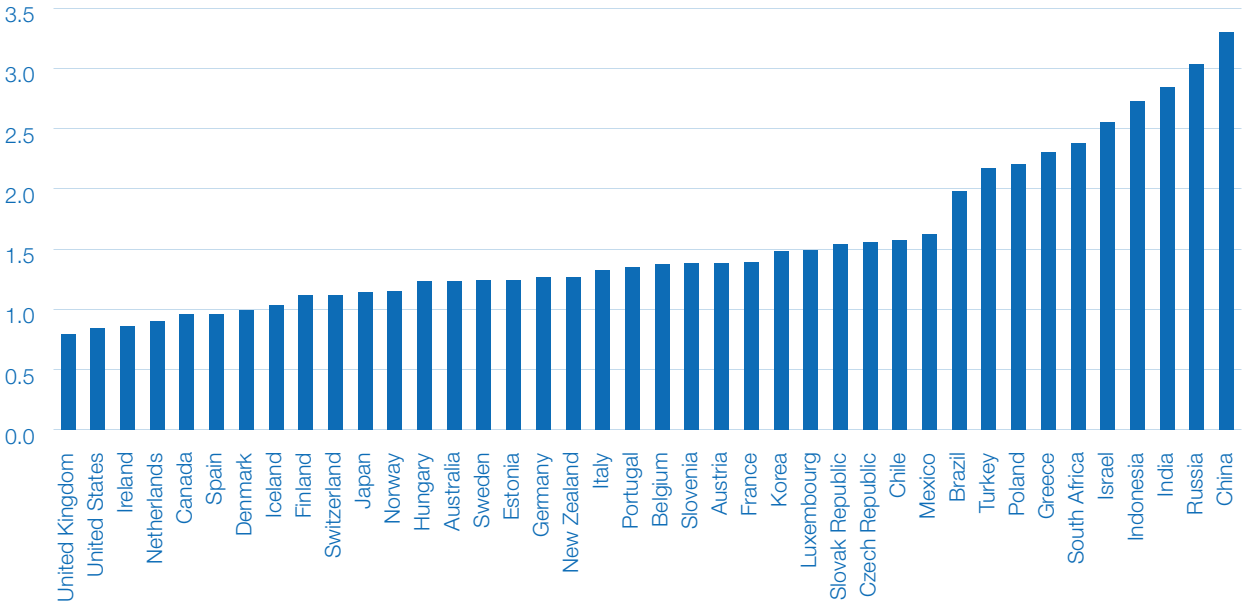
The UK's regulatory and institutional framework – international comparisons

2.10 The nature and variety of regulations and institutions make it difficult to compare their quality across countries. However, a number of international surveys assess the views of business executives, governments and experts on regulatory burdens. Some bodies also create more objective indicators by seeking views on matters such as the number of days taken to complete specified procedures, for example, registering a new business. Although these surveys are by no means all encompassing, they do offer a consistent means of comparison with sound methodologies.

2.11 The World Bank's *Ease of Doing Business* report 2012 ranked the UK 7th out of 185 countries. The OECD *Indicators of Product Market Regulation 2008* demonstrate the UK offers the most pro-competition economy in the 34 OECD countries. This is illustrated in Figure 2.1. The World Economic Forum's (WEF) *Global Competitiveness* report also ranks the UK highly. Further information on these international comparisons is at Annex 1.

Figure 2.1: Aggregate Product Market Regulation scores, 2008

Index scale of 0-6 from least to most restrictive



Source: **OECD, Product Market Regulation database.**[7]

2.12 One significant aspect of a country's competitiveness is its tax regime and the burdens this places on business. The World Bank's *Doing Business* report assesses the burdens placed on companies through tax obligations.[8] It looks at both the amount of tax and contributions (e.g. National Insurance) a medium-sized company must pay, and the administrative burden associated with the payment – focusing on the frequency with which the company has to file and the time this takes. In 2012 the UK was ranked 16th out of 185 economies in the category for ease of paying taxes – ahead of every G7 country except Canada, and one of the very best in the EU.

2.13 The UK's institutions are also considered to be among the best in the world. According to the WEF Report 2012-2013 the UK ranks 13th out of 144 for the quality of its institutions.[9] This places the UK ahead of its major competitors such as Germany, France, US and Italy. The UK's particular strengths include property rights (5th), intellectual property protection (6th), investor protection (10th) and efficiency of legal framework (11th). A similar picture is painted by the results of the Institute for Management Development (IMD) Global Competitiveness Yearbook[10] and the World Bank Governance Index.[11]

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7 OECD, Productivity and Long Term Growth Indicators of Product Market Regulation, latest figures available, 2008 data, retrieved March 2013, <www.oecd.org/economy/pmr>.

8 World Bank, *Doing Business Survey*, June 2012, retrieved March 2013, <http://doingbusiness.org/rankings>.

9 World Economic Forum, *The Global Competitiveness Report 2012-13,* 2012, retrieved April 2013, <http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf>.

10 IMD, *The World Competitiveness Yearbook 2012,* 2012, retrieved April 2013, <http://www.imd.org/research/publications/wcy/index.cfm>.

11 World Bank, Worldwide Governance Indicators 1996–2011, 2012, retrieved February 2013, <http://info.worldbank.org/governance/wgi/index.asp>.

The benefits of the shared institutional and regulatory framework and potential impacts of a vote for independence

2.14 As noted earlier, most regulations which impact on businesses in Scotland are currently reserved to the UK Government. Similarly, many enforcement and regulatory institutions operate, and are funded, on a UK-wide basis. This would change in the event of an independent Scottish state.

2.15 The following sections explore the benefits all of the UK currently enjoys, and raises some of the issues arising from the Scottish Government's paper *Economic and Competition Regulation in an Independent Scotland.*[12]

Business and consumer costs

2.16 The creation of a separate regulatory, institutional and tax framework in an independent Scottish state would have an impact on all UK businesses who operate in Scotland. The impact will be felt in two key ways: firstly, with the need to comply with two sets of regulations; and secondly, through the direct or indirect cost of maintaining a separate set of regulatory institutions. Those costs would ultimately be passed on to consumers.

2.17 The Scottish Government paper outlines two options for the regulatory framework in the event of an independent Scottish state. Under the first option, a combined economic and competition regulator would be created. This regulator would bring together the functions currently performed by the Office of Fair Trading (OFT), Competition Commission (CC) and sector regulators of the energy, telecommunications, postal services, water and rail sectors. The second option assumes the creation of a "combined utility regulator" and a separate competition authority.

2.18 The Scottish Government argues that a separate Scottish regulatory framework would benefit consumers from dealing with fewer regulatory bodies, lead to cost savings and create greater stability and consistency in regulatory decisions. While creating a single regulatory body for a small country could lead to administrative cost savings compared with the alternative of creating many new bodies, there are also significant challenges and risks involved in such an approach. Further analysis of the potential cost and benefits of a single regulator is included in Annex A.

"Finding the right path through these conflicting forces is difficult. Our preference is for separation between competition and regulatory agencies, based largely on concern about regulatory opportunism and about the resulting suppression of multiple view points. This reflects the views of some economists who have looked at these issues from a theoretical standpoint as well as the preferences that countries have increasingly revealed in their actual choices. But, we are well aware that in the Scottish context, this judgment has to be tempered by concerns over costs."

David Hume Institute Research Paper 11, 2013[13]

[12] Scottish Government, *Economic and Competition Regulation in an independent Scotland*, February 2013, retrieved March 2013, <http://www.scotland.gov.uk/Resource/0041/00415411.pdf>.

[13] Cave, M., Stern, J., Competition and Regulatory Policy and Institutional Design for Scotland, The David Hume Institute Research Paper 11, 2013, p. 8-9, retrieved May 2013, <http://www.davidhumeinstitute.com/images/stories/Research/Research_paper_11-_Cave_Stern.pdf>.

2.19 Regardless of the decisions by an independent Scottish state on its regulatory model, some fragmentation of the existing UK domestic market and regulatory environment would be likely. The impact of such fragmentation would vary considerably depending on a company's specific circumstances, including its size and sector. The main distinction can be made between companies that conduct their business only in Scotland and companies that operate on both sides of the border. It is reasonable to assume that the impact on companies in the rest of the UK that are not present or selling in Scotland would be minimal.

Businesses operating only in Scotland

2.20 The impacts of the new regulatory and institutional framework on businesses that operate only in an independent Scottish state would depend primarily on the new institutional arrangements and the policies of the government of an independent Scottish state.

2.21 It is likely that any transitional phase would create additional costs for these businesses. Companies would be required to familiarise themselves with regulation changes and the competencies of the new Scottish institutions. The familiarisation costs would depend on a range of different factors, primarily the smoothness and efficiency of the transition process and the extent that arrangements differ from the existing UK framework.

2.22 Over recent years, there have been relatively few big changes to regulatory organisation in the UK. This makes it difficult to estimate the potential scale of the costs for businesses arising from the need to familiarise themselves with the new arrangements in the event of an independent Scottish state.

2.23 In general, the cost to business of learning and adapting to a new piece of regulation varies depending on the complexity of a change. For example, the potential transitional cost to 19,000 UK firms directly affected by the recent changes in the regulatory framework for financial services was estimated to be between £50-100 million.[14] According to HM Revenue and Customs (HMRC), familiarisation costs to businesses arising from a change in a standard VAT rate vary from around £15 for a small business to around £500 for a typical large business.[15]

2.24 The Better Regulation Executive suggests that microbusinesses could be disproportionally affected by the additional costs and bureaucracy. Its 2010 report on how regulation impacts on the smallest businesses found that the existing frequency of regulatory changes is a major source of complaint from microbusinesses and "each new regulation costs them many days to try and interpret it".[16] However research suggests there has recently been a reduction in the number of businesses in the UK reporting the level of regulation in the UK as an obstacle to their business success.[17]

[14] HMT, *Impact Assessment: The Financial Services Act 2012, 2012*, p8, retrieved March 2013, <http://www.legislation.gov.uk/uksi/2013/636/impacts>.

[15] HMRC, *Impact Assessment of a change to the standard rate of VAT*, 2010, p.8, retrieved February 2013, <http://www.hmrc.gov.uk/budget2010/vat-rate-change-ia.pdf>.

[16] Better Regulation Executive, *The Regulatory Impact on UK's Smallest Businesses*, p.8-9, retrieved March 2013, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/31614/10-1251-lightening-the-load-regulatory-impact-smallest-businesses.pdf>.

[17] IFF Research, *Business Perceptions Survey 2012*, 2012, p.5, retrieved June 2013, <http://www.nao.org.uk/wp-content/uploads/2012/06/Business_Perceptions_Survey_2012.pdf>.

Box 2B: Benefits of a unified corporate tax regime

Scotland currently benefits from being part of the UK corporate tax system and the Government's commitment to have the most competitive tax regime in the G20. Alongside the UK's international standing and strong economic fundamentals (including macroeconomic stability, market size and skilled labour force) this helps to make Scotland an attractive place for overseas companies to locate and invest.[1]

This position will be further strengthened by planned reductions in the UK's main corporation tax (from 28 per cent in 2010 to 23 per cent in 2013 – it will be 20 per cent by 2015, the joint lowest level in the G20). These reductions are possible due to the size and diversity of the UK economy and tax base, and will benefit the whole of the UK. While the Scottish Government has suggested an independent Scottish state would have a lower rate than the continuing UK, this cannot be guaranteed if the intention is to negotiate a formal currency union with the continuing UK. It is also unclear how this further reduction would be funded.

A unified corporation tax regime also has a number of benefits in terms of compliance and administration costs. In the event of a vote for an independent Scottish state, companies that trade in both Scotland and the rest of the UK would have to engage with two separate systems and file separate tax returns. It would also increase the likelihood that these businesses would have to apply international tax rules, including transfer pricing rules,[2] to cross-border transactions. This is a complex activity for business and for tax authorities and the additional administration burden involved may reduce the attractiveness of an independent Scottish state as a place to invest.

The competitiveness of the UK's corporate tax regime is also not down to headline tax rates alone. Scotland benefits from the new UK wide 'Patent Box' rules; above the line R&D tax credit; and creative sector tax reliefs (including for the video games industry) which all create further incentives for investment. The extent to which the government of an independent Scottish state would continue to offer such tax incentives is unclear.

There would also be fiscal implications of a different approach to corporate tax. These may not be limited to the direct costs of establishing a new regime. The Independent Expert Group advising the Commission on Scottish Devolution concluded "the scope for substantive reductions in the possible rate of corporation tax in Scotland are limited if it is desired to maintain comparable levels of public services, unless the Scottish Government is able to increase revenues from other sources".[3]

Overall, there are significant benefits of a common corporate tax regime which limits costs to business, allows easier access to markets and therefore helps to encourage investment in Scotland and across the UK. An Ernst & Young survey of individuals in Scottish business helps support this conclusion with 64 per cent suggesting any economic benefits of a separate tax system would not justify the additional administrative and financial costs.[4]

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1 For a discussion of the motives for business investment, see for example Hajiokova, D., Nicoletti, G., Vartia, L. and Yoo, K.Y., 'Taxation, business environment and FDI location in OECD countries', *OECD Economic Studies paper*, preliminary version June 2006, p3., retrieved May 2013, <http://www.oecd.org/eco/public-finance/37002820.pdf>.

2 An overview of transfer pricing can be found on the HMRC website: <http://www.hmrc.gov.uk/international/transferpricing.htm>.

3 Commission on Scottish Devolution, *Scotland and the UK in the 21st Century: Final Report'*, June 2009, p.94, retrieved March 2013, <http://www.commissiononscottishdevolution.org.uk/uploads/2009-06-12-csd-final-report-2009fbookmarked.pdf>.

4 Ernst and Young, *Grasping the thistle: Ernst and Young's Scotland Corporate tax survey report*, 2012, p.10, retrieved April 2013, <http://www.ey.com/Publication/vwLUAssets/Grasping_the_thistle_Scotland_corporate_tax_survey_report/$FILE/EY_Grasping_the_thistle_-_Scotland_corporate_tax_survey_report.pdf>.

Businesses operating across the border

2.25 For businesses that operate in the rest of the UK and Scotland, the impact of a new institutional and regulatory system in an independent Scottish state is likely to be much greater.[18] The additional burdens (and therefore costs) on business could come from the need to comply with two sets of employment, company and competition rules and interaction with two sets of institutions and regulators. This would require businesses to devote more time and resources to explore the rules they have to comply with, and to monitor any changes.

2.26 The PWC and InterTradeIreland research on trade between the Republic of Ireland and Northern Ireland shows that sourcing relevant regulations in another country can be difficult and time consuming.[19] According to the report, a considerable amount of time was required "to go through each piece of regulation, draw out the relevant obligations within that legislation and then compare and contrast this against relevant legislation in the other jurisdiction".[20] Exploring the regulatory framework across the border was particularly difficult in cases where one piece of legislation in Northern Ireland did not correspond to just one piece of legislation in the Republic of Ireland.

2.27 In the event of an independent Scottish state, businesses that operate on both sides of the Scottish border may need to go through certain administrative processes and procedures twice – both in Scotland and the continuing UK. For example, an entrepreneur who starts a new business in the UK is currently required to register the company with Companies House. The registration process is relatively easy and can be done online in one day. However the same company could need to register twice to operate both in an independent Scottish state and in the continuing UK. Also, companies with a place of business in an independent Scottish state would need to register again with a Scottish Companies register. Potentially a large number of companies could be affected. There are 2,665 registered enterprises in Scotland with ultimate ownership in the rest of the UK and an estimated 990 Scottish-owned private sector enterprises registered in the rest of the UK.[21]

2.28 The full list of potential additional requirements and duplications of administrative processes could be very long. The most significant additional costs are likely to arise from dealing with two different tax authorities and being subject to two different sets of regulators that may have differing requirements and practices. Businesses who would seek to operate both in an independent Scottish state and the continuing UK would also need to ask themselves many new questions such as: do my products meet all required consumer/health and safety standards in both states? is my product liability or employer's liability insurance valid across the international border? are my vehicles and drivers insured in both an independent Scottish state and the continuing UK?

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[18] There are around 2,335 registered private sector enterprises in Scotland with ultimate ownership in the rest of the UK. These companies accounted for 20 per cent of total private sector employment (324,000). This is more than the share of employment by all foreign owned enterprises that operate in Scotland (18 per cent). Source: BIS calculations based on the data from the Inter Departmental Business Register published by the Office for National Statistics. Note some differences with the data published by the Scottish Government can be due to the differences in the definition of private sector enterprises. However, these differences are small and do not change the overall picture.

[19] PWC & InterTradeIreland, *Regulatory barriers to cross-border trade and business*, 2009, retrieved February 2013, <http://www.intertradeireland.com/media/intertradeirelandcom/researchandstatistics/publications/tradeandbusinessdevelopment/Regulatory%20Barriers%20to%20Cross-Border%20Trade%20and%20Business.pdf>.

[20] PWC & InterTradeIreland, *Regulatory barriers to cross-border trade and business*, 2009, p.51.

[21] BIS calculations based on the data from Inter Departmental Business Register. The figure accounts for 8,200 outlets across the UK (June 2012).

2.29 The cost to businesses could depend on how different the regulatory regimes end up being. However, given the number of legislative changes that affect businesses introduced in the UK every year, differences in regulations would be likely to appear relatively quickly. This is irrespective of whether the government of an independent Scottish state attempted to implement a similar regulatory and institutional framework. The experience of the EU Single Market shows that even small differences in implementation and interpretation of legislation have an impact on compliance costs for businesses.[22]

2.30 As discussed in Chapter 1, differences in regulation could potentially have the biggest negative impact on businesses that operate across the border. The impact of regulatory divergence could be especially high if it requires businesses to tailor their products and services (for example, to reflect different rules on issues such as packaging and providing business services), depending on whether they are sold in the continuing UK or an independent Scottish state. PWC and InterTradeIreland research found that for some businesses in the Republic of Ireland and Northern Ireland, the potential cost of achieving compliance in another jurisdiction was sufficiently large to discourage them from operating across the border.[23]

[22] PWC & InterTradeIreland, *Regulatory barriers to cross-border trade and business*, 2009.

[23] PWC & InterTradeIreland, *Regulatory barriers to cross-border trade and business*, 2009, p73.

Box 2C: Creative industries

Creative industries can be defined as those that 'have their origin in individual creativity, skills and talent'.[1] This incorporates a wide range of different activities from crafts, architecture to performing arts, TV, film, and computer games development.

The creative industries sector in Scotland has a strong international reputation and makes an important contribution to the Scottish economy in terms of employment (64,100 jobs), turnover (£4.8 billion) and Gross Value Added (£2.7 billion).[2] The sector is characterised by small businesses. In 2012, 57 per cent of enterprises were sole traders with no employees, and a further 41 per cent employed fewer than 49 people. The majority of enterprises are Scottish-owned (98 per cent).[3]

Between 2002 and 2007, the rest of the UK accounted for around two-thirds of exports by the creative industries in Scotland. In 2007, the value of exports to the rest of the UK was just over £2 billion. Exports to the rest of the world amounted to £1.1 billion.[4]

Scottish creative industries currently benefits from the 'best of both worlds'. In addition to measures funded by the Scottish Government, the sector also benefits from UK-wide measures such as:

- Creative industry tax reliefs (including for the video games industry);
- Programmes operated by the Technology Strategy Board to help creative businesses develop new products, processes or services (such as its Digital and Creative Clyde Launchpad which is investing up to £900,000 in innovative R&D projects centred on the emerging cluster of creative and digital businesses in Glasgow[5]); and
- The services of the Intellectual Property Office to help protect original creations both in the UK and further afield.

Businesses in Scotland risk losing access to such UK-wide schemes and services in the event of a vote for independence. As discussed in this chapter, there could also be additional impacts in the event of different regulations and tax systems emerging over time between an independent Scottish state and the continuing UK.

1 Scottish Government, *Creative Industries Key Sector Report, 2009*, p.3, retrieved June 2013, <http://www.scotland.gov.uk/Publications/2009/11/24133819/8>.

2 Scottish Government, Growth Sector Statistics Database, 2013, retrieved June 2013, <http://www.scotland.gov.uk/Topics/Statistics/Browse/Business/Publications/GrowthSectors>.

3 Scottish Government, Growth Sector Statistics Database, 2013.

4 Scottish Government, *Creative Industries Key Sector Report, 2009*, p.20.

5 See Technology Strategy Board website, retrieved June 2013, <www.innovateuk.org/-/digital-creative-clyde-launchpad>.

Tax affairs for individuals

2.31 Tax affairs are currently relatively simple for most people in the UK. The Pay As You Earn (PAYE) system means only 13 per cent of people in Scotland (or around a quarter of Scottish tax-payers) self assess their own tax bills. This gives the UK a key advantage over many others in the developed world, where many more people have to complete and file details of their earnings – for example the average in EU and EEA countries is 43 per cent.[24].

24 HMRC calculations based on figures taken from the OECD, Tax Administration in OECD and Selected Non-OECD Countries: Comparative Information Series (2010), 3 March 2011, retrieved March 2013, <http://www.oecd.org/redirect/tax/administration/comparativeinformationseries2010.htm>.

2.32 Chapter 3 demonstrates it is easy to live in one part of the UK and work in another. Whether or not an individual is tax resident in the UK is established without reference to which part of the UK the individual lives in or where in the UK they spend more of their time. The Scotland Act 2012 does not change this – for the Scottish rate of income tax, UK resident individuals will just need to consider whether they are a Scottish UK taxpayer. For the vast majority this will simply be a matter of considering whether their main place of residence is in Scotland or elsewhere, which for most will not involve keeping a record of where they spend their time. However, more sophisticated criteria would need to be developed between an independent Scottish state and the continuing UK. This would need to determine whether an individual based in an independent Scottish state is tax resident in Scotland, which is likely to bring administrative complexity to many people.

2.33 It is relatively straightforward for individuals to move house between Scotland and other parts of the UK, even once the Scotland Act 2012 has been implemented. In the year to June 2011, around 44,000 people came to Scotland from elsewhere in the UK, with around 41,000 people moving in the other direction. While those moving into Scotland from April 2015 will pay the Scottish Land and Buildings Transaction Tax (rather than Stamp Duty Land Tax) there will be no overlap between these two taxes and so no complicated assessment of which applies. And from 2016, while these people will need to consider whether they will be liable to pay the new Scottish rate of income tax, they will continue to pay this tax to HMRC, who will make adjustments for any under or over-payments via PAYE or Self-Assessment.

2.34 It is also easy to invest money in banks and building societies irrespective of their location within the UK. Many people in Scotland invest in banks located in other parts of the UK and pay tax on their interest by deduction at source. In the event of an independent Scottish state, they might have to account for this tax directly to the Scottish tax authorities, although they would be likely to receive a tax credit for any tax paid elsewhere. There would be similar complication for those in England, Wales and Northern Ireland with investments in Scotland.

2.35 There would be two completely separate tax systems, which would have a number of implications. The key burden would fall on those who spend time in both Scotland and the continuing UK – because, for example, they move home into or out of Scotland during a tax year. People in this situation would need to work out how much Income Tax they owed to both the Scottish administration, and HMRC, respectively.

2.36 As a minimum, the 95,000 people who typically move home between Scotland and the rest of the UK in a given tax year would need to consider their tax residence position against both new Scottish residency rules and revised rules for the continuing UK (which would need to be narrowed to exclude Scotland).[25] These people would need to understand and work through the detail of these new and revised tests, and keep records to support their final position. It is entirely plausible that many people would end up being tax resident in both countries. This is recognised as a complex area of taxation and will inevitably increase the costs and burdens for individuals who are required to consider this for the first time and to keep records to support their residency status.

2.37 There would also be added complication for the 30,000 people who live in one part of the UK and work in another. Double taxation treaties would be needed to set out how tax should be divided if an individual is resident in both an independent Scottish state and the continuing UK. Further implications in relation to specific taxes are shown in Box 2D.

[25] See Figure 3.5.

Box 2D: Benefits for individuals of a single tax authority in the UK

Capital Gains Tax (CGT)
UK resident individuals are currently taxed on worldwide gains accruing on the disposal of chargeable assets (with exceptions for those not domiciled here). Non-UK residents are not liable for UK CGT. Other tax regimes may take a different approach to CGT when non-residents dispose of assets sited in their jurisdiction. The consequences in the event of a vote in favour of independence, and the potential for double taxation, would depend on the scope of CGT introduced in an independent Scottish state.

VAT
As part of the UK's accession to the EU, the UK negotiated a number of exceptions from the general VAT rules, notably the zero rate on food, children's clothing, new dwellings, etc. If an independent Scottish state was not able to negotiate continuation of that derogation a minimum of 5% VAT would need to be charged on goods and services that are currently zero rated.

Relief for Gift Aid and pension schemes
Claiming would be more complex for individuals, charities and pension providers operating on both sides of the border; depending on the system adopted, individuals might have to spend more time on self-assessment.

Savings
The tax position on savings held in one country by someone living in the other would need to be addressed. Similar issues would apply for dividends.

Public sector: transitional costs

2.38 There are currently over 200 UK public bodies that work for Scotland now that may need to be recreated in the event of Scottish independence.[26] This includes UK economic regulators and other public bodies providing important services to businesses and the Scottish public. According to the information compiled by the Department of Businesses, Innovation and Skills (BIS), currently there are around 36 national regulators in the UK that provide regulatory functions for Scotland.[27] As noted earlier, the UK Government has set out evidence that such public bodies would have no power or obligation to act in or on behalf of an independent Scottish state. Creating a new regulatory and institutional framework in Scotland would be a complex task, requiring many new institutions or a significant expansion of capacities in existing ones. The potential costs could be large.

2.39 The overall cost of setting up the new Scottish institutional and regulatory framework is difficult to estimate, without knowing the detailed plans for the institutional and regulatory design in the event of an independent Scottish state.

[26] HM Government, *Scotland analysis: Devolution and the implications of independence*, February 2013, retrieved March 2013, <http://www.gov.uk/government/publications/scotland-analysis-devolution-and-the-implications-of-scottish-independence>.

[27] The information was obtained from <http://discuss.bis.gov.uk/focusonenforcement/list-of-regulators-and-their-remit/>, retrieved March 2013.

2.40 As noted in paragraph 2.17 above, the February 2013 Scottish Government publication outlines two options under consideration: either a combined competition and economic regulation or a combined utility regulator with a separate competition authority.[28] The report does not discuss in detail the potential set up costs associated with the creation of a new public body or the potential complexity of doing so. Creating a new economic regulator – potentially building on the Water Industry Commission for Scotland – is very different from experiences in the UK and internationally where existing regulatory bodies have been merged to deliver efficiencies to the benefit of consumers and businesses.

2.41 The Scottish Government focuses on the competition regime and economic regulation of infrastructure sectors (transport and utility regulators). Consideration would also need to given to whether to replicate a large number of other regulatory functions in an independent Scottish state. This includes functions performed by institutions such as the Intellectual Property Office, the Pensions Regulator and the Medicines and Healthcare Products Regulatory Agency. The combined budget for regulatory activities of the 36 institutions cited (see paragraph 2.38) was £552 million in 2011/12. The number of full-time equivalent staff for this regulatory activity is estimated to be around 12,300.[29] Later in the chapter consideration is given to ongoing costs and the economies of scale from the existing UK framework.

2.42 The past experience of government reorganisations in the UK suggests the potential cost of establishing new organisations could be relatively high. A report from the Institute for Government (IfG) and London School of Economics and Political Science (LSE)[30] put the average cost of establishing a new policy department in the UK or a mid-sized merger at around £15 million, and a National Audit Office report on reorganising central government also put the gross cost at around £15 million for each reorganisation. The main costs relate to staff (41 per cent), information and technology (20 per cent) and property (15 per cent) (see Figure 2.2).[31]

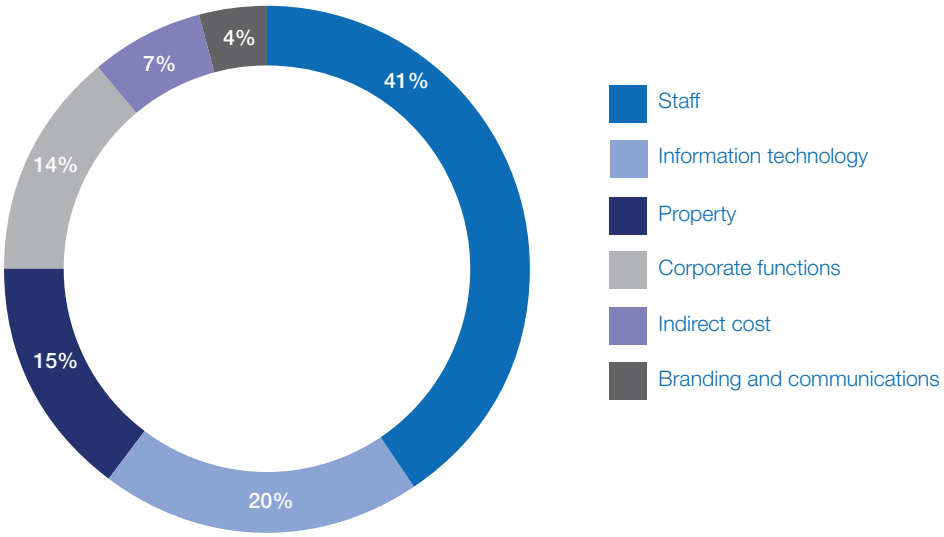
[28] Scottish Government, *Economic and Competition Regulation in an independent Scotland*, February 2013.

[29] Information from <http://discuss.bis.gov.uk/focusonenforcement/list-of-regulators-and-their-remit/>, retrieved March 2013.

[30] LSE and Institute for Government, *Making and Breaking Whitehall Departments: A guide to machinery of government change,* 2010, p.8, retrieved March 2013, <http://www.instituteforgovernment.org.uk/sites/default/files/publications/making_and_breaking_whitehall_departments.pdf>.

[31] National Audit Office, *Reorganising Central Government*, 2010, p.14, retrieved March 2013, <http://www.nao.org.uk/wp-content/uploads/2010/03/0910452.pdf>.

Figure 2.2: Costs related to reorganisations of central government by main area of expenditure



Source: National Audit Office, *Reorganising Central Government*, 2010.

2.43 The NAO and LSE/IfG calculations exclude indirect costs related to institutional memory loss or stakeholder relationship losses. These costs are difficult to quantify but could create an important problem for the new Scottish institutions, which would need to develop the expertise and experience that the continuing UK system would retain.

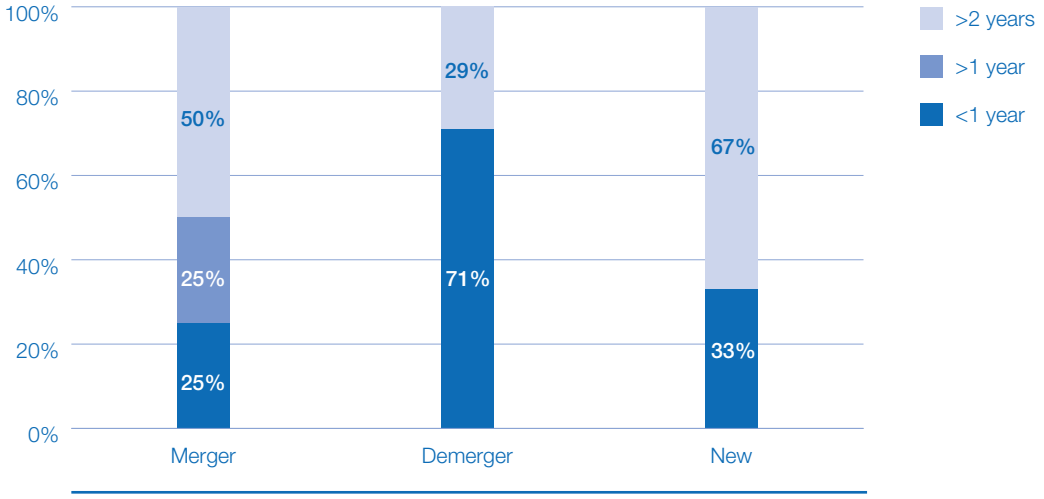
2.44 There might also be a relatively long transitional period, during which some underperformance and increased delivery risk might be expected. The LSE and IfG study found that in many cases it took longer than 2 years to configure department business processes, culture, and systems toward the new mandate, particularly in instances where new departments are created (see Figure 2.3).[32]

2.45 Increasing capacity and building a world class regulatory framework may prove difficult. International experience shows that setting up effective regulatory institutions is a complicated process. For example, the OECD study on regulatory institutions finds that "while the UK has a very mature and advanced institutional setting for regulatory reform, this reflects decades of trial and empirical testing".[33]

[32] LSE and Institute for Government, *Making and Breaking Whitehall Departments: A guide to machinery of government change,* 2010, p.33, retrieved March 2013, <http://www.instituteforgovernment.org.uk/sites/default/files/publications/making_and_breaking_whitehall_departments.pdf>.

[33] Cordova-Novion, C. and S. Jacobzone, 'Strengthening the Institutional Setting for Regulatory Reform: The Experience from OECD Countries', *OECD Working Papers on Public Governance*, No. 19, OECD Publishing, 2011, p.25, retrieved March 2013, <http://www.oecd-ilibrary.org/docserver/download/5kgglrpvcpth.pdf?expires=1365584673&id=id&accname=guest&checksum=1BF77A99DE8265EFDD32FF06FE62C2C0>.

Figure 2.3: Time required to refocus central government departments



Source: LSE and IfG, 2010.

2.46 An important element of the framework of economic regulations are past decisions which inform and guide businesses about the approach taken by the regulator, and this naturally takes time. A new Scottish regulator would have to build up relationships with businesses from scratch, meaning that businesses may find it more difficult to understand and anticipate what is required.

Public sector: ongoing costs

2.47 Ongoing administrative costs are also hard to estimate. This would depend primarily on the design and effectiveness of the new institutional and regulatory set up in an independent Scottish state. The Scottish Government have suggested that the annual savings from creating a combined Scottish regulator could be "in the region of 10-20% compared to the operating costs from creating a full suite of bodies".[34] This calculation, however, does not appear to include the potential loss of economies of scale from the fragmentation of the UK regulatory framework and the knock-on impacts on business described above.

2.48 There is a strong reason to believe that duplication of many processes and the loss of economies of scale are all likely to contribute to an increase in the overall cost of providing the same services in an independent Scottish State. As an example, Box 2E sets out some possible cost implications, based on international comparisons, of administrating a new revenue and customs infrastructure in an independent Scottish state. This could be significant. A report by ICAS[35] highlighted that "*The scale of the tasks and work needed to fully establish Revenue Scotland and have it take over from HMRC, should Scotland achieve independence, would be massive, complex, and expensive. It is not clear that this is yet understood by taxpayers – who would be expected to pay for it – or politicians*".

[34] Scottish Government, *Economic and Competition Regulation in an independent Scotland*, February 2013, p.8.

[35] ICAS, *Scotland's tax future: the practicalities of tax devolution*, November 2012, retrieved May 2013, <http://icas.org.uk/taxfuture2.pdf>.

Box 2E: Estimating the potential cost of a new revenue collection body for an independent Scottish state

Ongoing cost

The annual cost of separate tax administration would largely depend on the system adopted by the government of an independent Scottish state. Comparisons with the UK and other small advanced economists can provide some indication; however different methodologies provide different results:

- In 2011 HMRC's tax collection running costs were £3.6 billion. This suggests a per capita cost of £57. If the system adopted by the government of an independent Scottish state is equally efficient this would equate to £302 million a year (this is the methodology that the Scottish Government currently uses to calculate Scotland's share of this spending as part of the UK in GERS).
- Comparisons with small advanced economies suggest higher costs, which is likely to reflect some loss of economies of scale from administrating taxes in a smaller country. For example, the Scottish Government's own internal calculations, which are based on a comparison with New Zealand and the Republic of Ireland, indicate that the annual cost could be between £575 million and £625 million.[2]

Set up costs

Setting up a new framework for administrating all Scottish taxes would be a complex and costly process. It would require the creation of new systems to deal with the millions of transactions undertaken by taxpayers and companies involved in paying taxes to the Government.

Additional set-up costs would also arise in relation to recruiting and training new staff. HMRC operate the tax system on a UK wide basis and have staff involved in a range of work spread throughout the UK. Even if large numbers of HMRC staff based in Scotland transferred to 'Revenue Scotland', skills gaps would still be likely. On a population-based share of HMRC staff, Scotland would need over 6,000 staff for tax administration.

The overall cost is difficult to calculate due to the complexity of the process and the lack of relevant international evidence. The Scottish Government analysis of the cost of introducing and administrating their replacements for UK Stamp Duty Land Tax (SDLT) and Landfill Tax suggests that initial set-up costs equate to around 90 per cent of annual running costs.[3] If the same proportion was applied to introducing all taxes, the overall cost of setting up a new tax regime in an independent Scottish state could be up to £562 million.

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1 HMRC's tax collection costs are classified in Table B1 as 'Public and common services' and so are allocated to Scotland on a population basis.

2 Better Together, retrieved May 2013, <http://b.3cdn.net/better/c1d14076ee08022eec_u9m6vd74f.pdf>.

3 BIS calculations based on the estimates for administration of SDLT and Landfill Tax in Scotland produced by the Scottish Government; Scottish Parliament Information Centre, Financial Scrutiny Unit *Briefing: Landfill Tax (Scotland) Bill*, May 2013, retrieved June 2013, <http://www.scottish.parliament.uk/ResearchBriefingsAndFactsheets/S4/SB_13-32.pdf>.

2.49 There are many other examples of institutions with specific, specialist roles and may need to be replicated. For instance, the Intellectual Property Office (IPO) employs around 300 patent examiners covering various technology fields. Some of the examiners specialise in very niche areas which receive a very small number of patent applications a year. However, due to a very specialist knowledge required in this area, the IPO is required to have access to at least one expert who will be able to correctly examine patent applications for everything from quantum computing to footwear.

2.50 An IPO for an independent Scottish state would need to be able to examine applications in a similar number of areas. Otherwise, the quality of service would suffer. This would require recruitment of a large number of new patent examiners and an additional cost to businesses or the Scottish Government, depending on whether the Scottish IPO would be financed through patent fees or the Scottish taxpayer. Under this scenario, some of the efficiency savings arising from having a UK-wide patent office and one set of examiners would be lost. Businesses are also likely to want to have their intellectual property protected in both countries, resulting in additional costs and delays (see Chapter 4 and Annex A for more detail on the role of the IPO).

2.51 The Scottish Government states "the cost of running new institutions in Scotland would not be in addition to the existing cost of the UK regulators, but a replacement for them".[36] Indeed, as noted above, the Scottish Government reports its initial analysis shows cost savings would result. But, as noted previously, the report does not contain a full analysis of the functions conducted by economic and competition regulators, or any detailed assessment of the extent that duplication of functions or loss of economies of scale would arise.

2.52 For example, a separate system for the regulation of the UK's electromagnetic spectrum would be required in an independent Scottish state.[37] This is likely to involve the duplication of many, if not all, existing Ofcom[38] national and international functions. Existing Ofcom functions would still have to be performed for the continuing UK, with the exception of Scottish advisory committees. Hence, Scottish taxpayers or spectrum using companies would be faced with the extra costs of a new Scottish spectrum regulator which are likely to be much greater than current costs of the Scottish advisory committees.

2.53 Meanwhile Ofcom's functions in the continuing UK would cost much the same as before. In total there would be an increase in regulatory costs for managing spectrum as a result of independence. In addition the inevitable transition period may make any administration of spectrum difficult. In particular it may interfere with the release of the 700 MHz waveband currently planned for 2015 to 2018. Even if the government of an independent Scottish state sought to continue to have access to Ofcom's services, higher costs would inevitably result. Ofcom would need to decide whether it was practical and it is not possible to say with confidence what the outcome would be.

2.54 The Scottish Government acknowledges[39] there would be a requirement to recruit more staff than are currently employed in economic regulation in Scotland. It is likely that this would increase public sector employment in Scotland, which is already above the UK average and higher than in many other small European countries (see Chapter 3).

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[36] Scottish Government, *Economic and Competition Regulation in an independent Scotland*, February 2013, p.2.

[37] Issues related to the management of spectrum are discussed in more detail in Chapter 5.

[38] See Annex A for further information about the role of Ofcom.

[39] Scottish Government, *Economic and Competition Regulation in an independent Scotland*, February 2013, p.8.

2.55 In addition, given the scale of the institutional change and the resource required, new Scottish institutions may find it difficult to attract and retain experienced and appropriately qualified individuals. The OECD report (2011) on strengthening the institutional setting for regulatory reform states that "finding key capacities and competencies can be difficult in particular in small countries where the pool of talent needs to be shared with the private sector". This is considered in detail in Chapter 3.

Case Study: Transport

2.56 The scale and complexity of the challenge to create new public sector institutions can be illustrated in relation to transport. The Department for Transport and its agencies currently provide a wide range of services for the UK. These relate to the regulatory framework for:

- Vehicles and drivers;
- Key rail access;
- Shipping and maritime, airports and ports regulation; and
- Safety and security.

2.57 An independent Scottish state would need to account for transitional costs setting up a range of agencies (e.g. covering driver and vehicle licensing, vehicle operating standards, driving standards, maritime and coastguard services and accident investigation services for rail, air and maritime) and ongoing running costs. Currently these organisations and services ensure a common regulatory framework and assurance to all that standards and safety provisions are consistent across the UK, giving the user a similar experience, south and north of the border.

2.58 Similar bodies established by an independent Scottish state would not benefit from the same economies of scale as UK institutions, and the cost would fall to a smaller number of businesses or individuals. For example, the Civil Aviation Authority (CAA) is responsible for the regulation of certain UK aviation safety, airspace use and consumer rights matters; as well as of operators of dominant airports. From April 2014 it will also regulate UK aviation security. The Scottish Government's proposals to date do not refer to these airspace, security or consumer rights matters. They suggested that the CAA's current safety functions in Scotland could be delivered through the existing CAA on a joint governance or contractual basis, or through a separate Scottish civil aviation body; and that any necessary economic regulation could be dealt with through the competition powers of a combined regulator.

2.59 An independent Scottish state would need to establish, and finance, a legislative framework to regulate aviation safety, airspace use, consumer rights and security in accordance with European and international standards and requirements. The government of an independent Scottish State might request to make use of the CAA, but this would be subject to negotiation. Consumers and the aviation industry would be likely to resist any increases in the cost burden that regulation places on the industry, particularly where such increases could discourage investment in aviation in an essentially international market.

Box 2F: Impact on drivers of motor vehicles

Drivers of motor vehicles in an independent Scottish state could be affected in a number of ways, particularly if they use UK roads. These could include:

- A new Agency that may introduce different charges and requirements for administering the 3.7 million driving licences currently held in Scotland;[1]
- The need to set standard and safety provisions currently set by the Vehicle and Operator Services Agency, the Vehicle Certification Agency and the Driving Standards Agency, and whether these should go beyond minimum EU standards;[2]
- The new HGV charging rule would no longer be cost neutral, and instead Scottish HGV drivers would have to pay up to £10 a day to use UK roads. The government of an independent Scottish state would need to decide whether to reduce its rate of vehicle excise duty (VED), to compensate Scottish HGV drivers operating in the continuing UK. HM Treasury is responsible for the rates and structure of UK VED, which does not vary across the UK;
- Non-commercial vehicles registered in an independent Scottish state and brought into the continuing UK would only be exempt from UK registration and licensing for up to six months in any twelve-month period. Keeping such vehicles in the continuing UK for longer periods would incur a registration fee (currently £55 for non-UK vehicles) and VED would become payable.

[1] The UK currently exceeds minimum EU standards for driver testing. The relevant EU legislation governing driver licensing and testing is the Third European Directive on Driving Licensing, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:403:0018:0060:EN:PDF>.

[2] EU Directive on roadworthiness tests for vehicles, 2009/40/EC as amended by Commission Directive 2010/48/EU.

2.60 Some of these agencies rely on staff with very specialist skills. The accident investigation teams of the Department for Transport cover the whole of the UK and investigate accidents affecting UK interests across the world. Setting up new accident investigation branches could be disproportionately expensive for an independent Scottish state given the smaller area to be covered and the rare and specialist expertise needed to staff them.

2.61 In addition to the financial costs and difficulties recruiting and retaining appropriate staff, the creation of a number of new transport agencies may also have security implications. Transport security policy is developed and largely implemented across the UK as a whole. It forms part of the integrated UK-wide counter terrorism strategy, managed across the UK by the Home Office as part of the overall national security strategy. The Department for Transport is the counter-terrorism security regulator for the transport industry across the UK and UK transport assets abroad and ensures that regulations conform to European and other international requirements for which it is the responsible authority in the UK. There are a number of related issues that an independent Scottish state would have to consider when setting its own security policy, including transport security, which will be considered in a future paper in the Scotland analysis series.

Conclusion

2.62 This chapter demonstrates the crucial role that effective and stable regulatory frameworks play in establishing an environment where businesses can compete and grow. It shows the UK has a good reputation internationally, consistently ranking highly in international surveys. These shared business regulations and institutions underpin the UK domestic market, reducing burdens for business and benefiting employees and consumers across the UK.

2.63 Scotland benefits from being integrated into this framework. In the event of a vote for independence, duplication and divergence in regulations might affect business performance, consumers and jobs. The government of an independent Scottish state would also have to consider how to replace all key institutions that would only operate in the continuing UK.

Chapter 3:
Labour markets and skills

The UK labour market has an integrated regulatory framework, regarded as one of the most flexible in the world. This creates a unified national labour market – employees and employers are ensured a common set of core rights and responsibilities – which aids labour mobility across the UK.

Over the past ten years on average around 95,000 UK residents a year have crossed the Scottish border to move into or out of Scotland, and around 30,000 people travel between Scotland and the rest of the UK each day to work. This free flow of people benefits businesses and workers, particularly young workers. It ensures a greater supply of both workers and jobs and enables the better matching of skills to jobs across the UK. In total it is estimated over half a million people born in England, Northern Ireland and Wales now live in Scotland, and over 700,000 people born in Scotland have since moved to other parts of the UK.

Skills policy in the UK is devolved. As such **Scotland currently enjoys the best of both worlds – integration in the large UK labour market, with the choice and opportunities this presents, coupled with the power to control and tailor education and skills policy to address specific needs in Scotland.**

This flexibility and integration has enabled the labour market to perform strongly, during and since the recession. **Scotland's labour market within the UK framework has functioned well, often having the highest employment rate of the four parts of the UK over the last 10 years.** In the latest quarter for which data is available (February – April 2013), Scotland had an employment rate of 72.2 per cent, higher than in England, Wales and Northern Ireland. While Scotland's labour market has performed well, its public sector employment as a percentage of total employment remains relatively high. It is questionable whether such levels of public sector employment would be sustainable in the long run in the event of an independent Scottish state.

A vote in favour of independence risks creating barriers between the labour markets of an independent Scottish state and the continuing UK. Any divergence in labour regulations would create costs for business (for example to adapt payroll systems) and impede labour mobility. **It could be more complex for workers and families to move and live or work on the other side of the border.** This would reduce the ability of the separates economies to respond to adverse shocks through adjustments to wages and prices. **The impacts could be exacerbated should it be necessary to introduce border controls.**

Introduction

3.1 Labour market regulation is the system of laws and institutions that cover broad areas of labour and employment issues. All aspects of working life are affected: from how employers contract for the services of workers, to the terms and conditions of an individual's employment, to aspects of social security.[1] Labour market regulation protects workers' rights and ensures that employers and employees have a common set of rules to follow.

3.2 Employment relations are currently a reserved matter in relation to Scotland. Legislation and regulations cover Great Britain, and historically Northern Ireland has sought to, by and large, mirror Great Britain with respect to employment law matters. As a result, employees and employers share the same set of core rights and responsibilities wherever they are in the UK. Having this common set of employment rules supports a large, flexible and responsive labour market as it enables people to move around freely across the UK to seek opportunities that best match their skills and aspirations.

3.3 A vital determinant of the UK's economic prosperity is how many people are in work and how productive they are in the workplace. Research shows that developing workers' skills and ensuring that they are used to best effect is increasingly important in driving labour productivity and improving prosperity.[2] Labour productivity is maximised by both increasing the number of skilled individuals in the job market and by matching the skills those workers have to the businesses around the UK that will benefit from them the most.

3.4 Skills policy in the UK is devolved. This means that most policy initiatives in this area are the remit of the devolved administrations in Scotland, Wales and Northern Ireland and of the UK Government when it comes to England. There are some UK-wide exceptions, such as Sector Skills Councils. There is variation across the UK in the focus, priorities and delivery mechanisms of skills policies as each part of the UK adapts to their own specific needs. The overarching aims of skills policy are, however, broadly similar.[3]

3.5 As such, Scotland currently enjoys the best of both worlds. All parts of the UK are integrated into a common system of core employment rules and regulations, which enables workers and employers to move easily around the UK for work and results in a greater supply of workers and jobs. The greater availability of workers and employment opportunities increases the chances of achieving the best match between skills and jobs across the UK. Meanwhile, Scotland has the power to control and tailor education and skills policy to address specific needs in Scotland.

3.6 In the event of a vote for independence, an independent Scottish state would no longer be part of this UK-wide framework of labour market regulations. This could have important implications for businesses and individuals, since regulations would be likely to diverge over time, making it more difficult for workers to move between jobs in an independent Scottish state and the continuing UK. The impact of this could be exacerbated should independence result in the introduction of border controls between an independent Scottish state and the continuing UK. Further issues regarding borders will be considered in a future paper in the Scotland analysis series.

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1 Betcherman G., Luinstra A., Ogawa M., *Labor Market Regulation: International Experience in Promoting Employment and Social Protection*, Social Protection Discussion Paper No. 0128, 2001.

2 Leitch Review of Skills, *Prosperity for all in the global economy – world class skills*, December 2006.

3 CIPD, *Skills policy in the UK factsheet,* retrieved May 2013, <http://www.cipd.co.uk/hr-resources/factsheets/skills-policy-uk.aspx>.

3.7 This chapter sets out the importance of the UK's shared labour markets to Scotland and the rest of the UK. It sets outs the need to strike the right level of labour market regulation to enable the economy to function well, while protecting workers and businesses, evaluates how the UK's current employment regulations compare internationally and assesses the performance of the Scottish, and wider UK, labour market. It goes on to consider the benefits of the current approach and the potential implications of an independent Scottish state, particularly the impact on businesses and workers who may wish to work on one side of the UK-Scottish border, and live on the other.

The UK's labour market performance

Regulations

3.8 Labour market regulations can have both positive and negative consequences. The aim of labour market regulations should be to provide a framework that enables the labour market to function as efficiently as possible. Employment opportunities should be maximised, whilst at the same time achieving the appropriate balance of power between – and protection for – both businesses and workers.[4]

3.9 Excessive employment protection regulations are thought by many to be a key factor in generating labour market rigidity. As a result, such regulations are often cited as one cause for the large cross-country differences in labour market performance, notably between the US and Europe.[5] Overly strict regulations can reduce job flows, have a negative impact on employment of some groups of workers (notably young people), encourage labour market duality[6] and hinder productivity and economic growth.[7]

3.10 International surveys show that UK employment regulation is perceived by business as being significantly better than other major European economies, and on a par with the US and Canada. The UK also performs consistently well in the OECD's indicators of employment protection.[8] In the latest OECD indicators (2008), the UK had the least rigid regulation of those in the EU and the third lowest level within the OECD.[9] This indicator has shown the UK's position to be relatively stable over time.

3.11 Figure 3.1 shows the stringency of employment protection in all OECD countries as in force on 1 January 2008. Among OECD countries, Turkey, Luxembourg and Mexico have the strictest set of employment rules while the least strict are in the US, the UK, Canada and New Zealand.

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4 Department for Business, Innovation and Skills, *What we do,* retrieved April 2013, <http://www.bis.gov.uk/about/performance-reports/performance-indicators/change-net-employment-regulatory-burden-on-business>.

5 OECD, *Employment protection regulation and labour market performance* (Chapter 2), *Employment Outlook*, 2004.

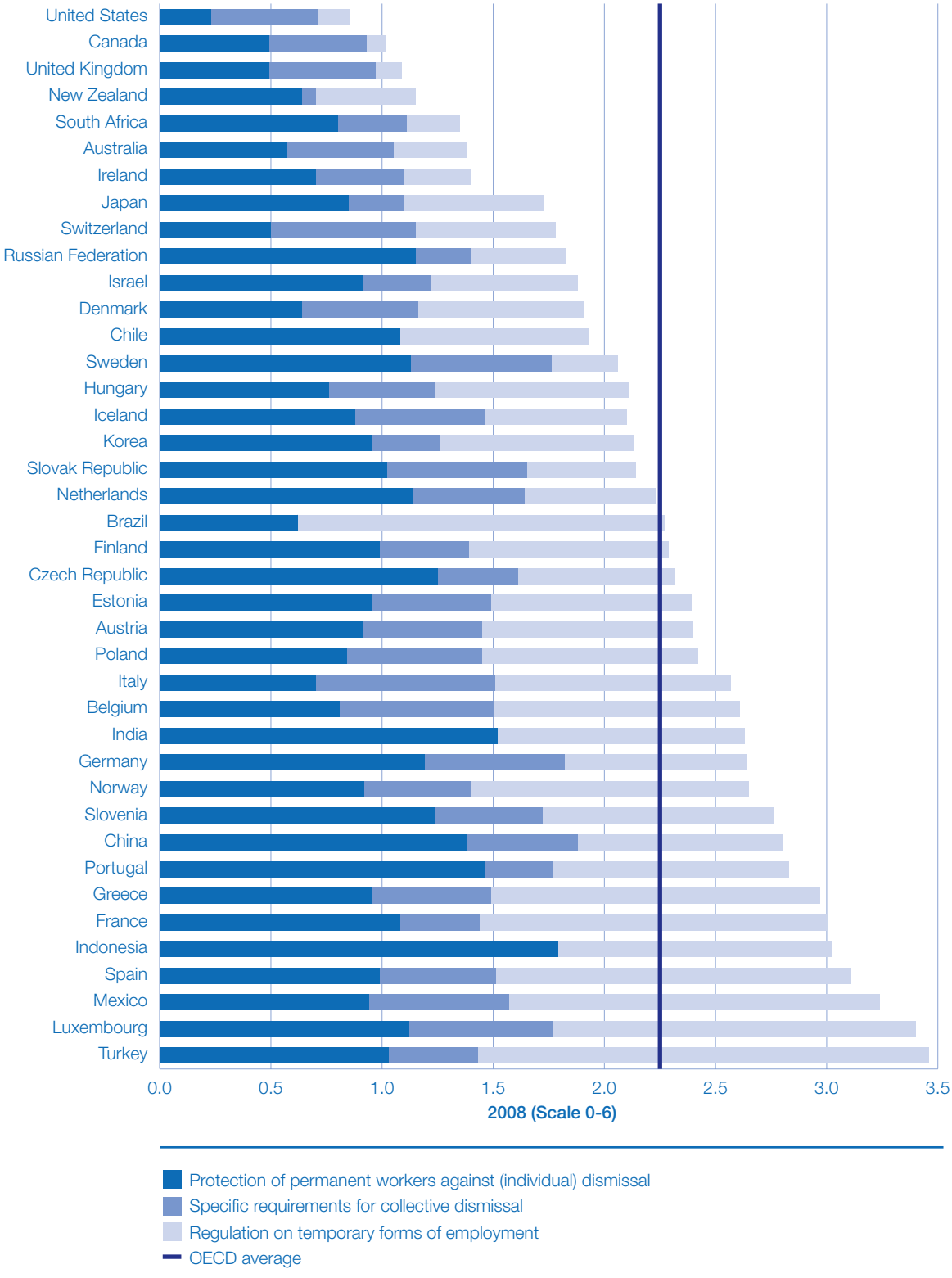
6 'Duality' refers to a segmentation in the labour market between workers in regular (often more protected) jobs, and those who are either unemployed or employed with fixed-term, part-time or temporary contracts which are typically subject to less stringent regulation.

7 Venn D., *Legislation, collective bargaining and enforcement: Updating the OECD employment protection indicators*, OECD Social, Employment and Migration Working Papers, 2009.

8 The OECD indicators of employment protection measure the procedures and costs involved in dismissing individuals or groups of workers and the procedures involved in hiring workers on fixed-term or temporary work agency contracts. Note that employment protection refers to only one dimension of the complex set of factors that influence labour market flexibility. For information on other labour market policies and institutions in OECD countries, see the OECD Employment Database.

9 The UK scored 1.09 (in an index ranging from 0-6, where lower numbers represent less strict regulation).

Figure 3.1: Strictness of employment protection (OECD countries, 2008)



Source: OECD.[10]

[10] Venn D., *Legislation, collective bargaining and enforcement: Updating the OECD employment protection indicators*, OECD Social, Employment and Migration Working Papers, 2009.

3.12 The UK also performs very strongly in the Labour Market Efficiency Index produced by the World Economic Forum's Centre for Global Competitiveness and Performance. The UK ranks 5th out of 144 countries on this index in the 2012-13 report[11], which is based on factors such as flexibility of wage determination, recruitment and dismissal procedures and pay and productivity.

3.13 How Scotland's labour market, as an integral part of this UK-wide framework, has performed is considered in the following sections.

Labour market trends in the UK

3.14 In terms of labour market outcomes, the UK performs strongly compared with other OECD countries. Employment rates, which is the proportion of the working age population (16-64) that are in employment, are typically amongst the highest in the world and have proved resilient during and since the recession. Indeed employment fell much less than many had expected given the fall in GDP.[12] Labour force participation – the proportion of the working age population who are either in work, or actively seeking work – is also high compared with other advanced economies.

3.15 A key driver of the strong performance of the UK labour market is the UK's light-touch system of employment regulation. The OECD comments that 'stricter employment protection for regular and temporary workers tends to reduce workers flows in and out of unemployment'.[13] The UK labour market does not display these signs of an overly strict regime, with large flows into and out of employment. For example, in the second quarter of 2009, there were 840,000 people leaving employment and 1.1 million people moving into work.[14] Also, even during recessions, most of these flows into and out of work are voluntary.

3.16 As well as having a dynamic labour market compared with other countries, helped by its scale, the UK also has one of the most diverse. The lack of regulation on work patterns provides greater opportunity for businesses and workers to decide on types and patterns of work that suit them. There is evidence that the UK has the widest range of types and patterns of work for workers to choose from – whether it is where they work or when they work in the day, week or year. Figure 3.2 shows the UK has a much greater variety in the number of hours usually worked by an employee compared with Germany, France and the US.

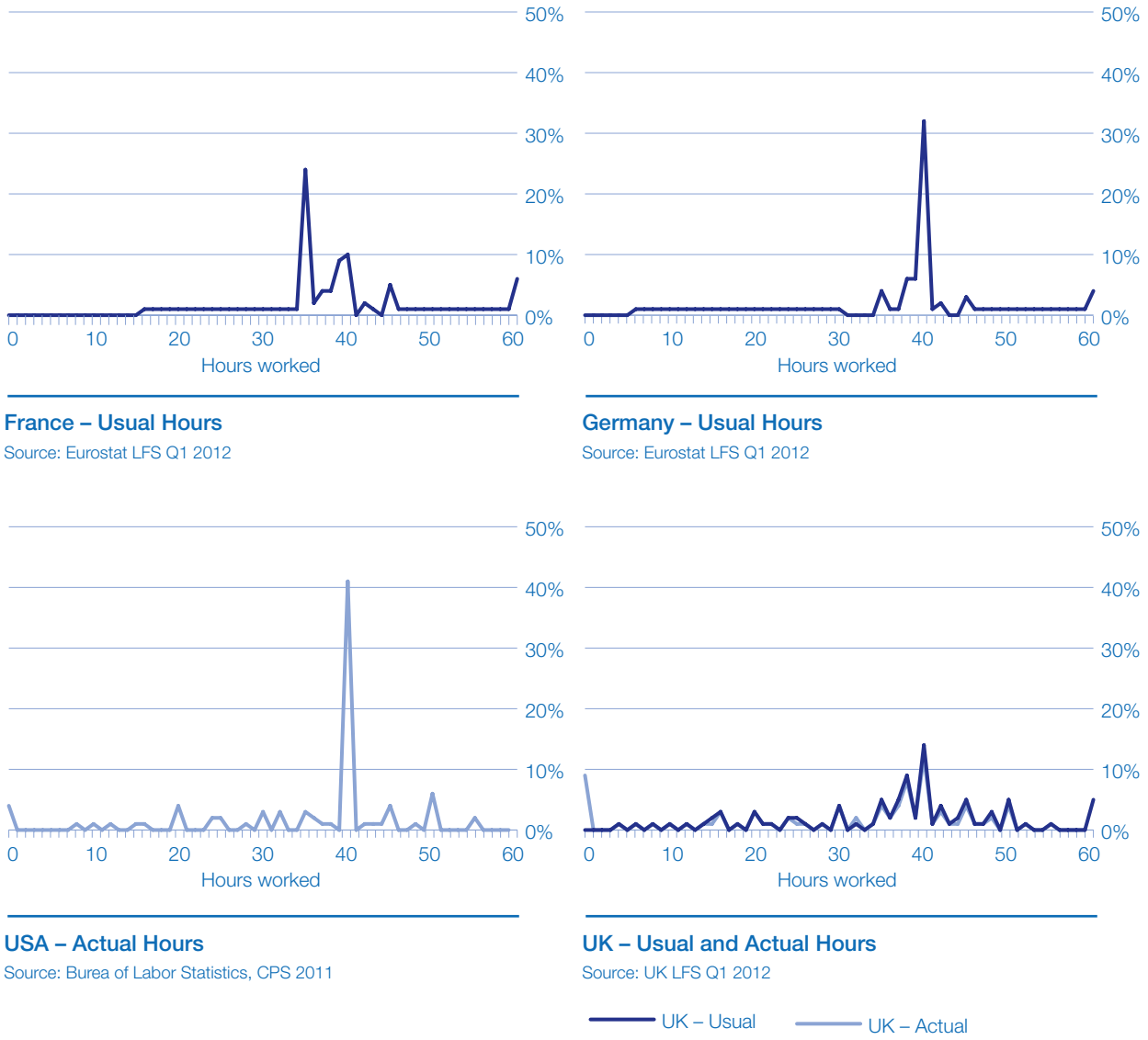
[11] Note data compiled for both of these sources is based on self-reporting and limited samples.

[12] See for example: ONS, *The Productivity Conundrum, Interpreting the Recent Behaviour of the Economy*, 2012 or Bank of England, *Minutes of the monetary policy committee meeting 5 & 6 September 2012*, 20 September 2012, p 5.

[13] OECD, *OECD Employment Outlook*, OECD Publishing, Paris, 2009.

[14] Institute for Fiscal Studies (IFS), *IFS Green Budget: February 2013*, 2013.

Figure 3.2: Hours worked by country



France – Usual Hours
Source: Eurostat LFS Q1 2012

Germany – Usual Hours
Source: Eurostat LFS Q1 2012

USA – Actual Hours
Source: Burea of Labor Statistics, CPS 2011

UK – Usual and Actual Hours
Source: UK LFS Q1 2012

Sources: As shown above.

3.17 This dynamism and diversity are likely to be significant contributing factors to the fact the UK employment rates are amongst the highest in the world. Employment rates for every main age and sex category are also higher than the OECD average (see Figure B.3 in Annex B). The greater choice of work patterns in the UK increases the possibility that jobs are available to a wider range of people with a broader range of characteristics and responsibilities.

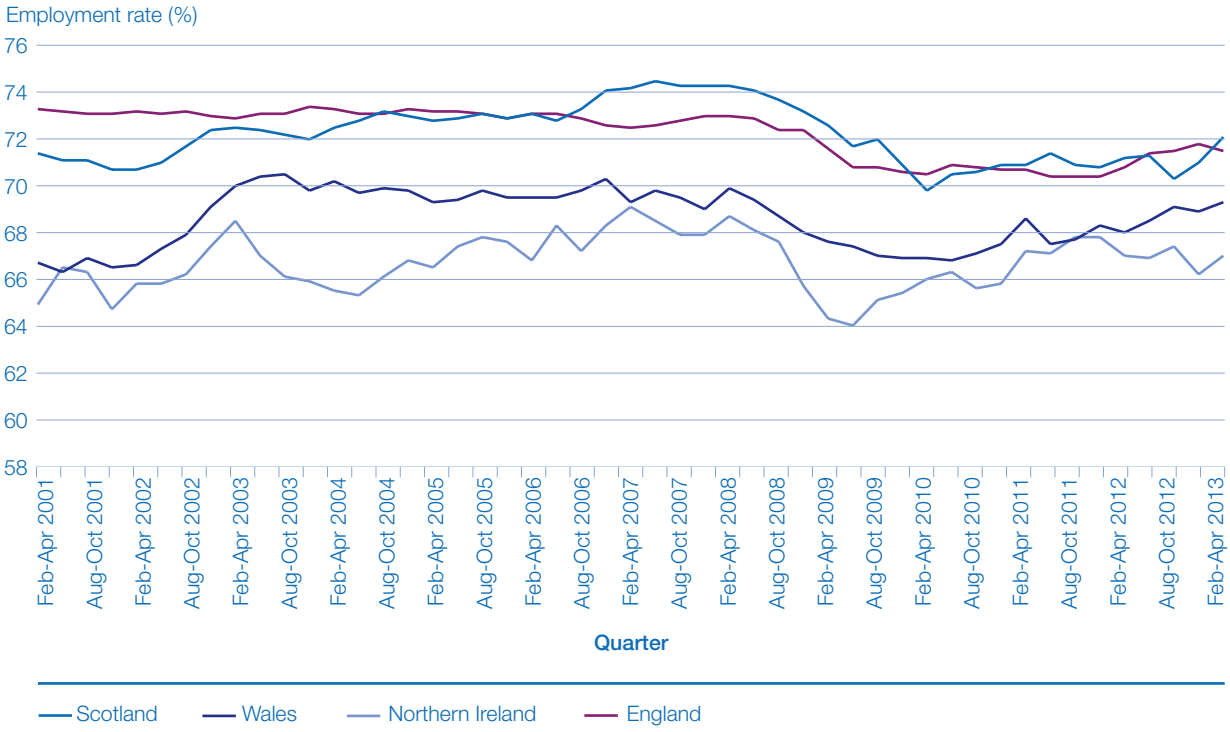
Scotland

3.18 Scotland's labour market has performed well under the current arrangements, often having the highest employment rate of the four parts of the UK over the last 10 years.[15] In the latest quarter for which data is available (February – April 2013), Scotland had an employment rate of 72.2 per cent, higher than in England, Wales and Northern Ireland (see Figure 3.3).[16] Both employment (see Annex B) and participation in the Scottish labour market have also performed well by international standards.

[15] Labour Force Survey (seasonally adjusted data), ONS; Scotland has had the highest employment rate of the four parts of the UK 22 quarters out of the last 40 (from May–June 2003 to February–April 2013).

[16] Labour Force Survey (seasonally adjusted data), ONS.

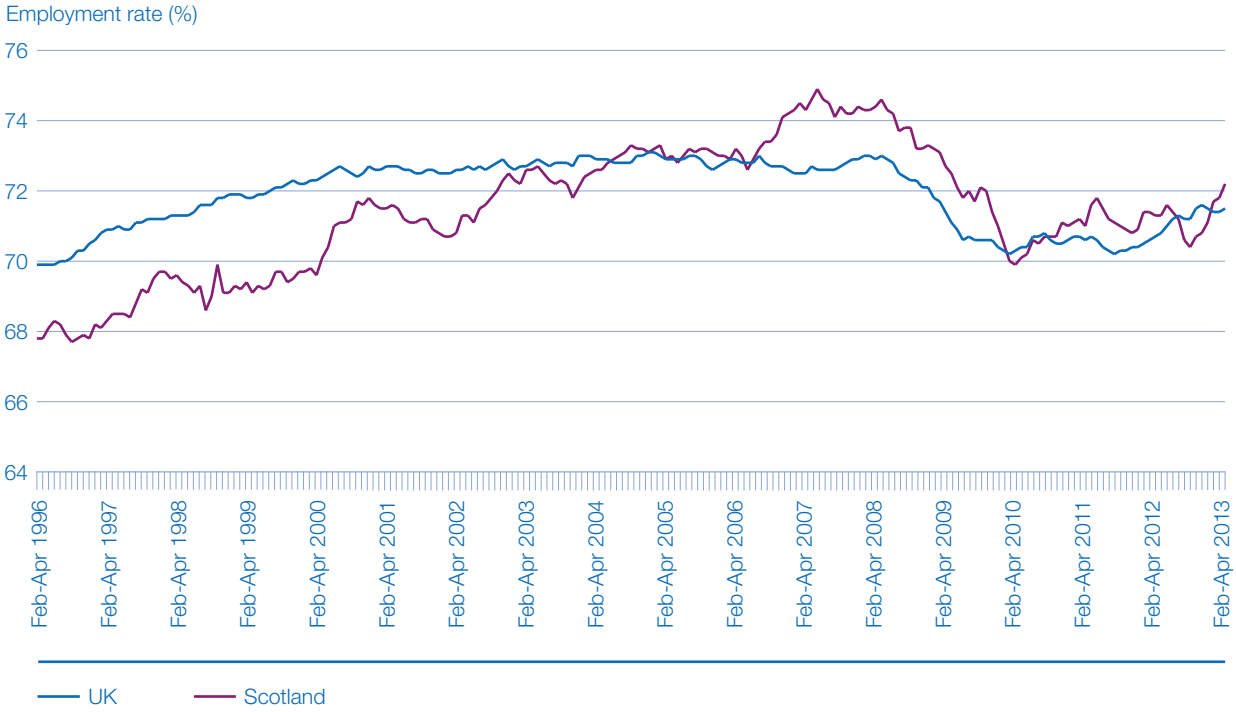
Figure 3.3: Employment rates (16-64) in the four parts of the UK, February-April 2001 to February-April 2013



Source: Labour Force Survey (Seasonally Adjusted data), ONS.

3.19 From the mid-1990s, Scotland's employment rate rose steadily, reaching a peak of 74.9 per cent during the second calendar quarter of 2007 (see Figure 3.4). This is illustrative of a broader trend in the performance of the Scottish labour market, which has converged closely with the performance of the UK as a whole.

Figure 3.4: Employment rates (%) in Scotland/UK (1996-2013)



Source: Labour Force Survey, ONS

3.20 From divergences in the unemployment rates of England and Scotland of almost four percentage points in the mid-1980s, this gap has narrowed to virtually zero since 2000. The Scottish claimant count rate has also converged towards the UK average since the early 1980s, closing a gap of 2 percentage points in mid-1983 to be virtually identical now. Some of this synchronisation is likely to be explained by the strikingly similar employment composition of the Scottish economy with the UK average (see Figure B.4 in Annex B), meaning Scotland and the rest of the UK are exposed to similar shocks, but also benefit from similar growth opportunities.

Benefits of the UK's integrated labour market framework

3.21 As shown in Chapter 1, Scotland and the rest of the UK are currently highly integrated. Trade in goods and services provides geographical diversification and is complemented by flows of capital. Having a free flow of labour is an essential part of this picture, as it increases the chances of workers finding the jobs that will make the most of their skills and employers finding the best people for their business.

3.22 As set out in the UK Government's paper *Scotland analysis: Devolution and the implications of Scottish independence*, devolution – Scotland's constitution today – offers people in Scotland the best of both worlds. Scotland is an integral part of the large UK-wide labour market but skills policy is devolved, meaning that the Scottish Parliament and Government are responsible for determining skills policies that reflect Scottish priorities.

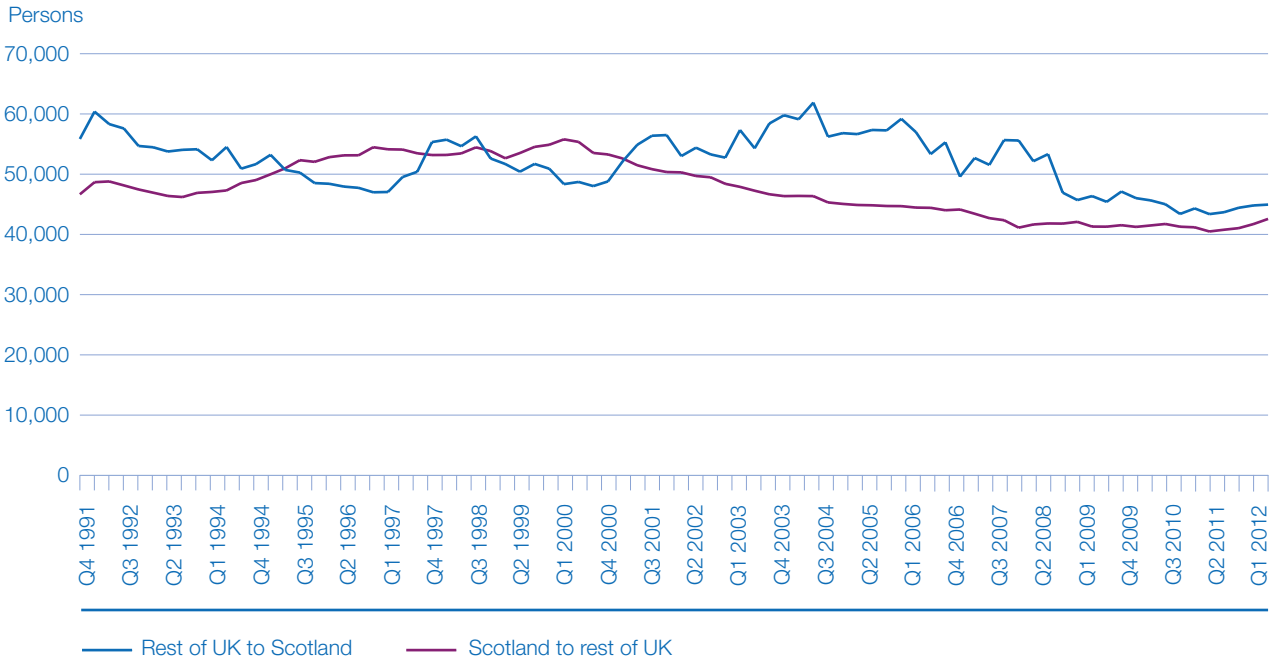
3.23 Within the UK, Scotland is part of an integrated regulatory framework that ensures employers and employees have the same set of core rights and responsibilities wherever they move in the UK. As a result, the skilled workforce in Scotland and employers looking for staff with various qualifications benefit from three key features of being part of a UK-wide framework: mobility, flexibility and scale. These three features are explored below.

Mobility

3.24 Within the UK's integrated labour market regulatory framework, employees and employers across the UK are ensured a common set of core rights and responsibilities. They are also subject to the same systems of tax and National Insurance, for example. This aids labour mobility and results in a more efficient allocation of resources. Workers are more able to move to where there are labour shortages or to find jobs that better match their skills and aspirations.

3.25 Over the past 10 years around 95,000 UK residents a year have moved into or out of Scotland (see Figure 3.5). The flow into Scotland from the rest of the UK is equivalent to one new rest of the UK arrival per 100 residents in Scotland. These flows are a part of a flexible labour market, benefiting Scotland and the rest of the UK.

Figure 3.5: Scotland migration to and from the rest of the UK, 1991-2012



Source: General Register Office for Scotland [17]

3.26 Historically, the vast majority of inward migration into Scotland has been from the rest of the UK. Whilst this has changed somewhat in recent years following the accession of new Member States to the EU, migration flows between Scotland and the EU remain of a significantly smaller scale than those between Scotland and the rest of the UK.

3.27 According to the ONS's International Passenger Survey data, fewer than 20,000 people immigrated to Scotland from the EU every year on average over the five year period between 2007 and 2011.[18] In contrast on average more than 45,000 people emigrated to Scotland from the rest of the UK each year.[19] Over the same period, fewer than 10,000 people emigrated from Scotland to the EU every year on average, compared with more than 40,000 people to the rest of the UK. Looking at all migration flows into and out of Scotland, over half remain accounted for by flows to and from the rest of the UK.

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[17] GROS, *Migration between Scotland and the Rest of the UK,* retrieved May 2013, <http://www.gro-scotland.gov.uk/statistics/theme/migration/mig-stats/scotland-rest-of-uk.html>.

[18] Data on migration between Scotland and the European Union are obtained from the International Passengers Survey results published by the Office for National Statistics.

[19] Data based on the National Health Service Central Register, published by the General Register Office for Scotland.

3.28 The vast majority of UK migrants to Scotland come from England (91 per cent in the year ending December 2010), with 3 regions – London, South East and North West – accounting for a significant proportion of all migrants from England (43 per cent in the year ending December 2010).[20]

3.29 Research by Findlay & Stockdale into English migrants to Scotland found that this group tended to have higher qualifications and occupational status relative to the Scottish population, and that most moved to Scottish cities.[21] In a separate study, economic reasons were found to be the most significant for those moving to Scotland from elsewhere in the UK.[22] Such migrants also tended to be younger than the resident population – close to half of UK migrants (49 per cent) to Scotland in 2008-9 were aged between 16 and 34.[23] This compares to around a quarter of the Scottish population as a whole. The reverse is also true. Data shows that 62 per cent of those leaving Scotland went to one of the other parts of UK and, like immigrants to Scotland, tended to be between the ages of 16 and 34.[24]

3.30 Labour mobility is also reflected by the fact that many people live in one part of the UK but work in another. For example, in 2011 there were 30,000 individuals who lived and worked on different sides of the England-Scotland border;[25] 13,000 of whom lived in Scotland and worked in the North of England.[26]

3.31 All in all, labour mobility creates important economic benefits. The reallocation of workers across regions means that the UK as a whole makes the most of the skilled workforce available, as people move to find jobs that suit them and employers in different locations across the UK have a broader set of suitable workers to employ. At the individual level, mobility allows for improvements in the economic circumstances of those whose skills or aspirations are a poor match for the job or location in which they find themselves.[27]

Flexibility

3.32 The UK framework of an integrated system of labour market regulation and social security[28] with devolved skills policy creates a flexible labour market that can respond to economic and social change. This is shown by the relative resilience of the UK labour market during and since the recession. Since 2008 employment levels in the UK have been remarkably robust (see Figure B.1 in Annex B).

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[20] Internal Migration (NHSCR) Interregional movements, Year ending December 2010, retrieved May 2013, <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-228332>.

[21] Findlay A. and Stockdale A., *English Migration to Urban Scotland*, ESRC.

[22] Pires C. and MacLeod P., *Experience of people who relocate to Scotland*, Scottish Executive Social Research, 2006.

[23] International Passenger Survey/Internal Migration (NHSCR) based figures in General Register Office for Scotland (GROS) 2009 mid-year estimates.

[24] GROS 2009 mid-year estimates.

[25] Annual Population Survey, January to December 2011.

[26] The North of England is defined as the following English regions: North East, North West, Yorkshire and the Humber.

[27] Long J., *Labour Mobility*, Oxford Encyclopaedia of Economic History.

[28] Although matters related to the social security scheme are historically the responsibility of Northern Ireland Ministers, the schemes in Great Britain and Northern Ireland have always been very close. Since 1948, the UK has operated identical contributory benefit schemes and the Administration Acts have permitted the modification of legislation in order to enable the two schemes to function as one and to make reciprocal agreements.

3.33 At the core of this resilience has been a more flexible labour market. The UK labour market was able to adjust rapidly to shocks through adjustments to wages and prices. Through the recession, average nominal earnings growth fell sharply,[29] despite an increase in prices.[30] This adjustment in real wages has helped to limit the rise in unemployment through the recession in all parts of the UK.[31]

3.34 This resilience has been supported by a responsive welfare system. A system which is characterised by tighter job search requirements and seeks to balance the advantages of an integrated welfare system with local flexibility in delivering those services on the ground. Local authorities and organisations – including those in Scotland – are able to access their own funding to deliver employment provision and managers in jobcentres have increasing flexibility in choosing how to deliver their services. This combination of local flexibility within a national framework of rights and responsibilities for claimants and employers has, despite the recession, delivered better labour market outcomes than in the past.

3.35 For Scottish based employers, particularly those with operations across different parts of the UK, the benefits of an integrated labour market are significant. They only need to navigate one set of requirements and have a single payroll system, which helps minimise administrative burdens and financial costs. For example, as part of the current arrangements employers often fill vacancies in different locations through UK-wide recruitment channels.

3.36 Scotland as part of the UK benefits from being part of one of the most flexible labour markets in the world. This is one of many important factors for attracting FDI and the array of benefits that this brings to host countries, such as additional employment, tax revenues and knowledge transfers (see Box 3A).

Scale

3.37 As part of the UK, Scotland benefits from being part of a large, integrated labour market. There are 32.3 million people aged 16 and over economically active in the UK, of whom 2.7 million are in Scotland.[32]

3.38 The scale of the UK is also relevant in considering levels of private and public sector employment, as pooling resources across the UK helps support levels of public sector employment or other work that relies on government funding. In the first quarter of 2013 there were 581,300 people employed in the public sector in Scotland, accounting for 23.2 per cent of total employment. Excluding public sector financial institutions[33] from this figure, there were an estimated 551,900 people employed in the public sector (representing 22.0 per cent of total employment in Scotland).[34]

[29] Total pay growth (including bonuses) remained broadly flat in 2009; regular pay growth (excluding bonuses) has remained below 2 per cent since 2009.

[30] Retail Price Index (RPI) inflation peaked at 5.6 per cent in September 2011.

[31] In the recent recession unemployment in the UK peaked at 8.4 per cent in the final quarter of 2011, considerably lower than in the previous recessions of the early 1980s and 1990s.

[32] Labour Market Statistics, June 2013, retrieved June 2013, <http://www.ons.gov.uk/ons/dcp171778_312067.pdf>.

[33] From Q4 2008, the Royal Bank of Scotland Group plc and Lloyds Banking Group plc were classified as public sector financial corporations.

[34] Scottish Government, Public sector employment statistics Q1 2013, retrieved June 2013, <http://www.scotland.gov.uk/Resource/0042/00424407.pdf>.

3.39 Analysis conducted by Professor David Bell found that of the 212,900 growth in Scottish employment over 1995-2008 85 per cent was in health and social work, education and administration, defence and social security. These jobs are predominantly in the public sector or rely heavily on public sector spending. As Professor Bell remarked 'this is clearly not a sustainable long-run growth path for the Scottish economy'.[35]

3.40 While more recent data shows a change in the nature of the workforce, with a net shift from public to private sector employment (see Annex B), public sector employment in Scotland, as a proportion of total employment, remains higher than the UK average 19.3 per cent.[36] There is a significant question around whether this would be sustainable in the long run by an independent Scottish state, particularly since – as the Scottish Government itself recognises – a vote for independence would mean public sector employment needing to increase to staff a number of new public sector institutions.[37]

3.41 In this context, it is important to recognise that data on public sector employment collected by the OECD suggests that there is no clear link between the size of the country and the proportion of the labour force in public sector employment.[38] Small Nordic countries such as Norway, Denmark and Finland have relatively high levels of pubic sector employment, but there are also examples of developed economies with a relatively modest public sector (e.g. the Republic of Ireland). This suggests that country specific conditions, policies and institutional arrangements could be more important determinants of the size of public sector employment.

[35] Analysis conducted using the Labour Force Survey featured In, Mackay D. et al, *Scotland's economic future*, Reform Scotland, 2011.

[36] Public Sector Employment, Q1 2013, retrieved June 2013, <http://www.ons.gov.uk/ons/publications/re-reference_tables.htm?addition=tcm%3a77-303285>. Figure is for Q1 2013 (not seasonally adjusted), the equivalent figure for England is 18.4 per cent.

[37] For example in the recent publication Scottish Government, *Economic and Competition Regulation in an Independent Scotland*, 2013, it was stated that there will be a requirement to recruit more staff than are currently employed in economic regulation in Scotland.

[38] OECD, *Government at a glance 2011*, 2011, retrieved June 2013, http://www.oecd-ilibrary.org/governance/government-at-a-glance-2011_gov_glance-2011-en

Box 3A: The importance of effective labour market regulations and skills for attracting foreign direct investment

As discussed in Chapter 1, the UK has a very successful record in attracting foreign direct investment (FDI), a position confirmed in Ernst & Young's 2013 *UK attractiveness survey.*[1] Flexible labour market regulations and the availability of skilled labour are important factors in attracting FDI. For example, Dewit et al found that differences in employment protection between nation states were a significant determinant of FDI location.[2] As set out above, having a shared UK-wide framework of labour market regulation encourages the availability of skilled labour as people move freely around the UK both to find work and to create jobs. Similarly, research conducted on behalf of the Department for Business, Innovation and Skills to examine the interaction between labour market flexibility and FDI found that labour market flexibility was identified as representing moderate or high degrees of importance by 59.7 per cent of respondents.[3]

The Ernst and Young annual survey provides a detailed analysis of the relative attractiveness of the UK. The skills level of the local labour force and the flexibility of labour legislation are found to be key factors for foreign-based companies. 80 per cent of existing and potential investors surveyed said that the skills of the local labour force was an attracting factor, whilst the equivalent figure for flexibility of labour legislation was 63 per cent.

[1] Ernst & Young, *2013 UK attractiveness survey*, 2013.

[2] Dewit G., Leahy D., Montagna C., *Employment protection and globalisation in dynamic oligopoly*, CEPR Discussion Paper 3871, 2003.

[3] Whyman P. and Baimbridge M., *Labour Market Flexibility and Foreign Direct Investment*, BIS – Employment Relations Occasional Paper, 2006.

The potential impacts of an independent Scottish state

3.42 Employment is currently a reserved matter in relation to Scotland. In the event of a vote for independence, an independent Scottish state would no longer be part of the UK's shared framework of employment rights, responsibilities and protections. While one policy option for the government of an independent Scottish state would be to, in so far as possible, mirror labour market regulations decided in Westminster, this would represent a loss of influence for Scotland – moving from the current situation where Scotland is able to shape employment laws in the UK Parliament to simply replicating legislation decided in the best interests of the continuing UK.

3.43 The alternative option would be for the government of an independent Scottish state to implement its own system of labour market regulations. The Scottish Government in its publication *Scotland's economy: the case for independence* has, for example, suggested having its own Employment Rights Authority – bringing together all employment related matters in Scotland under one body.[39] The remainder of this section considers the potential impacts of having a separate labour market framework in an independent Scottish state.

[39] Scottish Government, *Scotland's economy: the case for independence*, May 2013, retrieved May 2013, <http://www.scotland.gov.uk/Resource/0042/00422987.pdf>.

Informal barriers

3.44 Providing an independent Scottish state is able to successfully negotiate membership of the European Union (EU), then its workers would have the right to work in other EU countries, and EU workers would have the right to come to an independent Scottish state to work. In this scenario there might be no formal legal obstacles that stop people crossing the border to find work.

3.45 However, there may still be policy induced barriers that mean extra costs to firms and individuals, which could decrease cross border labour market flows. These costs would not necessarily be explicitly financial – although many would have cost implications – but represent extra bureaucracy or risk.

3.46 Bureaucracy could be created by any changes to the practical systems workers and employers rely on. In the event of a vote for independence, there would need to be substantial changes to the labour market system in an independent Scottish state. A new tax and national insurance system would need to be implemented and it is unlikely that an independent Scottish state would replicate exactly the continuing UK's ongoing labour market regulation.

3.47 Cross-border differences risk introducing frictions into the labour market. Any divergence in regulations would create costs for business and impede labour market mobility. Getting to grips with different tax and reporting requirements, as well as different obligations in relation to employees' national insurance and pensions, would add cost and complexity for employers with a presence in an independent Scottish state and the continuing UK. Businesses may, for example, require two separate HR systems in order to be compliant with two separate sets of requirements.

3.48 As well as changes to the practical systems workers and employers use, should Scotland leave the UK, employers and employees in an independent Scottish state would no longer share the UK's framework of employment responsibilities and protections. This would mean that firms which currently operate in both Scotland and the wider UK risk having workers subject to different employment laws depending on their location. Complying with different legal obligations would increase the non-wage costs of employing staff. Since data from the Inter Departmental Business Register suggests there is a substantial number of registered enterprises in Scotland (2,665) with ultimate ownership in the rest of the UK, such costs are likely to be significant.

3.49 Underpinning the labour market framework are matters relating to social security and welfare, which have important impacts for people both in and out of work. These issues will be explored fully in a later paper in the Scotland analysis series. However, it should be noted that having consistency in a number of these arrangements makes it easier for employers, employees and their families to move around the UK for work. These include:

- Social security numbers and levels of contributions;
- Pension arrangements;
- Existence of state benefits such as Child Benefit, Child Tax Credits and their successor versions in Universal Credits; and
- The level at which such benefits are paid.

3.50 It has been suggested that in the event of an independent Scottish state, there could be a transitional period of shared administration given the deeply integrated nature of the current welfare system, for example, its dependence upon a core IT system run by the

UK Department for Work and Pensions. Any bid by the government of an independent Scottish state to make use of these systems would have to be negotiated with and agreed by the UK Government. However the systems would continue to be designed to deliver continuing UK priorities, and as such any shared arrangements would be likely to result in policy constraints for an independent Scottish state during this period.

Mobility

3.51 Currently, businesses have access to the whole UK domestic market with no formal borders or barriers to restrict the free movement of people. Evidence shows that international borders reduce economic integration by hindering the free flow of goods, capital and labour. This remains true even when countries are members of single markets, with low formal barriers to trade and free movement agreements.

3.52 For example, free movement of labour is a right of all EU citizens and should allow individuals to move where they are best suited or to where there are jobs. However labour mobility between European countries remains low despite the EU Single Market. Annual cross-border mobility between EU15[40] countries stands at an average annual rate of only 0.35 per cent.[41] This means that while one country may be suffering high unemployment, another country may have skills and labour shortages.

3.53 While some of this will be explained by the linguistic and cultural diversity of European countries,[42] it is not sufficient to assume that an independent Scottish state's shared history, language and business networks with the continuing UK would ensure a free flow of labour between the two states. Even between the US and Canada, two countries that also share many of the same characteristics, labour mobility is relatively low. Research by Helliwell found that migration was 100 times more likely within Canada as it is from the US to Canada.[43]

3.54 As discussed above, increasing skills levels raises workers' productivity. The primary source of skilled labour is, and will continue to be, achieved through developing the skills of the resident population. However Scotland's skills base is not limited to those that already live there. Rather, in an open economy like Scotland, the in-migration of individuals – particularly from the rest of the UK – helps play an important role in creating a skilled workforce that matches the need of businesses.

3.55 Some researchers have argued that the economies which have suffered most from persistently high unemployment have been those which are least flexible in matching their unemployed with available employment openings. In addition to inadequate education and training, explanations for labour market mismatch have related to insufficient geographical labour mobility.[44]

3.56 The precise impacts of leaving the UK for an independent Scottish state on the availability of skilled labour are difficult to predict. However, the size and scale of the UK labour market means it is easier for employers to match skills and aspirations to jobs. With a considerably smaller domestic market, employers in an independent Scottish state might face greater difficulties in recruiting workers with the skills that they need.

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[40] EU15 refers to the 15 member countries in the European Union prior to the accession of ten countries on 1 May 2004.

[41] OECD, *Mobility and migration in Europe*, OECD Economic Surveys: European Union, 2012.

[42] See for example, Bartz K. and Fuchs-Schündeln N., *The Role of Borders, Languages, and Currencies as Obstacles to Labor Market Integration*, CEPR, 2012.

[43] Helliwell, J. F., National Borders, Trade and Migration, Pacific Economic Review 2(3), 1997.

[44] See CEPR, Unemployment mismatch and labour mobility, retrieved May 2013, <http://www.cepr.org/pubs/Bulletin/meets/357.htm>.

3.57 Research undertaken on behalf of Futureskills Scotland examined the skills content of Scottish jobs compared to the rest of the UK.[45] The results of this research show that whilst Scotland's workforce is relatively more skilled, on average, jobs in Scotland are characterised by lower levels of skill content than in the rest of the UK across almost all measures of skills that are considered. Hence mobility of labour between Scotland and the rest of UK helps to ensure a better matching of skills to jobs. For example, Research by Findlay examined Scottish migration to the South East of England in particular.[46] Here employment was the most common reason for migration, and significant numbers moved for career progression or achieved it once working in the area. Some 82 per cent of respondents in the research who had a university degree moved to the South East to get their very first job after graduation. Although significant numbers of people from Scotland migrate to the South East of England, the reverse is also true, and GROS figures show that Scotland has in fact made net gains in relation to Scotland-South East migration in recent years.

3.58 An independent Scottish state may decide to alter its immigration policy as a mechanism to try and offset any changes in migration flows from the continuing UK. However, as stated in Chapter 1, should an independent Scottish state become part of the Common Travel Area (CTA) or the Schengen Area, it would need to align its migration policy in certain aspects with the other members of those areas. These issues will be considered in a future paper in the Scotland analysis series.

3.59 In short, complying with diverging regulations and rules would raise costs for businesses, which would in turn be passed along to consumers. Diverging tax, benefit and regulation systems, and changing cultural and social norms, are likely to impact on flows of labour, particularly over the longer term.

Box 3B: Cross border mobility between Northern Ireland and the Republic of Ireland

A study by PWC (2001)[1] identified and assessed the obstacles to mobility across the Irish border. The purpose being to propose solutions to address these barriers since doing so would '*assist in improving economic efficiency and … assist both parts of Ireland to enhance competitiveness.*'

In the survey of individuals undertaken a number of potential obstacles were identified. These included direct taxes, social security, pensions, health, and recognition of qualifications as significant barriers to mobility. The barriers identified in the survey of recruitment agencies based in Northern Ireland and the Republic of Ireland were broadly similar. These included housing (regarded as being particularly important), direct taxes, childcare and health issues. The responses from government departments indicated that direct taxes, indirect taxes, pensions, employment law, and housing were considered important barriers.

The report considered the factors impacting on mobility between the two jurisdictions in Ireland within the wider EU context and specifically the right to freedom of movement. It reflected that '*many of the obstacles to mobility evident between the North and South of Ireland were similar to those experienced across European borders*'.

[3] PricewaterhouseCoopers, *Study of obstacles to mobility*, North/South Ministerial Council, 2001, <http://www.northsouthministerialcouncil.org/obstacles-to-cross-border-mobility.pdf>.

[45] Dickerson A., *The skills content of jobs in Scotland and the rest of the UK*, futureskills Scotland, 2009.

[46] Findlay A., *Scottish Demography: Scottish Migration to and Return from SE England*, ESRC, 2007.

Conclusion

3.60 The right balance of labour market regulation is imperative to a well functioning labour market. Having a shared regulatory framework in the UK with devolved skills policy – to reflect differing Scottish priorities – means Scotland gets the best of both worlds. The current framework has created an integrated national labour market and helped create a more transparent and efficient allocation of resources. The UK's balance of labour market regulation is well regarded internationally and Scotland's labour market has performed well as an integral part of the UK-wide framework. Scotland's employment rate has often been the highest of the four parts of the UK over the last 10 years and consistently among the highest in the world. It is easy for people to move between Scotland and the rest of the UK to live and work.

3.61 The creation of an independent Scottish state would risk introducing frictions into the labour market; introducing costs for business and individuals and impeding labour market mobility and reducing skills availability. Such impacts could be further exacerbated should independence necessitate border controls between an independent Scottish state and the continuing UK. An independent Scottish state would also have to consider how it would finance its relatively high proportion of public sector employment and consider whether this is sustainable in the long run. This is of particular importance since an independent Scottish state would need to create a significant number of new public institutions requiring additional public sector employment.

Chapter 4:
Innovation and technology

Innovation is a key driver of economic growth in the UK. The UK's innovation performance is high by international standards. Businesses across the UK are able to access an integrated and vibrant knowledge base, through a shared infrastructure for innovation, research and development (R&D). UK-wide funding offered by institutions such as the Technology Strategy Board, supports collaboration between business and research institutions across the UK. And the Scottish Government has additional powers to support innovation, such as through the provision of grants and advisory services. **Businesses in Scotland currently have the best of both worlds – access to large-scale, UK-wide support as well as specific opportunities, targeted and funded by the Scottish Government.**

Entrepreneurs and innovators, and their customers, benefit from being part of the UK. A single framework for intellectual property operated by the Intellectual Property Office reduces the costs of bringing a new product to market and offers innovators greater protection for new ideas and discoveries across the whole of the UK. National standards provided by the British Standards Institution give greater certainty for consumers within a larger domestic market. The Technology Strategy Board operates a range of UK programmes to support business-led research and development, such as the Catapult Centres which invest in large-scale technological development, while others promote multi-partner collaborations from across the UK.

In the event of a vote for independence, the current innovation networks across the UK would become more fragmented. Partnership opportunities between research organisations and business in an independent Scottish state and the continuing UK would change significantly and could be lost. This would hinder the development of new goods and services, and potential new sources of economic growth and employment. Any differences between national standards and intellectual property protection could reduce trade opportunities between an independent Scottish state and the continuing UK.

Introduction

4.1 Innovation is a key driver of long-term economic growth, stimulating the development of new products and services and improving the performance of existing products, services, processes and systems. Evidence demonstrates that innovation supports greater productivity and faster growth.[1]

4.2 Innovation, in all its forms, is important to build a strong, sustainable and balanced economy. Innovative activity exists across all industries, involves many actors and involves significant costs and risks. Innovation performance is powerfully shaped by the innovation framework – the connected set of organisations (such as, firms, universities and financial actors) and institutions (such as laws, regulations and infrastructures) that shape the environment in which organisations innovate.[2]

4.3 Government has an important role to play in shaping and supporting this framework. Devolution within the UK means the Scottish Parliament and Scottish Government are empowered to take decisions on key policy areas to develop the knowledge base and encourage innovation in Scotland. This includes responsibility for education and business support, including advice on starting and growing businesses and funding to encourage innovation.

4.4 There are many elements of the innovation framework where it is more efficient – and in the interests of Scotland – for the UK Government to take action across the whole of the UK. These include, for example, enabling investment on a larger scale and ensuring consistency for businesses and institutions operating across the UK. The UK Government has responsibility for a single intellectual property framework, setting national standards, large programmes promoting collaboration between academia and businesses, and the UK Research Councils. As a result, businesses in Scotland have the best of both worlds. They benefit from the UK's large and shared knowledge base and infrastructure, and support provided by the Scottish Government that is tailored to specific Scottish needs.

4.5 In the event of a vote for independence, an independent Scottish state would need to decide whether it would try to replicate and imitate this innovation framework, or create its own new system. As noted in the UK Government's paper *Scotland analysis: Devolution and the implications of Scottish independence*, the UK's key institutions would operate on behalf of the remainder of the UK as before and have no power or obligation to act in or on behalf of an independent Scottish state. In addition to creating new institutions, the effectiveness of collaborations and networking between these new bodies and with businesses would determine future Scottish innovation performance.

4.6 This chapter provides an outline of the importance of the UK's shared innovation framework for businesses in Scotland. It focuses primarily on business-led innovation, research and development and the UK Government's measures to encourage greater collaboration between businesses and universities. The UK Government will set out more information on the benefits of the UK research and innovation framework, and the role played by Research Councils, later in the year.

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[1] For example, see BIS Economics Paper No. 15, *Innovation & Research Strategy for Growth,* December 2011, retrieved March 2013, <http://www.bis.gov.uk/assets/BISCore/innovation/docs/I/11-1387-innovation-and-research-strategy-for-growth.pdf>.

[2] Department for Business, Innovation and Skills, Economics Paper No. 15. *Innovation and Research Strategy for Growth,* December 2011, p.2.

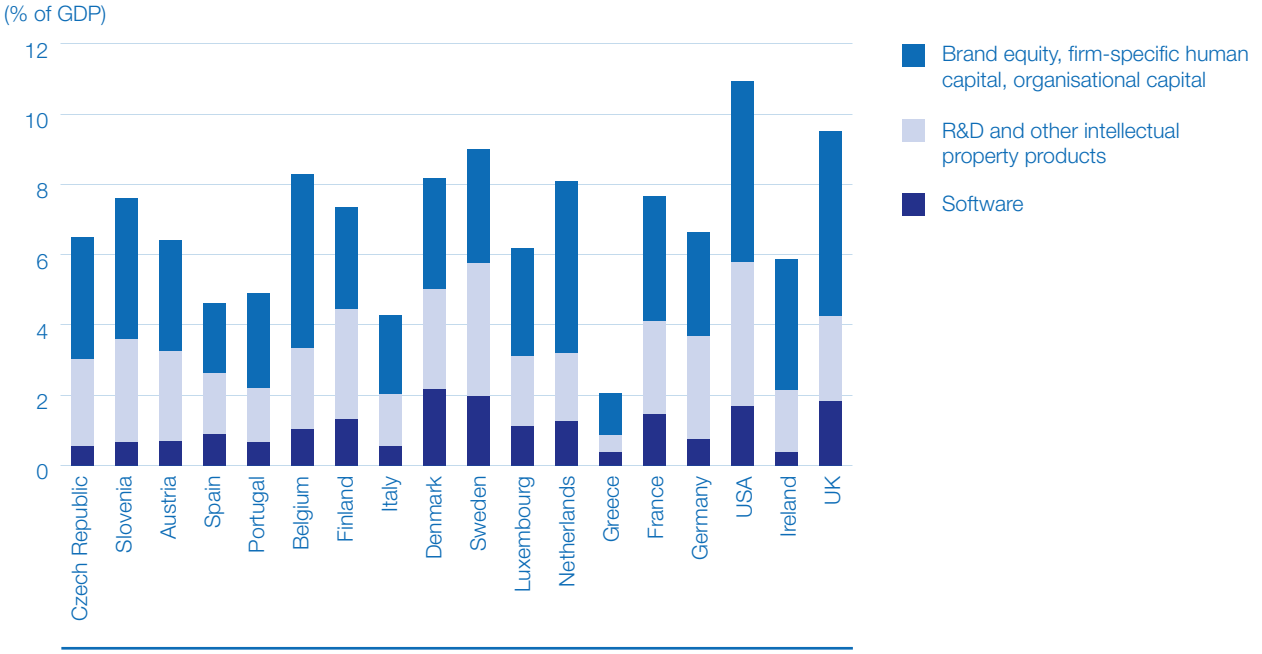
UK innovation performance

4.7 The UK ranks very highly (5th out of 141 countries) on the Global Innovation Index.[3] The UK performs particularly well in relation to strong institutions, sophisticated financial markets, knowledge and technology outputs and the economic impact of these activities.

4.8 A key factor in the UK's innovation performance is the strong science and research base. The UK, including Scotland, has an excellent reputation for world-class research, second only to the US.[4] The UK is also an attractive location for scientists and researchers[5] and university-industry R&D collaboration was the second best in the world according to the World Economic Forum in 2012.[6]

4.9 The UK's strong performance is also demonstrated by its success in attracting commercial investment in R&D from overseas. In 2010, 22 per cent of UK Business Enterprise Research and Development (BERD) was financed by abroad, compared with 9 per cent for France, 3.5 per cent for Germany and 0.5 per cent for Japan.[7]

Figure 4.1: Investment in intangible assets (percentage of GDP, 2009)



Source: Corrado, C., J. Haskel, C. Jona-Lasinio and M. Iommi, *Intangible capital and growth in advanced economies: Measurement methods and comparative results*, Imperial College Business School Discussion Papers, No. 2012/06.

3 INSEAD/World Intellectual Property Organization, *The Global Innovation Index 2012 Stronger Innovation Linkages for Global Growth*, 2012, retrieved April 2013, <http://www.wipo.int/freepublications/en/economics/gii/gii_2012.pdf>.

4 Elsevier, *International Comparative Performance of the UK Research Base – 2011*, a report prepared for the Department for Business, Innovation and Skills, 2011, p.2., retrieved March 2013, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32489/11-p123-international-comparative-performance-uk-research-base-2011.pdf>.

5 7th out of 59 in International Institute for Management Development, *World Competitiveness Yearbook 2012*, retrieved April 2013, <http://www.imd.org/research/publications/wcy/index.cfmIMD.>.

6 Department for Business, Innovation and Skills, *Annual Innovation Report 2012: Innovation, Research and Growth*, November 2012, URN 12/P188.

7 OECD, Main Science and Technology Indicators.

4.10 While R&D is the most accessible measure of firm innovation,[8] UK investment is particularly strong in other less tangible forms of innovation, such as the development of software and branding. Although there are issues around the comparability of the data, Figure 4.1 shows the UK performs better than most other leading economies when looking at knowledge assets such as skills, branding and software.

Support for business-led innovation

4.11 The current devolution settlement gives the Scottish Parliament wide powers to take decisions reflecting different priorities within Scotland to support business-led innovation. The Scottish Government is responsible for business growth and innovation policy in Scotland. It sets the economic strategy for Scotland and two regional development agencies (Scottish Enterprise and Highlands and Islands Enterprise) have key responsibility for delivery.

4.12 Organisations in Scotland also benefit from access to a range of UK-wide institutions that help to support innovation and collaboration. These include:

- **Intellectual Property Office (IPO)** – Responsible for granting Intellectual Property (IP) rights in the UK, including patents, designs, trade marks and copyright. A trusted IP framework is essential to enable creators, users and customers to benefit from R&D, knowledge and ideas;
- **The Technology Strategy Board** – The UK's innovation agency promotes, supports and invests in technology research, developments and commercialisation. It runs a number of UK-wide programmes including the Catapult Centres, which invest in large-scale technological development and are examined in more detail below. It plans to invest over £1 billion in 2011-2015 to support business-led research and development; and
- **UK Research Councils** – The UK has seven Research Councils. Each year they invest around £3 billion in research, training and infrastructure covering the full spectrum of academic disciplines across the UK.

4.13 These UK-wide institutions are able to fund projects on a larger scale to support a critical mass of research across a wider range of topics. This means the risks and rewards from such investment in research and technological innovation can be shared across the whole of the UK. Services can also be provided at reduced costs given the large domestic market, and the integrated nature of the UK research and innovation framework creates a shared and vibrant knowledge base, with greater opportunities for academia and businesses to collaborate across the UK. More detail on these institution's business-facing activities is set out below.

Intellectual Property Office

4.14 Every size of business – from individual inventors to the largest companies – relies on IP protection to commercialise their innovations. Protecting intellectual property is fundamental for encouraging innovation and growth, and attracting investment both domestically and from foreign enterprises.[9] Scottish entrepreneurs and innovators currently benefit from IP protection in the UK-wide market of over 60 million consumers through one

[8] The UK has long been known to have relatively low R&D expenditure relative to comparator countries, but this is largely explained by the UK's sectoral mix. See *Annual Innovation Report 2012*.

[9] Confederation of British Industry, *Submission to the Independent Review of Intellectual Property and Growth*, March 2011, retrieved March 2013, <http://www.cbi.org.uk/media-centre/press-releases/2011/03/robust-intellectual-property-system-critical-for-growth-cbi/>.

single, low-cost application to the UK IPO. As IP rights are territorial, innovators, creators and authors have access to this regime to protect their innovations and support their creativity throughout the UK, but only by special agreement outside of UK borders. For example, a Scottish author can currently market (and profit from) their work throughout the UK with the confidence that it will be protected.

4.15 The UK IPO is self-funding and economies of scale enable it to keep costs low. This helps to hold down prices for applicants, but also allows the IPO to reinvest in assistance for UK businesses. For example it operates online IP Healthchecks to help advise businesses on how to protect and exploit their intellectual assets. The IPO also funds innovation boosting schemes through its Fast Forward competition. For example, the Easy Access IP initiative, a collaboration between the University of Glasgow, King's College London and the University of Bristol, aims to make early stage IP more easily evaluated by and available to businesses across the UK.[10]

4.16 An independent Scottish state would face the financial implications of establishing and administering a separate Intellectual Property Office. Entrepreneurs and innovators wishing to operate in both that state and the continuing UK would have to protect their intellectual property in two separate states. These implications are discussed in more detail at Annex A. Any differences in intellectual property protection that might develop over time could also reduce trade opportunities between an independent Scottish state and the continuing UK, as firms may be deterred by the cost and bureaucracy associated with protecting their intellectual property through two different systems (see Chapter 2).

Technology Strategy Board

4.17 The Technology Strategy Board is the UK's innovation agency, which operates in partnership with the devolved administrations. In Scotland, the Technology Strategy Board works closely with the Scottish Government, Scottish Enterprise, Highlands and Islands Enterprise, the Scottish Funding Council and many other Scottish partners and organisations to support innovation and to actively encourage the participation of Scottish businesses in its programmes and activities. The Technology Strategy Board's programmes are open to businesses from across the UK and operate on a purely competitive basis. Scottish businesses are able to access both the full range of UK-wide Technology Strategy Board programmes and funding opportunities, as well as those offered only in Scotland by the Scottish Government.

4.18 The Technology Strategy Board's work centres on identified technology themes, which are chosen to reflect economic priority sectors throughout the UK and encourage co-development and co-investment with other public institutions (including those in Scotland such as Scottish Enterprise) and the private sector. For example:

- Technology Inspired Collaborative R&D projects aim to stimulate innovation across key enabling technology areas such as biosciences and advanced materials. The Technology Strategy Board developed the competition in partnership with Scottish Enterprise, who actively promoted the programme in Scotland. Both organisations have contributed to its funding (£17.75 million in total, of which £15 million was contributed by the Technology Strategy Board);

- To date, and since it was launched in July 2007, the Technology Strategy Board has funded around 400 projects in Scotland through its Collaborative Research and Development programme. This represents over £65 million in grant funding. This programme also gives Scottish businesses a tried and tested mechanism and

[10] See <http:www.easyaccessip.org.uk/about-us/> for more details.

valuable opportunities to forge relationships and build effective collaborations with leading businesses and universities from across the UK;

- In 2012 the Technology Strategy Board invited cities across the UK to compete for a £24 million Future Cities Demonstrator project. Around 30 cities submitted bids, and in January 2013 Glasgow was announced as the winner.

4.19 The Technology Strategy Board also facilitates knowledge transfer, enabling the UK's innovation communities to connect, collaborate and find out about new opportunities in key sectors. Its 15 Knowledge Transfer Networks (KTNs) do not replace local or sectoral knowledge transfer networks, but operate at a UK-wide level and cover a range of technology areas. A number of the KTNs are either wholly located in or have bases in Scotland (for example, the Biosciences KTN is headquartered in Scotland at the Roslin Biocentre), and all are working and interacting with businesses, universities, research institutions and other organisations and partners in Scotland, and are easily able to connect and communicate with the KTNs' 60,000 strong UK-wide membership.

4.20 In addition, Scotland is a major participant in the Technology Strategy Board's Knowledge Transfer Partnerships (KTPs), part-funded by the Scottish Funding Council. KTPs help UK businesses to improve their competitiveness, productivity and performance by accessing academic expertise. The development of collaborative partnerships can stimulate innovation and transform the participating businesses. Over 13 per cent of businesses participating in the KTPs are Scottish.[11]

Catapult Centres

4.21 As part of the UK, Scotland also benefits from the Technology Strategy Board's capability to invest in innovative technological development on a large scale. Substantial levels of investment are necessary if the UK, including Scotland, is to exploit new and emerging technologies. The Technology Strategy Board is currently investing over £200 million to develop an elite network of six Catapult Centres across the UK, to bridge the gap between research and technology commercialisation and to reduce the risks for business.

4.22 The Catapult Centres are being established in a number of technology themes of particular interest to businesses in Scotland and also reflect particular areas of Scottish capacity and know-how. This includes High Value Manufacturing (the AFRC in Strathclyde is a constituent part); Cell Therapy (which will work closely with the Edinburgh Bio-Quarter and other Scottish partners), Satellite Applications, Connected Digital Economy, Transport and the Offshore Renewable Energy Catapult (see Box 4A).

4.23 The Scottish Government is presently creating a network of Technology Innovation Centres (TICs) in Scotland,[12] and it is envisaged that these will feed into and complement the Catapults. Businesses in Scotland will be able to access and benefit from both the TICs and the Catapults according to their needs.

[11] More information on KTPs can be found at: <http:www.ktponline.org.uk>.

[12] £30 million of public funding – supported by the Scottish Funding Council and led by the universities of Glasgow and Edinburgh – is being invested, retrieved 7 June 2013, <http://www.scotland.gov.uk/News/Releases/2013/04/over-2000-jobs-at-new-30-million-innovation-centres>.

Box 4A: Offshore Renewable Energy Catapult

This Catapult Centre, primarily located in Glasgow with an operational centre in Northumberland, will focus on technologies applicable to offshore wind, tidal and wave power.

The Carbon Trust, National Renewable Energy Centre (Narec) and Ocean Energy Innovation formed the winning UK-wide consortium bid. Other public and private sector partners include SSE, Scottish Power Renewables, Scottish European Green Energy Centre, Scottish Renewables and Scotland's enterprise agencies. It will receive up to £10 million per annum over 5 years (£50 million in total) from the Technology Strategy Board.

In addition to providing a boost for the local economy, organisations from across the UK can benefit from accessing these facilities. The Centre is also building strong links with other centres of excellence, such as the Wave Hub in South West England (which allows developers of wave energy devices to test new wave energy technology).

4.24 As separate states, an independent Scottish state and the continuing UK would be competitors. The extent of current collaboration would be difficult to maintain. The Technology Strategy Board would continue to undertake its functions on behalf of the continuing UK and, while representatives of an independent Scottish state might seek to make use of these arrangements, any such proposals would be subject to negotiation with the continuing UK.

UK Research Councils

4.25 The UK's Research Councils have contributed significantly to Scotland's strong performance for world-class research. In 2010/11 Scottish organisations received almost 13 per cent (£436 million) of all funding awarded by UK Research Councils.[13] This is a high proportion compared with Scotland's share of the UK population (8.4 per cent). The work of Research Councils in supporting both Higher Education Institutions and the translation of knowledge to business will be set out in more detail by the UK Government later in the year.

Other UK-wide organisations

4.26 A range of other UK-wide institutions work to improve innovation performance in Scotland and the rest of the UK. These organisations help to connect the research and innovation systems, but also help to improve products and services for businesses and consumers. For example:

- The BSI is the UK's National Standards Body and works with industries and consumers to develop standards that are recognised and apply across the UK. The BSI also represents the UK in international European and international standards. The most recent study conducted into the effect of formalised standards concluded that they contributed £2.5 billion per annum to the UK economy and technology dissemination via these standards contributed 13 per cent per annum to UK labour productivity growth in 1948–2002.[14]

[13] Data from UK Research Council's database and includes funding to higher education institutions (including grants, studentships, fellowships, research funding to Research Council Institutes and independent research organisations) and infrastructure funding.

[14] Department for Trade and Industry, *DTI Economics Paper 12: The Empirical Economics of Standards*, June 2005.

- The National Measurement Office ensures that fair and accurate measurement is available and used for transactions regulated by law. For example it is responsible for the Weights and Measures Act 1985. Each year in the UK, £342 billion of goods are sold on the basis of the measurement of their quantity. In addition, goods worth around £280 billion per annum are weighed/measured at the industrial/business-to-business level.[15]
- The Design Council promotes the use of design throughout UK businesses. Good design helps turn new ideas into practical products. The Design Council quote a 2008 report from Cambridge University's Institute for Manufacturing which calculated design expenditure in the UK at around £50 billion annually.[16]

Encouraging investment and collaboration

4.27 In addition to access to the UK's strong institutions, businesses benefit from UK Government measures designed to increase their level of investment in research and development. They also have opportunities to collaborate with partners across the large UK domestic market.

4.28 The UK Government provides generous R&D tax credits to incentivise investment. Small and medium size enterprises (SMEs)[17] are able to claim a super-deduction worth 225 per cent of their R&D expenditure. This means the SME R&D tax credit reduces the cost of qualifying R&D investment by up 28 per cent. For every £10 invested, companies can reduce the cost of qualifying R&D investment by £2.80. SMEs with no corporation tax liability can convert taxable losses attributable to R&D relief into a payable cash credit.

4.29 Large companies are able to claim either a 130 per cent super-deduction, or a 10 per cent 'above the line' (ATL) credit. This enables large companies to reduce the cost of qualifying R&D investment by 8 per cent. The ATL credit was introduced in April 2013, designed to increase the visibility of R&D relief and provide greater support to companies with no corporation tax liability by allowing them access to a payable cash credit. The ATL credit will fully replace the super-deduction in April 2016.

4.30 In 2010-11, the last year of available data, R&D tax credits provided almost £1.1 billion of relief to over 10,200 claimants across the UK, supporting £10.9 billion of innovative investment.[18]

4.31 In addition, the UK Government's Patent Box will give a reduced 10 per cent rate of Corporation Tax on profits from patents and other similar types of intellectual property (e.g. supplementary protection certificates, regulatory data protection and plant variety rights). The Patent Box is being introduced to encourage high value business investment in R&D and the commercialisation of technologies across the UK. For example, GlaxoSmithKline (GSK) has confirmed plans to invest more than £500 million in manufacturing in Britain as a result of the introduction of the Patent Box. Part of this

[15] Source: National Measurement Office, retrieved June 2013, <http:www.bis.gov.uk/nmo/about>.

[16] Design Council, *Design for Innovation: Facts, figures and practical plans for growth,* December 2011, retrieved June 2013, <www.designcouncil.org.uk/Documents/Documents/OurWork/Inisght/DesignForInnovation_Dec2011.pdf>.

[17] Under 500 full-time employees and either an annual turnover not exceeding €100 million or a balance sheet not exceeding €86 million.

[18] Note this figure relate to the previous (lower) rates of tax relief. Source: HM Revenue & Customs, Research and Development Tax Credits Statistics, August 2012, retrieved June 2013, <http:www.hmrc.gov.uk/statistics/research-tc/rd-introduction.pdf>.

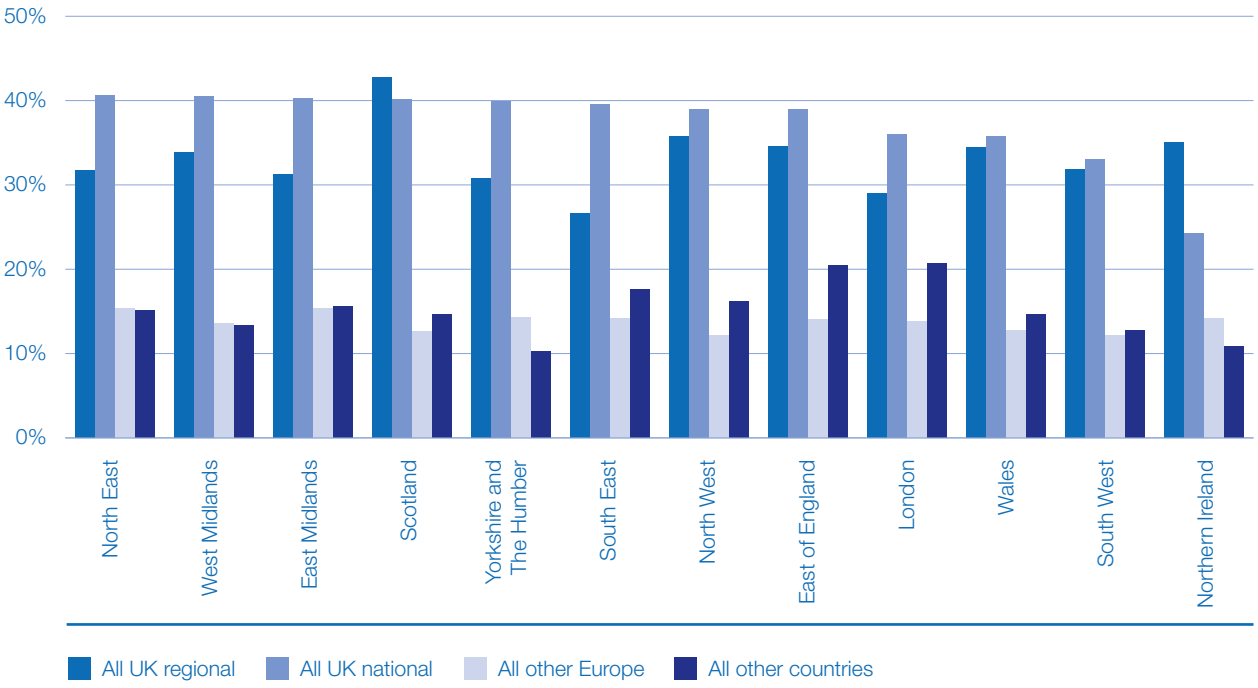
investment will see new jobs created in GSK's two Scottish manufacturing plants in Irvine and Montrose.[19]

4.32 In the event of a vote for independence, businesses in Scotland would no longer be able to benefit from the UK Government's tax credits or incentives. A government of an independent Scottish state would need to decide whether to offer similar incentives and how to administer the system.

4.33 The UK Government's strong commitment to research funding helps attract further private investment in the UK. For instance, the first round of the Biomedical Catalyst Fund committed £49 million to 64 projects and will leverage at least £25 million of private sector funding.[20] This will help innovative small companies and academics develop solutions to healthcare challenges.

4.34 Scottish innovators collaborate with others across the UK. The most recent available figures (Figure 4.2) suggest that around 40 per cent of Scottish innovators' cooperation partners in 2009 were located in the rest of the UK – only slightly below the share of partnerships with other Scottish organisations.

Figure 4.2: Geographical distribution of cooperation partners (percentage of strict innovators)



Source: Department for Business Innovation and Skills, *UK Innovation Survey 2009*, BIS Science and Innovation Analysis, December 2010, p.34.

4.35 An independent Scottish state would be able to seek more European and international collaborations, but even with strong existing relationships, partnership working with the continuing UK would be very likely to fall. This would primarily be due to reduced access to programmes operated by UK public sector institutions that would operate on behalf of

[19] Press release, GlaxoSmithKline, 22 March 2012, available online at <http://www.gsk.com/media/press-releases/2012/gsk-confirms-significant-investments-in-uk-manufacturing-ulverston-in-cumbria-selected-as-site-of-new-biopharmaceutical-factory.html>.

[20] HM Government, *Strategy for UK Life Sciences One Year On*, 2012, URN 12/1346, retrieved 10 April 2013, <http://www.bis.gov.uk/assets/biscore/innovation/docs/s/12-1346-strategy-for-uk-life-sciences-one-year-on.pdf>.

the continuing UK. The UK public sector institutions would have no power to act in or on behalf of an independent Scottish state, and no obligation to create the structures to do so. Scottish organisations could seek to increase their collaboration with each other, but they would increasingly need to seek partners from a smaller pool of organisations, both in terms of absolute numbers (there are an estimated 320,000 businesses in Scotland compared with 4.5 million businesses in the rest of the UK)[21] and in terms of variety and depth of expertise. Potentially valuable partnership opportunities could be lost in both the separate states as a result.

Conclusion

4.36 Scotland contributes to, and benefits from, the UK's strong international innovation performance and innovation framework. There are many elements of that framework where it is more efficient – and in the interests of Scotland and Scottish businesses – for the UK Government to take action across the whole of the UK. These include, for example, enabling investment on a larger scale and ensuring consistency for businesses and institutions operating across the UK.

4.37 So businesses in Scotland currently have the best of both worlds – access to that UK-wide support as well as specific opportunities, targeted and funded by the Scottish Government.

4.38 As separate states, an independent Scottish state and the continuing UK would be competitors. The extent of current collaboration would be difficult to maintain. Partnership working with the continuing UK would be very likely to fall, primarily due to reduced access to programmes operated by UK public sector institutions that would operate on behalf of the continuing UK. While an independent Scottish state might be able to seek more European and international collaborations, or to stimulate more collaboration between Scottish organisations, potentially valuable partnership opportunities could be lost as a result.

[21] Business, Innovation and Skills, *Business Population Estimates for the UK and Regions 2012*, October 2012, retrieved June 2013, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/80247/bpe-2012-stats-release-4.pdf>.

Chapter 5:
Communications and transport

The UK's communications and transport infrastructure is an important driver of growth. Doing business online, using postal services and utilising the transport network to move goods and people around the UK all bring benefits to business and consumers. Creating barriers within what are currently cross-UK networks risks fragmentation and introducing inefficiency to the market.

The management of spectrum and telecommunications networks across the UK brings benefits from economies of scale. The UK Government is working hard to improve UK residents' access to these networks, as increased uptake of broadband delivers productivity gains and helps deliver jobs. **Scotland's rural areas are benefitting significantly from the Government's scheme to rollout high speed broadband to rural areas with Scotland receiving £100.8 million of the £530 million budget during the current Spending Review period.**

The UK Government is also committed to maintaining the Post Office network and the Royal Mail's "one price goes anywhere" universal postal service across the whole of the UK. Operating the postal network across the UK creates economies of scale which help deliver a comprehensive provision of services – **supporting, for example, more than 90 per cent of Scottish rural or small businesses that use or rely on the Royal Mail's provision of the universal postal service.**

Investment in UK rail, road, aviation and other modes of transport helps goods and people move more quickly, easily and efficiently around the UK. All transport schemes are assessed on their economic viability and value, and are based on their benefit to all UK nationals. **In the event of a vote for independence, transport investments in the continuing UK which would directly or indirectly benefit an independent Scottish state may appear less attractive** from the UK perspective, or could require substantial investment from an independent Scottish state.

Introduction

5.1 The integration of the UK's domestic market is enabled on a practical level by our shared communications and transport infrastructure. Businesses and individuals around the UK are connected by our transport networks, kept in touch by phone or by internet via telecommunications managed on a UK wide basis, and by using our UK-wide postal services.

5.2 This chapter examines why operating these networks on a UK-wide basis helps businesses operate efficiently and how having shared infrastructure ensures enhanced connectivity between and within all parts of the UK. It considers how the scale of the UK supports the delivery of more comprehensive services (as providers derive commercial benefits from delivering services in highly populated areas which offsets less profitable operations in remote areas). Consumers in turn benefit from better service provision.

Telecommunications

5.3 The Digital Economy is increasingly important for economic growth. The internet in its entirety is believed to account for between 5.5 per cent and 7 per cent of GDP in the UK, with the Boston Consulting Group stating that the internet's measurable impacts on the UK economy contributed 8.3 per cent to UK GDP in 2010.[1] The World Bank estimates that broadband provision contributed a net increase of 0.5–1.2 per cent to the growth of the number of firms between 1998 and 2002.

5.4 Increased uptake of broadband delivers productivity gains and helps deliver jobs. Up to 600,000 jobs are predicted to be directly created by 2015 through the rollout of superfast broadband to around 9 million premises in the UK.[2] In addition, shifting 30 per cent of UK Government service delivery contracts to digital channels has the potential to deliver gross annual savings of more than £1.3 billion, rising to £2.2 billion if 50 per cent of contracts are shifted to digital.[3]

5.5 Consumers also benefit. PricewaterhouseCoopers (PWC) research shows that the annual average financial benefit to customers from shopping and paying their bills online in the UK is £365. Online retail sales in the UK are much higher (10.9 per cent of total sales) than the EU average (5.9 per cent). The potential total annual consumer savings from online transactions that could be realised by getting the 8.7 million adults in the UK who are not currently online to be able to access and transact online are estimated to be around £2.5 billion.[4.]

5.6 The use of communication technology in Scotland and the rest of the UK is shown in Table 5.1. Rural Scotland is particularly dependent on modern communications technology. Usage of fixed line telephones, the internet and fixed and mobile broadband among rural Scotland is as high, if not higher, than on average in the UK.

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1 Boston Consulting Group, *The Connected Kingdom*, retrieved May 2013, <https://publicaffairs.linx.net/news/wp-content/uploads/2012/03/bcg_4trillion_opportunity.pdf>.

2 James Meadway and Juan Mateos Garcia, *NESTA Broadband Policy Briefing: Getting up to Speed: Making Superfast Broadband a Reality*, *2009*, retrieved May 2013, <http://www.nesta.org.uk/library/documents/Getting-up-to-speedv5.pdf>.

3 Prepared by PWC for the Government UK Digital Inclusion Champion, *The economic case for digital inclusion,* October 2009, retrieved May 2013, <http://raceonline2012.org/sites/default/files/resources/pwc_report.pdf>.

4 Derived from PWC and ONS data as found in *National Digital Economy Strategy: Leveraging the National Broadband Network to drive Australia's Digital Productivity* (2011).

Table 5.1 Use of communication technology

% of adults	UK	Scotland		
		Total	Urban	Rural
Voice				
Fixed Line	84	82	81	87
Mobile	92	85	84	89
Smartphone	39	32	33	32
Internet				
Computer all types	79	70	68	78
Tablet	11	11	11	10
Total internet	80	71	69	79
Broadband (fixed and mobile)	76	68	67	76
Fixed broadband	72	64	63	72
Mobile broadband	13	12	11	17
Internet access to government	39	28	27	31

Source: Ofcom, *The Communications Market, 2012*.

Telecommunications networks

5.7 The telecommunications industry is characterised by instances of non-replicable networks. Non-replicable networks are those covering an entire population which, if they were to be fully replicated, would mean that neither the original network nor the newly created one would be able to earn a commercial profit. The largest example in the UK is the BT landline system which is only partly replicated by Virgin Media cable systems and Vodafone's international and business Ethernet connections.

5.8 Firms contemplating entering an industry of which non-replicable networks are a feature may have to face many years of loss making before total traffic grows to a sufficient level to justify the operation of two or more competing networks. There are, therefore, potentially significant impediments to entry into such industries with the result that there is a significant risk that there will be little competition from providers and they will become monopolistic. There is also a risk that prices may be higher and quality lower than if there were more competition. For these reasons, Ofcom,[5] the industry regulator in the UK, ensures that new entrants to the telecommunications market have open access to BT's Openreach telecommunications network and regulates the prices of many products supplied by the Openreach network. This has encouraged an active retail market for telecommunications services despite the existence of non-replicable networks.

5.9 Initiatives being proposed by the European Commission could, in future, reduce any impact that the creation of an independent Scottish state might have on the integrity and regulation of the UK telecommunications system. However, these initiatives would be subject to agreement by EU Member States and, if agreed, would still be likely to pose

[5] See Annex A for more information on Ofcom.

implementation and management challenges in the short and long term.[6] In addition, the issue of a separate regulator for an independent Scottish state would still need to be addressed, potentially increasing overall costs and introducing inconsistency in the way that telecommunications are regulated between Scotland and the continuing UK.[7]

Spectrum

5.10 Whenever you use Wi-Fi, a tablet or a mobile or cordless phone, listen to radio or watch TV you use electromagnetic spectrum. Spectrum is used in radar and two-way radios and is essential to the safe management of rail, air and sea transport. Taxis, traffic signals and emergency services are all controlled by systems using spectrum. Use of spectrum, therefore, impacts on many aspects of modern life.

5.11 Radio spectrum is estimated to deliver over £52 billion of value to the UK each year.[8] However, spectrum is a finite resource and requires effective and efficient coordination at national and international level to maximise its use. Spectrum management is managed on a UK basis and licenses – such as those issued to mobile phone companies – are issued accordingly.

5.12 Electromagnetic spectrum is a resource which can be exploited for profit by anyone but which is of no benefit to anyone if everyone uses it. Unless its use is controlled, use by one operator is likely to interfere with that of others. As a consequence, uncontrolled use of spectrum is of little value to anyone. There are major international agreements and treaties related to the management of spectrum to which the UK is a signatory.[9] In the UK, civil spectrum (separate from that used by the military) is assigned between users by Ofcom. This assignment is most obviously done via auctions, such as the February 2013 sale of the 4G spectrum, but Ofcom also uses a variety of other methods to regulate the use of spectrum within the UK.

5.13 In the event of a vote for independence it would not be straightforward to replan spectrum usage across an independent Scottish state and the continuing UK, in order to create a boundary that correlated with the border between the two states. Mobile telephony signals do not respect international borders unless they are specifically engineered to do so. To re-engineer existing signals in this way would lead to increased cost for all parties involved. In any case, mobile operators are already licensed to operate across the whole of the UK. They might seek to recover costs if required to replan networks to take account of a new border. As set out above, there is also the issue of who manages their compliance with their licence.

5.14 There are also issues with overlap in signals and international call charges. Overlaps matter much more with mobile, wireless and radio services than they do with fixed services. In this respect the UK benefits from its geography in that most of the UK has no

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6 The European Commission have made several proposals to move towards a Single Market in telecommunications, which include: suppliers regulated by one Member State will be able to offer services in other Member States; arrangements for spectrum auctions may be harmonised; new provisions for net neutrality; removal of roaming tariffs; and, easier switching between suppliers. Commissioner Kroes, speech to the European Parliament, 30 May 2013, retrieved June 2013, <http://europa.eu/rapid/press-release_SPEECH-13-484_en.htm>.

7 See Chapter 2 and Annex A for more details on the role of Ofcom.

8 2012 report by Analysys Mason for SHEX and DCMS, retrieved May 2013, <https://www.gov.uk/government/publications/impact-of-radio-spectrum-on-the-uk-economy-and-factors-influencing-future-spectrum-demand>.

9 International agreement on spectrum use is set out in the Radio Regulations, an international treaty agreed every three years at the World Radiocommunication Conference. The Conference, and work leading up to it, is organised by the International Telecommunications Union (ITU). Ofcom represents the UK in these discussions at the ITU and at its regional organisation, the European Conference of Postal and Telecommunications Administrations.

land border with other international states. A new land border would lead to a reduction in the efficiencies in spectrum use as providers seek to ensure services in one country do not interfere with others being used in neighbouring countries. For example, many of the places where there is little or no mobile coverage ("mobile not-spots") in Northern Ireland are near the border with the Republic of Ireland, since UK mobile network operators can only operate from one side of the border and in consequence there is a reduced commercial incentive to ensure full coverage. In contrast mobile not-spots in Scotland, Wales and England are currently the natural consequences of topography and low population density.[10]

5.15 In the event of a vote for independence and successful negotiations to join the EU, calls subject to customer contracts between an independent Scottish state and the continuing UK would likely be defined as "international calls" and therefore would be subject to the EU Roaming Regulation.[11] This means that, in principle, operators could lawfully impose roaming charges (in both directions) for those calls. For example, international charges are currently incurred on calls between Northern Ireland and the Republic of Ireland.

5.16 If roaming charges were introduced, these would be particularly onerous for those requiring data transfer. People from one country using their handset in the other would incur international roaming charges. Furthermore, callers on both sides of the border would inadvertently incur international roaming charges if their mobile phone connected to a mast on the other side of the border. This is a particular problem, for example, for British residents in Gibraltar who unintentionally are connected to Spanish networks. As noted earlier in this chapter, new proposals by the European Commission to remove international roaming charges, if agreed and implemented, could address this potential problem.

Rural-urban balance

5.17 Installation and maintenance costs of telecommunications networks are much lower per unit of use in urban situations than in rural ones. The higher the proportion of urban costs, the lower the average cost of provision of service over the network. For a large network spread across diverse areas, these lower urban costs can have a significant impact on reducing the average cost of provision across the whole network.

5.18 However, when these higher rural costs are spread across a small network they will significantly raise average costs. Therefore, if a small, highly rural network is split from a larger predominantly urban one, the result is likely to be a significant rise on average cost of provision but with little or no reduction in cost in the predominantly urban one. A standalone telecommunications network for an independent Scottish state would be likely, therefore, to operate at a higher average cost than the present network serving the whole of the UK.

5.19 Approximately 32 per cent of the Scottish landmass has a population density of less than 150 per square kilometre. This compares with under 15 per cent for the UK as a whole and 11 per cent for England. Telecommunications suppliers find it commercially challenging to supply such thinly spread populations. Therefore, it is possible that commercial investment and innovation in a standalone Scottish telecommunications network would be significantly reduced from current levels.

[10] These are areas of the UK where no mobile coverage is provided by any Mobile Network Operator.

[11] Regulation (EU) No 531/2012 of the European Parliament and of the Council of 13 June 2012 on roaming on public communications networks within the Union.

5.20 The commercial business case for broadband in rural communities is weak as the cost of deployment rises considerably. The Highlands and Islands in particular is faced with very high costs of deployment per premise for fixed broadband, and Scotland as a whole is benefiting significantly from the UK Government's scheme to rollout high speed broadband to rural areas across the nation. Scotland is receiving £100.8 million of the £530 million budget for this project during the current Spending Review period.[12] The rural broadband project is an example of how pooling resources across the whole of the UK has supported a public spending initiative for more sparsely populated areas of the UK, including in Scotland.

Network effects

5.21 Networks are more useful the greater their coverage of a given population. The wider the coverage the more certain that any potential user of the network can be that the person or institution they wish to contact can be reached by that means. This is equally true of fixed and mobile telephone networks and radio communications. The more complete a network becomes, the greater the average benefit it yields to users.

5.22 It has been found that the more connected a society is the greater the potential for productivity growth from the use of telecommunications technology. For example, these network effects have been found to contribute 0.3 to 0.4 per cent per annum to GDP in the UK.[13] Indeed, where few people are connected investment in telecommunications technology may reduce productivity growth rather than increase it. In the event of a vote for Scottish independence, this GDP growth would be expected to be lower as a result of any disruption to the coherence of telecommunications networks between the continuing UK and an independent Scottish state.

Postal services

5.23 Postal services are used by millions of people every day for personal and professional reasons. Royal Mail delivers around 58 million items a day to 29 million addresses across the UK – of these 4.5 million items a day are delivered to the 2.5 million addresses in Scotland.

5.24 Postal matters are generally reserved and the UK Government has a legal obligation to provide a universal postal service in accordance with EU Postal Services Directives.[14] In some respects the UK's provision for postal services goes beyond the EU minimum standard: for example the Royal Mail's six days a week service. The Postal Services Directive requires all Member States to provide collection and delivery services not less than five working days a week. The Royal Mail is the UK's designated universal service provider. Other than the UK, only Denmark, Germany, France and the Netherlands are required by national law to provide a 6 days per week postal service.[15] Ireland, for example, is among the largest grouping of states within the EU that provides a 5 days per week universal service.

5.25 As with telecommunications, post is regulated by Ofcom, which has a primary duty to ensure the provision of the universal postal service and has powers to intervene if that service is at risk.

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[12] See Annex C for more information.

[13] Gruber H. and Kouptrompis P., *Mobile Telecommunications and the Impact on Economic Developmen*t, Economic Policy 52nd Panel Meeting, Centre for Economic Policy Research, 22-23 October 2010.

[14] See <http://ec.europa.eu/internal_market/post/legislation/index_en.htm>.

[15] Ofcom, *Review of postal users' needs – a consultation document on the reasonable needs of users in relation to the market for the provision of postal services in the United Kingdom*, October 2012, retrieved May 2013, <http://stakeholders.ofcom.org.uk/binaries/consultations/review-of-user-needs/summary/condoc.pdf>.

5.26 The UK national post office network comprises around 11,800 post offices of which only 373 'Crown' branches are directly owned and managed by Post Office Ltd (POL) (which operates independently of Royal Mail). The remainder are operated as privately owned businesses under agency or franchise contracts. At the end of March 2013, 5,351 outlets were urban (45 per cent) and 6,429 were rural (55 per cent). Of the 1,411 outlets in Scotland 457 were urban (32 per cent) and 954 were rural (68 per cent). The proportion of rural branches in Scotland (as also in Wales and Northern Ireland) is significantly higher than the England and UK averages.

Access to postal services and benefits for rural areas

5.27 Central to the UK's postal market is the six-days-a week, "one price goes anywhere", universal postal service provided by the Royal Mail. The universal postal service means that customers receive the same service wherever they are located in the UK, whether in cities or rural areas. Royal Mail's delivery network in Scotland includes 178 main delivery offices and 172 small delivery offices, many serving its more remote rural areas. Over 90 per cent of Scottish rural or small businesses use or rely on the universal service. There are very few postal operators that reach the Scottish islands apart from Royal Mail.

5.28 In addition the UK Government is committed to ensuring high levels of access to Post Office branches. Current policy is to maintain a national network of at least 11,500 Post Office branches compliant with six access criteria. These include requirements that 99 per cent of the UK population be within 3 miles and 90 per cent within 1 mile of their nearest Post Office outlet. In addition, 95 per cent of the total rural population should be within 3 miles, and 95 per cent of the population in every postcode district should be within 6 miles of their nearest Post Office outlet.

5.29 The consequence of maintaining such high levels of access is that not all branches are commercially viable. Therefore, to support this policy, the UK Government makes an annual network subsidy payment to POL to maintain branches which are not commercially viable but play an important social and economic role in the communities they serve. It is estimated that around 7,000 branches fall into the non-commercial category and these are predominantly small and rural branches. A significant proportion of Post Offices in Scotland are non-commercial.

5.30 This subsidy is paid to POL as a single annual sum (£210 million in 2012-13; £180 million in 2011-12; £150 million in 2010-11). There is currently no mechanism for allocating the subsidy down to individual non-commercial branches. In the last 5 years Scottish Government funding has been for two Post Office Diversification Schemes of around £1 million each.

5.31 In the event of a vote for independence, an independent Scottish state would have to consider how to fund the significant non-commercial elements of their Post Office network if it wished to maintain the current level of service. It would be unlikely to achieve the economies of scale of the current UK-wide network, which helps support the provision of services to remote areas.

Post and the business environment

5.32 Post is essential to our economy, with the UK letters market worth around £6.6 billion. The postal sector continues to face challenges, including the decline in volumes of traditional letters (fallen by over a quarter since 2006). However, nearly 90 per cent of businesses send post every day and large companies make the most regular and extensive use of post, with around 50 large businesses accounting for 40 per cent of mail volumes. Royal Mail is also one of the largest employers in the UK employing around 150,000 people, some 12,500 in Scotland.

5.33 Creating a border for mail would have operational and commercial implications for UK postal operators and also impact the businesses and consumers that utilise their services on both sides of the border. The free movement of post across the border could be subject to controls, potentially impacting on the cost and quality of service (e.g. time it takes to deliver) between the two states and harming the provision of goods and services.

5.34 There may also be issues around the price of posting letters and parcels between the continuing UK and an independent Scottish state. If Scotland voted to leave the UK, and negotiated entry into the EU, the continuing UK would need to re-categorise an independent Scottish state for postal purposes as if it were any other EU Member State. Differences in pricing could create new difficulties and confusion for businesses and individuals when sending cross-border post.

Transport

A shared UK network

5.35 Effective modes of transport—including quality roads, railways, ports, and air transport—play a vital role in ensuring that the UK's domestic market is physically joined up, as well as supported by shared set of common standards and regulations. Transport links enable businesses to get their goods and services to market efficiently and securely within the UK and facilitate the movement of workers to the most suitable jobs.

5.36 There is demand – both from Scotland and the rest of the UK – for fast and reliable transport links across the UK. Whilst travel is not purely limited to those with a business focus, the ability to move freely and easily within the UK helps to support and increase growth within a shared economy. The demand for strong transport links is demonstrated by the volume of traffic between various parts of the UK:

- In 2009 there were an estimated 24 million vehicle crossings, in both directions, between England and Scotland.[16] In 2010 17.9 million tonnes of freight were moved by UK HGVs from England to Scotland and 14.8 million tonnes were moved in the opposite direction.[17]
- In 2010 there were over seven million rail passenger journeys to and from Scotland and the rest of the UK with 2.3 million tonnes of freight leaving Scotland by rail and 1.6 million tonnes of freight entering Scotland.[18]
- In 2011 there were 825,874 passenger journeys between Scotland and Northern Ireland.
- In 2010 over 16 million tonnes of freight were moved by sea from Scottish ports to other parts of the UK.[19] In the same year over 5.5 million tonnes of freight were discharged at Scottish ports from other parts of the UK.[20]

5.37 The effect of having an international border on movement of people and goods between the two states, in the event of a vote for Scottish independence will be considered in a later paper in the Scotland analysis series. However, if the border was subject to controls, this would be likely to inhibit the movement of people and goods.

[16] Road traffic flows at <www.dft.gov.uk/traffic-counts>.

[17] Scottish Transport Statistics No29, 2010 Ed.

[18] Scottish Transport Statistics No29, 2010 Ed.

[19] Scottish Transport Statistics No29, 2010 Ed.

[20] Scottish Transport Statistics No29, 2010 Ed.

Transport investment

5.38 All transport schemes undergo economic assessment in order to assess their value and viability. This economic assessment takes into account the business and economic benefits that flow from investment in our transport infrastructure. Current examples of transport investment within the UK that provide benefits to Scotland are set out in Box 5A.

5.39 The operation of a domestic market across the UK and the significant flows of business, workers and trade within our shared business framework create a demand for good transport links between all parts of the UK. For the reasons considered in earlier chapters of this paper, should Scotland leave the UK, trade and labour market mobility may reduce over time. Consequently, the demand from businesses for improved travel links between the two states could reduce, resulting in a weaker economic case for investment.

5.40 In deciding what rail, road and aviation projects to invest in, the UK Government considers what would be most beneficial for businesses and individuals across the whole of the UK. This means that benefits to people in Scotland and to the Scottish economy are taken into account when making investment decisions, such as in the example in Box 5A of the High Speed (HS) 2Y network from London via Birmingham to Leeds and Manchester.

5.41 Should Scotland leave the UK, the UK Government would have no clear reason to factor in benefits to an independent Scottish state when appraising a case for investment. This could lead to transport improvement projects which provide more benefits to an independent Scottish state than to the continuing UK appearing less attractive to the UK Government. As a result, projects could be delayed or not go ahead at all. Alternatively a transport project may require a substantial financial contribution from the government of an independent Scottish state to make the project more attractive. If the government of an independent Scottish state did not wish to provide that investment as the project was not one of their own priorities, this would also result in work being delayed or halted.[21]

[21] See Annex C for more information on HS2.

Box 5A: Examples of UK Government transport measures benefiting Scotland

Rail

Investment in the rail network to improve sections of route that lead to Scotland, but go through England, generally gives an improved service to Scotland in terms of faster or more frequent journeys from or through England. For example, recent investment in rail electrification in North West England, providing extra tracks and increase in power supply will enable better, more frequent and faster services between England and Scotland. This will bring benefits to business travellers, to freight movements and to households more generally.

Scotland gets very significant benefits from improved connectivity to and through England. For example, the biggest benefit that HS2 will bring to Scotland is the reduction in journey times of up to an hour once the Y network from London via Birmingham to Leeds and Manchester is complete. It is estimated these better services would help provide benefits to the Scottish economy of around £3 billion.[1] HS2 will improve access to international markets through the connection to Heathrow but also by allowing for direct rail access to continental Europe through HS1. But the benefits also go in the other direction. People in England and Wales will be able to travel to Scotland faster and more easily, with improved capacity, connectivity and comfort. The benefits brought about by HS2 are therefore spread right across the UK.

In addition, the UK Government is taking forward a study in collaboration with Transport Scotland to examine and articulate rail connectivity needs north and south of the border and to look at how best to boost capacity and cut journey times to under three hours so that Scotland can gain the most benefit from a High Speed Britain.

Road schemes

Similarly, account is taken of the importance of traffic flows between strategic destinations in the UK when appraising road schemes. For example, in 2011 the definition of "Strategic National Corridors" (SNC) was adjusted in order to recognise the specific importance of connecting the four capital cities of the UK. This redefinition led to the categorisation of the A1 from Newcastle to the Scottish Border as a SNC. Being a SNC ensures the strategic importance of the route is recognised.

Aviation

The UK Government consulted on the Aviation Policy Framework in 2012 and published the final version of the framework in March 2013. It sets out the Government's objective to ensure the UK's air links continue to make it one of the best connected countries in the world. The Framework identifies airports in Scotland as being important in maintaining this connectivity, and also in having a key role in relieving pressure on the busiest airports in South East England. The Aviation Policy Framework includes measures aimed at supporting airports across the UK and extending the existing regional liberalisation policy to further enhance the attractiveness of regional airports.

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[1] Department for Transport, *High Speed Rail: Investing in Britain's Future Phase Two: The route to Leeds, Manchester and beyond*, p.83, January 2013.

Conclusion

5.42 This chapter has highlighted the importance of communications and transport networks to the efficient operation of the UK economy. The UK's shared telecommunications network, postal service and transport infrastructure connects individuals and businesses across all parts of the UK, making it easier to do business and keep in touch with each other.

5.43 Cross-UK networks bring economies of scale. Providing post and telecommunications services on a UK-wide basis helps support the more expensive provision of these services in harder to reach places, such as Scotland's rural areas. Splitting up these networks builds barriers to trade, risks fragmentation and inefficiency in the market, and potential difficulties in management across the continuing UK and an independent Scottish state.

5.44 As part of the UK, Scotland benefits from pooling resources across the UK to invest in services considered in this chapter; for example, the UK Government's commitment to provide broadband and mobile coverage in rural areas, along with the maintenance of urban and rural branches of the Post Office Network. It will also benefit from current committed and future investment in the UK's transport network, including the HS2 rail scheme.

Annex A: Foreign direct investment, regulations and institutions

A.1 This annex provides further detail on the UK's regulatory and institutional structure to provide background context to the material contained in Chapters 1 and 2. It covers: additional analysis of foreign direct investment, the UK's regulatory and institutional performance in a selection of international surveys; and information on the pros and cons of a single economic and competition regulator model. Finally the annex highlights some case studies of UK-wide institutions and their role, namely: the Intellectual Property Office; Ofcom; and UK Trade and Industry.

Part A: Additional analysis on foreign direct investment

What is Foreign Direct Investment and why does it matter?

A.2 Inward FDI entails investment in an existing or new UK company by a foreign entity, to gain lasting and significant managerial influence.[1] It covers investment in machinery, equipment and factories, as well as mergers, acquisitions and joint ventures. In general, FDI could represent anything from the exploration of North Sea Oil and Gas, to investment in high street shops.

A.3 For the host country, attracting FDI has an array of benefits, which explain why countries compete to encourage it. FDI can help to create jobs, raise tax revenues, broaden and deepen the skills and technology base, increase exports and broaden world trade networks.

A.4 Furthermore, FDI can help to improve the efficiency of local firms by raising competition and, therefore, potentially improving competitiveness and productivity. There can also be important spillovers to the host nation in the form of technological diffusion and the improved skill-base of the labour force, which feeds into local companies in the supply chain.[2]

A.5 The impact of FDI depends heavily on the host country's specific characteristics. For instance, its impact on the host country is thought to be enhanced in countries, like the UK, with a highly skilled workforce, advanced technology and developed financial markets.

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1 OECD, *OECD Benchmark Definition of Foreign Direct Investment*, Fourth Edition, 2008, retrieved March 2013, <http://www.oecd.org/fr/daf/inv/statistiquesetanalysesdelinvestissement/fdibenchmarkdefinition.htm.>.

2 Further analysis on the impacts of FDI spillovers see Meyer, K.E. & Sinani, E., 'When and Where Does Foreign Direct Investment Generate Positive Spillovers? A Meta Analysis', Journal of International Business Studies, vol.40, Issue 7, 2008 and Harris, R. 'Spillover and Backward Linkage Effects of FDI: Empirical Evidence for the UK', Spatial Economics Research Centre Discussion Papers, LSE, 2009.

What drives a company's choice of FDI location?

A.6 Broadly speaking, there are three main reasons why firms decide to invest abroad. First, companies are motivated by the continuous search for improved access to markets. Second, companies' desire to minimise production costs by taking advantage of specialisation, cheaper labour and economies of scale. Third, firms seek to exploit the know-how and technological and scientific expertise available in the destination country.

A.7 In general, the evidence suggests that strong economic fundamentals are the most important determinant of FDI location.[3] In most cases, these include comparative advantage, political and macroeconomic stability, market size, real income levels, skills base and the quality of infrastructure.

A.8 Foreign investment may also be influenced by specific incentives offered by host countries. These can take various forms, but financial incentives such as lower taxes, targeted grants and preferential loans are the most common.

A.9 However, empirical research suggests these incentives have only a limited impact.[4] Foreign investors first consider the economic fundamentals. Financial incentives are typically a secondary motive, for example, when a firm considers two or more similar locations for its investment.[5] Furthermore, investors who are mainly attracted by the financial incentives, rather than economic fundamentals, are more likely to be relatively footloose and may relocate if offered better incentives elsewhere.[6]

FDI trends in the UK

A.10 The UK has a very good record in attracting FDI. According to the United Nations Conference on Trade and Development (UNCTAD) data, the stock of FDI in the UK totalled $1.2 trillion in 2011 making it the second biggest destination for FDI in the world, behind only the US (Figure A.1).[7] On a per capita basis, the UK FDI stock also compares favourably against both France and Germany.

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3 OECD, *The Economics of International Investment Incentives*, 2002, retrieved February 2013, < http://www.oecd.org/daf/inv/investment-policy/2487874.pdf>.

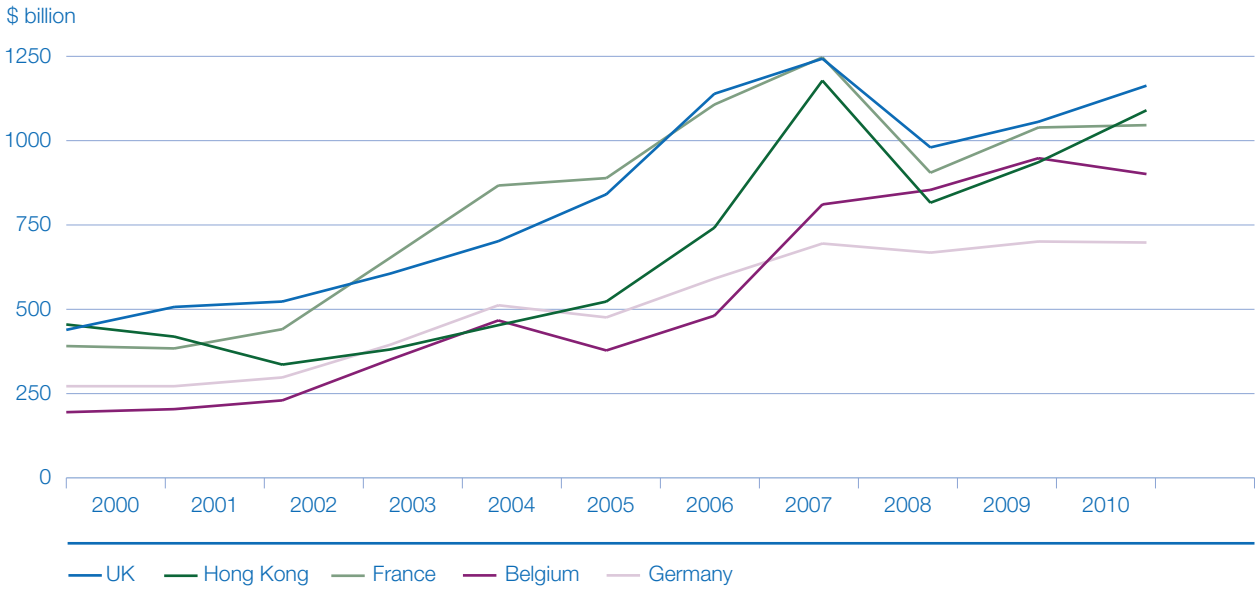
4 OECD, *The Economics of International Investment Incentives*, 2002, p.169.

5 For example, see World Bank, 'Tax Incentives: Using tax incentives to attract FDI', *Public Policy for the Private Sector*, Note Number 253, 2003, retrieved February 2013 <http://rru.worldbank.org/documents/publicpolicyjournal/253moris-020603.pdf>.

6 OECD, *The Economics of International Investment Incentives*, 2002, p.169.

7 UNCTAD database, retrieved December 2012, <http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx?sRF_ActivePath=P,5,27&sRF_Expanded=,P,5,27>.

Figure A.1: Inward FDI stock



Source: UNCTAD (Top 5 nations excluding USA, $bn, current prices, current exchange rates).

A.11 Despite the reduction in inward flows of FDI in the aftermath of the global financial crisis, the UK remains a large recipient of FDI. In 2011, it ranked seventh in the world for inward flows of FDI, ahead of France and Germany.

A.12 ONS figures indicate that the stock of FDI in the UK totalled £766 billion in 2011, of which £438 billion came from Europe. The single largest source of FDI for the UK was the US, whose companies invested over £204 billion in the UK. The main sources of European FDI were Netherlands (28 per cent), France (13 per cent), Luxembourg (11 per cent) and Germany (11 per cent). FDI flows from Asia, Australasia and Africa remain relatively low. The presence of developing countries in the UK is much weaker, with India accounting for £2.8 billion, Russia £1.5 billion, South Africa £1.1 billion and China £0.8 billion.[8]

A.13 The data on FDI in Scotland is not comprehensive.[9] fDi Intelligence (2012) estimates that since 2003 there have been 745 FDI projects, with a total value of £24.6 billion, accounting for 76,000 new jobs.[10] UKTI data suggest a similar number of projects (735) but a lower number of new and safeguarded jobs (55,034). According to the Ernst & Young Survey,

[8] Office for the National Statistics, *Foreign Direct Investment Involving UK Companies*, 2011 (MA4), *Statistical Bulletin*, February 2013, retrieved February 2013, <http://www.ons.gov.uk/ons/rel/fdi/foreign-direct-investment/2011-ma4/stb-ma4-2011.html>.

[9] There are three main data sources containing information on FDI in Scotland: fDi Intelligence, Ernst and Young European Investment Monitor and the UKTI database. The data collected by these organisations is based on public announcements, intelligence and business surveys, and hence may not capture all FDI projects in Scotland. There are also some substantial differences between the different data sources, especially in terms of employment impacts. The UKTI data on employment effects is based on the information directly collected from foreign companies in Scotland; fDi Intelligence and E&Y European Investment Monitor employment data is based on estimates. All of these sources do not provide information on the stock of FDI in Scotland, only flows data is available. Finally, all sources focus on investment in physical assets, such as plant and equipment. Equity capital, reinvested earnings and intra-company loans which are included in the UNCTAD statistics are not captured by the estimations produced for Scotland.

[10] fDi Intelligence database from The Financial Times Ltd, retrieved December 2012. The data covers the period from January 2003 to October 2012.

in 2011 Scotland secured 76 FDI projects (10.9 per cent of all UK projects) accounting for around 4,876 jobs (16.1 per cent).[11]

A.14 fDi Intelligence data shows that sources of FDI inflows to Scotland are relatively concentrated in a few countries. Similar to the UK overall, Scotland's FDI position is largely driven by the strong relationship it holds with the US. The US was the top investor and accounted for 40 per cent of all FDI projects from 2003 to 2012.

A.15 Similarly, inward FDI to Scotland is concentrated in a few sectors (Table A.1). For instance, since 2003, the top five FDI sectors in Scotland accounted for around 40 per cent of all projects.[12] Software & IT services recorded the highest number of FDI projects (69), closely followed by 'Industrial Machinery Equipment & Tools' and 'Business & Financial Services'. The 'Food & Tobacco' sector was the largest job creator (11,658 jobs) and 'Coal, Oil and Natural Gas' brought in the greatest capital investment ($7.4 billion).

Table A.1: FDI trends in Scotland by sector (2003–October 2012)

Sectors	Number of projects	Jobs created		Capital investment	
		Total	Average	Total (USD m)	Average (USD m)
Software & IT services	69	3,658	53	635	9
Industrial Machinery, Equipment & Tools	68	2,957	43	281	4
Business Services	61	4,663	76	287	5
Financial Services	50	4,857	97	1,175	24
Coal, Oil and Natural Gas	47	7,453	158	7,399	157
Food & Tobacco	45	11,658	259	999	22
Alternative/Renewable energy	39	2,555	65	5,012	129
Textiles	30	2,082	69	560	19
Hotels & Tourism	28	4,258	152	1,828	65
Pharmaceuticals	28	1,649	58	289	10
Other sectors	280	30,778	109	6,161	22
Total	745	76,568	102	2,4624	33

Source: fDi Intelligence, from the Financial Times Ltd 2012.

Why firms invest in the UK: explaining the UK's attractiveness

A.16 Various international competitiveness rankings suggest the UK is regarded as one of the best places in the world to invest. For example, the World Bank's investment across borders indicators show that the UK outperforms the average for high income OECD countries on almost all individual measures included in the report.[13] In addition, as discussed in Chapter 2, the UK is listed seventh in the world for the overall ease of doing business by the World Bank.[14]

[11] Ernst & Young, *No room for complacency Scotland*, p.3, retrieved June 2013, <http://www.ey.com/UK/en/Issues/Business-environment/2013-Scotland-attractiveness-survey>.

[12] fDi Intelligence database from The Financial Times Ltd.

[13] The World Bank, Investing Across Borders Database, retrieved January 2013, <http://iab.worldbank.org/Data/Explore%20Economies/United-Kingdom>.

[14] The World Bank, *Doing Business Report 2013*, retrieved February 2013, <http://www.doingbusiness.org/>.

A.17 This assessment is consistent with OECD research.[15] Overall, the UK has relatively low barriers to foreign investment. Analysis of the barriers by sector shows that with the exception of fishing, transport and media industries, the UK received a score between 0 and 0.024 for all sectors (where 0 indicates fully open and 1 a fully closed sector).

A.18 The Ernst & Young 2013 International Executive Survey provides a detailed analysis of the relative attractiveness of the UK.[16] Within the UK, the quality of life, diversity, culture and language was considered most attractive, with 91 per cent rating this criterion as attractive and very attractive. Technology and telecommunications infrastructure came second (89 per cent), followed by stability and transparency of political, legal and regulatory environment (84 per cent). The UK was also assessed highly on indicators such as entrepreneurial culture (84 per cent), labour skills level (80 per cent) and domestic market (71 per cent).

A.19 The Ernst & Young survey from 2012 also provides a breakdown of the most important factors when evaluating the UK as a potential investment location. The UK's market size generally emerged as highly influential. Of the foreign executives surveyed 35 per cent stated the level of demand for their product in the UK was vital. The second most important consideration was the ability to use the UK as an export base to Europe which was noted by 20 per cent of respondents, rising to 31 per cent of respondents from Asia.[17] Other key motives include economic growth prospects for the UK, the existence of clusters of expertise and the ability of the UK to support research and innovation. Interestingly, research and innovation quality was also mentioned as a top feature the UK should display to remain a major destination for FDI.

A.20 A similar picture is painted by the information collected by fDi intelligence in relation to investment in Scotland. According to the information based on 81 projects in Scotland, the key reasons for investment were skilled workforce availability (37 per cent), domestic market growth potential (24.7 per cent), and proximity to markets or customers (24.7 per cent).[18]

[15] OECD, FDI 2012 *Regulatory Restrictiveness Index*, retrieved August 2012, < http://www.oecd.org/investment/fdiindex.htm>.

[16] Ernst & Young, *Staying ahead of the game*, p.22.

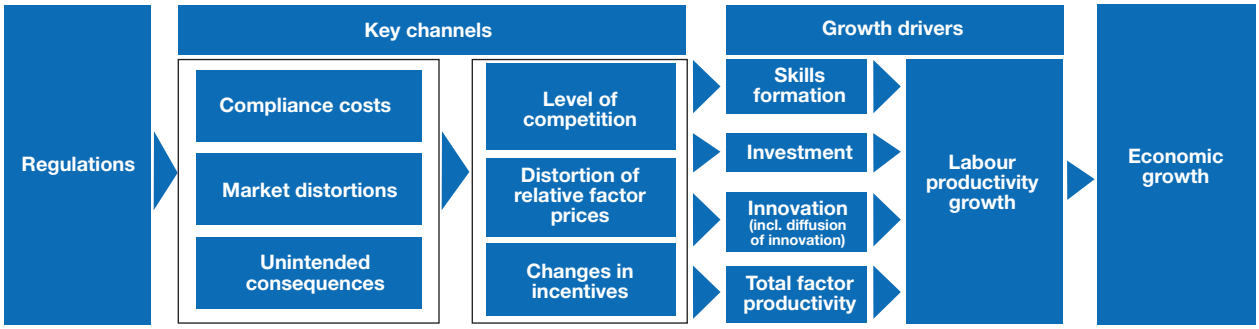
[17] Ernst & Young, *Staying ahead of the game*, p.26.

[18] fDi Intelligence database from The Financial Times Ltd.

Part B: Additional analysis on regulations and institutions

A.21 Regulation and institutions play an important role in 'greasing the wheels' of the economy. Figure A.2 illustrates how regulation can impact all the drivers of economic growth. Efficient and high quality regulation improves company performance and fosters the right conditions for investment, employment and consequently economic growth. Consumers also benefit through lower prices and the provision of better quality products and services.

Figure A.2: Channels through which regulation impacts on economic growth



Source: Frontier Economics (2012).[19]

A.22 The OECD Indicators of Product Market Regulation (PMR) are a comprehensive and internationally-comparable set of indicators. They measure policies promoting or inhibiting competition in areas of the product market where competition is viable. The latest available indicators measure the economy-wide regulatory and market environments in 34 OECD countries, as well as Brazil, China, India, Indonesia, Russia and South Africa in (or around) 2008; they are consistent across time and countries.

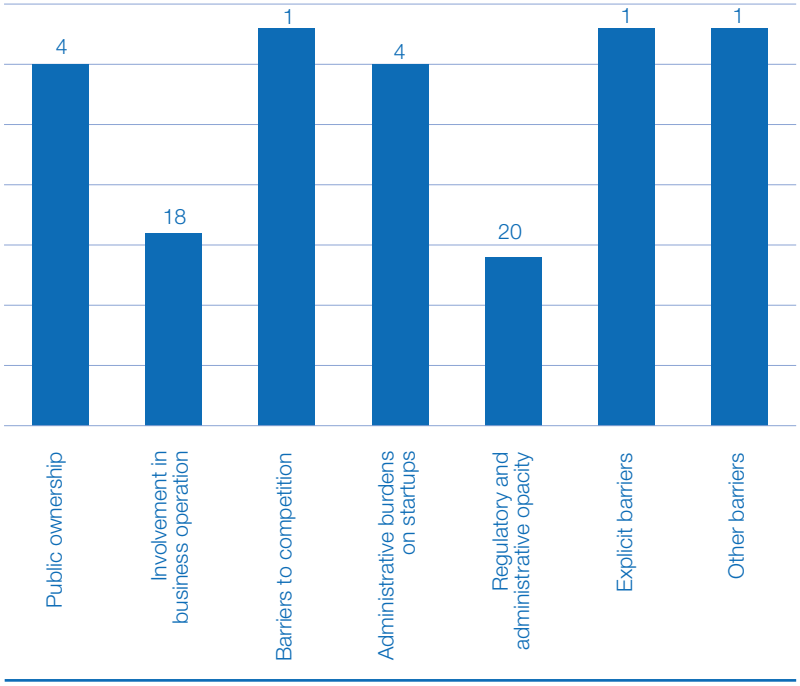
A.23 The indicator covers formal regulations in the following areas:

- State control of business enterprises;
- Legal and administrative barriers to entrepreneurship; and
- Barriers to international trade and investment.

[19] Frontier Economics, *The real impact of regulation on growth, a report prepared for the Department of Business, Innovation and Skills*, May 2012, retrieved March 2013, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32107/12-821-impact-of-regulation-on-growth.pdf>.

A.24 The relative position of the UK varies slightly across the three main regulatory domains (Figure A.3). The UK performs particularly well in (low) barriers to trade and investment, but relatively less well in relation to state control of business enterprises.

Figure A.3: UK rankings out of 34 OECD countries

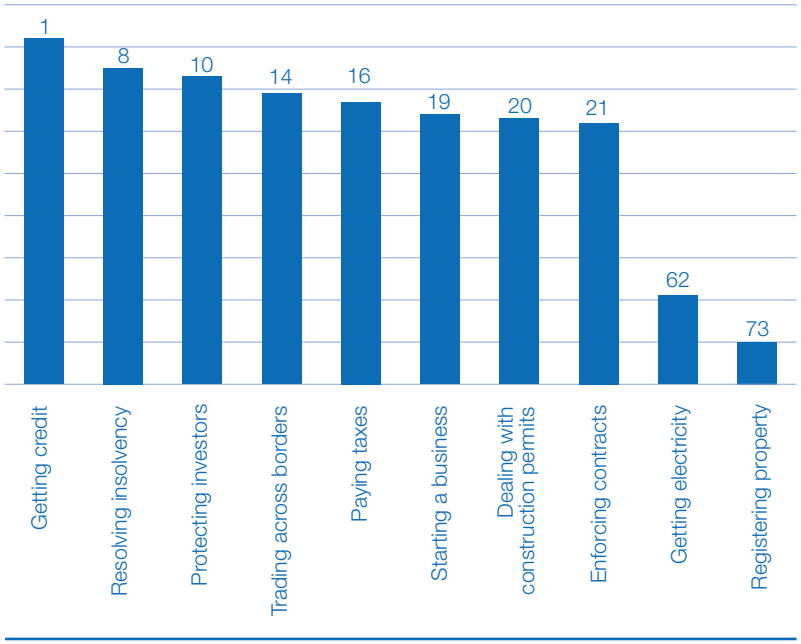


Source: OECD, Product Market Regulation database.

A.25 The World Bank *Doing Business* annual report ranks 183 economies across a broad range of indicators to assess business regulation's usability and effectiveness for small businesses. Ten business processes, shown in Figure A.4, are analysed in terms of the number of procedures required, their cost and how long they take to complete. The economies that rank highest on the ease of doing business are not those where there is no regulation — but those where governments have managed to create rules that facilitate interactions in the marketplace without needlessly hindering the development of the private sector.[20]

[20] World Bank, *About Doing Business: measuring for impact,* retrieved April 2013, <http://www.doingbusiness.org/~/media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB13-Chapters/About-Doing-Business.pdf>.

Figure A.4: UK rankings out of 183 for various business processes



Source: World Bank, *Doing Business Report,* 2012.

A.26 This data shows that while there are understandable differences in regulatory costs associated with different business processes, the overall "ease of doing business" in the UK is highly ranked (7th out of 183 in 2012). Among OECD nations the UK is ranked 4th – and there is very little difference in performance in each of the processes between the top-ranked nations.

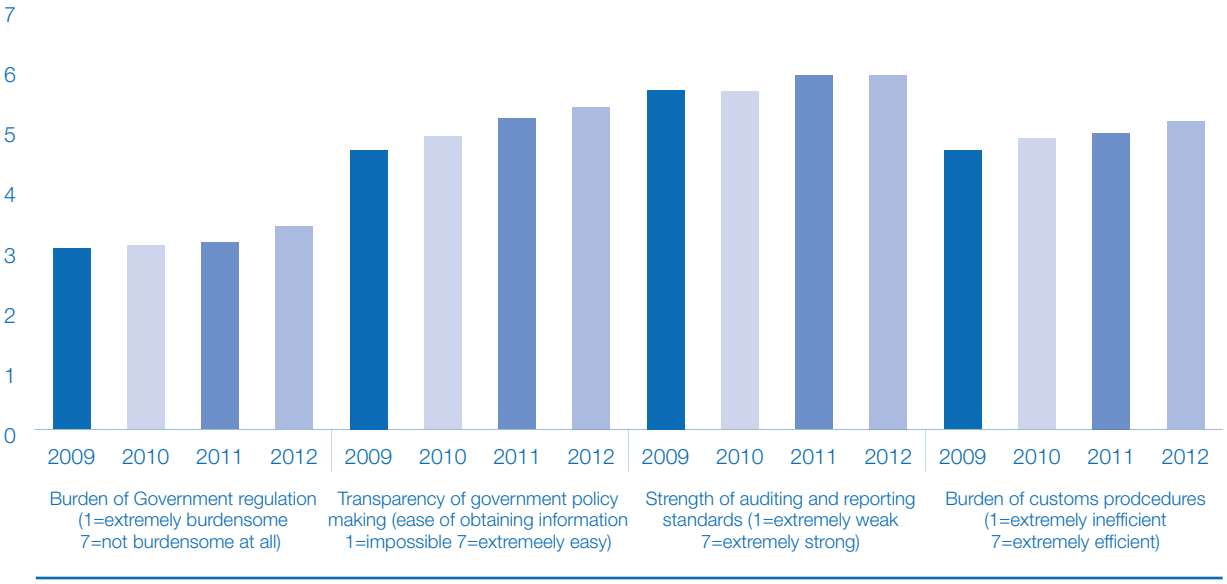
A.27 The UK's regulatory environment and institutions are also considered in the World Economic Forum's (WEF) Global Competitiveness Report[21] and the Institute for Management Development's (IMD) World Competitiveness Yearbook.[22]

A.28 The WEF offers a perceived global ranking of the UK as a place to do business. This ranking is in part based on its Executive Opinion Survey which gathers the views of over 12,000 top management business leaders in over 130 countries. Results from this survey are expected therefore to reflect the views of larger businesses with an eye on international trade. Overall, the UK ranks 10th in terms of competitiveness (up from 12th since 2009). Figure A.5 illustrates the UK's progress in improving its regulatory regime between 2009-2012.

[21] World Economic Forum, *The Global Competitiveness Report 2012-13*.

[22] IMD, *World Competiveness Yearbook 2013*.

Figure A.5: World Economic Forum – UK trends in tackling regulation effecting competitiveness 2009-2012



Source: WEF, Global Competitiveness Report 2012-13.

A.29 According to the WEF report, UK regulation supports 'goods market efficiency', reflected by its rank of 17th out of 144 countries, which compares favourably with France, Germany and the US. The IMD also finds the UK's competition legislation to be efficient, achieving a rank of 22nd internationally.

A.30 Burden of government regulation appears to be an area of relative UK weakness according to the WEF business executive survey data. The WEF report ranks the UK 72nd in terms of how burdensome it is for business to comply with government regulation, which places it ahead of the US and France but slightly behind Germany. A more positive picture is painted by the IMD report. The UK regulatory and institutional framework is perceived to support competitiveness of enterprises (11th), but is seen as less effective in making it easy for businesses to do business (20th). The WEF and IMD surveys do, however, rely more on subjective judgements when rating regulatory issues and these findings contrast with those of the World Bank and the OECD.

A.31 The UK's institutions are also considered to be among the best in the world. According to the WEF report the UK ranks 13th out of 144 for the quality of its institutions. This places the UK ahead of its major competitors such as Germany, France, US and Italy. The UK's particular strengths include property rights (5th), intellectual property protection (6th), investor protection (10th) and efficiency of legal framework (11th).

A.32 A similar picture is painted by the results of the IMD Global Competitiveness Yearbook. According to the 2013 report the UK's institutional framework is ranked 12th out of 59. While the strength of the UK's institutional framework is mainly driven by exchange rate and interest rate policy, the UK scores reasonably well in terms of transparency and the legal and regulatory framework.

A.33 The high quality of UK institutions is confirmed by the World Bank Governance Index. The UK ranks 8th out of 215 economies on the measure of government effectiveness which captures perceptions of the quality of public services, the civil service, policy formulation and implementation, and the credibility of the government's commitment to such policies.

Institutional arrangements for regulatory supervision in Europe: separate regulatory agencies versus a single regulator

A.34 Across the EU Member States, there is a wide diversity of institutional arrangements for economic regulation and enforcement of competition and consumer law. These differences reflect country specific factors such as legal administrative traditions, stage of economic development and political realities.

A.35 The analysis of different regulatory arrangements in the EU shows that the model based on separate agencies is the most common approach. However, over the recent years, there has been a gradual shift towards partly-integrated or fully integrated regulatory institutions.[23]

A.36 In most cases, this trend relates to bringing competition authorities and consumer agencies together into one administrative body. The merger of the Office for Fair Trading (OFT) and the Competition Commission (CC) in the UK is an example of this new approach. In other cases, such as the newly established Authority for Consumer and Markets in the Netherlands, the consolidation of market supervision also involves taking over functions of some sector regulators.

A.37 The main arguments for creating these new super authorities include:

- Increasing efficiency and achieving cost savings through reducing duplication of activities and increasing effectiveness with which resources are used;
- Improving information sharing, pooling expertise and knowledge;
- Better coordination and greater flexibility;
- Reduced incentives for "excessive populist interventions", as having multiple regulatory agencies may lead to competition between them for budgetary resources;[24] and
- Reduced risk of firm opportunism; for example, "separation gives a firm the option of choosing the forum the most favourable to its purposes".[25]

A.38 Creation of the super-authorities also poses some challenges. First, combining regulatory powers and enforcement competencies could be problematic due to the intrinsic differences in their nature. For example, some experts argue that competition authorities and sector regulators are simply too different to be combined. An opinion survey by Utility Week shows that this view is also shared by the senior executives in the water and energy sectors in the UK. According to the survey, 64 per cent of those questioned were against merging Ofwat and Ofgem into one regulator, whilst 21 per cent of respondents were in favour.[26]

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[23] For example see Schaefers, T., Houdijk, K., 'The Netherlands' New Authority for consumers and Markets: Towards a Problem-Based Approach', *World Competition 35,* no.4 (2012), p. 659-670.; Cseres, K., 'Comparing Laws in the Enforcement of EU and National Competition Laws', *European Journal of Legal Studies*, Vol 3 Issue 1 (2010); Cseres, K. 'Integrate or Separate Institutional Design for the Enforcement of Competition Law and Consumer Law', Amsterdam Centre for European Law and Governance Research Paper No. 2013-01; Amsterdam Law School Research Paper No. 2013-03, January 2013.

[24] Cave, M., Stern, J., 'Competition and Regulatory Policy and Institutional Design for Scotland', *The David Hume Institute*, May 2012, p. 8-9, retrieved May 2013, <http://www.davidhumeinstitute.com/images/stories/Research/Research_paper_11-_Cave_Stern.pdf>.

[25] Cave, M., Stern, J., 'Competition and Regulatory Policy and Institutional Design for Scotland', p8-9.

[26] Utility Week, *A tale of two regulators,* 9 February 2011, retrieved March 2013, <http://www.utilityweek.co.uk/news/news_story.asp?id=195022&title=A+tale+of+two+regulators>.

A.39 Furthermore, a recent research paper published by the David Hume Institute points out that merging competition and regulatory agencies can lead to "regulatory opportunism" and "suppression of multiple view points".[27] For example, according to the publication, having a single agency "eliminates open and transparent competition of ideas" and means that "bad decisions and errors can take longer to spot and be harder to remedy".

A.40 In addition, a review of the new Dutch super-authority, suggests that creating bigger and more powerful authorities, must be accompanied by putting in place necessary checks and balances to ensure they have sufficient independence from political influence and do not misuse the information available to them.[28]

A.41 Finally, while mergers of regulatory agencies are likely to generate long-term savings, the transitional costs of setting up new institutions should also be considered. For example, the NAO estimates that the cost of the merger of five regulatory bodies to create the Office for Communications (Ofcom) was at least £80 million.[29] The transitional cost of the merger of OFT and CC is estimated to be much less: £6.8 million[30] (see Chapter 2 for a more detailed discussion of the costs of government reorganisations).

Part C: Selected case studies

Intellectual Property Office

A.42 Every size of business – from individual inventors to the largest companies – relies on intellect property (IP) protection to commercialise their innovations. Protecting IP is fundamental for encouraging innovation and growth, and attracting investment both domestically and from foreign enterprises.[31.]

A.43 As part of the UK, Scotland benefits from IP protection in a market of 60 million consumers through one single, low-cost application to the UK Intellectual Property Office (IPO). Over the last 160 years the UK has defined and continues to refine an IP regime to support innovation, covering patents, trade marks, designs and copyright. As IP rights are territorial, innovators, creators and authors have access to this regime to protect their innovations and support their creativity throughout the UK, but only by special agreement outside of UK borders. For example, a Scottish author can currently market (and profit from) their work throughout the UK with the confidence that it will be protected. In the event of a vote for independence, the Scottish Government may be able to negotiate these protections, or receive them as an EU member, but it would not be automatic and the creator would have to check each time they marketed their work outside of an independent Scottish state.

[27] Cave, M., Stern, J., 'Competition and Regulatory Policy and Institutional Design for Scotland', p8-9.

[28] Schaefers, T., Houdijk, K., 'The Netherlands' New Authority for Consumers and Markets: Towards a Problem-Based Approach, p.667-669.

[29] National Audit Office, *The creation of Ofcom: Wider lessons for public sector mergers of regulatory agencies*, 2006.

[30] Department for Business, Innovation and Skills, *A competition regime for growth: a consultation on options for reform, Impact assessment*, March 2011.

[31] Confederation of British Industry, *Submission to the Independent Review of Intellectual Property and Growth*, March 2011, retrieved March 2013, <http://www.cbi.org.uk/media-centre/press-releases/2011/03/robust-intellectual-property-system-critical-for-growth-cbi/>.

A.44 The IPO employs around 300 patent examiners covering various technology fields, processing over 20,000 patent applications per year. In addition, IPO's 60 trade mark examiners process almost 40,000 trade mark applications annually. In 2011, the IPO processed almost 1,000 patent applications and over 1,500 trade mark applications from Scotland. 5 of the top 10 UK patent applicants to the IPO have a significant presence in Scotland.

A.45 Examining and granting patents requires expertise in all the possible fields of technology – from chemistry and biotechnology to telecoms and electronics – whether there are 1,000 applications per year or 20,000 applications per year. Wrongly-granted patents place an unfair restriction on businesses, particularly SMEs, who may lack the legal resources to challenge those patents; so quality must be ensured. Some of the examiners specialise in very niche areas, such as quantum computing, which receive a very small number of patent applications a year. However, due to a very specialist knowledge required in this area, the IPO is required to have at least one expert who will be able to correctly examine patent applications for quantum computing.

A.46 The UK IPO ran a £66.6 million turnover in 2010/11, financed by fees either direct or refunded from the European Patent Office (EPO). It employs 900 staff in 2 main offices – Newport and London. The average cost of a patent application is currently £280 (£230 if e-filed (excluding yearly fees to keep the patent active)). Economies of scale enable the IPO to keep costs down and therefore keep prices low and reinvest in assistance for business, e.g. through its Business Advisor IP workshops and various online services including free IP health checks.

A.47 The IPO also provides funding for innovation boosting schemes, such as the Easy Access IP initiative collaboration between the University of Glasgow, King's College London and the University of Bristol. Using funding secured through the IPO's Fast Forward competition they have created a radical new approach to the licensing of university IP. They make early stage IP available through simple one-page agreements, which allows companies to evaluate it and put it to use quickly and with reduced risk.

A.48 It is difficult to estimate the precise set up and ongoing cost of the new institutions an independent Scottish state would need to establish, or if it could maintain the UK's level of fees and service standards. Looking at some smaller European states provides a useful indication of potential cost. Table A.2 provides annual budgets for some of the countries with a similar population size to Scotland (Finland, Norway, Ireland, and Slovakia).

Table A.2: Selected annual budgets for intellectual property institutions by country

Office	Expenditure in 2011
Finland	Euro 48.7 million[32] =£39.2 million
Norway	NOK 216.8 million[33] =£23 million
Ireland	Euro 3.8 million =£3.0 million
Slovak Republic	Euro 2.8 million[34] =£2.24 million

Source: Annual reports on official websites. Exchange rates market rate as December 10th 2012 (1 NOK = £0.10979; 1 Euro = £0.80570).

[32] Large due to agency also covering company registration.

[33] Large expenditure on (voluntary) grants. Expenditure on core work probably nearer NOK116 million (£12.7 million).

[34] Set budget is Euro 2 million.

A.49 Alternatively the EPO could process patent applications for an independent Scottish state, negating some of the loss of economies of scale described above. However this would mean Scotland lost control over the process, including quality, which is vital in the patent system and for individual businesses. Not having any examination nationally also greatly reduces an office's international reputation and negotiating weight.

A.50 An application to the EPO is considerably more expensive than applying within the UK. Compared with the IPO fee of £230 (for grant, before renewal fees), the fee at the EPO (for 4 countries) is €3,965 (£3,317). On average an EPO application also takes longer to process (an independent study in 2008 found the average time from priority date to grant at the EPO was 60 months, compared with 38 months for the UK IPO). There is also no trade mark or designs equivalent to the EPO – an Independent Scottish state would have to process their own trademarks (at their or their applicant's expense) or seek to contract back to the UK IPO to provide that service. Finally, an independent Scottish state may have to renegotiate its membership of relevant organisations including the EPO.

Office of Communications (Ofcom)

A.51 Telecommunications, internet and spectrum issues are currently reserved matters and the regulation of these sectors in the UK is the responsibility of the independent regulator, the Office of Communications (Ofcom). Ofcom is involved in advising and setting some of the more technical aspects of policy, implementing and enforcing the law. Its independent status allows it to act solely in the interest of citizens and consumers.

A.52 Ofcom was established in 2003 and has a statutory requirement to ensure UK citizens' views (including Scotland's) are represented and central to Ofcom's policy making in telecoms and internet markets. It also makes sure UK citizens get the best from their communications services and are protected from scams and sharp practices, while ensuring that competition can thrive. Ofcom overall regulates the TV and radio sectors, fixed line telecommunications and mobiles, plus the airwaves over which wireless devices operate.

A.53 The Ofcom Scotland Team represents Ofcom in Scotland and the interest of Scotland in Ofcom. It ensures that the views and opinions of citizens and consumers, the regulated industries and stakeholders more generally in Scotland are factored into policy and decision making. The team deals with all aspects of Ofcom's remit and provide input and advice on issues as they apply to Scotland. The experience and expertise of Ofcom's Advisory Committee for Scotland and its Content Board and Communications Consumer Panel members for Scotland also feeds into its work.

A.54 A single regulatory regime provides a level playing field and ensures that regions or administrative areas are not excluded from services that are enjoyed in other parts of the UK. This provides consistency for consumers and business.

A.55 A single regulator for the whole UK also helps to minimise costs. An economic regulator in an independent Scottish state would incur substantial cost for resourcing and to fulfil a national spectrum management role. There would be an additional resource implication for Ofcom (England and Wales) as it works to manage the new cross-border relationship. Ofcom's budget for 2012/13 is £121.4 million. An independent Scottish state would also have to engage at EU level and with the International Telecommunications Union over the use of radio spectrum in an independent state and co-ordinate its use with its neighbours.

A.56 There are a range of UK-wide services such as the national air traffic radar network, railway communications, mobile telephony and broadcasting where the utility of the service is predicated on having UK-wide licences. Splitting of the current licenses into a number of national licenses could lead to fragmentation of the regulatory regime between nations resulting in an inefficient and sub-optimal spectrum usage.

A.57 Any amendment to the licenses awarded to mobile operators (e.g. for 4G) could be legally challenged. An independent Scottish state would have to establish its own regulatory system but would have limited freedom, at least in the short term, to change the existing licence structures. This is because existing licences have expiry dates. At those dates any Scottish regulator would be able to change structures but, if they were to do so before then, they might be subject to challenge for damages.

A.58 A current major issue concerns the allocation of 4G licences. Ofcom concluded that the population density and spread within England and the Devolved Administrations may not support a "national coverage" business model for 4G mobile networks. To prevent coverage being limited to the large cities and major travel routes, the recent auction therefore included one licence with a coverage obligation for 98 per cent of the UK (indoors) and 95 per cent of each Nation.

The role of UK Trade & Investment (UKTI) in helping attract FDI to Scotland

A.59 UKTI is the UK Government agency responsible for helping UK-based companies succeed in the global economy and assisting overseas companies to bring their high-quality investment to the UK. Under concurrent powers, responsibility for the provision of trade and foreign direct investment support within Scotland is devolved. Scottish Development International (SDI) – an agency of the Scottish Government – has its own funding and support programmes and international network covering 15 countries (although not all foreign posts are focussed on FDI). In addition to its own networks and support programmes, SDI draws on the resources of UKTI offices in the majority of overseas markets and has access to UKTI's national FDI network and its pipeline of potential new investors.

A.60 UKTI promotion of the UK as a whole and support for potential investors considering the wider UK helps attract inward FDI to Scotland in many cases. With 162 offices in 96 countries, UKTI can attract the best companies from around the world to invest in the UK.

A.61 UKTI takes a "UK first" approach which means that on receiving an FDI enquiry, UKTI considers locations throughout the whole UK which might be of interest to the potential investor. If one or more of these locations is in Scotland, UKTI will then draw this to SDI's attention and can help SDI make the case for the investment to go to Scotland. For example, of the 96 Scottish FDI projects recorded by UKTI in 2011/12, UKTI was involved in 75, of which 46 had joint engagement with SDI. UKTI involved projects created 4,052 jobs and safeguarded 2,758 jobs in 2011/12.[35]

A.62 A risk attached to an independent Scottish state would be the need for SDI to expand its existing network in overseas markets to compensate for loss of access to UKTI's much larger overseas network. This would involve high upfront costs. This could lead to potential investors having to rely more heavily on their own research and information, risk losing opportunities to the continuing UK and elsewhere, thus placing inward FDI flows to an independent Scottish state and associated jobs at risk.

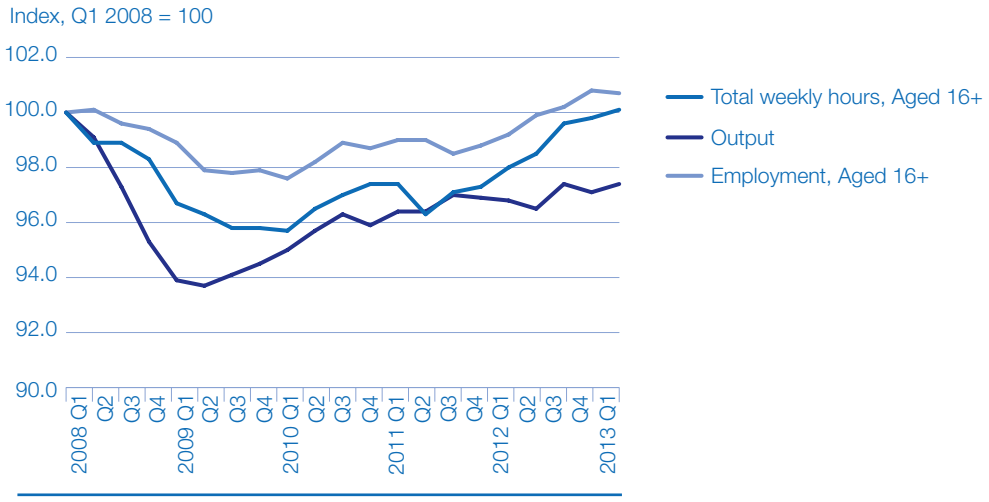
[35] UKTI database.

Annex B: Labour markets

B.1 This annex provides further charts on the UK's labour market performance. It provides background context to the material contained in Chapter 3 and covers additional analysis of the UK's employment performance relative to its output performance; international and UK comparisons with Scotland's labour market; Scotland's employment composition compared to that of the rest of the UK and illustrates public sector employment trends in Scotland.

B.2 Figure B.1 demonstrates the resilience of the UK labour market during and since the recession. Employment rates have remained high relative to output and recovered to their pre-recession levels by the second quarter of 2012.

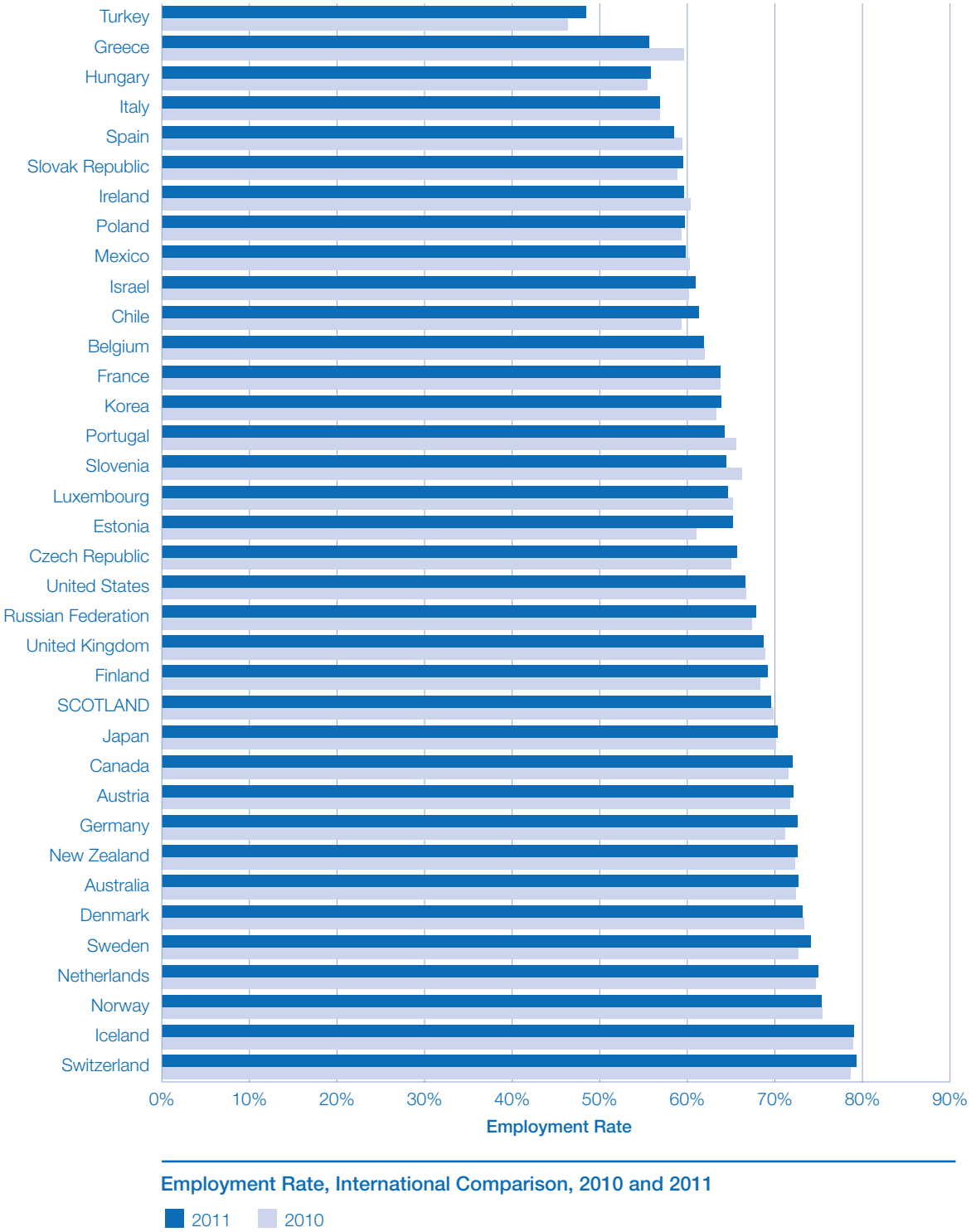
Figure B.1: Index of output, employment and hours since 2008 Q1, seasonally adjusted



Source: Office for National Statistics (ONS).

B.3 Employment in Scotland has performed well by international standards. The employment rate in Scotland, using the European age definition (15-64), in 2011 was 69.5 per cent. When compared against 35 OECD countries, Scotland was ranked 13th highest (Figure B.2).

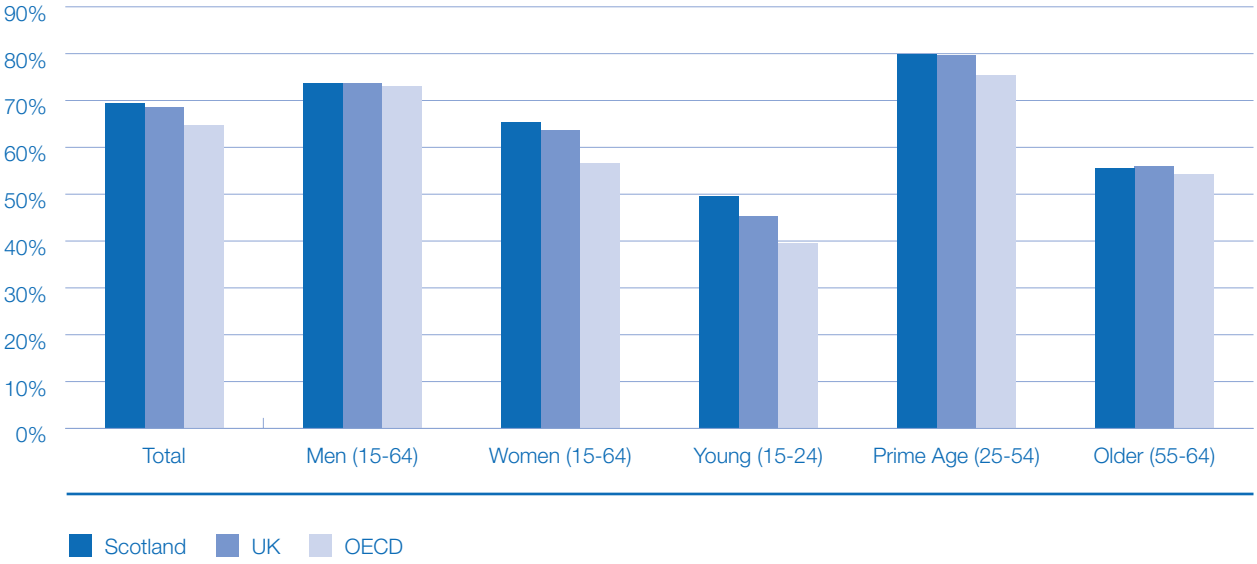
Figure B.2: Employment rate, international comparisons, 2010 and 2011



Source: Annual Population Survey, OECD.

B.4 Not only is the overall Scottish employment rate substantially higher than the average of the major OECD industrialised countries, Figure B.3 shows it is higher for all groups, by age and gender.

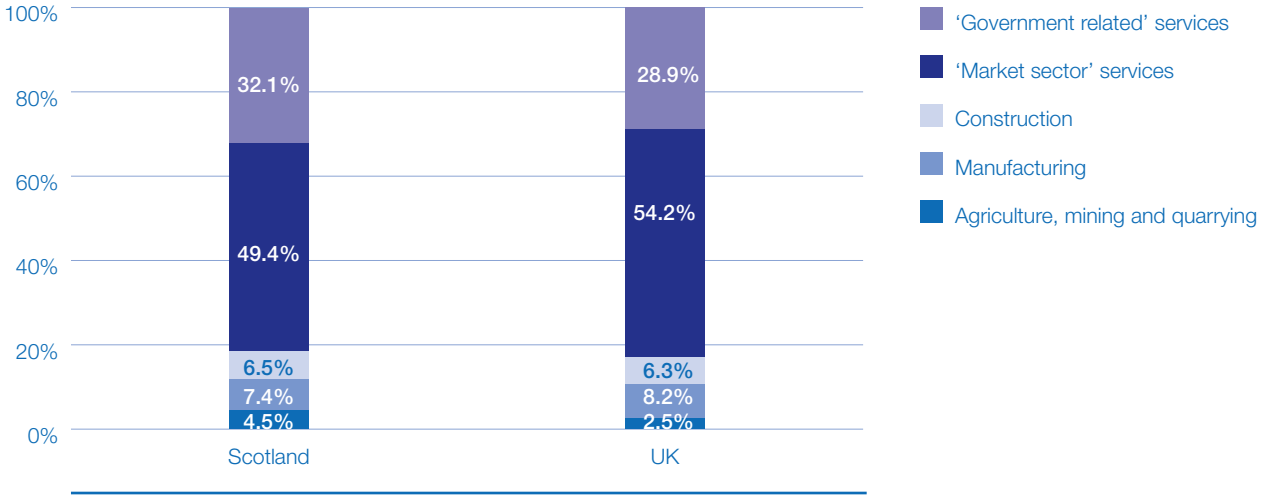
Figure B.3: Employment rates by gender and age, Scotland, UK and OECD average



Source: OECD and ONS Annual Population Survey (2011).

B.5 The strikingly similar employment composition of the Scottish economy with the UK average is shown in Figure B.4.

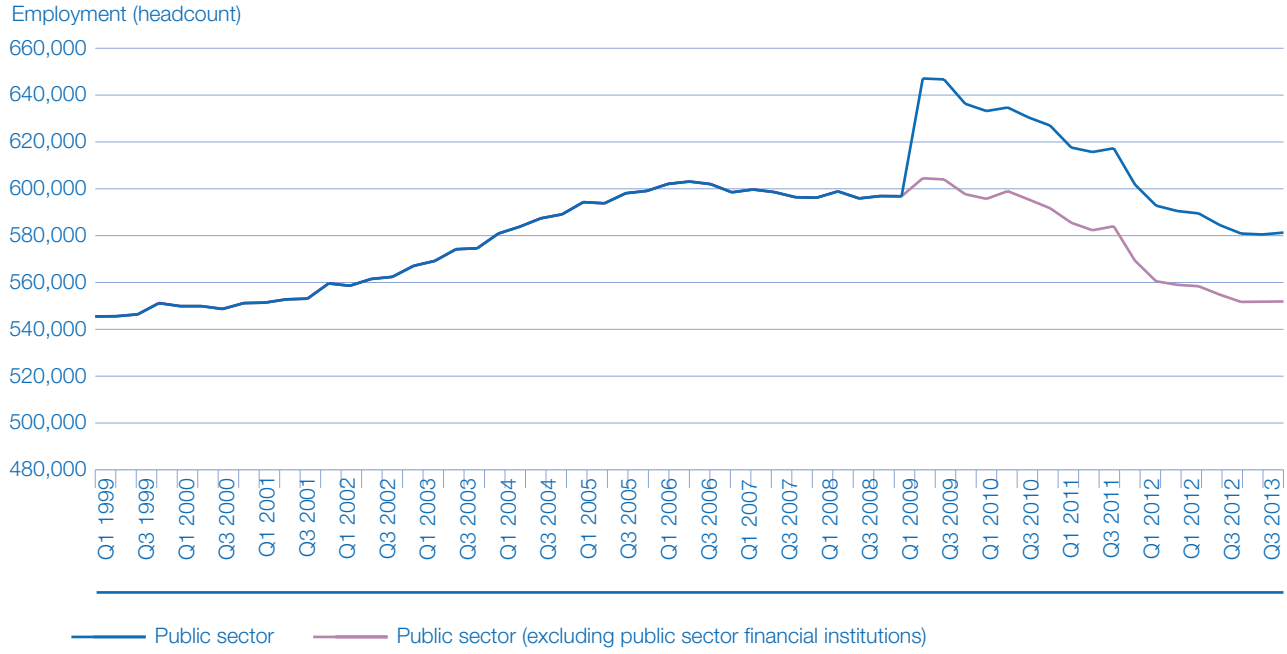
Figure B.4: Employment composition in Scotland and the UK (2012)



Source: ONS.

B.6 Recent data shows a change in the nature of the workforce, with a net shift from public to private sector employment. Public sector employment accounted for 23.2 per cent of total employment in Scotland in Q1 2013, down from 24.0 per cent in Q1 2012. However, this is a fall from a relatively high baseline of public sector employment and is reversing an earlier significant trend in the opposite direction (Figure B.5).

Figure B.5: Total public sector employment in Scotland, headcount 1999-2013[1]



Source: Scottish Government.[2]

[1] From Q4 2008, the Royal Bank of Scotland Group plc and Lloyds Banking Group plc were classified as Public Sector Financial Corporations.

[2] Public sector employment statistics, retrieved June 2013, <http://www.scotland.gov.uk/Publications/2013/06/9041>.

Annex C: Telecommunications and transport

Broadband rollout

C.1 The UK Government has allocated £530 million during the current Spending Review period for the 'Rural Broadband Programme', which stimulates commercial investment to roll out high speed broadband in rural communities. Scotland's allocation is £100.8 million (19 per cent), meaning Scotland benefits disproportionately compared with its share of the UK population (8 per cent). The ambition is to provide superfast broadband to at least 90 per cent of premises in the UK and to provide universal access to standard broadband with a speed of at least 2Mbps.

C.2 Highlands & Islands Enterprise is managing the project to provide broadband in the Highlands and Islands, and the Scottish Government is managing the single project for the rest of Scotland. In addition to the £100 million funding from the UK Government, funding is also being provided by the Scottish Government, some of the Scottish local authorities, and European funding from the European Regional Development Fund. The total funding from these sources is expected to be in the region of £250 million. This will add to funding from the private sector.

C.3 The UK Government has provided extensive support to the Highlands & Islands project as it has gone through procurement. The procurement process for this project started in 2011 and a contract for delivery was agreed in March 2013. The project for the rest of Scotland will be procured using the Broadband Delivery Framework that has been put in place by DCMS. The procurement began at the end of January 2013 and is scheduled to be completed by early July. This much more rapid timescale demonstrates the benefit of using the procurement framework that the UK Government has put in place.

C.4 Broadband projects involving public funding will need EU State aid approval. Normally this requires approval from the European Commission, but DCMS has delegated authority from the Commission for an umbrella scheme under which it can give clearance for broadband projects which meet the conditions that have been set by the Commission. This allows projects to be approved much more rapidly than if they each need to submit separate approvals to the Commission. The Highlands and Islands project gained approval through this route and it is expected that it will also be used for the project for the rest of Scotland.

C.5 The Government has also allocated £150 million up to 2015 for an 'Urban Broadband Fund' to create 'super-connected cities'. Edinburgh successfully bid in the first wave. Aberdeen and Perth have been selected as successful cities in the second wave. Economic growth will be stimulated by the improved access to fast broadband for SMEs,

encouraging new businesses. The wide availability of ultra-fast broadband will encourage the development of new applications and new ways of working.

Mobile Infrastructure Project

C.6 In 2011, the UK Government announced up to £150 million funding to improve mobile coverage and quality across the UK – known as the Mobile Infrastructure Project (MIP). This is intended to improve mobile phone coverage through building additional mobile phone masts in uncovered areas, whilst ensuring technical solutions are compatible with future technological developments. A contract for delivery was awarded in May 2013.

C.7 Ofcom have identified over 80,000 premises in complete not spots[1] with 11,000, or 14 per cent, of these in Scotland. The aim of the MIP is to cover as many of these premises as possible, as well as ten key roads, including the A82(T) in Scotland.

High Speed 2

C.8 High Speed 2 (HS2) is the most significant transport infrastructure project being developed which will have an impact on Scotland. The new national high speed rail network will support growth, unlock jobs and boost the competitiveness of the whole of the UK. The biggest benefit that HS2 brings to Scotland is the reduction in journey times of up to an hour once the Y network from London via Birmingham to Leeds and Manchester is complete. Modern rolling stock and removal of capacity bottlenecks in England will also improve services to Scotland. HS2 will improve the reliability of services, for example HS1 operates with an average train delay of just 6.8 seconds, while providing an alternative route should there be a problem with the East or West Coast main lines.

C.9 The UK Government's ultimate goal is a genuinely national network with high speed services from London to the midlands and the north – including Scotland. Phasing the construction of the network is the best way to manage its overall cost and deliverability and to ensure that high speed rail is introduced as quickly as possible to Britain.

C.10 HS2 is forecast to carry up to 4.5 million passengers every year who might otherwise have travelled by air, as well as seeing up to 9 million passengers transfer from the national road network. The high speed network will also present opportunities for modal shift of freight from our roads to our railways by releasing capacity on key sections of the conventional network, for example along the West Coast Main Line, some of which could be used to provide additional freight services.

[1] Defined as a 200m sided area where the outside received signal strength indicator is below 86dBm from any operator. These not spots were derived by Ofcom from data provided by the 2G mobile network operators to Ofcom in January 2012.

Bibliography

Analysis Mason, *Impact of Radio Spectrum on the UK Economy and Factors Influencing Future Spectrum Demand*, report for SHEX and DCMS, November 2012, retrieved March 2013, <https://www.gov.uk/government/publications/impact-of-radio-spectrum-on-the-uk-economy-and-factors-influencing-future-spectrum-demand>.

Aussilloux *et al*., *What benefits from completing the Single Market?*, CEPII, December 2011, retrieved March 2013, <http://www.cepii.fr/PDF_PUB/lettre/2011/let316ang.pdf>.

Bank of England, *Minutes of the monetary policy committee meeting 5 & 6 September 2012*, 20 September 2012, <http://www.bankofengland.co.uk/publications/minutes/Documents/mpc/pdf/2012/mpc1209.pdf>.

Bartz K. and Fuchs- Schündeln N., *The Role of Borders, Languages, and Currencies as Obstacles to Labor Market Integration,* CEPR, 2012, <http://www.cepr.org/pubs/new-dps/dplist.asp?dpno=8987.asp>.

Betcherman G., Luinstra A., Ogawa M., *Labor Market Regulation: International Experience in Promoting Employment and Social Protection*, Social Protection Discussion Paper No. 0128, 2001, retrieved March 2013, <http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Labor-Market-DP/0128.pdf>.

Better Regulation Executive, *The Regulatory Impact on UK's Smallest Businesses*, retrieved March 2013, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/31614/10-1251-lightening-the-load-regulatory-impact-smallest-businesses.pdf>.

Boston Consulting Group, *The Connected Kingdom*, October 2010, retrieved March 2013, <http://www.connectedkingdom.co.uk/downloads/bcg-the-connected-kingdom-oct-10.pdf>.

Cave, M., Stern, J., 'Competition and Regulatory Policy and Institutional Design for Scotland', *The David Hume Institute*, May 2012, p. 8-9, retrieved May 2013, <http://www.davidhumeinstitute.com/images/stories/Research/Research_paper_11-_Cave_Stern.pdf>.

CEPR, Unemployment Mismatch and labour mobility, retrieved May 2013 <http://www.cepr.org/pubs/Bulletin/meets/357.htm>. CIPD, *Skills policy in the UK factsheet*, retrieved March 2013, <http://www.cipd.co.uk/hr-resources/factsheets/skills-policy-uk.aspx.>.

CIPD, Skills policy in the UK factsheet, retrieved May 2013, <http://www.cipd.co.uk/hr-resources/factsheets/skills-policy-uk.aspx>.

Commission on Scottish Devolution, *Scotland and the UK in the 21st Century: Final Report',* June 2009, retrieved March 2013, <http://www.commissiononscottishdevolution.org.uk/uploads/2009-06-12-csd-final-report-2009fbookmarked.pdf>.

Competition Commission, *Customer benefits from competition between Edinburgh and Glasgow airports*, retrieved May 2013, <http://www.competition-commission.org.uk/assets/competitioncommission/docs/pdf/non-inquiry/rep_pub/reports/2009/fulltext/545_10_4.pdf>.

Confederation of British Industry, *Submission to the Independent Review of Intellectual Property and Growth*, March 2011, retrieved March 2013, <http://www.cbi.org.uk/media-centre/press-releases/2011/03/robust-intellectual-property-system-critical-for-growth-cbi/>.

Cordova-Novion, C. and Jacobzone, S., 'Strengthening the Institutional Setting for Regulatory Reform: The Experience from OECD Countries', *OECD Working Papers on Public Governance*, No. 19, OECD Publishing, 2011, p.25, retrieved March 2013, <http://www.oecdilibrary.org/docserver/download/5kgglrpvcpth.pdf?expires=1365584673&id=id&accname=guest&checksum=1BF77A99DE8265EFDD32FF06FE62C2C0>.

Cseres, K., 'Comparing Laws in the Enforcement of EU and National Competition Laws', *European Journal of Legal Studies*, Vol 3 Issue 1 (2010), retrieved June 2013, <http://cadmus.eui.eu/handle/1814/16114>.

Cseres, K., 'Integrate or Separate – Institutional Design for the Enforcement of Competition Law and Consumer Law', *Amsterdam Centre for European Law and Governance Research Paper No. 2013-01*; Amsterdam Law School Research Paper No. 2013-03, January 2013, retrieved June 2013, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2200908>.

Department for Business, Innovation and Skills, *BIS Performance Indicators: Meeting the government's commitment to maintaining access to the Post Office network*, October 2012, retrieved May 2013, <http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/83081/Post_Office_network.pdf>.

Department for Business, Innovation and Skills, *Business Population Estimates for the UK and Regions 2012*, October 2012,retrieved June 2013, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/80247/bpe-2012-stats-release-4.pdf>.

Department for Business, Innovation and Skills, *First Findings from the UK Innovation Survey 2011*, Science and Innovation Analysis, May 2012, retrieved April 2013, <http://www.bis.gov.uk/assets/BISCore/science/docs/F/12-p107-first-findings-uk-innovation-survey-2011.pdf>.

Department for Business, Innovation and Skills, *Innovation & Research Strategy for Growth,* Economics Paper No. 15, December 2011, retrieved March 2013, <http://www.bis.gov.uk/assets/BISCore/innovation/docs/I/11-1387-innovation-and-research-strategy-for-growth.pdf>.

Department for Business, Innovation and Skills, *UK Government response: European Commission consultation on the Single Market*, 2011, retrieved March 2013, <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32275/11-760-uk-response-single-market-act.pdf>.

Department for Business, Innovation and Skills, *The value of the consumer benefits of the competition regime*, October 2012, retrieved May 2013, <https://www.uk/government/uploads/system/uploads/attachment_data/file/85952/The_value_of_the_consumer_benefits_of_the_competition_regime.pdf>.

Department for Business, Innovation and Skills, *What We Do,* retrieved April 2013, <http://www.bis.gov.uk/about/performance-reports/performance-indicators/change-net-employment-regulatory-burden-on-business>.

Department for Culture, Media and Sport, *Broadband Delivery UK*, retrieved April 2013, <http://www.gov.uk/broadband-delivery-uk>.

Department for Transport, Aviation Policy Framework, March 2013, retrieved April 2013, <http://www.gov.uk/government/publications/aviation-policy-framework>.

Department for Transport, Consultation on revising the strategic national transport corridors, May 2011, <http://www.gov.uk/government/speeches/consultation-on-revising-the-strategic-national-transport-corridors--4>.

Department for Transport, February 2012, retrieved March 2013, <http://www.gov.uk/government/news/extra-trains-and-faster-journey-times-will-boost-capacity>.

Department for Transport, January 2013, retrieved February 2013, <http://www.gov.uk/government/publications/high-speed-rail-investing-in-britains-future-phase-two-the-route-to-leeds-manchester-and-beyond>.

Department for Transport, *Road traffic flows data*, 2010, retrieved February 2013, <www.dft.gov.uk/traffic-counts>.

Design Council, *Design for Innovation: Facts, figures and practical plans for growth*, December 2011, retrieved June 2013, <www.designcouncil.org.uk/Documents/OurWork/Insight/DesignForInnovation_Dec2011.pdf>.

Dewit G., Leahy D., Montagna C., *Employment protection and globalisation in dynamic oligopoly*, CEPR Discussion Paper 3871, 2002, <http://www.cepr.org/meets/wkcn/3/3516/papers/leahy.PDF>.

Dickerson A., *The skills content of jobs in Scotland and the rest of the UK*, futureskills Scotland, 2009, <http://www.scotland.gov.uk/Resource/Doc/302354/0094627.pdf>.

Djankov, S., McLiesh, C., Ramalho, R., *Regulation and Growth*, World Bank, 2006, retrieved April 2013, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=893321>.

Elsevier, *International Comparative Performance of the UK Research Base – 2011*, a report prepared for the Department for Business, Innovation and Skills, 2011, retrieved March 2013, <http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32489/11-p123-international-comparative-performance-uk-research-base-2011.pdf>.

Ernst and Young, *Grasping the thistle: Ernst and Young's Scotland Corporate tax survey report,* 2012, retrieved April 2013, <http://www.ey.com/Publication/vwLUAssets/Grasping_the_thistle_-_Scotland_corporate_tax_survey_report/$FILE/EY_Grasping_the_thistle_-_Scotland_corporate_tax_survey_report.pdf>.

Ernst &Young, *No room for complacency*, retrieved June 2013, <http://www.ey.com/UK/en/Issues/Business-environment/2013-UK-attractiveness-survey>.

Ernst & Young, *No room for complacency Scotland*, retrieved June 2013, <http://www.ey.com/UK/en/Issues/Business-environment/2013-Scotland-attractiveness-survey>.

Ernst and Young, *Staying ahead of the game: 2012 UK Attractiveness Survey*, 2012, retrieved February 2013, <http://www.ey.com/UK/en/Issues/Business-environment/2012-UK-attractiveness-survey>.

Ernst & Young, *2013 UK attractiveness survey*, 2013, <http://www.ey.com/Publication/vwLUAssets/Ernst-and-Youngs-attractiveness-survey-UK-2013-No-room-for-complacency/$FILE/EY_UK_Attractiveness_2013.pdf>.

European Commerce Register's Forum, *Global benchmarking of business registration ECRF & CRF Business registers surveys*, 2012, retrieved February 2013, <http://www.ecrforum.org/>.

European Commission, *Better Regulation – simple explained*, 2006, retrieved March 2013, <http://ec.europa.eu/governance/better_regulation/brochure_en.htm>.

European Commission, European Business Panel Test, *Help us identify business obstacles in the internal market*, retrieved June 2013, <http://ec.europa.eu/yourvoice/ebtp/consultations/2011/obstacles/report_en.pdf>.

European Commission, European Business Panel Test, *Solvit*, retrieved June 2013, <http://ec.europa.eu/yourvoice/ebtp/consultations/2009/solvit/report_en.pdf>.

European Commission, *Innovation Union Scoreboard 2013*, 2013, retrieved May 2013, <http://ec.europa.eu/enterprise/policies/innovation/files/ius-2013_en.pdf>.

European Commission, *Internal Market Scoreboard 26*, February 2013, retrieved April 2013, <http://ec.europa.eu/internal_market/score/docs/score26_en.pdf>.

European Commission, *Single Market Act II*. Together for new growth, 2012, retrieved June2013, <http://ec.europa.eu/internal_market/smact/docs/single-market-act2_en.pdf>.

Findlay A., *Scottish Demography: Scottish Migration to and Return from SE England*, ESRC, 2007, <http://www.esrc.ac.uk/my-esrc/grants/RES-342-25-0009/read>.

Findlay A. and Stockdale A., *English Migration to Urban Scotland*, ESRC, 2007, <http://www.esrc.ac.uk/my-esrc/grants/R000223200/outputs/Download/0da78fb2-f314-4a5b-8ad6-af87eaacaf1d>.

Fiscal Commission Working Group, *Fiscal Commission Working Group – First Report – Macroeconomic Framework,* 2013, < http://www.scotland.gov.uk/Resource/0041/00414291.pdf>.

Fontagné, L., Guillin, A. & Mitaritonna, C., 'Estimation of Tariff Equivalent for the service sectors', *Document de travail 2011-23 CEPII*, 2011, retrieved March 2013, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2004933>.

Frontier Economics, *The real impact of regulation on growth, a report prepared for the Department of Business, Innovation and Skills*, May 2012, retrieved March 2013, <http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/32107/12-821-impact-of-regulation-on-growth.pdf>.

Dichtl, E., Leibold, M., Koeglmayr, H.,G., Mueller, S., 'The Foreign Orientation of Management as a Central Construct in Export-Centered Decision-Making Processes', *Marketing Studies of International Business,* Nijenrode Studies in Business Volume 7, 1984, p. 119-141, retrieved March 2013, <http://link.springer.com/chapter/10.1007%2F978-94-009-5646-9_8#>.

Global Competition Review Ranking, *Rating Enforcement 2012,* retrieved February 2013, <http://globalcompetitionreview.com/rating-enforcement/>.

Gouldie et al, *Scotland's Future: the economics of constitutional change*, 2013.

Gruber H. and Kouptrompis P., *Mobile Telecommunications and the Impact on Economic Development*, Economic Policy 52nd Panel Meeting, Centre for Economic Policy Research, 22-23 October 2010.

Hajiokova, D., Nicoletti, G., Vartia, L. and Yoo, K.Y., 'Taxation, business environment and FDI location in OECD countries', *OECD Economic Studies paper*, preliminary version June 2006, retrieved May 2013, <http://www.oecd.org/eco/public-finance/37002820.pdf>.

Helliwell, J. F., *National Borders, Trade and Migration*, Pacific Economic Review 2(3), 1997, <http://onlinelibrary.wiley.com/doi/10.1111/1468-0106.00032/abstract>.

HM Government, *Scotland Analysis: Currency and monetary policy*, April 2013, retrieved May 2013, <http:www.gov.uk/government/publications/scotland-analysis-currency-and-monetary-policy>.

HM Government, *Scotland Analysis: Devolution and the implications of independence*, February 2013, retrieved March 2013, <http://www.gov.uk/government/publications/scotland-analysis-devolution-and-the-implications-of-scottish-independence>.

HM Government, *Scotland Analysis: Financial services and banking,* May 2013, retrieved May 2013, <http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/200491/scotland_analysis_financial_services_and_banking_200513.pdf>.

HM Government, *Strategy for UK Life Sciences One Year On*, 2012, URN 12/1346, retrieved 10 April 2013, <http://www.bis.gov.uk/assets/biscore/innovation/docs/s/12-1346-strategy-for-uk-life-sciences-one-year-on.pdf>.

HMRC, *Impact Assessment of a change to the standard rate of VAT*, 2010, retrieved February 2013, <http://www.hmrc.gov.uk/budget2010/vat-rate-change-ia.pdf>.

HMRC, *Online guidance how to claim VAT refunds*, retrieved March 2013, <http://www.hmrc.gov.uk/vat/managing/international/overseas-traders.htm>.

HMRC, VAT: Implementing EC legislation regarding the place of supply of services and measures to combat VAT, 2009, retrieved June 2012, <http://webarchive.nationalarchives.gov.uk/20100407044034/http://hmrc.gov.uk/budget2009/cross-border-vat-2805.htm>.

HMT, analysis of FSA product sales data for the financial year ending March 2012, available at <www.gov.uk/scotlandanalysis>.

HMT, *Impact Assessment: The Financial Services Act 2012, 2012*, retrieved March 2013, <http://www.legislation.gov.uk/uksi/2013/636/impacts>.

HMT, *UK membership of the single currency: An assessment of the five economic tests*, 1997, retrieved February 2013, <http://hm-treasury.gov.uk/d/single.pdf>.

ICAS, *Scotland's tax future; the practicalities of tax devolution*, November 2012, retrieved May 2013, <https://icas.org.uk/taxfuture2.pdf>.

IMD, *The World Competitiveness Yearbook 2012,* 2012*,* retrieved April 2013, <http://www.imd.org/research/publications/wcy/index.cfm.>.

IMD, The World Competitiveness Yearbook 2013, 2013, retrieved June 2013, <http://www.imd.org/research/publications/wcy/index.cfm.>.

IFS, *IFS Green Budget: February 2013*, Institute for Fiscal Studies, 2013, <http://www.ifs.org.uk/publications/6562>.

IFS, *Piecing together the productivity puzzle,* Press release, 1 February 2013, retrieved May 2013, <http://www.ifs.org.uk/pr/productivity_puzzle.pdf>.

INSEAD/World Intellectual Property Organization, *The Global Innovation Index 2012 Stronger Innovation Linkages for Global Growth*, 2012, retrieved April 2013, <http://www.wipo.int/freepublications/en/economics/gii/gii_2012.pdf>.

Kneller, R., Pisu, M., 'Export Barriers: What are They and Who Do They Matter to?', *University of Nottingham Working Paper No. 2007/12*, retrieved March 2013, <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=968428>.

Leitch Review of Skills, *Prosperity for all in the global economy – world class skills*, December 2006, <http://www.hm-treasury.gov.uk/d/leitch_finalreport051206.pdf>.

Lobb, A. E., Lobb, Buttler, L.T., Harvey, K. N. 'UK Focus Group Evidence: Consumer Attitudes to Local, National and Imported foods', *The University of Reading,* Workpackage No. 2, Report No.1, July 2005.

Long J., *Labour Mobility*, Oxford Encyclopedia of Economic History, <http://faculty.wcas.northwestern.edu/~fe2r/papers/Labour%20Mobility.pdf>.

LSE and Institute for Government, *Making and Breaking Whitehall Departments: A guide to machinery of government change,* 2010, retrieved March 2013, <http://www.instituteforgovernment.org.uk/sites/default/files/publications/making_and_breaking_whitehall_departments.pdf>.

Mackay D. et al, *Scotland's Economic Future*, Reform Scotland, 2011, retrieved March 2013, <http://reformscotland.com/public/publications/scotlandseconomicfuture.pdf>.

Meadway, J. and Mateos-Garcia, J., *NESTA Broadband Policy Briefing: Getting up to Speed: Making Superfast Broadband a Reality,* January 2009*,* retrieved Aril 2013, <http://www.nesta.org.uk/library/documents/Getting-up-to-speedv5.pdf>.

National Audit Office, *The creation of Ofcom: Wider lessons for public sector mergers of regulatory agencies*, 2006, retrieved June 2013, <http://www.nao.org.uk/report/the-creation-of-ofcom-wider-lessons-for-public-sector-mergers-of-regulatory-agencies/>.

National Audit Office, *Reorganising Central Government*, 2010, retrieved March 2013, <http://www.nao.org.uk/wp-content/uploads/2010/03/0910452.pdf>.

OECD, *OECD Benchmark Definition of Foreign Direct Investment*, Fourth Edition, 2008, retrieved March 2013, <http://www.oecd.org/fr/daf/inv/statistiquesetanalysesdelinvestissement/fdibenchmarkdefinition.htm>.

OECD Economic Surveys, *European Union*, March 2012, retrieved February 2013, <http://www.oecd.org/eco/49950244.pdf>.

OECD, *Employment protection regulation and labour market performance* (Chapter 2), Employment Outlook, 2004, retrieved April 2013, <http://www.oecd.org/els/emp/34846856.pdf>.

OECD, *OECD Employment Outlook: tackling the jobs crisis*, OECD Publishing Paris*,* 2009*,* retrieved April 2013, <http://www.oecd.org/els/soc/43728718.pdf>.

OECD, FDI 2012 *Regulatory Restrictiveness Index*, retrieved August 2012, <http://www.oecd.org/investment/fdiindex.htm>.

OECD, *Government at a glance 2011*, 2011, retrieved June 2013, <http://www.oecd-library.org/governance/government-at-a-glance-2011_gov_glance-2011-en>.

OECD, Product Market Regulation Indicator, retrieved March 2013, <www.oecd.org/economy/pmr>.

OECD, ILO, World Bank, WTO, *Seizing the benefits of trade for employment and growth*, report prepared for submission to the G-20 Summit meeting Seoul, 2010, 11-12, retrieved April 2013, <http://www.oecd.org/dataoecd/61/57/46353240.pdf>.

OECD, *The Economic Impact of Regulatory Policy: A Literature Review of Quantitative Evidence*, 6th meeting of the Regulatory Policy Committee, 11-12 April 2012, retrieved March 2013, <http://www.oecd.org/gov/regulatory-policy/3_Kirkpatrick%20Parker%20web.pdf>.

OECD, The Economics of International Investment Incentives, 2002, retrieved February 2013, <http://www.oecd.org/daf/inv/investment-policy/2487874.pdf>.

OECD, *Mobility and migration in Europe*, OECD Economic Surveys: European Union, 2012, <http://www.oecd-ilibrary.org/docserver/download/1012081ec005.pdf?expires=1370293409&id=id&accname=ocid72023236&checksum=F7FEF84E8ED3122F826259733C00020C>.

OECD, *The sources of economic growth in OECD countries*, 2003, retrieved June 2013, <http://browse.oecdbookshop.org/oecd/pdfs/free/1103011e.pdf>.

Ofcom, *Securing the Universal Postal Service*, October 2011, retrieved in May 2013, <http://stakeholders.ofcom.org.uk/binaries/consultations/securing-the-postal-service/summary/condoc.pdf>.

Office of Fair Trading, *Productivity and competition. An OFT perspective on the productivity debate*, 2007, retrieved April 2013, <http://www.oft.gov.uk/shared_oft/economic_research/oft887.pdf>.

Office for National Statistics, *2011 Census: Population Estimates for the United Kingdom*, 2011, retrieved May 2013, <http://www.ons.gov.uk/ons/rel/census/2011-census/population-and-household-estimates-for-the-united-kingdom/index.html>.

Office for National Statistic, Labour Market Statistics, March 2013, <http://www.ons.gov.uk/ons/dcp171778_301631.pdf>.

Office for National Statistics, *Regional accounts*, retrieved June 2013, <www.ons.gov.uk/ons/rel/regional-accounts>.

Office for National Statistics, *The Productivity Conundrum, Interpreting the Recent Behaviour of the Economy*, 2012, <http://www.ons.gov.uk/ons/dcp171766_277262.pdf>.

Pilat, D. 'Competition, productivity and efficiency', OECD Economic Studies No.27, 1996, retrieved April 2013, <http://www.oecd.org/eco/growth/17985473.pdf>.

Pires C. and MacLeod P., *Experience of people who relocate to Scotland*, Scottish Executive Social Research, 2006, <http://www.scotland.gov.uk/Resource/Doc/151187/0040561.pdf>.

PricewaterhouseCoopers, Report for the Government UK Digital Inclusion Champion: *The economic case for digital inclusion,* October 2009, retrieved April 2013, <http://www.parliamentandinternet.org.uk/uploads/Final_report.pdf>.

PWC & InterTradeIreland, Regulatory barriers to cross-border trade and business, 2009, retrieved February 2013, <http://www.intertradeireland.com/media/intertradeirelandcom/researchandstatistics/publications/tradeandbusinessdevelopment/Regulatory%20Barriers%20to%20cross-Border%20Trade%20and%20Business.pdf>.

Royal Mail Group, *Preliminary Results for the year ended 31 March 2013*, 2013, retrieved 2013, <http://www.royalmailgroup.com/financial-and-media/results-and-reports>.

Schaefers, T., Houdijk, K., 'The Netherlands' New Authority for consumers and Markets: Towards a Problem-Based Approach', *World Competition 35,*no.4 (2012), p. 659-670, retrieved June 2013, <http://www.akd.nl/media/1003642/01-01-2012_jhoudijk-tschafers_woco2012049.pdf>.

Scottish Enterprise*, Business Plan 2013-2016*, 2013, retrieved May 2013, <www.scottish-enterprise.com/~/media/SE/Resources/Documents/ABC/Business-plan-2013.pdf>.

Scottish Government, *Economic and Competition Regulation in an Independent Scotland, 2013,* retrieved April 2013*,* <http://www.scotland.gov.uk/Publications/2013/02/1911/0>.

Scottish Government, *Food and Drink in Scotland: Key Facts 2012*, 2012, retrieved June 2012, <http://www.scotland.gov.uk/Resource/0038/00389160.pdf>.

Scottish Government, News Release, 23 April 2013, <http://www.scotland.gov.uk/News/Releases/2013/04/over-2000-jobs-at-new-30-million-innovation-centres>.

Scottish Government, *Scotland's Global Connections Survey 2011*, January 2012, retrieved January 2013, <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/Exports/GCSIntroduction>.

Scottish Government, *Scottish Economy: Key Facts April 2013*, 2013.

Scottish Government, Scottish National Accounts 2012 (Quarter 3), retrieved June 2013, <http://www.scotland.gov.uk/Topics/Statistics/Browse/Economy/SNAP/expstats/aggregates>.

Scottish Government, *State of Economy Annex: Overview of the Scottish Economy*, July 2011, retrieved April 2013, <http://www.scotland.gov.uk/Resource/Doc <http://www.scotland.gov.uk/Resource/Doc/919/0119249.pdf>.

Scottish Transport Statistics No31, December 2012, p. 31, retrieved May 2013, <http://www.transportscotland.gov.uk/files/j251205.pdf>.

Siddique et al., *Institutions & Economic Growth: cross-country evidence*, 2009, retrieved March 2013, <http://ideas.repec.org/p/pra/mprapa/19747.html>.

Speech by Owen Kelly, Chief Executive of Scottish Financial Enterprise, at the Scotsman Conference, *A Question of Independence: The Economics of Independence,* June 2012.

Talking Retail, *New research shows one in two Brits now feel British food is better quality than imported*, 22 March 2013, retrieved April 2013, <http://www.talkingretail.com/news/industry-news/new-research-shows-one-in-two-brits-now-feel-british-food-is-better-quality-than-imported>.

TheCItyUK, *Regional Contribution of UK Financial and Professional Service,* January 2013, retrieved June 2013, <http://www.thecityuk.com/financial-services-in-the-uk/uk-by-region/scotland/>.

Thom, R., Walsh, B., 'The effect of a common currency on trade: Ireland before and after the Sterling Link', Centre for Economic Research, Working Paper Series, 2001, retrieved June 2013, <http://www.ucd.ie/economics/research/papers/2001/WP01.10.pdf>.

UKTI, *International Business Strategies, Barriers & Awareness Monitoring Surveys,* 2012, 2011 and 2010 editions, retrieved March 2013, <http://www.ukti.gov.uk/uktihome/aboutukti/item/393900.html>.

UNCTAD statistics, <http://unctad.org/en/Pages/Statistics.aspx>.

Utility Week, *A tale of two regulators,* 9 February 2011, retrieved March 2013, <http://www.utilityweek.co.uk/news/news_story.asp?id=195022&title=A+tale+of+two+regulators>.

Venn D., *Legislation, collective bargaining and enforcement: Updating the OECD employment protection indicators*, OECD Social, Employment and Migration Working Papers, 2009, retrieved April 2013, <http://www.oecd.org/els/emp/43116624.pdf>.

Whyman P. and Baimbridge M., *Labour Market Flexibility and Foreign Direct Investment*, BIS – Employment Relations Occasional Paper, 2006, retrieved March 2013, <http://www.bis.gov.uk/files/file33254.pdf>.

World Bank, *About Doing Business: measuring for impact*, retrieved April 2013, <http://www.doingbusiness.org/~/media/GIAWB/Doing%20Business/Documents/Annual-Reports/English/DB13-Chapters/About-Doing-Business.pdf>.

World Bank, *Doing Business Survey*, June 2012, retrieved March 2013, <http://doingbusiness.org/rankings>.

World Bank, Investing Across Borders Database, retrieved January 2013, <http://iab.worldbank.org/Data/Explore%20Economies/United-Kingdom>.

World Bank, 'Tax Incentives: Using tax incentives to attract FDI', *Public Policy for the Private Sector*, Note Number 253, 2003, retrieved February 2013, <http://rru.worldbank.org/documents/publicpolicyjournal/253moris-020603.pdf>.

World Bank, *Worldwide Governance Indicators 1996–2011*, 2012, retrieved February 2013, <http://info.worldbank.org/governance/wgi/index.asp>.

World Economic Forum, *The Global Competitiveness Report 2012-13,* 2012*,* retrieved April 2013, <http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf.>.

List of abbreviations

BAA	British Aviation Authority
BIS	Department for Business, Innovation and Skills
BRE	Better Regulation Executive
CAA	Civil Aviation Authority
CC	Competition Commission
CGT	Capital Gains Tax
CTA	Common Travel Area
EPO	European Patent Office
EU	European Union
E&Y	Ernst and Young
FDI	Foreign Direct Investment
GCS	Global Connections Survey
GDP	Gross Domestic Product
GVA	Gross Value Added
HGV	Heavy Goods Vehicles
HMRC	Her Majesty's Revenue & Customs
HS	High Speed
ICAO	International Civil Aviation Organisation
IfG	Institute for Government
IHT	Inheritance Tax
IMD	Institute for Management Development
IPO	Intellectual Property Office
ISA	Individual Savings Account

KTN	Knowledge Transfer Networks
KTPs	Knowledge Transfer Partnerships
LSE	London School of Economics & Political Science
MCA	Maritime & Coastguard Agency
MIP	Mobile Infrastructure Project
NAO	National Audit Office
NAREC	National Renewable Energy Centre
OECD	Organisation for Economic Co-operation and Development
Ofcom	Office of Communications
OFT	Office of Fair Trading
ONS	Office for National Statistics
PMR	Product Market Regulation
POL	Post Office Ltd
PWC	PricewaterhouseCoopers
R&D	Research & Development
RPI	Retail Price Index
SDI	Scottish Development International
SDLT	Stamp Duty Land Tax
SFC	Scottish Funding Council
SME	Small and Medium Sized Enterprise
SNAP	Scottish National Account Project
SNC	Strategic National Corridors
TIC	Technology Innovation Centres
UNCTAD	United Nations Conference on Trade & Development
US	United States
WEF	World Economic Forum

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