powers for growth

reform scotland

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Acknowledgements

In addition to the help and advice from members of Reform Scotland's Advisory Board and Trustees, Reform Scotland would also like to thank Graeme Blackett and Antonio Fatas for their help putting together this publication.

March 2008

About Reform Scotland

Reform Scotland is an independent, non-party think tank whose aim is to set out a better way to deliver increased economic prosperity and more effective public services based on the traditional Scottish principles of limited government, diversity and personal responsibility.

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Objective

This study looks at Scotland's long-term trend rate of economic growth to see how it compares with that of other countries and different parts of the UK. It analyses why Scotland's growth rate is lagging behind other regions and countries and assesses the key factors that have enabled faster economic growth in other countries. Based on the evidence, the paper recommends some broad policy changes that are necessary to improve Scotland's economic performance. However, it does not cover every area affecting Scotland's growth rate. The changes we recommend need to be part of a wide-ranging strategy including vital areas such as the existence and quality of infrastructure, the extent and burden of government regulation and the quality and productivity of the public sector, in particular the education and planning systems. These subjects will be explored in future papers.

Findings

A number of key measurements of economic health show that Scotland is moving in the wrong direction. Although Scotland enjoys a high level of economic freedom, on most of the other key indicators Scotland is performing below its peers. These include:

- A declining productivity rate, well below the EU average **(figure 9)**;
- 20% of working-age men not in employment **(figure 10)**;
- One of the highest levels of public spending in the EU which, unlike all other EU countries except Portugal, is increasing as a proportion of GDP **(figure 14)**;
- A relatively high tax burden **(figure 19)**;
- A low business start up rate **(figure 23)**

While the UK as a whole also fares poorly on a number of the above measures, London retains a very successful economy which performs well on many of the key indicators. Generally, the further away from London an area of the UK is, the worse that area performs.

Policy recommendations

Lower overall tax burden: We would recommend a strong policy of reducing the overall burden of tax. The paper shows the correlation between a falling ratio of total tax revenue to GDP and economic growth **(figure 20)**. The correlation between cutting a single tax such as corporation tax and economic growth is less clear **(figure 21)**, for example the US corporation tax has remained constant whilst in Germany it has been cut by 14% and yet the two countries have seen the same growth rates. Lowering taxes is important in encouraging long term investment and new business generation which in turn leads to greater employment and productivity. We welcome the Scottish Government's policy on lowering the business rate **(figure 22)** and working with local authorities to freeze council tax, and we would encourage the Scottish Government to go further within the powers it has to lower the overall tax burden.

Limited government: We would recommend that government pursues a policy of significantly reducing the proportion of public spending as a share of GDP. Scotland is among the countries most dependent on the state, both within Europe **(figure 14)** and also within the UK. However, more worryingly, while countries such as Sweden are reducing their public spending as a share of GDP, Scotland, and the UK as a whole, are increasing their share. The paper shows there is a strong correlation between decreasing dependence on the state and improving economic growth; therefore to improve Scotland's economic growth, there has to be a reduction in public spending as a share of GDP. Limiting the role of government will allow the private and not-for-profit sectors to develop faster and for there to be an increasing business start up rate. In addition, faster growth in the private and not-for-profit sectors will help reduce public sector dependence. The main thrust for less public sector dependence must come from greater public sector reform. Such reform must aim to deliver better and more effective services which deliver real value for money. That is the only way to ensure that resources are used efficiently throughout the economy. In many areas, it may require introducing different ways to deliver public services and later Reform Scotland reports will look at this issue in greater detail.

Greater fiscal autonomy: In order for the full benefits of the first two recommendations to be realised, we recommend a policy of greater fiscal autonomy which will help Scotland achieve these objectives. There are

benefits, in terms of economic growth, to be gained from lowering the taxes the Scottish parliament currently controls. Equally, a more favourable UK tax regime would help the Scottish economy. However, if Scotland aspires to match the most successful economies, there are additional benefits to be gained from a tax system that is differentiated from the rest of the UK and particularly South East England to provide Scotland with a real platform for higher economic growth. Importantly, this would also mean that the higher revenues resulting from higher economic growth would accrue to Scotland and not the Treasury.

At the same time, public spending in Scotland is largly governed by a block grant from Westminster. This provides no incentive for the Scottish Government to exert greater control over public spending as any savings resulting from greater efficiency are returned to Westminster. Greater fiscal autonomy would, therefore, help to encourage a reduction in public spending as a share of GDP.

From an economic perspective, additional economic powers are valuable only if used to reduce the tax burden and control spending. If used to increase taxes, this would have a detrimental effect on economic growth in Scotland.

Better statistical information: We would recommend that the Scottish Government creates a mechanism for providing quality Scottish economic data, such as quarterly GDP, GDP growth and breakdown of government revenue and expenditure that can be compared with historical figures and to other regions in the UK. These figures should be produced at the same time as the Treasury produces figures for the UK. Without such basic tools, there is a danger that measuring any progress becomes an argument over statistics and economic assumptions, rather than what can be done to improve the economy. Similarly, we would recommend that the Scottish Government does what it can to ensure that Scotland is once again included within the IMD's World Competitiveness Yearbook.

Conclusion

In comparing Scotland to other similar-sized countries, we can see no reason why it cannot achieve an average growth rate of 3.5% or higher for a limited period of 10 to 12 years to allow its GDP per head to reach a level that is in line with the best performing world economies such as that of the USA. However, to achieve this, the government will need to adopt policies that will provide the right framework for creating new businesses, reducing dependence on the public sector, greater productivity and higher investment. This in turn will lead to increased employment and higher economic growth. The policies of lower taxation, public sector reform and better information are vital ingredients that other countries such as Ireland have used to achieve faster economic growth.

1. Introduction

The aim of this study is threefold:

- To look objectively at Scotland's long-term trend rate of economic growth to see how it compares with that of other countries and different parts of the UK and draw conclusions about the rate of economic growth which is achievable in the long term;
- To look at some of the reasons why Scotland's growth rate lags behind other countries or parts of the UK by highlighting differences between Scotland and these other areas in terms of key aspects of the economy; and
- To suggest broad policy changes that could increase Scotland's trend rate of economic growth, learning important lessons from the approaches adopted elsewhere.

2. Scotland's economy

2.1. Lack of hard facts in Scotland

In any discussion about the performance of the Scottish economy, an important step should be to review how Scotland compares, not just with other regions within the UK, but also with other economies across Europe and the rest of the world. In order to do this, robust data is needed to measure Scotland's economic progress over recent years. Unfortunately, in Scotland there is a lack of agreed economic data to measure performance. In particular, there are no agreed official figures for Scottish GDP and while quarterly Gross Domestic Product bulletins are published, they actually measure Gross Value Added[1] growth. However, it isn't even possible to measure Scottish GVA over any particularly long period. A written parliamentary question in 2006[2] asked for the GVA figures for Scotland going back to 1950. No consistent or comparable data was available and the best that could be produced was GDP based on factor incomes from 1971 to 1996 and GVA at current basic prices for the period from 1989 to 2004.

Similarly another written parliamentary question[3] asked for annual growth rates for Scotland, compared against the UK as a whole, England, Wales and Northern Ireland going back to the 1970s. Such data would allow comparisons to be made across the UK. Whilst Scottish data was available, no comparable figures exist for England, Wales and Northern Ireland.

Without such basic tools, there is a danger that measuring Scottish growth becomes an argument over statistics and economic assumptions, rather than what can be done to improve our performance.

It was also particularly disappointing that after being included within the IMD's World Competitiveness Yearbook for 3 years, in 2007 Scotland was left out. This yearbook provided a valuable way to track Scotland's progress compared to other countries, and regions, across the world. When Scotland was included it showed a significant under-performance compared to the UK as a whole.

1 The term GVA is used to denote estimates that were previously known as gross domestic product (GDP) at basic prices. Under European System of Accounts 1995 the term GDP denotes GVA plus taxes (less subsidies) on products, i.e. at market prices. Regional accounts are currently only published at basic prices, so the figures are now referred to as GVA rather than GDP as in previous publications.

2 S2W-22235

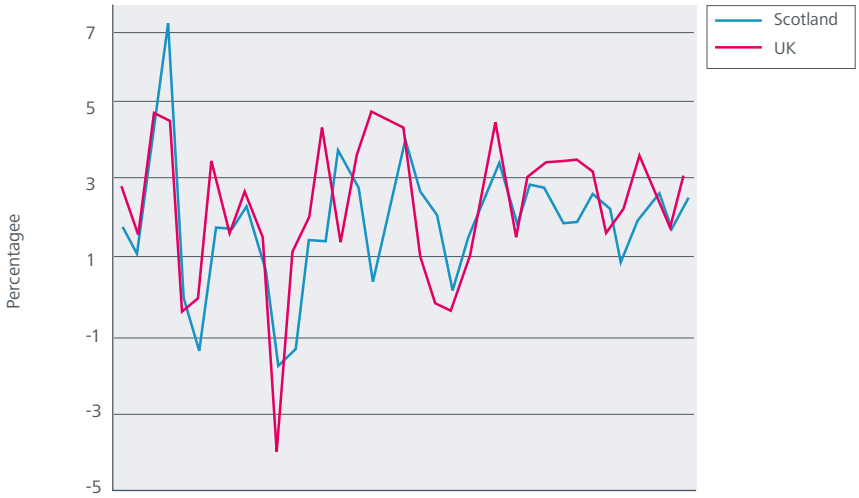
3 S3W-7438

If we are to learn from our own past economic performance, and those of other countries, sound economic facts and figures are needed. As part of its strategy to improve Scotland's growth, the Scottish Government should seek to work with Westminster and the Office for National Statistics to produce the raw data needed for measuring the success or failure of its policies. As well as GDP and growth, such data should include up-to-date revenue figures and a balance sheet for Scotland. Ideally, this information should be published at the same time as the UK figures.

2.2. How Scottish GDP compares with other countries and regions

Commentators have long lamented Scotland's poor growth rate and economic performance compared with the rest of the UK. Figure 1 charts Scotland's annual growth rate against that of the UK as a whole over the past 35 years. With the exceptions of a few temporary blips in the mid-eighties and late-nineties, Scotland has generally lagged behind the UK, both in terms of the general trend and extent of growth.

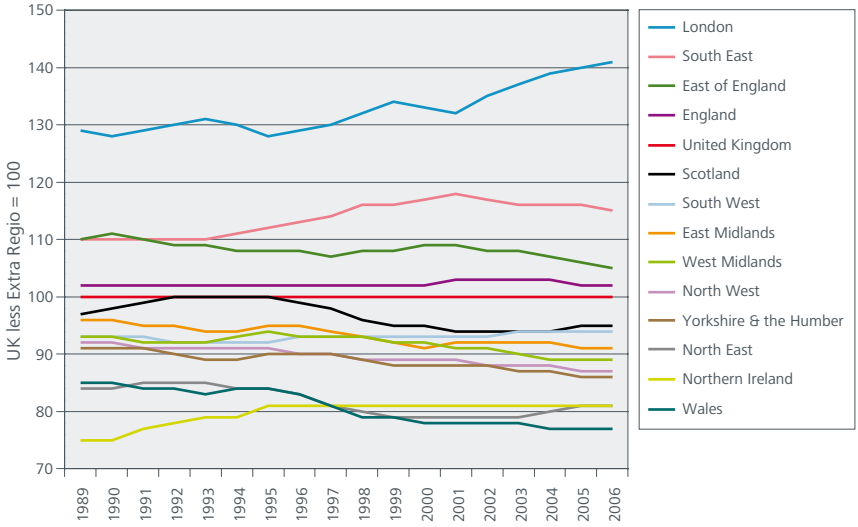
Figure 1: Annual GDP growth rates at constant basic prices for Scotland and the UK as a whole



Source: S3W-7438

In order to compare Scotland's economic progress in recent years with other countries, the GVA per head index produced by the ONS in 2006 was used. This provides a ratio of Scotland's GVA per head compared to the rest of the UK less extra region, as illustrated by Figure 2.

Figure 2: GVA per head indices (UK less extra region = 100)



Source: Regional GVA, ONS, December 2007

The black line denotes Scotland and shows how Scottish GVA measures against the rest of the UK over the past 15 years. As might be expected, London's GVA per head has consistently performed far better than the rest of the country, followed by the South East. Generally, the further you move away from London the worse the local economy performs, though Scotland has proved to be an exception to this rule. While Scotland's GVA per head was on a par with the UK average in the early 1990s, by 2006 Scotland stood at 95%.

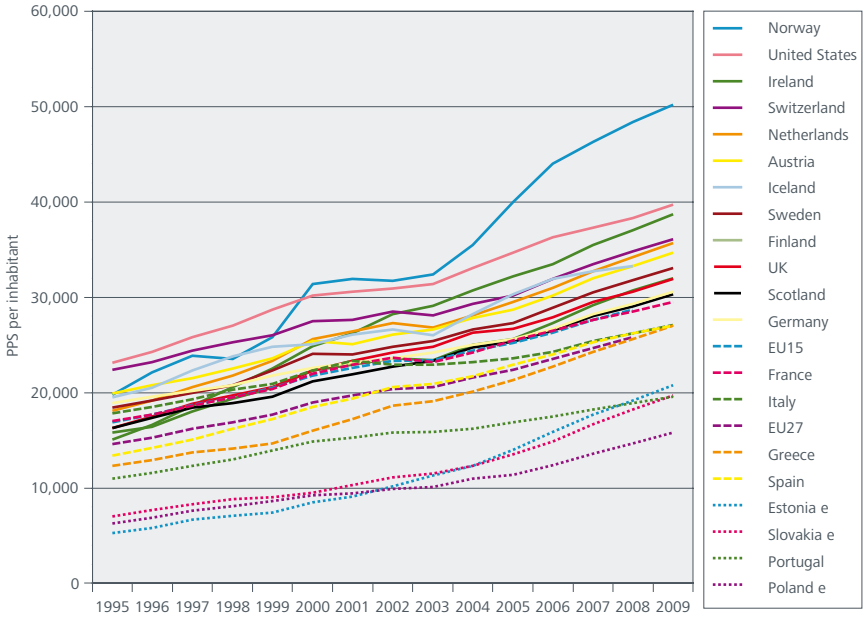
Figure 3, based on information provided by EUROSTAT, charts GDP at market prices expressed as PPS per inhabitant. The PPS (Purchasing Power Standard) is an artificial currency that takes into account differences in national price levels. The unit allows meaningful volume comparisons of economic indicators across

countries. Using the GVA indices allows an estimated figure for Scottish GDP to be established and, therefore, charted against other European countries and the USA.

For example in 2004:
UK = 100, Scotland =94, England =103, Wales = 77, Northern Ireland = 81

EUROSTAT tells us that in 2004 the PPS for the UK was 26,300. Scotland's GVA per capita in this year was 94% of the UK as a whole, so assuming that Scotland's GDP per capita was also 94% of the UK's in 2004, Scotland's PPS for 2004 was 24,722.

Figure 3: GDP per capita at basic current prices



Sources: Regional GVA, ONS, DEC 2007 and Eurostat

Figure 3 shows that, with the exception of Norway, which is arguably a special case because of the recent discovery of oil, other countries all lag behind the USA. Luxembourg's economy (not illustrated in the graph below though included in the table in Appendix 2) also performs better than the

USA, although it too could be seen as a special case given the small size and geographical location of the country.

The graph highlights the success of a number of small European countries which outperform their larger European neighbours, including Iceland, Ireland, the Netherlands and Austria.

Even allowing for the fact that the Scottish figure is only an estimate, the gap between Scotland and these successful economies has widened over the past decade, as illustrated in Table 1:

Table 1: Difference between Scotland and selected economies based on GDP per capita expressed as PPS

	1995	2006
UK	-	+5%
Ireland	-8%	+26%
Norway	+21%	+66%
USA	+42%	+37%
Iceland	+19%	+20%

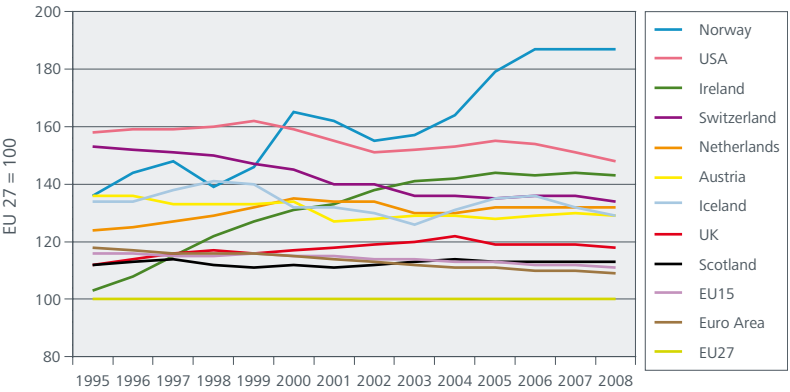
However, it should also be highlighted that the UK as a whole has not fared particularly well over this period when compared to these same countries, as highlighted by Table 2:

Table 2: Difference between UK and selected economies based on GDP per capita expressed as PPS

	1995	2006
Ireland	-7%	+20%
Norway	+21%	+58%
USA	+42%	+30%
Iceland	+20%	+14%

To provide a closer look at how the differences in the economies have changed since 1995, Figure 4 charts an index of GDP per capita, again expressed as PPS per inhabitant, with the EU27 equal to 100. The graph shows how the EU15 and the Euro area, whilst slightly above the EU27 as a whole, have both declined in recent years. Some of the more successful smaller European countries are also charted. While Scotland and the UK's relative position is not as volatile as many other areas, it does highlight their relatively weak positions, well below that of Ireland.

Figure 4: Index of GDP per capita at basic current prices



Sources: Regional GVA, ONS, DEC 2007 and Eurostat

2.3. Conclusion

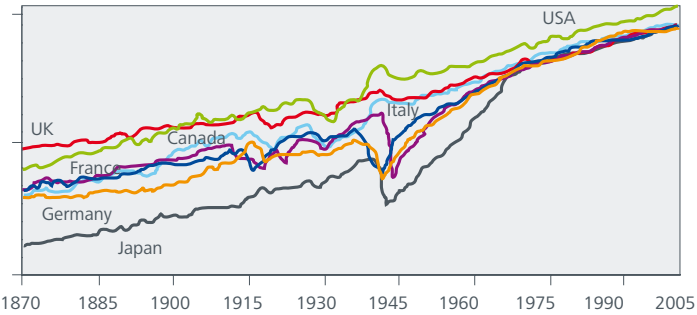
All the evidence shows that, in terms of GDP per capita, there is a clear gap between the trend rate of growth of the Scottish economy and those of the leading parts of the UK, the EU and the rest of the world. Indeed, since the mid-1990s, Scottish growth has lagged behind that of the UK as a whole, even though the UK's trend rate of growth is nothing to write home about.

This raises the questions of why this gap exists and how could it be closed. However, before going on to look at those questions, it needs to be recognised that there are limits to growth. The work of Antonio Fatas and Ilian Mihov on convergence demonstrates this. Taking the trend rate of growth in GDP per capita as the measure, they have shown that whilst countries can converge with the world economic leader (the USA for most of the last century), it is extremely difficult to overtake that trend rate of growth.

The reason for this, according to Fatas and Mihov, is that the world economic leader is operating at what they call the 'technological frontier'[4]. This means it uses the most advanced technology and capital, the most skilled labour and implements the best managerial practices to produce a range of services and goods. Thus increases in its growth rate can only come from innovation in technology or products or simply better ways of producing the same things through improvements in management or organisation.

Not surprisingly, such technological and organisational innovation is difficult to achieve and is the result of effort on the part of a variety of companies and research laboratories. In the United States it has led to a remarkably constant real growth rate of about 1.85% going back over the last 130 years.

Figure 5: Real GDP per capita within the G7



Source: Antonio Fatas

It is also the case that the further behind the economic leader a country is in terms of its trend rate of GDP per capita growth, the higher its growth rates can be. However, as a country's trend rate of growth gets closer to the leader, growth slows down. This is because poorer countries have greater potential for growth, with cheap labour and the ability to copy and import knowledge from wealthier countries. As their production becomes more like that of the wealthier countries though, growth rates slow down and they too find that increases come about only through innovation.

4 The Four I's of Economic Growth, Antonio Fatás and Ilian Mihov, INSEAD

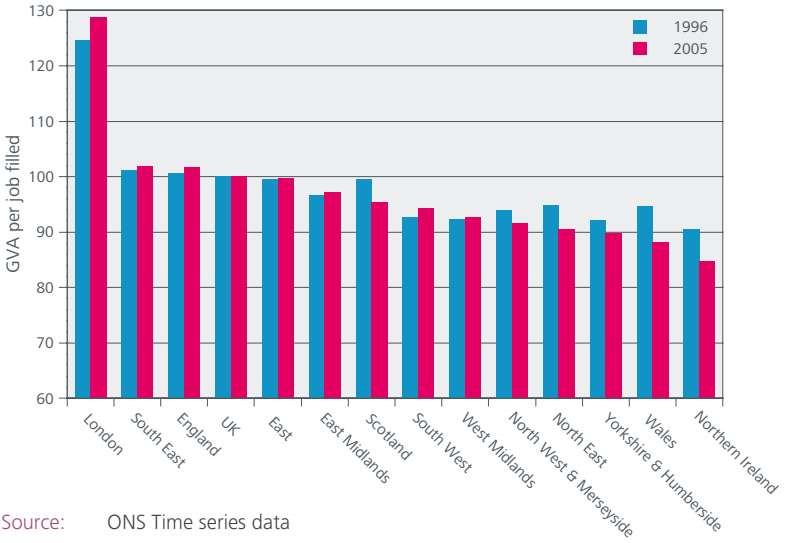
3. Why does Scotland's growth rate lag behind?

The previous section demonstrated that there is a growing gap in the trend rate of growth between Scotland and the leading regions of the UK, between Scotland and the UK as a whole and between both Scotland and the UK and a number of small European countries. This section attempts to explain why Scotland's growth rate lags behind. It does so by highlighting differences between Scotland and these countries, first by examining economic indicators such as productivity, then looking at areas more directly within the control of government, such as tax rates.

3.1 Productivity and growth

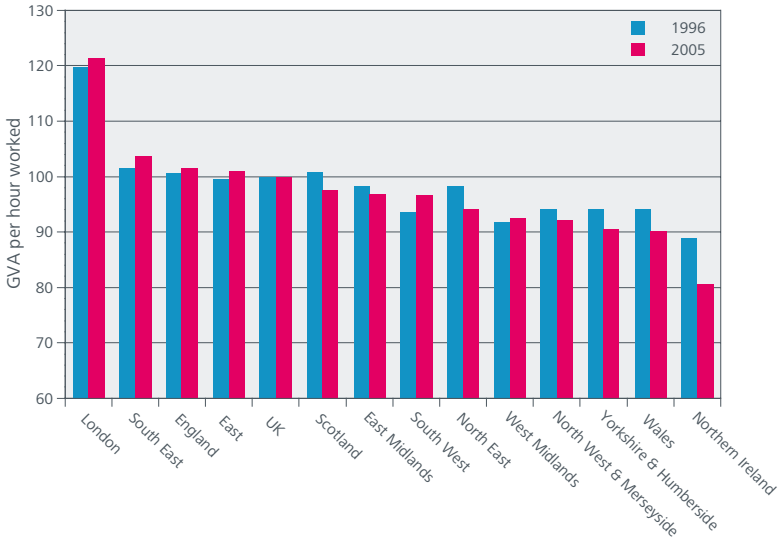
Increased productivity is the major driver of economic prosperity in the long term and a key indicator in assessing the success of an economy. Two measures of labour productivity are often used: GDP per worker and GDP per hour worked. **Figures 6 and 7** below chart how Scotland compares to other regions within the UK. While Scotland does comparatively well on both charts, its productivity has fallen over the past decade, whilst productivity has increased in the more successful parts of the UK.

Figure 6: GVA per job filled, UK =100



Source: ONS Time series data

Figure 7: GVA per hour worked, UK=100



Source: ONS Time series data

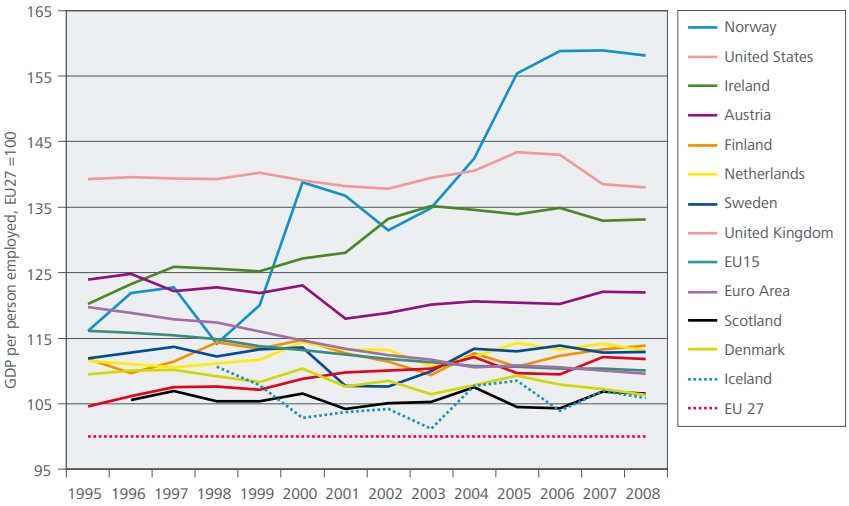
Using the index provided by the ONS has allowed Scotland to be charted against other European counties in **Figures 8 and 9**.

For example in 2004, Scotland's GVA per hour worked was 97.6% of the UK's. EUROSTAT tells us that in 2004 the UK's GDP per hour worked was 92.5 (EU15=100). Therefore, it can be assumed that Scotland's GDP per worker was 90.3 (97.6% of 92.5).

GDP per hour is arguably a better measure of productivity because it strips out the effects of different working hours across countries.[5] Although Scotland and the UK as a whole perform better than a number of the small eastern European countries (detailed in **Appendix 4** though not included in **Figures 8 & 9**), the graphs illustrate the gap between Scotland's productivity and that of the countries Scotland is trying to emulate, such as Ireland and Norway. Scotland and the UK are also significantly below the EU15.

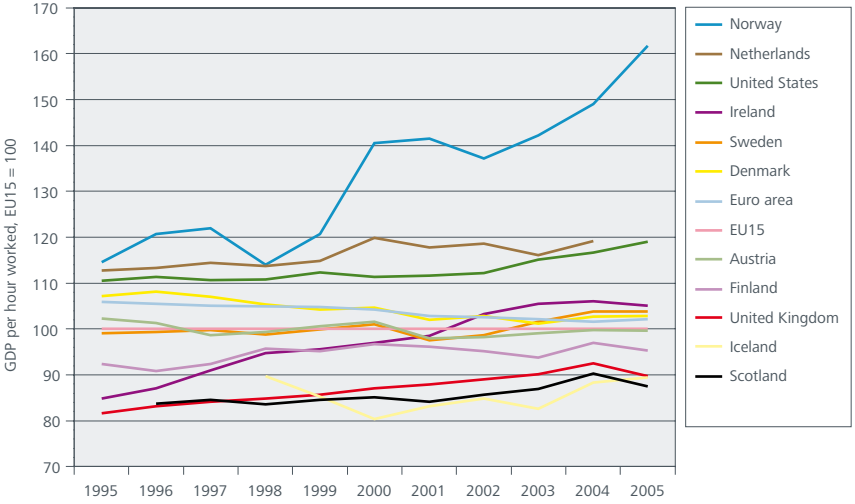
5 Labour costs and regulation also impact on productivity. For example, in France labour is comparatively expensive so companies invest more in their workforce to make them more productive. In contrast in the UK, Labour is more plentiful and there is less regulation, so there is an incentive for companies to use more labour and invest in technology less, which can make productivity per job or per hour worked less. This conundrum aside, productivity remains a useful way of comparing economies.

Figure 8: GDP per job filled, expressed at PPS, EU27=100



Source: EUROSTAT, ONS Time series data

Figure 9: GDP per hour worked, expressed as PPS, EU15=100

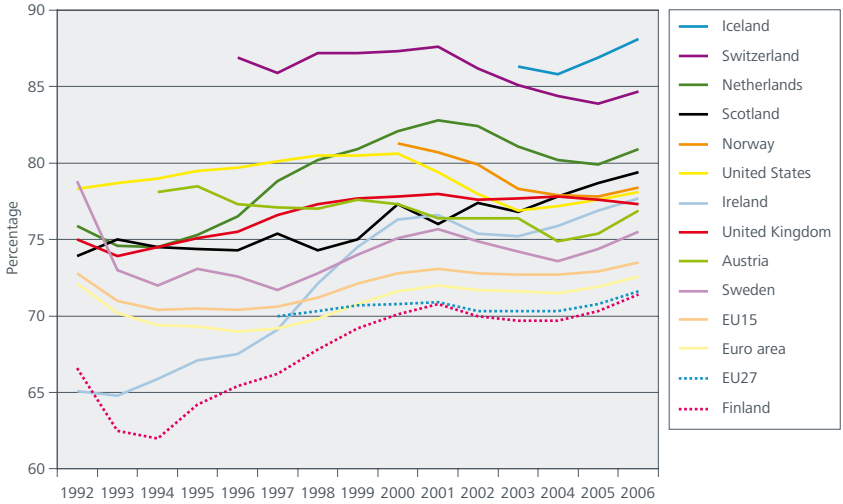


Source: EUROSTAT, ONS Time series data

3.2 Employment rate and growth

The employment rate is another key indicator of a country's economic performance. The employment rate, rather than unemployment, is a better way to measure true employment across different countries as it removes inconsistencies with regard to benefit provision. **Figure 10** measures only the male employment rate in order to remove cultural differences with regard to women staying at home to raise children. Eurostat measures from the age of 15, whereas the Scottish figures provided by the ONS measure from 16 to 64. This gives Scotland a marginal advantage, but allows the general trend to be illustrated in **Figure 10**.

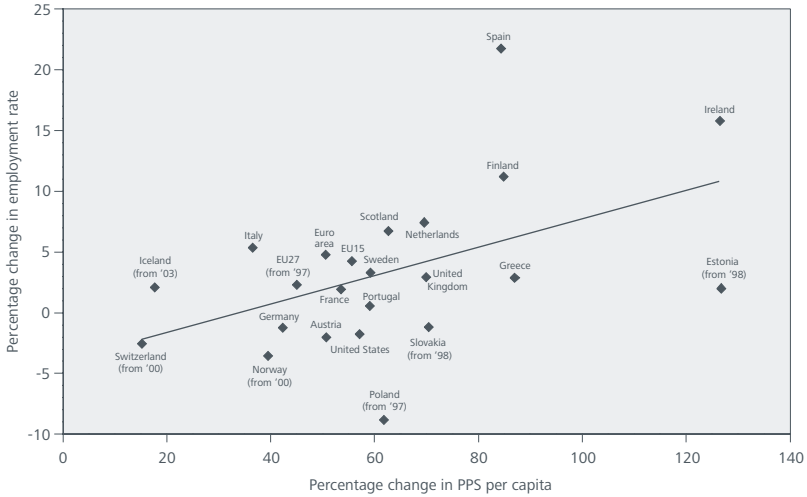
Figure 10: Employment rate among men aged 15-64



Source: EUROSTAT and ONS

In terms of the employment rate amongst men, it may appear that Scotland fares comparatively well. However, with over 20% of the male population of working age not in employment, too many people in Scotland are not contributing to GDP. Countries that have generated substantial improvements in their rate of employment have also generated improvements in GDP per capita. For example, Ireland has seen a 16% increase in its employment rate, compared to Scotland's increase of 7%. This correlation between the employment rate and GDP per capita is illustrated in **Figure 11**.

Figure 11: Relationship between the changes in the employment rate for men aged 15-64 and GDP per capita, expressed as PPS at basic current prices, 1995 to 2006



Source: EUROSTAT and ONS

Figure 11 gives a clear indication of the correlation between an increase in the employment rate and an increase in GDP per capita. Generally, the more a country improved its employment rate, the more it saw an increase in GDP per capita, though the impact varied from country to country. For example, the UK does better than it should based on its performance in increasing its employment rate, whilst Scotland does worse, again emphasising the differences within the UK.

3.3 Economic freedom and growth

Whilst a healthy employment rate and productivity rate are key indicators of, and contributors to, a successful economy they are areas where a government can influence, not direct. The next sections examine the areas, such as tax rates and public spending, which governments directly control, highlighting their impact on creating a successful economy. The first, and arguably the most important, is the environment governments create in which to do business.

For over a decade, The Wall Street Journal and The Heritage Foundation, an American based think tank, have compiled an Index of Economic Freedom. The Index covers 10 freedoms in 157 countries, giving countries a percentage score for economic freedom out of 100. In 2008, the index ranges from 3% for North Korea to 90.3% for Hong Kong. The higher the score, the lower the level of government interference in the economy.

The 10 freedoms calculated are:

- Business Freedom
- Trade Freedom
- Fiscal Freedom
- Freedom from Government
- Monetary Freedom
- Investment Freedom
- Financial Freedom
- Property Rights
- Freedom from Corruption
- Labour Freedom

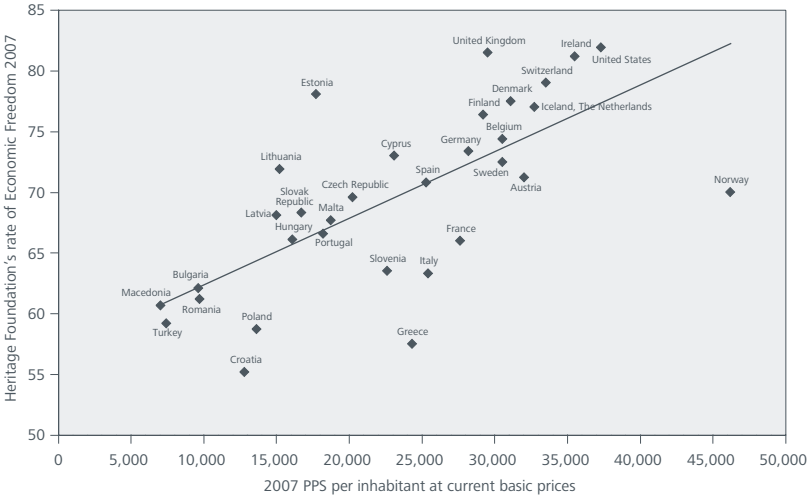
The Heritage Foundation argues that there is a link between economic freedom and the success of an economy's performance:

"Economic freedom is strongly related to good economic performance. The world's freest countries have twice the average per capita income of the second quintile of countries and over five times the average income of the fifth quintile of countries. The freest economies also have lower rates of unemployment and lower inflation. These relationships hold across each quintile, meaning that every quintile of less free economies has worse average rates of inflation and unemployment than the preceding quintile has."[6]

6 2007 Index of Economic Freedom, Heritage Foundation

Scotland is not included in the Heritage Foundation's Index and as the majority of issues covered by the index are reserved to Westminster, Scotland is therefore not included separately in Figure 12.

Figure 12: Relationship between 2007 rating of economic freedom & 2007 GDP per capita, measured as PPS at current basic prices



Source: Eurostat, Heritage Foundation

The chart backs up the assertion from the Heritage Foundation that the freer an economy, the better its performance. The UK performs well in the 2008 Index, ranked as 75.5% free, making it the world's 10th freest economy. However, the UK's position has fallen from 6th in the world in 2007 and from the freest economy in Europe in 2007, to third place in Europe in 2008, behind Ireland and Switzerland. The reason for this slippage is the fact that the UK scores far below the world average in government size and fiscal freedom. The proportion of GDP spent by government is a useful tool for measuring how dependent on government a country is, an area which is examined in the next section.

Another useful measure of economic freedom is the IMD's World Competitiveness Yearbook. Between 2004 and 2006, Scotland was included in the yearbook, but was left out in 2007. In the three years Scotland was included, it continually performed well below the UK. The Scottish Government should seek to ensure that Scotland is once again included in this exercise. Table 3 shows how Scotland and the UK performed between 2004 and 2006.

Table 3: IMD World Competitiveness Yearbook 2004-2006

	2004	2005	2006
Scotland	36/60	35/60	30/61
UK	22/60	16/60	22/61

Source: IMD

3.4 Public spending and growth

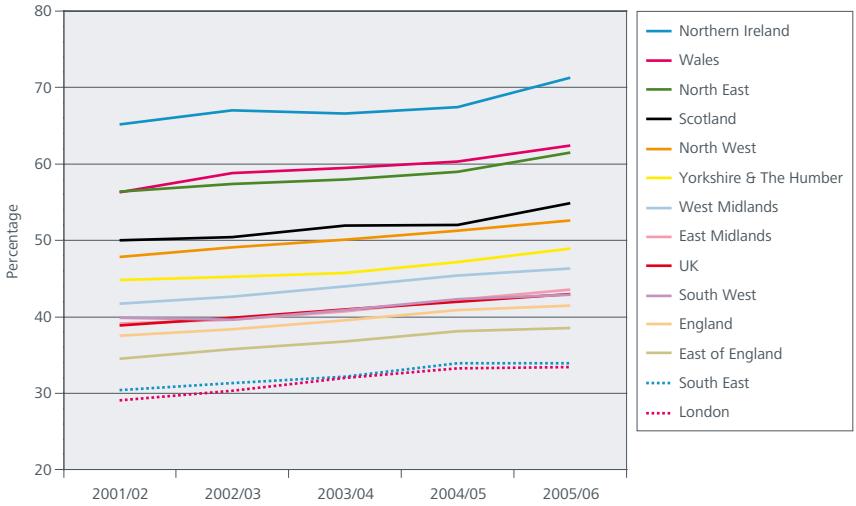
It has often been stated that Scotland has a high level of public spending; however this is unfortunately another area where it has been difficult to get agreed official statistics for Scotland mainly due to the problems in agreeing a figure for GDP. However, in May 2006 the Centre for Economics and Business Research (CEBR) published the estimates of public spending as a share of GDP across regions within the UK based on Public Expenditure Statistical Analyses 2006. Those estimates are detailed in Table 4 and illustrated in Figure 13. The information highlights the trend that the farther away from London an area, the higher the dependence on government spending. Although other parts of the UK have a higher figure for public spending as a share of GDP, over the past five years Scotland's public spending as a share of GDP has consistently been 10% above the UK as a whole.

Table 4: Public spending as a share of GDP throughout the UK

	2001/02	2002/03	2003/04	2004/05	2005/06
Northern Ireland	65.2%	67.0%	66.6%	67.4%	71.3%
Wales	56.3%	58.8%	59.5%	60.3%	62.4%
North East	56.4%	57.4%	58.0%	59.0%	61.5%
Scotland	50.0%	50.4%	51.9%	52.0%	54.9%
North West	47.8%	49.1%	50.1%	51.3%	52.6%
Yorkshire & The Humber	44.8%	45.2%	45.7%	47.2%	48.9%
West Midlands	41.7%	42.6%	44.0%	45.4%	46.3%
East Midlands	39.1%	39.6%	40.7%	42.2%	43.6%
UK	38.9%	39.9%	41.0%	42.0%	43.0%
South West	39.9%	39.6%	40.9%	42.3%	42.9%
England	37.5%	38.4%	39.5%	40.9%	41.5%
East of England	34.5%	35.8%	36.8%	38.1%	38.5%
South East	30.4%	31.3%	32.2%	33.9%	33.9%
London	29.1%	30.3%	32.0%	33.3%	33.4%

Source: Forecasting Eye Special – How public money is spent in each region and country of the UK, CEBR, May 2006

Figure 13: Public spending as a share of GDP throughout the UK

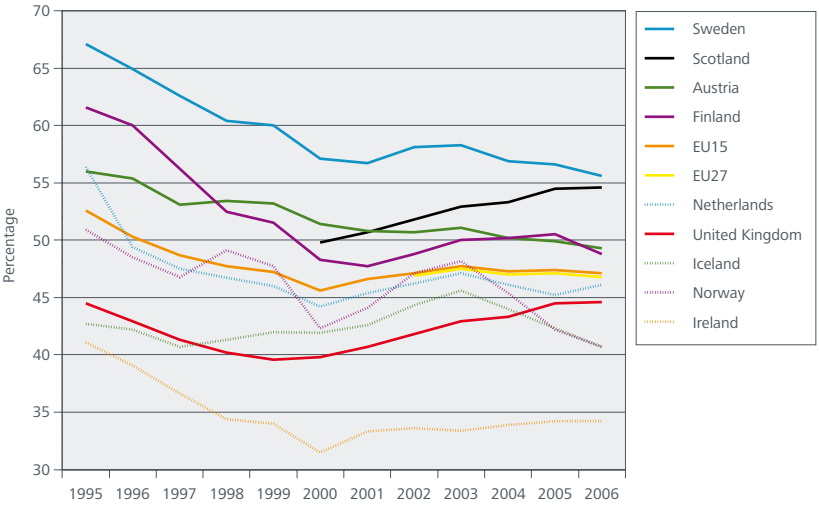


Source: Forecasting Eye Special – How public money is spent in each region and country of the UK, CEBR, May 2006

Whilst public spending is a useful indicator in examining dependence on the public sector, it is important when making comparisons that the data from different countries refers to the same thing. Figure 14 charts general government expenditure as a percentage of GDP provided by Eurostat and defined in European System of Accounts 1995 by reference to a list of categories.[7] The work carried out by the CEBR suggested Scotland has been 10% higher than the UK as a whole over the past five years. Using this relationship has allowed Scotland to be included in Figure 14 and gives a rough indication of her standing compared to the rest of Europe.

7 Intermediate consumption, gross capital formation, compensation of employees, other taxes on production, subsidies, payable property income, current taxes on income, wealth, etc., social benefits, some social transfers, other current transfers, some adjustments, capital transfers and transactions on non-produced assets.

Figure 14: Total General Government Consumption as a percentage of GDP



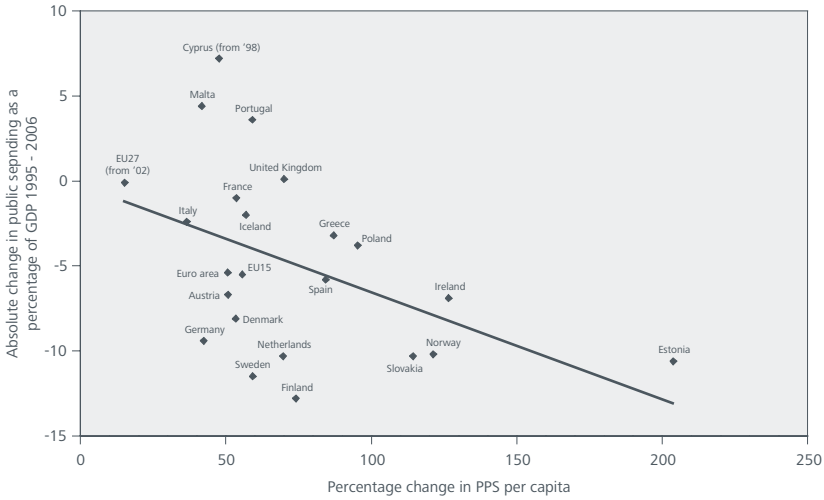
Source: EUROSTAT, CEBR

Even allowing for the fact that the Scottish figures are simply an estimate based on the UK figures, **Figure 14** quite clearly shows that Scotland has a very high level of public spending compared to the rest of Europe. Although Sweden is still at the highest level, crucially public spending as a share of GDP is dropping in Sweden whilst it is increasing in Scotland.

For the UK as a whole, **Figure 14** gives the impression that the UK's total government consumption as a proportion of GDP is not too bad as it is below the EU average (for both the EU 15 and EU 27). However, the UK is the only country charted whose share actually increased over the past 10 years. In fact, across all 35 countries or groups of countries for which EUROSTAT had information, only four countries increased their percentage spent on Government consumption – the UK, Malta, Cyprus and Portugal.[8] In contrast, successful economies such as Ireland and Norway saw a big drop in their share.

8 Appendix 6

Figure 15: Relationship between the changes in public spending as a percentage of GDP and changes in GDP per capita, expressed as PPS at basic current prices between 1995 and 2006



Source: EUROSTAT

Although the UK has performed better than it should have given the increase in government consumption, Figure 15 demonstrates that there is a correlation between public spending and improvement in GDP per capita. Generally, the more a country reduced the share of GDP spent on government consumption, the greater the increase in GDP per capita. Therefore if Scotland is to increase its GDP per capita, there has to be a move to reduce its dependence on government spending.

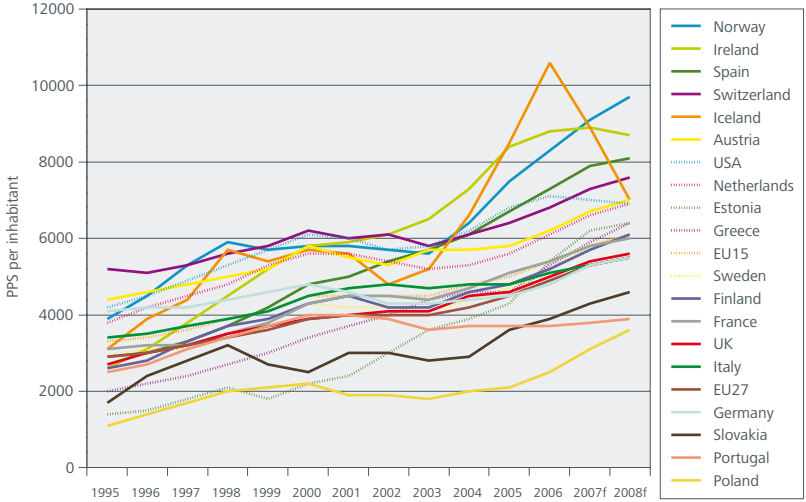
However, it is important to note that within the current financial set-up in Scotland, there is no incentive for the Scottish Government to cut its share of spending in Scotland. The Scottish Government receives a block grant from Westminster, which is calculated in accordance with the Barnett Formula. In 2006-7, Total Scottish Identifiable Public Expenditure was just over £44 billion. Of this, just under £30 billion, or 67.5%, was made up by the Scottish Budget[9]. Without greater revenue raising powers, there is no incentive for the Scottish Government not to spend all this money, otherwise it is simply returned to Westminster.

9 S3W-4438 by John Swinney on 27th September 2007

3.5 Fixed capital formation[10] and growth

Investment of fixed capital formation is another important building block of a successful economy, and again an area on which a government has direct impact. Unfortunately, it is also another problem area for agreeing Scottish figures which are comparable with other areas. Figure 16 charts gross fixed capital formation across Europe and the USA expressed as PPS per capita whilst Figure 17 illustrates gross fixed capital formation expressed as a percentage of GDP for selected economies. The UK National Asset Register showed that in both 2001 and 2007 Scotland had about 6% of Total Fixed Assets compared with the UK as a whole. As Scotland's population was about 8.5% of the UK's at this time, it shows that Scotland's comparative asset level is slightly below that of the UK, so it can be assumed that Scotland would perform slightly worse than the UK in Figures 16 and 17.

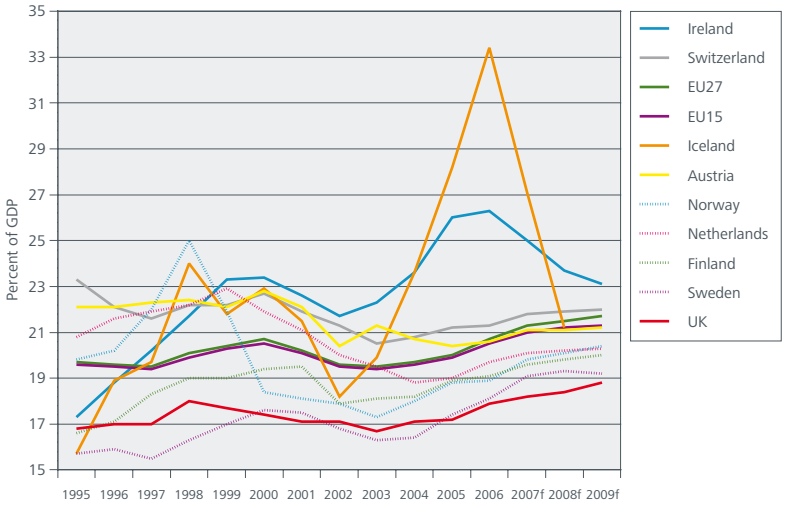
Figure 16: Gross Fixed Capital Formation expressed as PPS per inhabitant at basic current prices



Source: EUROSTAT

10 Gross fixed capital formation consists of resident producers' acquisitions, less disposals, of fixed assets during a given period plus certain additions to the value of non-produced assets realised by the productive activity of producer or institutional units. Fixed assets are tangible or intangible assets produced as outputs from processes of production that are themselves used repeatedly, or continuously, in processes of production for more than one year.

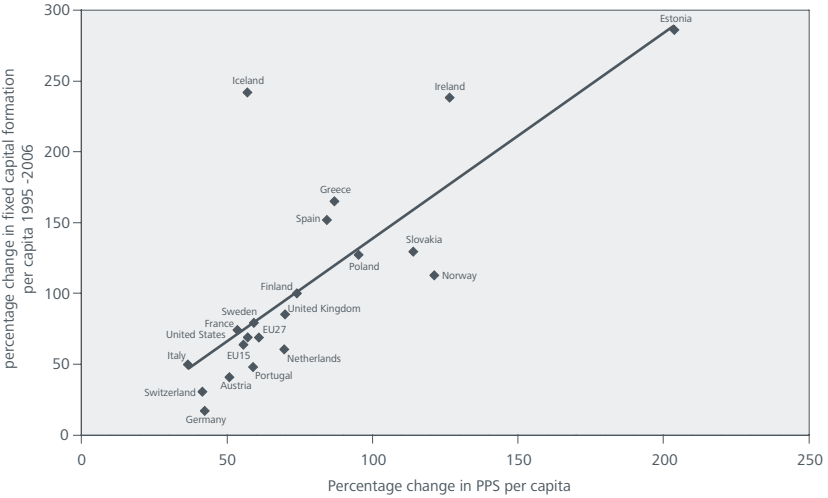
Figure 17: Percent of GDP spent on Gross Fixed Capital Formation



Source: EUROSTAT

What is striking about these graphs is how badly the UK, and by implication Scotland, fares. Despite having high levels of public spending, as illustrated in section 3.4, the UK has one of the smallest percentages of GDP spent on fixed capital formation and one of the smallest per capita spends. The more successful economies of Ireland, Iceland and Norway all spent substantially more. This correlation is mapped out in **Figure 18**.

Figure 18: Relationship between the changes in expenditure on fixed capital formation and changes in GDP per capita, expressed as PPS at basic current prices between 1995 and 2006



Source: Eurostat

The trend exhibited in **Figure 18** quite clearly indicates that the greater the increase in expenditure on fixed capital formation, the greater the increase in GDP per capita.

3.6 Tax burden and growth

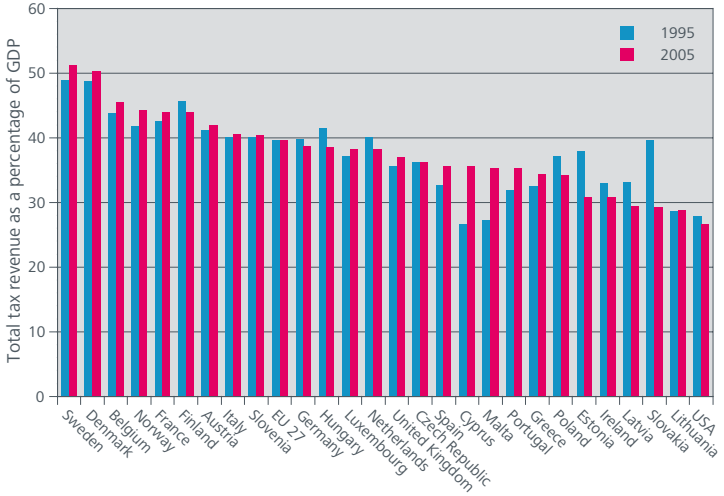
The European Union as a whole is a high tax area. In 2005, the total tax revenue as a percentage of GDP amounted to 39.6% compared to 26.6% in the United States. However there are also different trends amongst different groups of countries within Europe. The Scandinavian countries of Sweden, Denmark, Norway and Finland tend to have the highest tax burdens, followed largely by the founding members of the European Community including France, Belgium and Germany. However, emerging growing economies such as Ireland and Estonia have lower and declining tax burdens.

Within the current devolved settlement in Scotland, there are only limited tax-varying powers available covering:

- Non-domestic rates
- Decreasing or increasing the basic level of Income Tax by 3p
- Council Tax. Although this is normally set at council level, the Scottish Parliament has the power to change the nature of the tax, introduce centrally driven cuts or increases, or, as the SNP Government has done, work with councils to provide a council tax freeze.
- The Scottish Parliament can also introduce new taxes in devolved areas, e.g. plastic bag taxes.

As a result of these limitations, Scotland is included within the UK in Figures 19-21.

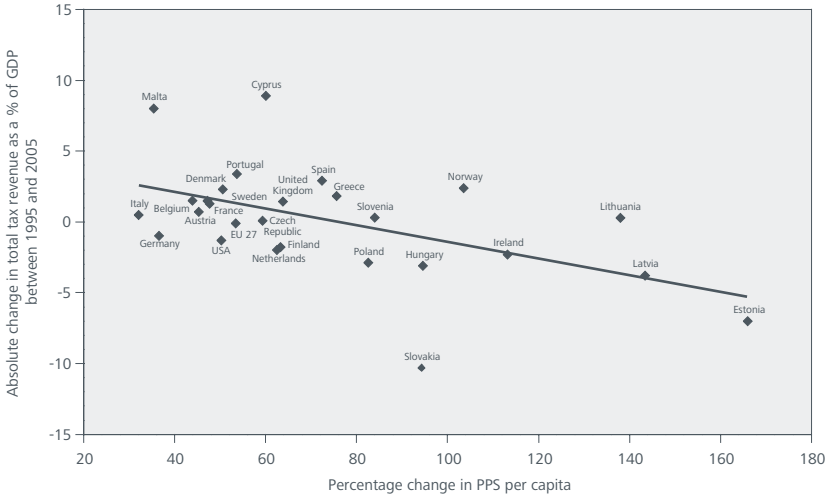
Figure 19: Changes in total tax revenue as a percentage of GDP 1995 and 2005



Source: "Taxation Trends in the EU" EUROSTAT, 2007, USA 1995 figure based on OECD revenue statistics

The next graph attempts to chart the correlation between this change in tax revenue and the change in GDP per capita between 1995 and 2005.

Figure 20: Relationship between changes in tax revenue as a percentage of GDP and change in GDP per capita, expressed as PPS at current basic prices between 1995 and 2005.



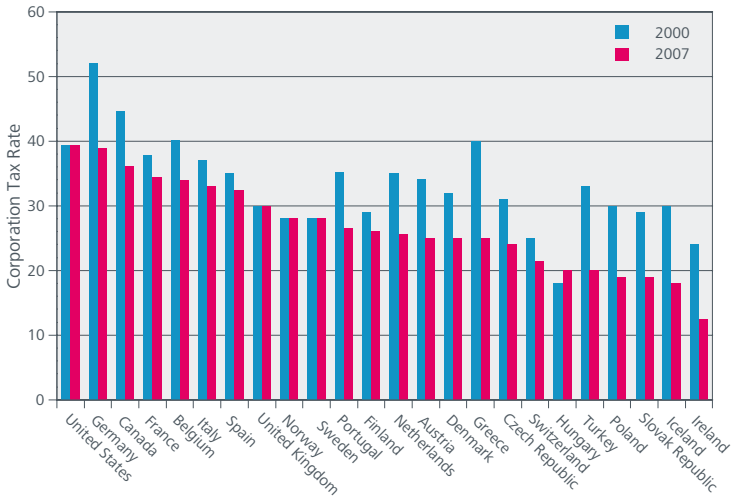
Source: "Taxation Trends in the EU" EUROSTAT, 2007, OECD revenue statistics

Figure 20 shows that there is a slight correlation between lowering the tax burden and an increase in GDP per capita. This policy has been adopted by a number of the emerging economies of the former eastern bloc, such as Estonia and Slovakia. Estonia reduced its total tax burden from 37.9% of GDP to 30.9% and saw an increase of 166% in its PPS per inhabitant over the decade. Similarly, Slovakia's total tax burden fell from 39.6% to 29.3% while PPS per inhabitant increased by 94%. While some may argue that the eastern bloc countries are special cases, Ireland has also reduced its tax burden from 33.1% to 30.8%, making it one of the lowest across the EU. This reduction corresponded with an increase in Ireland's PPS per inhabitant of 113%.

While most countries within the EU have increased their overall tax burden, there are some areas where single taxes have been reduced, particularly Corporation Tax. Figure 21 shows the difference in Corporation Tax rates

between 2000 and 2007. Only the UK, USA, Sweden and Norway have stayed constant over this period (although, as of April 2008 the UK rate will come down from 30% to 28%). Hungary is the only country to increase its rate.

Figure 21: Basic combined central and sub-central (statutory) corporate income tax rate given by the adjusted central government rate plus the sub-central rate



Source: OECD Tax database

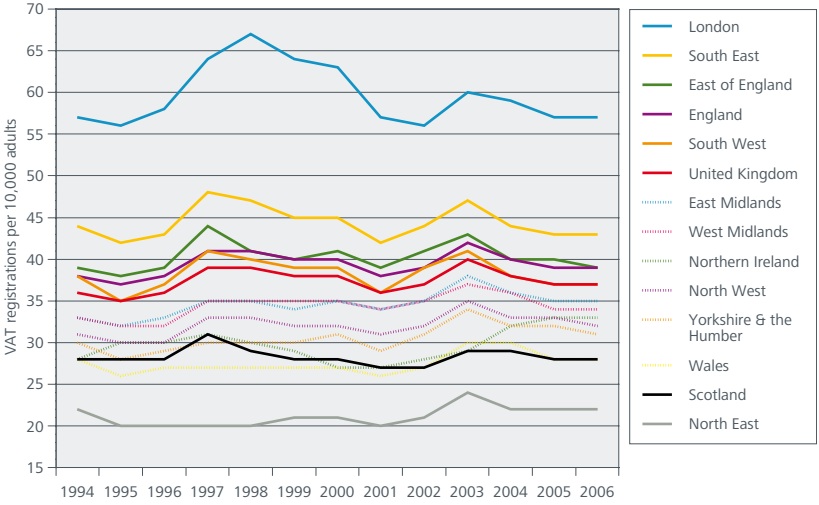
The main tax-varying power used by the Scottish Government to date has been non-domestic rates, also known as business rates. Up until 1999/2000, a Uniform Business Rate poundage operated throughout the UK, at which point the Scottish Government increased the Scottish rate. Scottish business rates then remained higher than in England and Wales until April 2007. Figure 22 charts the changes in business rates through Britain over the past decade.[11] The higher business rate in Scotland compared to England between 1999/2000 and 2007/08 cost businesses in Scotland almost £900 million – a clear disincentive to invest.

11 The business rates schemes operate in different ways throughout the UK; importantly Scotland has three levels, while England has only two. Essentially this means that in Scotland only larger businesses pay a supplement to cover small business rates relief, while in England a supplement is added to the standard multiplier to pay for the small business rate relief. Whilst this difference may seem insignificant it actually means that as of April 2007, Scottish business rates were lower than those in England.

Figure 22: Business rates across the UK

The higher business rate that has operated in Scotland may be one of the explanations for the low level of business start ups in Scotland over the period, as illustrated in Figure 23.

Figure 23: VAT registrations per 10,000 resident adults



Source: Department for Business, Enterprise & Regulatory Reform, Nov 2007

4. Improving Scotland's economic growth rate

The good news is that it is possible to close the gap between the trend rate of growth of Scotland's economy and that of more successful economies as a number of countries have done so. The starting point must be to make that a clear priority. In this respect, the Scottish Government's economic strategy document is a welcome recognition of the central importance of achieving sustainable economic growth. It sets out the goal of raising Scotland's GDP growth rate to the UK level by 2011 and then seeking to match comparable EU countries by 2017. A caveat is that the Scottish Government should make it explicit that it is targeting the trend rate of growth.

The aim in Scotland should be to achieve as speedy a convergence as possible with the most advanced economies and that means consistently growing faster than them. That will only happen if Scotland adopts the right policies. Scotland does suffer some economic disadvantages in terms of its geographical position and the sparse distribution of population in some areas. However, these are relatively minor and other countries have demonstrated that they can be overcome if the right policies are adopted.

Studies by Fatas and Mihov have shown that two key factors affect a country's trend rate of economic growth – investment and the quality of what can be defined as a country's institutions.

Ultimately, economic growth is driven by growth in productivity, which in turn relies on investment in infrastructure, human capital, knowledge and equipment. Countries starting from a low base can invest a greater share of their GDP (30-45% in countries such as China, Korea and Singapore) and this drives their astonishing levels of growth. Interestingly, of this investment a relatively low proportion is foreign direct investment (FDI), although this plays an important role in transferring knowledge.

This doesn't mean that countries which invest more will automatically become wealthier. There are three main caveats.

The first is that increased investment requires people to save more and therefore to reduce their consumption. They are often unwilling to do this, either because they are close to subsistence level or are happy with present levels.

The second is that the private sector must play the central role as when governments try to replace the private sector, they misdirect funds and do not add to productive capacity.

The third, and most important, is that the environment for doing business (or institutions of a country) is crucial.

The term 'institutions' covers things such as property rights, the rule of law, policy stability, the regulatory framework, tax levels as well as cultural factors such as entrepreneurial spirit, risk taking behaviour and attitudes to work.

These are largely the areas that can be affected by government policy and it is no coincidence that countries that have implemented reforms to improve their environment for doing business have achieved increases in their growth rates.

The key lesson, according to Fatas and Mihov, is that *"the goal for government should be to set up the right environment for business rather than manage investment. Once the environment exists, once it is rewarding to save and a big chunk of the uncertainty about future pay-offs is gone, individuals and firms start putting aside more money for investment and growth picks up"*.

4.1 Case studies

It is worth examining a number of countries that have increased their trend rate of growth to see how they achieved this.

Ireland

As can be seen from the graphs in Section 3 of this paper, the transformation in Ireland's trend rate of growth has been truly astonishing. In the late 1980s, the Irish economy was in the doldrums with high inflation and unemployment, low growth, high taxation and enormous public debts. Yet today its GDP per capita is almost 40% above the EU average, whereas it was 31% below that average in 1987.

This transformation was triggered by the severe crisis Ireland faced in the late 1980s. This prompted action from the government and a shared sense amongst the Irish population that there was a need for change.

It is a commonly-held view that Ireland's economic success was largely due to the contribution from EU Structural Funds. They certainly played a part. The Irish Economic and Social Research Institute estimated that EU Funds had contributed 10% of the GDP increase in the 1990s. Other studies suggest the funds added 0.5% to GDP growth a year. This was no doubt important, but not crucial considering that growth was 6-7% a year for 15 years.

The keys to Ireland's economic transformation were policies which turned Ireland into the modern, highly industrialised economy it is today. Collectively, these reforms made Ireland a highly attractive environment in which to do business.

As discussed in Section 3, the Heritage Foundation/Wall Street Journal Index of Economic Freedom ranks countries according to a series of categories which look at the openness of an economy, the ease of doing business, levels of tax and government spending. There is a strong correlation between this economic freedom and economic growth. The 2008 edition ranks Ireland as number one in Europe.

This is as a direct result of the consistent direction of policy since the late 1980s. Taxes were lowered, particularly Corporation Tax, which came down from 50% in 1985 to 12.5% today. At the same time, revenues from Corporation Tax increased during that period from 1% of GDP to 4% of GDP. Corporations and individuals were also allowed to keep more of their own money and this all fuelled the investment boom which was crucial to the growth of the economy.

This was combined with policies to control public spending. Public expenditure went from 52% of GDP in 1987 to 35% in 2005. Although this looks like a big cut, in fact the public sector has much more money than it did in the 1980s as the economy is so much bigger.

Iceland

Iceland has been through an equally remarkable transformation following difficulties in the 1980s with high inflation and large public deficits and debt. At this time, Iceland was a high tax, over-regulated economy in which the State took a leading role in the economy.

The change since then has seen Corporation Tax cut from 45% to 18% and yet revenue in 2006 was 10 times higher than in 1991.

Personal taxes have also been reduced, with income tax going from a progressive tax rate up to 47% in the mid-1990s to a flat rate of 36% today - the sixth lowest in the OECD. Taxation of Capital Gains has also been reduced from more than 40% in 1996 to a flat rate of 10% today.

Despite these reductions in tax rates, tax revenue from income, profits and capital gains have gone from 9.9% of GDP in 1990 to 18.4% today. Iceland also provides some interesting evidence of the effects of tax reductions on the labour supply, which grew by 6.7% in 1987 when incomes earned in that year were made tax free.

These reforms to the taxation system were combined with others to liberalise markets and privatise sections of the economy.

The overall results led the OECD to comment that 'Iceland's economy and per capita income have grown at an impressive pace since the mid-1990s, making the country one of the most prosperous in the OECD. Real GDP has grown by 4% per annum, significantly bettering OECD growth over that period and making the country the fifth wealthiest in the OECD on that benchmark'.

Norway

Norway is another interesting example of a country where the trend rate of growth has gone up dramatically.

It provides an attractive environment for business in many ways – for example it is easy to start a business, inflation is low and property rights are secure. However unlike Ireland and Iceland, it has relatively high taxes, with tax revenues representing 44.9% of GDP. Government spending is also high at 45.9% of GDP.

These potential weaknesses are, however, more than offset by its oil revenues which have been the main driver of the economy in Norway.

4.2 Conclusion - policy proposals

The evidence in this paper shows that the performance of the Scottish economy is mediocre at best. There are areas of the Scottish economy which are performing strongly such as financial services, life sciences, energy and tourism. However, the inescapable conclusion is that Scotland could do much better.

This paper has continually highlighted the trend rate of economic growth, as this is the most reliable indicator of economic health. Changing that trend rate of growth must be the goal and that will require growth in productivity.

So what policies should the Scottish Government be looking at to achieve this goal? Governments cannot improve productivity directly. Instead, they must aim to create what Art Laffer has referred to as 'The Political Economy of Growth'. By this he means an attractive environment in which to do business.

In many respects, the current UK policy environment, which governs the key areas of Scottish economic policy, fits the bill. The economic reforms of the 1980s and 1990s have given the UK an extremely open economy and steady economic growth. Indeed, the Heritage Foundation/Wall Street Journal Index of Economic Freedom continues to rank the UK highly. So where is the problem?

There are two main areas of concern. The first is that in two key areas, taxation and spending, the policy environment in the UK has become less attractive compared with other countries. Other countries have controlled expenditure as a share of GDP and lowered taxes, whilst the UK is going in the opposite direction with tax revenue as a percentage of GDP at 37% and spending amounting to 44% of GDP. The direction of policy is vitally important as businesses are looking for a stable environment in which to invest. In countries such as Ireland, that comes from a broad consensus around the need for economic growth and the type of policies required to achieve it. In relation to taxation and spending, this does not exist in the UK and this has knock-on effects for the Scottish economy.

The second is that the current UK policy environment does not seem to be working for many of the nations and regions which make up the United Kingdom. The economies of London and the South East of England are booming on the back of the remarkable success of the City of London as

a global financial centre. There is no doubt that London is driving the UK economy and provides benefits to all parts of the UK. However, the figures for the trend rate of growth within the UK show that the nations and regions farthest from London do not benefit to anything like the same extent. It may be that in time, these benefits will be dispersed. The problem is that this will always leave places like Scotland playing catch-up.

So what can be done? This paper proposes two broad areas of policy reform that should be pursued, reform of the public sector and taxation. The proposals are based on the evidence presented in this report and are a necessary precondition of improving Scotland's economic performance. However, they are only part of the answer. The changes we recommend need to be part of a wide-ranging strategy including vital areas such as the existence and quality of infrastructure, the extent and burden of government regulation and the quality and productivity of the public sector, in particular the education and planning systems. These subjects will be explored in future Reform Scotland papers.

Public sector reform

This is an area that needs to be examined as a matter of urgency as achieving value for public money is a key policy objective around which everyone should be able to unite. This study has shown that Scotland's trend rate of growth has deteriorated compared with the UK as a whole since the mid-1990s. When trying to establish why, we need to look at important areas of difference in policy. One obvious area is public spending as a share of GDP.

Independent analysts have estimated this to be over 50% in Scotland well above the figure for the UK as a whole, never mind the figures for London and the South East of England. The Scottish Government's Council of Economic Advisers is currently looking at this issue in order to gauge its effect on Scotland's economic performance and this study should produce important information. There is a correlation between reducing public spending as a share of GDP and faster economic growth, so this high level of public spending is likely to be holding Scotland back.

However, as well as examining the level of public spending in Scotland, it is also necessary to look at the performance of the public sector, how it

compares to other parts of the UK and other countries and what might be done to improve it. Future Reform Scotland studies will look at this subject in much greater detail. What is already clear is that Scotland is not seeing the improvements in our public services that would be expected given the extra money invested in recent years.

This is vitally important for people in Scotland because of its effect on their quality of life. It also has an important bearing on the performance of the economy.

In particular, Scotland is in need of good schools that provide people with a general level of education, which is vital to increased productivity in a modern economy.

Equally, if productivity in the public sector is not as high as in the private sector then resources are not being used efficiently, which is bound to affect economic performance.

Lower taxes

We should also aim to reduce the overall tax burden in Scotland. The Scottish Government is heading in the right direction by focussing on lowering taxes, having proposed a Council Tax freeze and a reduction in business rates – a policy also supported by other parties in Scotland including the Conservatives and Liberal Democrats. The parties in the Scottish Parliament should also consider reducing the rate of income tax in Scotland. Although any reduction would be limited to 3p in the pound under the current devolution settlement, it would send out a clear signal about the direction of reform in Scotland and help to reduce the overall tax burden in Scotland. As this paper has shown this would bring benefits in terms of higher economic growth.

Equally, a more favourable UK tax regime would help the Scottish economy as well as that of the rest of the UK. We would, therefore, argue for reductions in the taxes currently under the control of the Westminster Government to further reduce Scotland's overall tax burden.

However, if we aspire to match the most successful economies, there are additional benefits to be gained from a tax system that is differentiated from the rest of the UK and particularly South East England to provide Scotland with

a real platform for higher economic growth. Importantly, this would also mean that the higher revenues resulting from higher economic growth would accrue to Scotland and not the Treasury.

At the same time, public spending in Scotland is largly governed by a block grant from Westminster. This provides no incentive for the Scottish Government to exert greater control over public spending as any savings resulting from greater efficiency are returned to Westminster. Greater fiscal autonomy would, therefore, help to encourage a reduction in public spending as a share of GDP.

From an economic perspective, additional economic powers are valuable only if used to reduce the tax burden and control spending. If used to increase taxes, this would make people in Scotland worse off than at present. Fortunately, the Scottish Government's Economic Strategy is unequivocal on this point. Extra responsibility for tax raising and spending would be used 'to make Scotland the lowest taxed part of the UK'.

The SNP has tended to concentrate on reducing Corporation Tax. This is the same strategy as adopted in Ireland, where it generated a quick return and made further reform easier to implement. However, taxation policy should be looked at in the round and, therefore, other taxes should be reduced in order to help to match the growth rate of the leading economies.

A clear overall tax-reducing strategy would be an important statement of intent and would send out exactly the right message about the Scottish economy. However, it is most important because it will drive the productivity growth the Scottish economy needs in order to raise its trend rate of growth.

As illustrated in **Section 3**, investment in fixed capital formation is a vital component of economic growth. Lowering business and personal taxes will be a key driver of that investment. In particular, it will enable people to save more as they will have more disposable income and an increase in the level of saving will drive up investment.

Lowering taxes can also have other beneficial economic effects. Evidence from other countries shows it can increase incentives to work and therefore expand the labour supply. At the same time, it encourages the taking of risks and exactly the sort of entrepreneurial activity needed to boost Scotland's economic performance.

Future Reform Scotland papers will examine taxation and spending policy in greater detail, in particular the effects of lowering different taxes on the performance of the economy.

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Appendices

Appendix 1

Gross Domestic Product Annual Growth Rate at Constant Basic Prices for Scotland and the UK (1970-2006), Parliamentary Written Answer S3W-7438

	GDP growth rate (%)	
	Scotland	UK
1970	1.8	3
1971	1.1	1.7
1972	3.6	4.7
1973	7.1	4.5
1974	0	-0.4
1975	-1.5	0
1976	1.8	3.4
1977	1.7	1.6
1978	2.4	2.7
1979	1	1.6
1980	-1.9	-4
1981	-1.4	1.1
1982	1.5	2
1983	1.4	4.3
1984	3.8	1.5
1985	2.8	3.8
1986	0.4	4.7
1987	2	4.5
1988	4	4.3

	GDP growth rate (%)	
	Scotland	UK
1989	2.7	1.2
1990	2.2	-0.1
1991	0.1	-0.3
1992	1.4	1
1993	2.5	3
1994	3.4	4.5
1995	1.8	1.6
1996	2.9	3
1997	2.8	3.4
1998	1.9	3.4
1999	1.9	3.5
2000	2.7	3.2
2001	2.3	1.6
2002	0.8	2.2
2003	2	3.6
2004	2.6	2.6
2005	1.7	1.9
2006	2.6	3.1

Appendix 2

GVA per head indices, "Gross Value Added at current basic prices by region 1989 to 2006", Office of National Statistics (UK less Extra-Regio=100)

	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005 f	2006 f
London	129	128	129	130	131	130	128	129	130	132	134	133	132	135	137	139	140	141
South East	110	110	110	110	110	111	112	113	114	116	116	117	118	117	116	116	116	115
East of England	110	111	110	109	109	108	108	108	107	108	108	109	109	108	108	107	106	105
England	102	102	102	102	102	102	102	102	102	102	102	102	103	103	103	103	102	102
United Kingdom	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Scotland	97	98	99	100	100	100	100	99	98	96	95	95	94	94	94	94	95	95
South West	93	93	93	92	92	92	92	93	93	93	93	93	93	93	94	94	94	94
East Midlands	96	96	95	95	94	94	95	95	94	93	92	91	92	92	92	92	91	91
West Midlands	93	93	92	92	92	93	94	93	93	93	92	92	91	91	90	89	89	89
North West	92	92	91	91	91	91	91	90	90	89	89	89	89	88	88	88	87	87
Yorkshire & the Humber	91	91	91	90	89	89	90	90	90	89	88	88	88	88	87	87	86	86
North East	84	84	85	85	85	84	84	83	81	80	79	79	79	79	79	80	81	81
Northern Ireland	75	75	77	78	79	79	81	81	81	81	81	81	81	81	81	81	81	81
Wales	85	85	84	84	83	84	84	83	81	79	79	78	78	78	78	77	77	77

Appendix 3

PPS per inhabitant, Eurostat, Scottish Figures derived from Regional GVA, ONS

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007 f	2008 f	2009 f
EU27	14600	15300	16200	16900	17700	19000	19700	20400	20600	21600	22400	23500	24700	25800	:
EU15	16900	17700	18700	19500	20500	21800	22600	23300	23400	24400	25200	26300	27600	28700	:
Euro Area	17200	17900	18800	19600	20600	21900	22400	23000	23100	23900	24800	25900	27100	28200	:
Belgium	18900	19400	20400	20800	21900	24000	24400	25600	25500	26800	27800	28900	30500	31600	32900
Bulgaria e	4700	4400	4300	4600	4800	5300	5800	6300	6700	7200	7900	8700	9600	10300	11300
Czech Republic e	10800	11600	11800	12000	12400	13000	13900	14400	15200	16400	17200	18600	20200	21500	22800
Denmark	19300	20400	21600	22400	23300	25100	25300	26300	25700	26800	28200	29700	31100	31900	32900
Germany	18900	19600	20200	20800	21800	22600	23100	23600	24200	25000	25600	26700	28200	29200	30500
Estonia e	5300	5800	6700	7100	7400	8500	9100	10200	11300	12300	14000	15900	17700	19200	20800
Ireland	15100	16600	18600	20600	22500	24900	26200	28200	29100	30700	32200	33500	35500	36900	38600
Greece	12300	12900	13700	14100	14700	16000	17200	18600	19100	20100	21300	22700	24300	25500	26900
Spain	13400	14200	15100	16200	17200	18500	19400	20600	20900	21700	22900	24000	25300	26100	27000
France	17000	17700	18600	19500	20400	22000	22900	23700	23200	24200	25500	26500	27600	28400	29400
Italy	17800	18500	19300	20300	20900	22300	23300	22900	22900	23200	23600	24300	25400	26100	27100
Cyprus	13000	13400	13900	14700	15600	16900	18000	18300	18400	19700	21000	22000	23100	23900	24900
Latvia e	4600	5000	5600	6000	6400	7000	7700	8400	9000	9800	11200	13100	15000	16400	17800
Lithuania e	5000	5500	6200	6800	6900	7500	8200	9000	10100	11000	12000	13500	15200	16600	18000
Luxembourg	32700	34000	34800	36900	42300	46400	46300	49200	51100	54500	58800	65400	70100	73900	78200

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007 f	2008 f	2009 f
Hungary e	7400	7800	8300	8900	9500	10700	11600	12600	13100	13800	14500	15300	16100	16800	17800
Malta e	12700	12200	13100	13700	14400	15900	15400	16300	16200	16400	17000	17700	18700	19400	20300
Netherlands	18100	19200	20600	21800	23300	25600	26400	27300	26800	28100	29500	31000	32700	34100	35600
Austria	19900	20800	21500	22500	23600	25400	25100	26100	26600	27800	28700	30200	32000	33200	34600
Poland e	6300	6900	7600	8100	8600	9200	9400	9900	10100	11000	11400	12400	13600	14600	15700
Portugal	11000	11600	12300	13000	13900	14900	15300	15800	15900	16200	16900	17500	18200	18800	19500
Romania	:	:	:	:	4600	4900	5400	6000	6500	7200	7700	8800	9700	10400	11300
Slovenia e	10600	11400	12300	13000	14000	15000	15600	16600	17000	18300	19400	20800	22600	24000	25400
Slovakia e	7000	7700	8300	8800	9000	9500	10300	11100	11500	12300	13500	14900	16700	18100	19600
Finland	15800	16400	18000	19400	20500	22300	22900	23600	23400	25000	25600	27300	29200	30600	31900
Sweden	18400	19200	20000	20800	22300	24100	24000	24800	25400	26600	27300	28900	30500	31700	33000
UK	16300	17500	18800	19700	20600	22300	23300	24200	24800	26300	26700	27900	29500	30500	31800
Scotland	16300	17325	18424	18912	19570	21185	21902	22748	23312	24722	25365	26505	28025	29070	30305
Croatia e	5700	6500	7000	7400	7400	8200	8600	9300	9800	10600	11100	11700	12800	13600	14700
Macedonia	:	:	4300	4500	4800	5100	5000	5100	5300	5600	6100	6500	7000	7500	8000
Turkey e	4300	4700	5200	5400	5200	5700	5200	5600	5600	6000	6400	6900	7400	7800	8400
Iceland	19500	20500	22300	23800	24800	25100	26100	26600	26000	28200	30300	31900	32700	33200	:
Norway	19800	22100	23900	23500	25800	31400	31900	31700	32400	35500	40000	44000	46200	48200	50100
Switzerland	22400	23200	24400	25300	26000	27500	27600	28500	28100	29300	30200	31900	33500	34600	36000
USA	23100	24300	25800	27000	28700	30200	30600	30900	31400	33100	34700	36300	37300	38100	39600
Japan	18600	19600	20500	20400	20900	22300	22600	22900	23200	24400	25500	26800	27800	28800	30100

f Forecast
e Estimated Value

Appendix 4

GVA per filled job, ONS time series data UK=100

	London	South East	England	UK	East	East Midlands	Scotland	South West	West Midlands	North West & Merseyside	North East	Yorkshire & Humberside	Wales	Northern Ireland
1996	124.6	101	100.6	100	99.5	96.6	99.4	92.6	92.3	94	94.8	92.1	94.7	90.4
1997	124.2	100.6	100.6	100	99	95.8	99.5	91.8	93.4	93.9	93.8	92.5	94.7	89.6
1998	123.7	102.3	100.8	100	98.8	95.4	97.9	92.1	92.8	95	92	92.7	93.8	89.6
1999	123.8	103.6	100.9	100	97.0	93.9	98.4	93.3	93.2	93.9	93.6	93.1	91.9	89.4
2000	123.4	104.1	101	100	97.1	95.3	97.9	94.5	94.1	94.4	94.1	92.6	91.5	89.3
2001	122.8	103.9	101.3	100	97.4	97.2	94.9	93.9	94.5	93.8	95.3	92.6	91.6	89.1
2002	124.7	103.4	101.4	100	96.1	98.3	95.4	93.4	93.6	91.9	92.6	92.4	90.4	87.1
2003	126.7	104.6	101.4	100	98.4	98.8	95.4	94.2	93.1	91.2	91.4	91	89.1	86.4
2004	128.8	104.2	101.4	100	99.5	99	95.9	93.6	92.9	90.2	91.6	89	88.8	85.5
2005	128.8	101.9	101.6	100	99.7	97.2	95.3	94.4	92.6	91.6	90.4	89.8	88.2	84.7

GVA per hour worked, ONS time series data UK=100

	London	South East	England	East	UK	Scotland	East Midlands	South West	North East	West Midlands	North West & Merseyside	Yorkshire & Humberside	Wales	Northern Ireland
1996	119.7	101.4	100.6	99.5	100	100.8	98.3	93.6	98.2	91.7	94.1	94.2	94.1	88.9
1997	121	100.6	100.6	99.5	100	100.5	96.2	93.5	94.8	92.1	94.6	94.1	94.4	87.6
1998	119.8	102.9	100.9	99.9	100	98.5	95.8	93.5	95.4	91.2	95.7	93.8	93	88.1
1999	117.4	104.4	100.9	97.9	100	98.7	94.6	95	96.3	93.8	95.1	94.5	93.1	87.1
2000	118.6	105.2	101	97.8	100	97.8	95.4	97.3	95.5	93.6	94.6	94.6	93.4	86.2
2001	116.8	105	101.2	97	100	95.7	97.5	96	98.7	94.6	94.4	95.1	92	88.3
2002	118.6	104.4	101.3	97.2	100	96.2	98.4	95.7	95.1	93.3	92.9	93	91.3	85.1
2003	119.8	106.7	101.5	99.6	100	96.3	98.4	97.2	93.8	93.1	92.1	91.6	89.7	82.9
2004	122.1	105.6	101.4	100.1	100	97.6	100.4	95.9	93.1	92.2	91.2	89.8	89.6	81.6
2005	121.4	103.7	101.4	101	100	97.5	96.8	96.6	94	92.4	92.1	90.6	90.1	80.7

Appendix 5

Labour productivity per person employed - GDP in PPS per person employed relative to EU-27, Eurostat, Scottish Figures derived from ONS Time Series Data

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	07 f	2008 f
eu27 EU (27 countries)	100	100	100	100	100	100	100	100	100	100	100	100	100	100
eu25 EU (25 countries)	105.5	105.4	105.3	105.1	104.9	104.8	104.6	104.4	104.3	104.1	104	103.8	103.9	103.8
eu15 EU (15 countries)	116.1	115.8	115.4	114.9	113.8	113.2	112.5	111.8	111.3	110.8	110.7	110.4	110.4	110.1
ea Euro area	119.7	118.9	117.9	117.4	116	114.7	113.4	112.4	111.7	110.6	110.9	110.6	110.1	109.6
Belgium	140.9	137.8	138	134.7	134.2	137	133.8	136.4	134.5	132.1	132	131.4	135.4	134.2
Bulgaria e	:	30.4	29.3	30	30.7	30.4	31.4	33	33.4	33.7	34.3	35	36.4	37.3
Czech Republic e	61.6	62.6	60.7	60.3	61.9	61.8	63.3	63	66.5	68	69.1	70.7	73.5	74.5
Denmark	109.5	110.1	110.2	109.2	108.3	110.4	107.6	108.5	106.5	107.8	109.3	107.9	107.2	106.4
Germany	116.9	116.3	114.6	112.7	111.8	108.1	106.9	106.3	108.6	108.2	107.5	107.1	106.3	105.6
Estonia e	34.2	36	39.2	41.1	42.2	46.5	47.8	50.8	54.4	56.8	61.7	64.3	67.3	70
Ireland	120.2	123.3	125.9	125.6	125.2	127.2	128	133.2	135.2	134.6	133.9	134.9	132.9	133.1
Greece e	101.5	102.3	105.1	102.2	102.3	105.2	109.9	114.6	114.7	113.7	116.4	118	118.8	119.2
Spain	111.1	110.4	108.7	108	105.5	103.8	103.3	104.8	103.8	102.1	102	103.1	100	97.9
France	126.7	125.8	126.2	126.6	125.2	125.1	125.1	125.4	121.6	120.6	123.2	123.5	125.2	124.1
Italy	131.5	130.4	129.4	130.4	127.4	126.1	125.6	117.6	115.5	112	111	109.2	109.6	108.2
Cyprus e	81.3	81.2	81	82.5	83	85	86.8	84.5	82.5	82.8	84.3	84.9	87.5	87.8
Latvia e	33.6	35	35.6	36.9	37.9	40.1	41.4	43	44.2	45.9	49.2	51.4	56.7	59.1
Lithuania e	35.2	36.1	38.2	40.7	40.2	42.7	46.9	47.9	51.9	53.2	54.7	57.1	61.6	64.8
Luxembourg	176.8	174.2	166.9	165.8	176	176	162.5	163.2	166.5	169.6	175.7	184.1	183.8	182
Hungary e	60.2	60.4	61.8	62.7	61.8	64.7	68	70.9	71.8	72.1	73.5	74.5	75.9	76.2
Malta	:	:	:	:	:	96.8	89.9	92	90.2	89.7	89.6	89.6	89	88.5
Netherlands	111.5	111	110.6	111.1	111.7	114.4	113.3	113.2	110.8	112.2	114.3	113.3	114.2	113.1

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	07 f	2008 f
Austria	123.9	124.8	122.2	122.8	121.9	123.1	118	118.9	120.1	120.6	120.4	120.2	122.1	122
Poland e	46.4	48	49.7	50.7	54	55.2	56	58.6	60	61.4	60.9	60.9	62.2	63.3
Portugal	69.3	68.7	68.4	67.9	69.2	68.9	68	67.8	68.3	67.1	68.3	68.1	68.3	67.9
Romania	:	:	:	:	:	:	24.9	29.9	32.1	35.3	36.7	39.4	39.7	40.8
Slovenia e	65.9	68.8	72.1	73.9	75.1	75.1	75.4	76.6	78	80.8	82.7	84	87.1	88.5
Slovakia e	50.6	52	54.6	56.4	56.5	58	60.5	62.5	63.3	65.5	68.8	71.7	75.5	78.1
Finland	111.8	109.7	111.4	114.4	113.4	114.8	112.7	111.4	109.4	112.7	110.7	112.3	113.3	113.9
Sweden	111.9	112.8	113.7	112.2	113.3	113.6	107.7	107.6	110	113.4	113	113.9	112.8	112.9
United Kingdom	104.6	106.2	107.5	107.6	107.1	108.8	109.8	110.1	110.4	112.1	109.7	109.5	112.1	111.8
Scotland		105.56	106.96	105.34	105.39	106.52	104.20	105.04	105.32	107.50	104.54	104.35	106.83	106.55
Croatia	:	51.7	52.4	54.5	54.7	53	57.9	58	60	60.9	62	64.3	63.6	65.1
Turkey e	35.9	37.2	40.1	39.6	36.2	39.8	36.4	38.8	39.2	41.5	42.1	45.5	43.7	44.6
Iceland	:	:	:	110.7	107.8	102.8	103.7	104.2	101.2	107.7	108.5	103.9	106.9	105.9
Norway	116.1	121.9	122.8	114.2	120	138.8	136.7	131.5	134.9	142.4	155.4	158.8	158.9	158.1
Switzerland	114	113.3	113.6	112.6	110.7	110.6	107	107.3	105.5	105.1	105.4	105.8	106.8	106.8
United States	139.3	139.6	139.4	139.3	140.3	139.1	138.2	137.8	139.5	140.6	143.4	143	138.5	138

f Forecast
e Estimated Value

Appendix 6

GDP per hour worked EU15=100, Eurostat, Scottish Figures derived from ONS Time Series Data

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
EU15	100	100	100	100	100	100	100	100	100	100	100
Euro area	105.9	105.5	105.1	105	104.8	104.3	102.9	102.6	102.2	101.6	102.2
Belgium e	133.5	130.7	129.4	127.6	128.7	130.7	125.6	127.4	126	126.6	125.1
Bulgaria	:	:	:	:	:	27.3	28.1	29.5	30	30.1	30.6
Czech Republic e	44.8	45.6	44.2	43.8	44.6	44.3	47.7	47.8	50.4	51.7	52
Denmark	107.2	108.2	107	105.3	104.3	104.7	102	102.9	101.2	102.7	102.8
Germany	111.9	112.5	111.5	110.4	111.1	108.1	108.4	108.5	111.3	111.4	110.8
Estonia	:	:	:	:	:	34.5	35.7	37.8	40.4	42.2	45.4
Ireland e	84.9	87	91	94.8	95.6	97	98.5	103.2	105.5	106	105.1
Greece	68.9	70.4	73.5	71	70.2	71.8	75.6	78.5	78.8	79.9	:
Spain	94.1	93.8	92.3	91.8	90.3	88.4	88.5	89.8	89.7	89.7	90.5
France	112.7	111.6	112.3	113.9	113.8	115.9	117.3	120.5	117.1	114.9	117.6
Italy	103.8	102.2	101.9	102.1	100.7	99.8	100.8	94.8	93.3	91	90.4
Cyprus	:	:	:	:	:	71.2	68.1	67	66.1	67.2	69
Latvia	:	:	:	28	29.1	30.4	31.6	32.9	33.5	36	:
Lithuania e	29.8	30.6	32.3	33.6	34.4	34.1	37.9	39.2	42.8	43.7	43.2
Luxembourg e	154.6	154.3	148.2	148.5	158.7	158.3	146	147.8	152.5	159.1	165.7
Hungary e	43.3	43.6	44	45	44.3	46.3	49.9	51.6	53	53.6	54.5
Malta	:	:	:	:	:	78.5	75.8	76.7	75.9	74.5	:
Netherlands e	112.8	113.3	114.4	113.7	114.9	119.8	117.8	118.6	116.1	119.2	:
Austria	102.3	101.3	98.6	99.3	100.6	101.6	97.9	98.3	99	99.7	99.6
Poland	:	:	:	:	:	40.9	42	43.7	44.6	46	45.2
Portugal e	57.1	58.2	59.5	59.5	60.3	61.4	58.2	58	59.2	56.4	57.6

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Slovenia	:	56.9	60.2	62.1	63.1	62.4	62.7	64.2	65	69.4	:
Slovakia e	39.5	41.5	43.6	45.9	46.3	47.2	50	53.1	55.7	56.3	57.8
Finland	92.4	90.8	92.3	95.7	95.2	96.7	96.2	95.1	93.8	97	95.3
Sweden	99.1	99.3	99.7	98.8	99.9	101	97.5	98.6	101.6	103.8	103.8
United Kingdom	81.6	83.1	84.2	84.9	85.7	87	87.9	89	90.2	92.5	89.7
Scotland		83.76	84.62	83.63	84.59	85.09	84.12	85.62	86.86	90.28	87.46
Iceland	:	:	:	89.7	85.3	80.4	83.1	84.8	82.6	88.3	89.5
Norway	114.5	120.7	122	114	120.7	140.5	141.5	137.2	142.2	149.1	161.8
Switzerland	102.1	102.7	104	103.1	101	101.7	100.6	101.8	100	:	:
United States	110.5	111.4	110.6	110.8	112.3	111.4	111.7	112.2	115.1	116.7	119

e Estimated value

Appendix 7

Employment rate among men aged 15-64, EUROSTAT, Scottish Figures derived from Regional Labour Market Summary, ONS

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006 f
EU27						70	70.3	70.7	70.8	70.9	70.3	70.3	70.3	70.8	71.6
EU15	72.8	71	70.4	70.5	70.4	70.6	71.2	72.1	72.8	73.1	72.8	72.7	72.7	72.9	73.5
Euro area	72.1	70.2	69.4	69.3	69	69.2	69.8	70.8	71.6	72	71.7	71.6	71.5	71.9	72.6
Germany	76.7	74.9	74.1	73.7	72.6	71.9	71.9	72.8	72.9	72.8	71.8	70.9	70.8	71.3	72.8
Estonia							69.6	65.8	64.3	65	66.5	67.2	66.4	67	71
Ireland	65.1	64.8	65.9	67.1	67.5	69.1	72.1	74.5	76.3	76.6	75.4	75.2	75.9	76.9	77.7
Greece	72.4	72.1	72.4	72.5	72.7	72.1	71.7	71.1	71.5	71.4	72.2	73.4	73.7	74.2	74.6
Spain	67.1	63	61.8	62.5	62.9	64.5	66.8	69.3	71.2	72.5	72.6	73.2	73.8	75.2	76.1
France	68.7	67.3	66.8	67.2	67	66.9	67.4	68	69.2	69.7	69.5	69.4	68.9	68.8	68.5
Italy		69.3	67.7	66.9	66.7	66.5	66.8	67.3	68	68.5	69.1	69.6	70.1	69.9	70.5
Netherlands	75.9	74.6	74.5	75.3	76.5	78.8	80.2	80.9	82.1	82.8	82.4	81.1	80.2	79.9	80.9
Austria			78.1	78.5	77.3	77.1	77	77.6	77.3	76.4	76.4	76.4	74.9	75.4	76.9
Poland						66.8	66.5	64.2	61.2	59.2	56.9	56.5	57.2	58.9	60.9
Portugal	78.1	75.8	74.5	73.5	73.9	75.5	75.9	75.8	76.5	77	76.5	75	74.2	73.4	73.9
Slovakia							67.8	64.3	62.2	62	62.4	63.3	63.2	64.6	67
Finland	66.6	62.5	62	64.2	65.4	66.2	67.8	69.2	70.1	70.8	70	69.7	69.7	70.3	71.4
Sweden	78.8	73	72	73.1	72.6	71.7	72.8	74	75.1	75.7	74.9	74.2	73.6	74.4	75.5
United Kingdom	75	73.9	74.5	75.1	75.5	76.6	77.3	77.7	77.8	78	77.6	77.7	77.8	77.6	77.3
Scotland	73.9	75	74.5	74.4	74.3	75.4	74.3	75	77.3	76	77.4	76.8	77.8	78.7	79.4
Iceland												86.3	85.8	86.9	88.1
Norway									81.3	80.7	79.9	78.3	77.9	77.8	78.4
Switzerland					86.9	85.9	87.2	87.2	87.3	87.6	86.2	85.1	84.4	83.9	84.7
United States	78.3	78.7	79	79.5	79.7	80.1	80.5	80.5	80.6	79.4	78	76.9	77.2	77.6	78.1

f Forecast

Appendix 8

Total general government expenditure as a percentage of GDP, EUROSTAT, Scottish Figures derived from Forecasting Eye Special, CEBR. May 2006

Total general government expenditure is defined in ESA-95 by reference to a list of categories: intermediate consumption, gross capital formation, compensation of employees, other taxes on production, subsidies, payable property income, current taxes on income, wealth, etc., social benefits, some social transfers, other current transfers, some adjustments, capital transfers and transactions on non-produced assets.

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
EU (27 countries)								46.9	47.5	47	47.1	46.8
EU (25 countries)					47.1	45.5	46.5	47	47.6	47.1	47.2	46.9
EU (15 countries)	52.6	50.3	48.7	47.7	47.2	45.6	46.6	47.1	47.7	47.3	47.4	47.1
Euro area	53.3	50.8	49.4	48.6	48.2	46.2	47.4	47.7	48.2	47.7	47.7	47.9
Belgium	51.9	52.3	51	50.3	50.1	49.1	49.1	49.8	51.1	49.2	49.9	48.9
Bulgaria								39.7	40.3	39.7	39.6	37.1
Czech Republic	54.5	42.6	43.2	43.2	42.3	41.8	44.5	46.3	47.3	45.1	44.9	43.6
Denmark	59.6	59.3	57.3	57	56.1	54.2	54.8	55.2	55.7	55.4	53.1	51.5
Germany	54.8	49.3	48.4	48	48.1	45.1	47.6	48.1	48.5	47.1	46.9	45.4
Estonia	43.6	42.3	39.2	39.5	42.8	36.5	35.1	35.6	34.6	34.1	33.4	33
Ireland	41.1	39.1	36.6	34.4	34	31.5	33.3	33.6	33.4	33.9	34.2	34.2
Greece	45.5	43.9	44.8	44.2	44.3	46.7	45	44.8	45	45.4	43.2	42.3
Spain	44.4	43.2	41.6	41.1	39.9	39.1	38.6	38.9	38.4	38.9	38.5	38.6
France	54.4	54.5	54.1	52.7	52.6	51.6	51.6	52.6	53.4	53.2	53.7	53.4
Italy	52.5	52.5	50.3	49.2	48.2	46.2	48	47.4	48.3	47.7	48.3	50.1
Cyprus				36.7	36.8	37	38.2	40.3	45.1	42.9	43.7	43.9
Latvia	38.9	37	36.2	40.6	41.8	37.3	34.6	35.6	34.8	35.8	35.6	37.2

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Lithuania	35.7	37.4	50.3	40.4	40.1	39.1	36.8	34.8	33.2	33.4	33.6	34
Luxembourg	39.7	41.1	40.7	41.1	39.2	37.6	38.1	41.5	41.9	42.5	41.8	39
Hungary		52.6	52.2	52.8	49.9	46.5	47.3	51.3	49.1	48.9	49.9	51.9
Malta	39.7	42.6	42.9	43	43	41	43.1	43.2	47.8	45.8	45.1	44.1
Netherlands	56.4	49.4	47.5	46.7	46	44.2	45.4	46.2	47.1	46.1	45.2	46.1
Austria	56	55.4	53.1	53.4	53.2	51.4	50.8	50.7	51.1	50.2	49.9	49.3
Poland	47.7	51	46.4	44.3	42.7	41.1	43.8	44.2	44.6	42.6	43.3	43.9
Portugal	42.8	43.6	42.6	41.9	43.2	43.1	44.4	44.3	45.5	46.5	47.7	46.4
Romania					46.6	40.6	38.8	39.6	33.6	32.7	33.6	35
Slovenia	54	45.6	46.1	46.9	47.8	47.4	48.2	47.1	47.1	46.5	46	45.3
Slovakia	48	52.9	48.3	45.5	47.3	50.5	44.3	44.8	40.5	38	38.4	37.7
Finland	61.6	60	56.2	52.5	51.5	48.3	47.7	48.8	50	50.2	50.5	48.8
Sweden	67.1	64.9	62.6	60.4	60	57.1	56.7	58.1	58.3	56.9	56.6	55.6
United Kingdom	44.5	42.9	41.3	40.2	39.6	39.8	40.7	41.8	42.9	43.3	44.5	44.6
Scotland						49.8	50.7	51.8	52.9	53.3	54.5	54.6
Iceland	42.7	42.2	40.7	41.3	42	41.9	42.6	44.3	45.6	44	42.3	40.7
Norway	50.9	48.5	46.8	49.1	47.7	42.3	44.1	47.1	48.2	45.4	42.2	40.7

Appendix 9

Expenditure on Gross Fixed Capital Formation, expressed as PPS per inhabitant at current basic prices, EUROSTAT

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007 f	2008 f
EU27	2900	3000	3200	3400	3600	3900	4000	4000	4000	4200	4500	4900	5300	5500
EU15	3300	3400	3600	3900	4100	4500	4500	4500	4500	4800	5000	5400	5800	6100
Germany	4100	4200	4200	4400	4600	4800	4600	4300	4300	4400	4500	4800	5300	5500
Estonia	1400	1500	1800	2100	1800	2200	2400	3000	3600	3900	4300	5400	6200	6400
Ireland	2600	3100	3800	4500	5200	5800	5900	6100	6500	7300	8400	8800	8900	8700
Greece	2000	2200	2400	2700	3000	3400	3700	4000	4400	4600	4600	5300	5900	6400
Spain	2900	3000	3300	3700	4200	4800	5000	5400	5700	6100	6700	7300	7900	8100
France	3100	3200	3200	3500	3800	4300	4500	4500	4400	4700	5100	5400	5800	6000
Italy	3400	3500	3700	3900	4100	4500	4700	4800	4700	4800	4800	5100	5300	5500
Netherlands	3800	4200	4500	4800	5300	5600	5600	5400	5200	5300	5600	6100	6600	6900
Austria	4400	4600	4800	5000	5200	5800	5500	5300	5700	5700	5800	6200	6700	7000
Poland	1100	1400	1700	2000	2100	2200	1900	1900	1800	2000	2100	2500	3100	3600
Portugal	2500	2700	3100	3400	3700	4000	4000	3900	3600	3700	3700	3700	3800	3900
Slovakia	1700	2400	2800	3200	2700	2500	3000	3000	2800	2900	3600	3900	4300	4600
Finland	2600	2800	3300	3700	3900	4300	4500	4200	4200	4600	4800	5200	5700	6100
Sweden	2900	3100	3100	3400	3800	4300	4200	4200	4100	4400	4700	5200	5800	6100
UK	2700	3000	3200	3500	3700	3900	4000	4100	4100	4500	4600	5000	5400	5600
Iceland	3100	3900	4400	5700	5400	5700	5600	4800	5200	6600	8500	10600	8900	7000
Norway	3900	4500	5300	5900	5700	5800	5800	5700	5600	6400	7500	8300	9100	9700
Switzerland	5200	5100	5300	5600	5800	6200	6000	6100	5800	6100	6400	6800	7300	7600
USA	4200	4500	4900	5300	5700	6100	6000	5700	5800	6200	6800	7100	7000	6900

f Forecast

Appendix 10

Total tax revenue (including social security contributions) as a percentage of GDP, Taxation Trends in the European Union, Eurostat, 2007

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Belgium	43.8	44.4	44.9	45.5	45.5	45.2	45.5	45.3	44.9	45	45.5
Czech Republic	36.2	34.7	35	33.3	34	33.8	34	34.8	35.7	36.8	36.3
Denmark	48.8	49.2	48.9	49.3	50.1	49.4	48.4	47.8	48	49.3	50.3
Germany	39.8	40.7	40.7	40.9	41.7	41.9	40	39.5	39.7	38.8	38.8
Estonia	37.9	35.6	35.9	34.9	34.6	31.3	30.2	31.1	31.5	31.4	30.9
Ireland	33.1	33.1	32.4	31.7	31.8	31.7	29.8	28.5	29.1	30.5	30.8
Greece	32.6	33	34.3	36.3	37.3	37.9	36.6	36.7	35.5	34.3	34.4
Spain	32.7	33.1	33.2	33	33.6	33.9	33.5	33.9	33.9	34.5	35.6
France	42.7	43.9	44.1	44	44.9	44.1	43.8	43.1	42.8	43.1	44
Italy	40.1	41.8	43.7	42.5	42.5	41.8	41.5	40.9	41.3	40.7	40.6
Cyprus	26.7	26.4	25.8	27.7	28	30	30.9	31.2	33.1	33.5	35.6
Latvia	33.2	30.8	32.1	33.7	32	29.5	28.5	28.2	28.5	28.5	29.4
Lithuania	28.6	27.9	31	32	31.8	30.1	28.7	28.4	28.2	28.3	28.9
Luxembourg	37.1	37.6	39.3	39.4	38.3	39.1	39.8	39.1	38.5	37.9	38.2
Hungary	41.6	40.6	39	39	39.1	38.5	38.9	38.5	38.4	38.6	38.5
Malta	27.3	25.8	27.5	25.3	27.1	28.2	30.4	31.9	31.8	34.2	35.3
Netherlands	40.2	40.2	39.7	39.4	40.4	39.9	38.3	37.7	37.4	37.7	38.2
Austria	41.3	42.6	44	44	43.7	42.8	44.7	43.7	43.1	42.8	42
Poland	37.1	37.2	36.5	35.4	35.3	34	33.6	34.3	33.4	32.6	34.2
Portugal	31.9	32.8	32.9	33.1	34.1	34.3	33.9	34.7	35.1	34.2	35.3
Slovenia	40.2	39.1	38	38.8	39.2	38.6	38.9	39.3	39.5	39.6	40.5

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Slovakia	39.6	38	35	35.6	34.2	32.9	31.6	31.9	30.9	29.7	29.3
Finland	45.7	47	16.3	46.1	45.8	47.2	44.6	44.6	44	43.4	43.9
Sweden	49	51.5	52	52.7	53.3	53.4	51.4	49.7	50.2	50.5	51.3
United Kingdom	35.6	35.1	35.7	36.7	37.1	37.6	37.3	35.8	35.6	35.9	37
Norway	41.9	42.4	42.2	42	42.3	42.8	42.9	43.3	42.5	43.8	44.3
EU 27	39.7	40.4	40.7	40.5	41	40.7	40	39.3	39.3	39.2	39.6

Appendix 11

Corporation Tax, OECD Tax database

		2000	2001	2002	2003	2004	2005	2006	2007
	Austria	34.00	34.00	34.00	34.00	34.00	25.00	25.00	25.00
	Belgium	40.20	40.20	40.20	34.00	34.00	34.00	33.99	33.99
	Canada	44.60	42.10	38.60	36.60	36.10	36.10	36.10	36.10
	Czech Republic	31.00	31.00	31.00	31.00	28.00	26.00	24.00	24.00
	Denmark	32.00	30.00	30.00	30.00	30.00	28.00	28.00	25.00
	Finland	29.00	29.00	29.00	29.00	29.00	26.00	26.00	26.00
b	France	37.80	36.40	35.40	35.40	35.40	35.00	34.40	34.40
c	Germany	52.00	38.90	38.90	40.20	38.90	38.90	28.90	38.90
	Greece	40.00	37.50	35.00	35.00	35.00	32.00	29.00	25.00
d	Hungary	18.00	18.00	18.00	18.00	16.00	16.00	17.33	20.00
	Iceland	30.00	30.00	18.00	18.00	18.00	18.00	18.00	18.00
	Ireland	24.00	20.00	16.00	12.50	12.50	12.50	12.50	12.50
e	Italy	37.00	36.00	36.00	34.00	33.00	33.00	33.00	33.00
	Netherlands	35.00	35.00	34.50	34.50	34.50	31.50	29.60	25.50
	Norway	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
f	Poland	30.00	28.00	28.00	27.00	19.00	19.00	19.00	19.00
	Portugal	35.20	35.20	33.00	33.00	27.50	27.50	27.50	26.50
	Slovak Republic	29.00	29.00	25.00	25.00	19.00	19.00	19.00	19.00
	Spain	35.00	35.00	35.00	35.00	35.00	35.00	35.00	32.50
	Sweden	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
g	Switzerland	24.90	24.70	24.00	24.10	24.10	21.30	21.32	21.32
	Turkey	33.00	33.00	33.00	30.00	33.00	30.00	20.00	20.00
a	United Kingdom	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00
h	United States	39.30	39.30	39.30	39.30	39.30	39.30	39.30	39.30

This table shows the basic combined central and sub-central (statutory) corporate income tax rate given by the adjusted central government rate plus the sub-central rate.

(a) For Australia, New Zealand and the UK, all with a non-calendar tax year, the rates shown are those in effect as of 1 July, 1 April and 1 April, respectively.

(b) These are the rates applying to income earned in 2001, to be paid in 2002. The rates include surcharges, but does not include the local business tax (Taxe professionnelle) or the turnover based solidarity tax (Contribution de Solidarité). More information on the surcharges is included as a comment.

(c) The rates include the regional trade tax (Gewerbesteuer) and the surcharge.

(d) The rates do not include the turnover based local business tax.

(e) These rates do not include the regional business tax (Imposta Regionale sulle Attività Produttive; IRAP).

(f) Source for the information: KPMG's Corporate Tax Rate Survey.

(g) Adjusted central and sub-central tax rates are calculated by the Swiss Federal Tax Administration (see 'Quels taux effectifs et nominaux d'imposition des sociétés en Suisse pour le calcul des coins fiscaux. Le procédé de la déduction fiscale en Suisse'). Church taxes are included, but the results excluding church taxes are indicated as comments.

(h) The sub-central rate is a weighted average state corporate marginal income tax rate