

measuring Scotland's progress towards

A SMART, SUCCESSFUL SCOTLAND

2003





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Scottish Executive
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joint performance team introduction

- 1 *Smart, Successful Scotland*, published in January 2001, set out the Scottish Executive's strategic direction for the Enterprise Networks. It built on the policy commitments already made in the *Programme for Government* and the *Framework for Economic Development in Scotland* and was designed to provide direction and focus for the Enterprise Networks' activities. *Smart, Successful Scotland* identified three key themes and twelve specific priority areas for economic development in Scotland. These themes and priority areas are closely inter-related, with progress in one area contributing to, and reinforcing progress in other areas.
- 2 At the same time, Ministers decided that a new Joint Performance Team (JPT) should be established with members drawn from the Executive and the Enterprise Networks. The Joint Performance Team was assigned the initial task of developing measures to monitor progress towards achieving the ambitions for the Scottish economy identified in *Smart, Successful Scotland*. In March 2002, the Joint Performance Team published its first report on *Measuring Scotland's progress towards a Smart, Successful Scotland*, after extensive consultation in autumn 2001 on the appropriate progress measures to be employed. The approach adopted by the Joint Performance Team was to develop progress measures for each of the 12 priority areas identified in *Smart, Successful Scotland*. These measures are a combination of:
 - Measures that describe what a smart, successful Scotland would look like and allow progress towards it to be tracked, e.g. the gap in unemployment between the worst performing areas and the Scottish average.
 - Measures which indicate the extent to which the necessary conditions for a smart, successful Scotland are in place, e.g. the cost and geographic coverage of broadband.
- 3 For each of the 12 priority areas in *Smart, Successful Scotland* the Joint Performance Team developed one lead measure and two supporting measures. The lead measure is intended to meet three main requirements. It should be an appropriate overall measure of progress; it should provide the right strategic steer to the Networks and it should be capable of relatively straightforward international comparison. The supporting measures are intended to provide a more rounded picture of progress to avoid the potentially distorting effects of too narrow a focus.
- 4 The progress measures are intended to add to the strategic direction of *Smart, Successful Scotland* in guiding the activities to promote the economic development of Scotland in the medium to longer term (3 to 10 years). The progress measures are not intended to be operating (output) targets for the Networks. However, the specific operating targets employed by the Networks to direct annual performance are chosen so that they contribute to progress measures. The

activities planned for any individual year therefore link to longer-term ambitions and changes in the Scottish economy.

5 This report tells us how Scotland is performing. It does not, of itself, tell us the contribution that Scottish Enterprise and Highlands and Islands Enterprise are making to that performance. That needs to be assessed through evaluation of programmes and projects. The Joint Performance Team is also responsible for agreeing priorities for such evaluation and for ensuring that lessons of evaluation are taken on board. Through effective evaluation, the Joint Performance Team aims to ensure that there can be understanding of the relationship between outputs of the delivery agencies and aspects of economic performance. This will allow decisions as to whether strategic direction needs to be amended or whether, within the strategic direction, different sorts of programmes and projects are required. This report is therefore part of an approach of evidence-based policy making.

6 The Fraser of Allander Institute carried out supporting work for the first report. In this report we have decided to separate out more clearly the analysis of performance, which was carried out by the Fraser of Allander Institute, and commentary from the Joint Performance Team.

7 The intention is that such reports should be prepared and made

available on a regular basis so that trends can be identified and interpreted – and inform action where appropriate. From 2004, the report will issue in the autumn so that it issues at the same time of year as the Enterprise Networks' Annual Reports.

THE APPROACH TO MEASUREMENT

8 Scotland's relative economic performance in an international context is the best measure of progress. The Joint Performance Team's objective is to benchmark Scotland's performance against the 30 member countries of the OECD. The aim is to improve performance and move towards the top quartile for each of the twelve priority areas, i.e. to aspire to "world class performance". The timescale over which such an aspiration may be achieved will vary across the proposed measures, determined to a large extent by where we start from. In some of the priority areas, this aspiration may only be achievable over a long period of time but in other areas we may aspire to "world class performance" in the short term. Our aspirations have to be set in the context of what the best in the world are able to achieve and what, realistically, we can expect to attain.

9 The availability of appropriate data to measure progress in each of the priority areas is of crucial importance to this exercise. When this approach was designed, it was recognised that, for some of the indicators at that time, there was not a complete set of data

for Scotland and for all the 30 OECD economies. The implementation of the approach was therefore envisaged as being dynamic, with more work required in the future to discover other appropriate data sources – if such exist – and, in the case of Scotland, to compile the fundamental statistics.

10 In presenting the core of this report, the Fraser of Allander Institute comment on the present availability and suitability of data sources. For many of the measures the availability of comparable data makes performance against the proposed OECD benchmarks relatively straightforward to measure. For other measures, where data to establish a benchmark are not readily available, the Fraser of Allander Institute has had to make a practical judgement constrained by limited data sources.

11 Where there are deficiencies in data the JPT is committed to improving availability in so far as that is within the ability of the Scottish Executive and the Enterprise Networks. This year's report highlights that, for a small number of indicators, no easily accessible internationally comparable data exists and work will continue over the coming year to identify potential new sources. For example, Scotland has been invited to become a partner region in the 2004 IMD (Institute for Management Development) World Competitiveness Yearbook which will provide international data for a range of economic indicators. While access to such international comparisons is the key issue there

will also be benefits from proposed actions to improve Scottish data and comparator data for the UK.

12 Scottish Executive economic statisticians are planning several developments in statistical outputs in the coming year. Among the more significant is the boost to the Labour Force Survey for Scotland which will result in bigger samples for Scotland allowing more detailed analysis of characteristics within the labour market for smaller geographic areas. The Scottish Executive will also be working closely with the Office for National Statistics to improve the quality of Regional Accounts data, with a view to harmonising the outputs for Scotland in the longer term.

13 It should be noted that all of the datasets in this publication are already in the public domain. Some of the information, although the latest available, pre-dates the publication of *Smart, Successful Scotland* in July 2001.

In this report, Scotland's performance is, where possible, benchmarked against the set of countries comprising the Organisation for Economic Co-operation and Development (OECD). The Joint Performance Team requested that the approach adopted in this second annual report should follow the first report where Scotland's performance was assigned to one of the four quartiles containing the comparator OECD economies ranked from best to worse on the chosen indicator. For the three themes of *Smart, Successful Scotland*: growing businesses, global connections, and skills and learning there are 12 lead indicators and 24 supporting indicators, plus 1 overall progress indicator, making 37 in all. As might be expected, there are several data gaps, with data either absent for Scotland, or for the OECD countries, or for both. In addition, for some indicators, data were only available for a subset of OECD countries. These data gaps inevitably complicate the benchmarking and limit the degree of certainty that we would like on the measure of Scotland's comparative performance.

We also felt that it was important for readers to be able to see how Scotland is doing on each indicator, using charts. Six comparator countries were chosen for this graphical analysis in addition to the UK. The graphical comparison was restricted to seven countries for two reasons. First, it avoids the clutter that would be inevitable if we included every OECD country. Secondly, and perhaps more importantly, a restricted set of countries was chosen to minimise the effect of different groups of countries being included in the charts due to variations in data availability for each of the indicators. There are no precise scientific criteria that can be applied to determine the selection of

a sub-set of countries. The countries were therefore chosen largely on practical grounds, reflecting differences in size, economic and governance structures, locations and importance to the global economy. The USA, Japan and Germany were the three large countries selected, with Ireland, Finland and New Zealand being of similar scale to Scotland.

The description and analysis of Scotland's comparative performance that is contained in the following pages reveals that the Scottish economy continues to have both strengths and weaknesses.

For the three themes of *Smart, Successful Scotland*: growing businesses, global connections, and skills and learning, Scotland's relative performance is best in enhancing skills and learning. This theme has a greater number of indicators, for which a comparison with the OECD or UK is possible, above average than is the case for either growing businesses or global connections.

When each indicator is considered separately and using the criterion of a ranking in the first quartile of the OECD countries for which data are available then Scotland's strengths appear to lie in:

- the percentage of business activity transacted through e-business;
- the share of output produced in knowledge-based industries;
- the importance of export sales; and
- the core reading and mathematical skills of its schoolchildren.

However, using the criterion of a ranking in the fourth quartile of OECD countries then the Scottish economy's principal weaknesses can be found in:

- the share of businesses using broadband; and
- the degree of net out-migration.

Scottish performance also tends to be *above* the OECD average in:

- the proportion of businesses trading online;
- the proportion of households online;
- the cost of broadband access to the Internet;
- the proportion of the working-age population in employment; and
- the core scientific skills of its schoolchildren.

But Scottish performance also tends to be *below* the OECD average in:

- gross domestic product (GDP) per head;
- business R&D as a proportion of GDP;
- total entrepreneurial activity;
- the likely proportion of high-growth business starts;
- the number of global firms per head of the population;
- labour productivity levels;
- the proportion of 16-19 year olds in education, training and employment; and
- the proportion of graduates in the workforce.

In addition, when the UK or the UK regions are the only comparator then Scotland does *relatively better* on:

- academic spinouts per head of population;
- the proportion of young people achieving a qualification at level 3 or equivalent at 25; and
- the extent of skill shortages.

But does *relatively worse* than the UK, or the majority of UK regions, on:

- the number of working age people in education, training and employment;
- the number of new business starts;
- the proportion of innovative firms;
- patents filed per head of the population;
- the proportion of those in employment undertaking training; and
- the demand for learning to enhance transferable skills.

So, while the latest data continue to show that Scotland's comparative economic performance is mixed there is little evidence, from the indicators studied, to suggest any relative deterioration since the first report. Indeed, given that there has been some improvement in comparative productivity performance it would appear that some progress is being made in securing a smart, successful Scotland.

Priority Area

Lead Indicator

OECD Comparison

Overall progress indicator

Standard of living indicator (GDP per head)

Scotland and UK were in the third quartile.

Growing Businesses
Entrepreneurial dynamism and creativity

High growth firms (business starts)

Scotland is in the third quartile with business starts and innovative firms below the average for the UK.

More E-business

Percentage of businesses trading online

Scotland is placed in the second quartile for trading on-line, though a first quartile ranking for activity transacted through e-business and, on a small sample, a fourth quartile placing for broadband connectivity.

Commercialisation of research and innovation

Business investment as a proportion of GDP

Scotland is in the third quartile, though it is some way behind the lead countries and the UK. However, it has a strong performance in academic spinouts, though patenting performance is low.

Global success in key sectors

Productivity levels in Scottish industry

Scottish productivity levels are in the third quartile, though ahead of the UK. Scotland performs strongly in knowledge-intensive industries.

Global Connections
Digital connectivity

Cost and geographic coverage of broadband

Scotland's broadband cost and coverage places it in the second quartile, with a similar performance in terms of on-line population.

Involvement in global markets

Companies exporting (Scottish manufactured exports)

Scotland has a strong export performance when exports to the rest of the UK are included, placing it in the first quartile.

Globally attractive location

Graduates as a proportion of the workforce

Scotland is in the third quartile for graduates as a percentage of the workforce and lags behind the UK.

Choosing to live and work in Scotland

Net-migration (working-age) as a proportion of the population.

Scotland is in the fourth quartile with slight net out-migration having returned following a period of net in-migration.

Priority Area

Lead Indicator

OECD Comparison

Skills and Learning

Improving the operation of the Scottish labour market

The proportion of the working age population in employment

Scotland is in the second quartile, performing similarly to the UK as a whole although better than England in terms of skill shortages.

The best start for all our young people

Proportion of 16-19 year olds not in education, training or employment

Scotland is in the third quartile, performs well in terms of transferable skills and has a higher rate of individuals with a level 3 qualification than the UK.

Narrowing the gap in unemployment

Ratio of unemployment rates between the worst 10% of areas and the Scottish average

No international comparison is possible for the lead indicator, but over time Scotland is narrowing the gap in unemployment with a third quartile ranking for the percentage of the population in education, training, employment or economic inactivity.

Improved demand for high quality in-work training

The proportion of those in employment undertaking training

Again no international comparison was possible, and though Scotland does lag behind the UK on all measures, there is evidence to suggest that Scotland's relative position is improving.

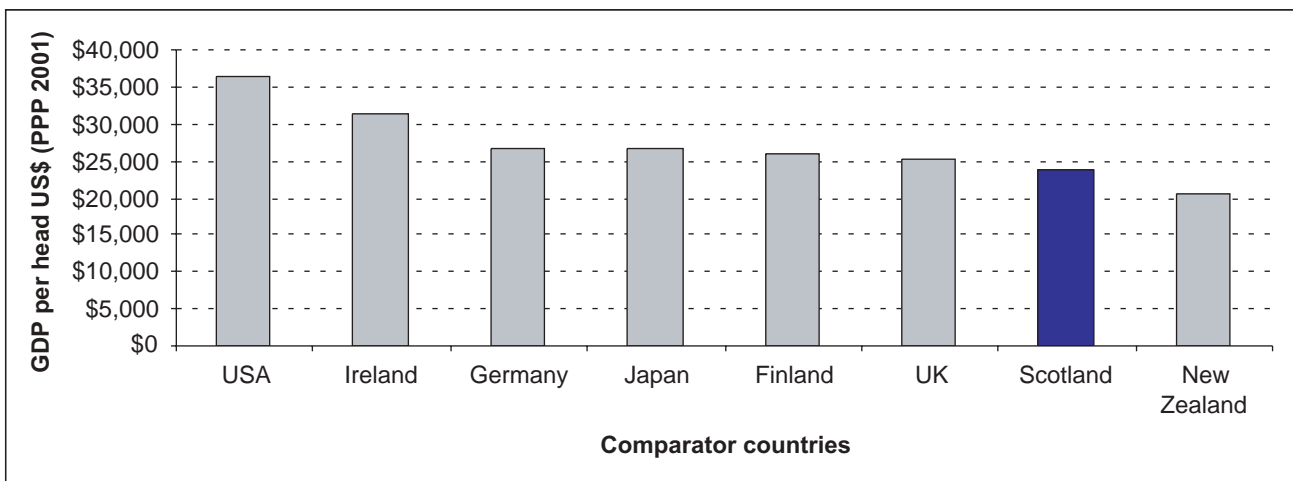
1 – GDP PER HEAD

Why this measure?

GDP per head is the most widely used measure of living standards. Its method of calculation can be standardised across countries to allow accurate comparison of the value of goods and services produced within a country's economy in a given year relative to the population of that country. It does not wholly capture the benefits of economic growth, as it does not measure the value attached to natural resources and other aspects of life that may not have a monetary value. It must also be remembered that it does not measure how the benefits of growth are dispersed amongst society.

How does Scotland perform?

GDP per head (2001)



Source: OECD in Figures and ONS/HM Treasury

In order to make a comparison with other countries the GDP per capita figures had to be standardised and presented in the same unit – 2001 US dollars. Scotland has a GDP per capita of \$23,622, placing it in the third quartile – the same as last year – of a 31-country sample along with the UK and Finland. The first quartile was led by Luxembourg and also included the USA and Ireland. But the position of Ireland may reflect the consequences of transfer pricing¹ by the large number of multi-national companies present in that country. Luxembourg's high position may be due to the dominance of externally-owned banks and financial institutions.

¹ Transfer pricing is undertaken within a company when it sells goods from unit to unit within the company. In doing so it can set the price equal to the market price for the good, or it can set the price above/below the market price in order to make use of favourable tax or tariff regimes within the two countries.

UK GDP per head has been around the OECD average since the 1960s. Scotland's GDP per head has risen relative to the UK since the 1960s and was higher than that of the UK in 1995. This may have been because the recession of the early 1990s was less severe in Scotland than in some parts of the UK and as a result Scotland came out of recession sooner. Since 1995 a lower GDP growth rate in Scotland has led to a slower increase in GDP per head than in the UK as a whole. Over the past two years the recession in the world ICT and electronics industry has had a disproportionate impact on Scotland due to the high level of importance here of those sectors. Output and jobs have suffered as a result.

What does this mean for Scotland?

Scotland's GDP per head is behind that of the UK. Key determinants of GDP per head are the employment rate and productivity per worker. In Scotland both these measures are below those of the UK. Scotland's participation rate in the workforce is less than that of the UK and Scotland also has a greater ratio of part-time to full-time workers: both these will act to lower Scotland's GDP per head.

The effect on GDP growth of the downturn in the world electronics industry also highlights Scotland's vulnerability as a small open economy to external events affecting those sectors in which Scotland specialises. But in the longer term Scotland's GDP per head depends on the success achieved by Scottish businesses in undertaking R&D, starting new firms, adopting new methods of doing business, introducing new products and processes and in training the workforce. Other measures within this document chart Scotland's progress in these areas.

LEAD INDICATOR

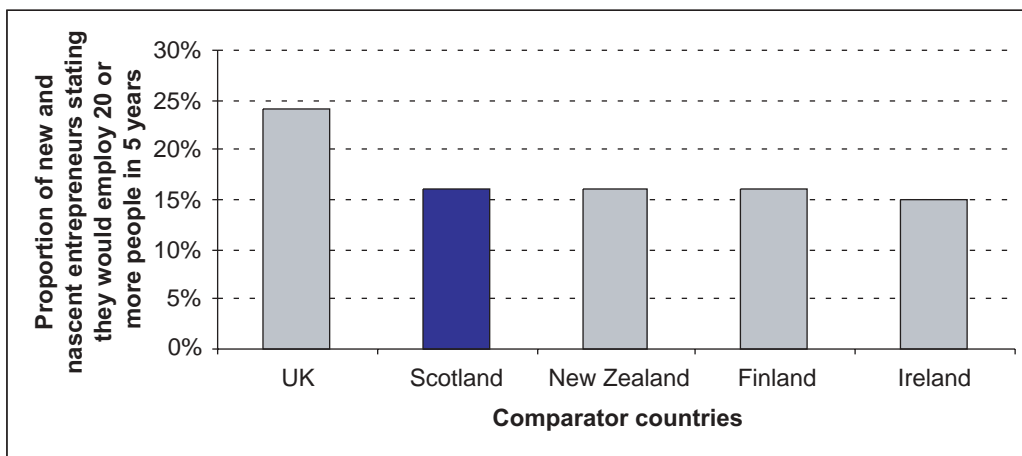
2A – HIGH GROWTH FIRMS (BUSINESS STARTS)

Why this measure?

It is important that new firms started in Scotland, a measure of Scotland's entrepreneurial dynamism, are both capable of, and succeed in achieving, high growth. High growth firms are, in general, more innovative in product development and in the marketplace. This innovation creates jobs and opportunities for further growth. It may also have significant spillover effects for other businesses within Scotland.

How does Scotland perform?

Proportion of new and nascent entrepreneurs stating they would employ 20 or more people in five years (2002)



Source: Global Entrepreneurship Monitor, Scotland Report 2002

Limited data were available for international comparison from the Global Entrepreneurship Monitor (GEM). Of those data that were available there was little variation in the percentage of new or nascent entrepreneurs expecting to employ more than 20 people in five years – the proxy measure used for this indicator. The lack of cross-country variation can be seen from the graph, but it should be remembered that only a limited sample was available. However, Scotland does less well than the UK. Given this small sample size it is difficult to determine a quartile ranking for Scotland, but it can reasonably be assumed that Scotland would not be in either the first or fourth quartiles and most likely lies in the third quartile given Scotland's score on the Total Entrepreneurial Activity scale (Indicator 2b). Data specific to Scotland showed that between 1998 and 2001 for those enterprises first registered for VAT and/or PAYE in 1998 0.8% could be considered high-growth firms – with a high-growth firm defined as one that increases from between 0-4 employees to over 15 employees over the same period.

What does this mean for Scotland?

It is difficult to draw any firm conclusions given the limited data available, but there does appear to be limited variation in entrepreneurial intent, at least as regards high-growth firms in countries of a similar size to Scotland. There is a significant gap between how many firms are expected to be high growth and how many turn out to be high growth. This should not be unexpected, as there is often some degree of divergence between what individuals expect to do and what they in fact do. It should also be remembered that the data on high growth firms for Scotland are for firms started in 1998 while the data for the GEM are based on responses in 2002. These responses will involve expectations of future market conditions and these expectations will likely vary from those of 1998. But, that said, it is clear that one of the challenges facing the Scottish economy is to raise the proportion of new starts that go on to achieve high growth.

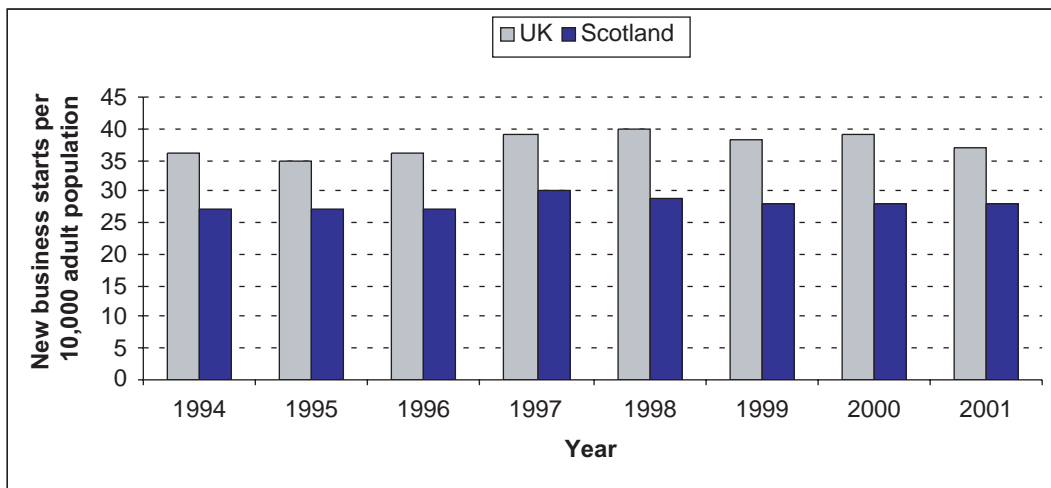
2B – NEW BUSINESS STARTS PER 10,000 OF THE ADULT POPULATION

Why this measure?

The number of businesses started over a period gives a real measure of the more difficult to measure concept of entrepreneurial spirit, and ultimately reflects how well that spirit is transferred into tangible outputs – new firms that represent the realisation of commercial opportunities and the creation of jobs. High rates of new firm formation are found in dynamic economies and are increasingly associated with high rates of economic growth.

How does Scotland perform?

New business starts per 10,000 of the adult population (1994-2001)



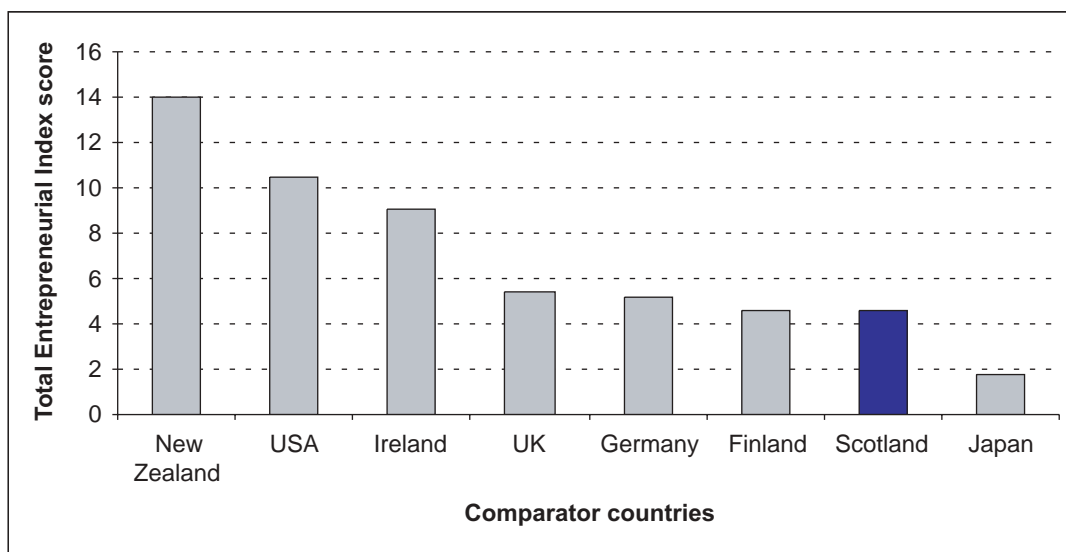
Source: Small Business Service

The measure used to calculate business starts is the number of VAT registrations. A positive sign is that the number of registrations per 10,000 of Scotland's adult population in 2001 was the highest since 1998. Using VAT registrations does not capture all business starts as some, especially small businesses, may not be VAT registered, though there is no reason to suspect this would disproportionately affect Scotland.

The latest figures for 2001 show that the number of business starts in Scotland is less than half that of the leader London. In fact London has a considerably higher number than the next best performing region, the South East, with Scotland 9th of the 12 regions.

Of those companies started in 2000, 91.1% survived one year in Scotland with the figure being very similar for the UK (91.4%). Of those firms started in 1998, 62.6% survived three years in Scotland while 64% survived in the UK. The survival rates are only marginally different but place Scotland 7th and 12th respectively amongst the regions of the UK for one- and three-year survival rates.

Total Entrepreneurial Activity² (TEA) index by country (2002)



Source: Global Entrepreneurship Monitor, 2002 Executive Report and 2002 Scotland Report

To allow an international comparison, data from the 2002 Global Entrepreneurship Monitor³ are used. Though this does not measure the number of business starts the Total Entrepreneurial Activity (TEA) index does act as a proxy. The caveat must be introduced that there are margins of error around these figures due to the small sample sizes. Of a 25-country OECD sample Scotland is 16th equal, putting it in the third quartile alongside the UK and Germany. New Zealand leads the first quartile.

What does this mean for Scotland?

The TEA rate shows that Scotland is some way behind the lead countries, even when the margin of error within the statistics is accounted for. It is similar, though below that of the UK – and this is reflected in the number of new business starts. The rate of business starts in Scotland has lagged behind the UK for some time, and although there is evidence that the absolute number of business starts in Scotland is increasing there is no clear indication that the position is improving markedly relative to the UK. It should be noted, however, that of those firms started there is little difference in survival rates as between Scotland and the UK.

² This is defined as that per cent of the labour force that is either actively involved in starting a new venture, or the owner/manager of a business that is less than 42 months old.

³ The aim of the Global Entrepreneurship Monitor (GEM) is to measure the difference in the level of entrepreneurial activity between countries, and study the complex relationships between entrepreneurship and economic growth. The 2002 report was the third year of Scotland's involvement in the GEM study.

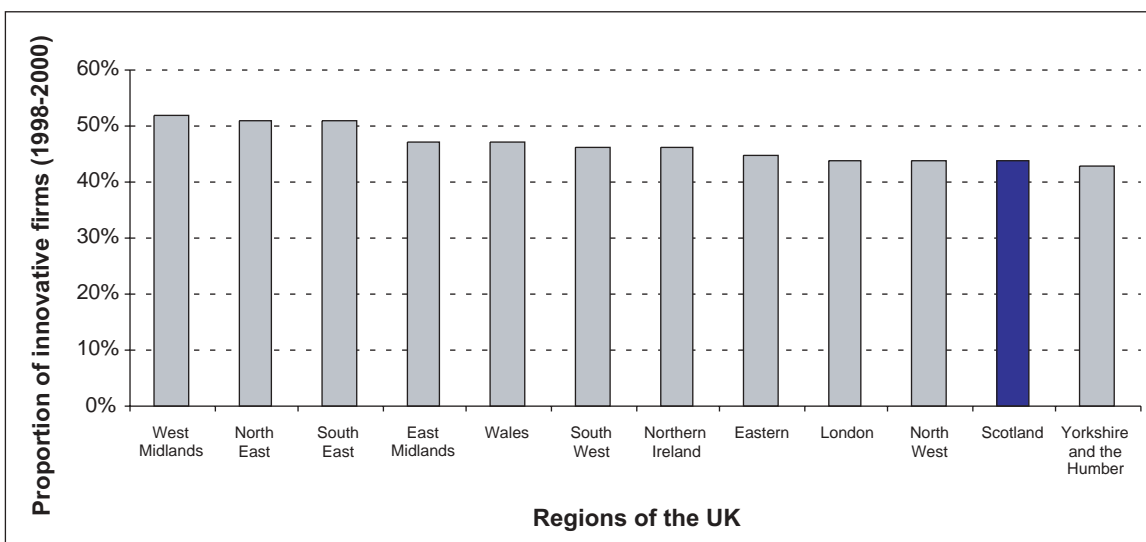
2C – PROPORTION OF INNOVATIVE FIRMS

Why this measure?

Innovation is strongly correlated with economic growth and is essential for Scotland's businesses if they are to be at the forefront of technological advancement and productivity enhancement. Innovation can take many forms and needn't refer only to products: it can refer to production processes, partnerships or the transfer of ideas from one firm or industry to another.

How does Scotland perform?

Proportion of innovative firms (1998-2000)



Source: Community Innovation Survey, 2001

The latest Community Innovation Survey (CIS) is not yet available for an international comparison. The CIS survey takes a broad definition of innovation⁴ and admits that the small sample size does lead to a significant margin of error around the survey findings, but even still the issue of note is the lack of any significant variation in innovation across regions of the UK.

What does this mean for Scotland?

Scotland's second-bottom position in terms of innovation is of less concern given the caveat that there is a significant margin of error around the statistics. Perhaps the issue of more importance is that the absolute level of innovative firms across the UK is, on average, less than 50%. In the previous CIS, covering the period 1994-96, the UK as a whole had a higher percentage of innovative companies than the EU average.

⁴ The CIS counts an innovative firm as one which has "introduced a new or significantly improved good, service or process; been engaged in innovation projects not yet complete or abandoned; been engaged in longer-term innovation activity such as basic R&D or technology watch; had expenditure in areas such as internal research and development, training, acquisition of external knowledge or machinery and equipment linked to innovation activities, or; formally co-operated on innovation activities with other enterprises or institutions".

more e-business

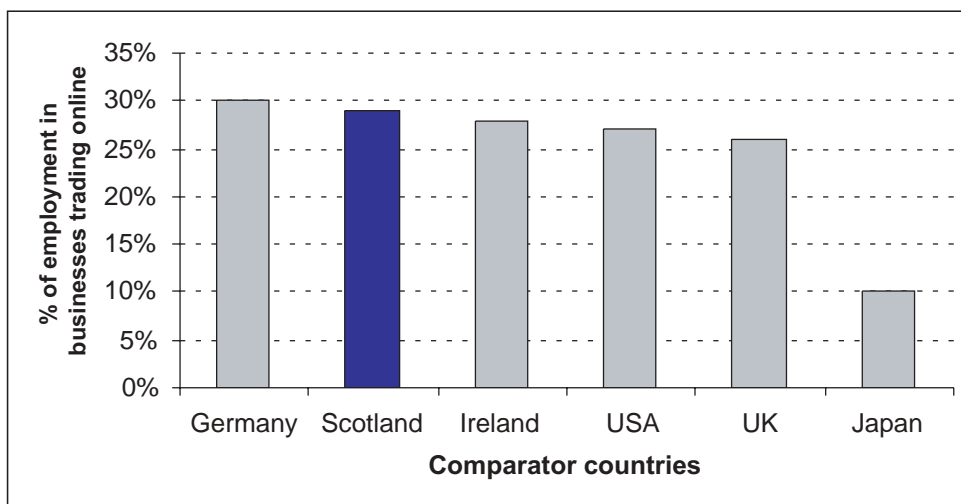
LEAD INDICATOR

3A – PERCENTAGE OF BUSINESSES TRADING ON-LINE

Why this measure?

The Internet opens up a global market to Scottish companies. The percentage of companies making use of on-line trading gives an indication of how well Scottish business is engaged with the global marketplace. Of course trading on-line is not appropriate to all businesses so the supporting indicators broaden the analysis to show the range of ways in which e-business can be used to increase productivity and improve performance.

How does Scotland perform?

Percentage of employment in businesses trading on-line⁵ (2002)

Source: DTI Business in the Information Age, International Benchmarking Study 2002, Figure 3.4 & 10.2

Using employment in companies trading on-line places Scotland in the 2nd quartile of an OECD sample of 10 countries. Against the group of comparator countries it performs well, doing better than the UK and considerably better than Japan. The top-ranking country was Australia with 39% of businesses trading on-line. Scotland performs well, and though the sample of 10 countries available is small it does contain all of Scotland's G7 partners. A larger percentage of Scottish firms trade on-line than is the case in the UK, in fact Scotland has overtaken the UK moving from 20% to 29% of employment being in firms that trade on-line between 2001 and 2002. For the UK the increase was from 24% to 26%.

What does this mean for Scotland?

Scotland's performance, at over a quarter of businesses trading on-line, represents considerable engagement with on-line trade. It should be noted that Scotland enjoys relatively low levels of "mainstream"⁶ broadband costs. (Indicator 6a – cost and coverage and broadband). It does not lag far behind the leader in the field, Australia with 39%, and does considerably better than the poorest performing country, France with 8%.

⁵ The DTI defines trading on-line as: (a) enabling customers to order on-line; (b) enabling customers to pay on-line; (c) using ICTs to order goods and services on-line; and (d) using ICTs to pay for goods and services on-line.

⁶ For definition of mainstream broadband see indicator 6a.

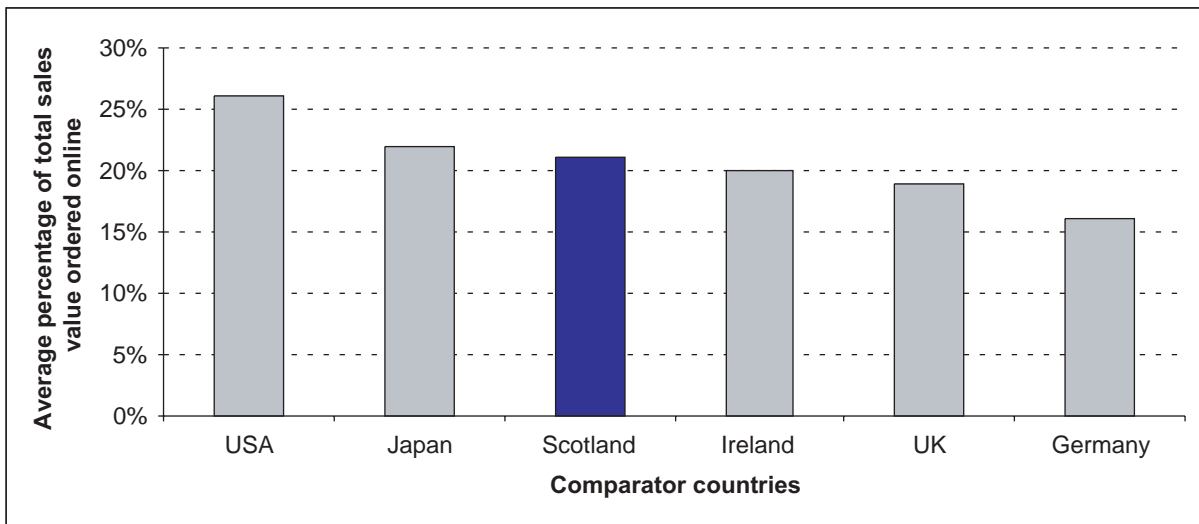
3B – PROPORTION OF BUSINESS ACTIVITY TRANSACTED THROUGH E-BUSINESS

Why this measure?

This measure is based on the value of sales made through e-business as a proportion of the value of total sales of those firms that allow customers to order on-line. This measure is important because it shows how well businesses are using the Internet as an integral part of their sales focus.

How does Scotland perform?

Proportion of business activity transacted on-line (2002)



Source: Enterprise Networks, ICT International Benchmarking Study 2002

Scotland (21%) lies in the first quartile of an OECD sample of 11 countries. Only Japan and the USA perform better. Against the comparator countries Scotland does equally well and outperforms the UK and Germany. Since the last study (2001) Scotland's sales value recorded on-line has increased from 17% to its current 21%.

What does this mean for Scotland?

Those Scottish businesses that do trade on-line make good use of the technology. Scotland's high ranking amongst OECD countries shows that the firms that are using the Internet to advertise their products and conclude sales are exploiting the opportunity to access a global marketplace comparatively well.

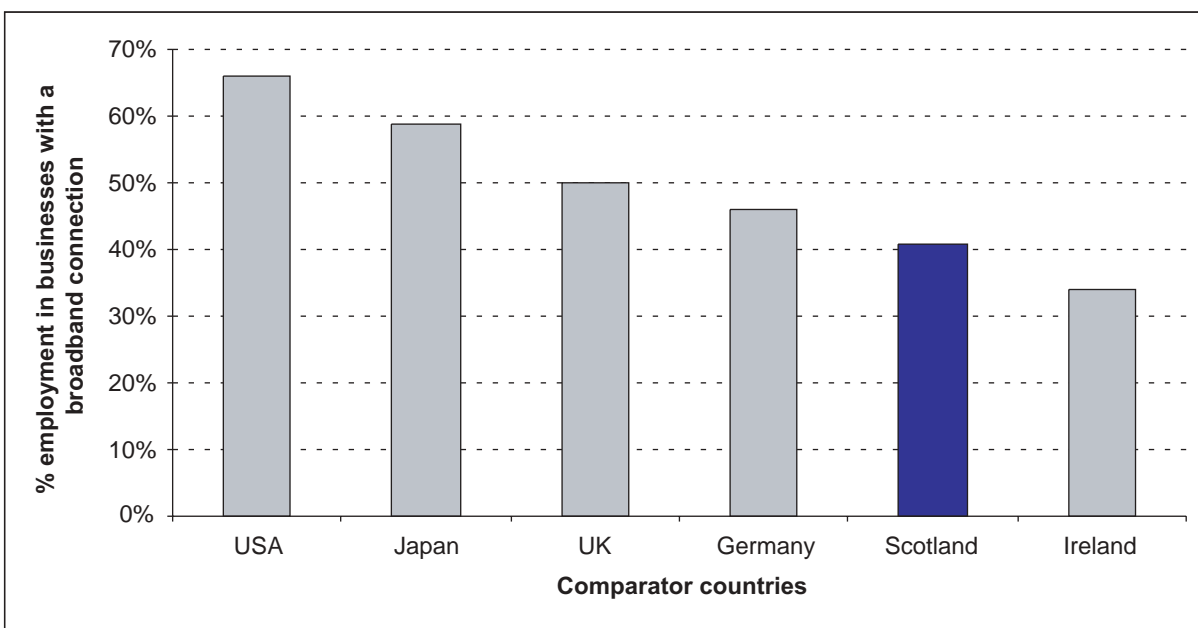
3C – SHARE OF BUSINESSES USING BROADBAND⁷

Why this measure?

Broadband technology is far in advance of standard modem connections. It allows much faster transfers of data and allows businesses to make more use of the Internet. A recent survey by the Federation of Small Businesses in Scotland (May 2002) found that more than three-quarters of businesses using broadband technology have experienced enhanced productivity as a result. The share of businesses using broadband will, however, be limited by the coverage available. At present some areas of Scotland do not have access to broadband connections.

How does Scotland perform?

Percentage of employment in businesses using broadband (2002)



Source: DTI Business in the Information Age, International Benchmarking Study 2002, Figures 4.4 & 10.4

Scotland lies in the fourth quartile of a 10 country OECD sample. The measurement used for this indicator is employment in firms with broadband. Scotland's performance is somewhat behind its competitors and behind the UK as a whole. The top performing country is France (70%) followed closely by Sweden (68%), with Australia (34%) as the poorest performer. It should be noted that this measure differs from that used in last year's report as the definition has been broadened to include more broadband connection methods.

⁷ There is no one definition of broadband. The definition of broadband used for this indicator is at the low end at over 128kbps per second.

What does this mean for Scotland?

To allow broadband to have as big an impact on the Scottish economy as possible coverage must be developed. There are large areas of Scotland unable to utilise this technology and they are excluded currently from its benefits. However, broadband will only make a difference if businesses take up the opportunity to use it. With only 41% of employment in businesses using broadband at present the task is not only to develop the infrastructure of the network, but encourage those businesses with access to use it. Given the relatively low costs of mainstream broadband services (Indicator 6a), Scotland should be well placed to utilise broadband technology if coverage is extended and take-up encouraged. Efficient and effective use of this technology requires companies to enhance staff skills, commit adequate resources and plan effectively for its use within their business.

increased research and commercialisation

LEAD INDICATOR

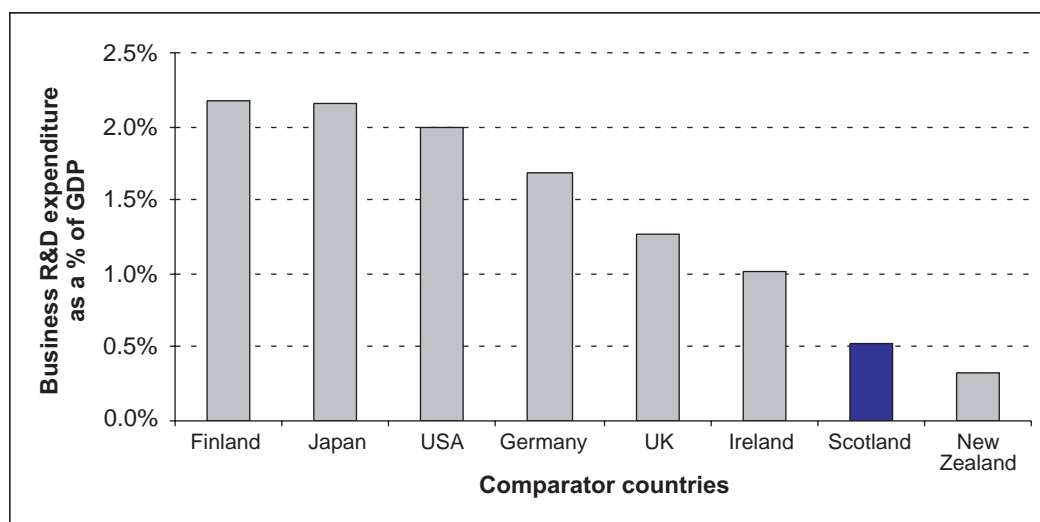
4A – BUSINESS RESEARCH AND DEVELOPMENT EXPENDITURE AS A PROPORTION OF GDP

Why this measure?

Research and development and productivity are closely linked, with R&D being essential to ensure long-term productivity growth. It also serves as a measure of how effectively businesses exploit existing technology and strive to develop new products and processes. For Scotland to continue to grow, its businesses have to make the investments now that will ensure jobs, prosperity and continued economic growth in the future.

How does Scotland perform?

Business research and development investment as a proportion of GDP (1999)



Sources: BERD 2000 and OECD STI Scoreboard Annex Table 5.1.1
 Note: Data for Ireland for 1997, others for 1999

The latest data available (1999) indicate that Scotland is in the third quartile of 30 OECD countries. Sweden, Finland and Japan lead the first quartile while Scotland ranks above countries such as Mexico, Portugal and Greece. Against the comparator countries Scotland does not perform well with business R&D just over 0.5% of GDP, over 1.5% less than the leader Finland and 0.75% behind the UK as a whole. Evidence suggests, however, that both the UK and Scotland perform considerably better on R&D investment by the government and education sectors. The high level of R&D investment of the education sector is reflected in Scotland's strong performance in terms of academic spinouts (Indicator 4b).

What does this mean for Scotland?

Scotland has a historically low level of business R&D investment, partly as a result of the routine production processes carried out by many of Scotland's businesses. This low level may be in part to blame for Scotland's low productivity growth. The concentration of the headquarters of many UK corporations in the South East of England also tends to result in R&D departments being located there. Companies therefore need to be encouraged to undertake R&D in Scotland, or at the very least encourage technology transfers from within the company to Scotland, the successful implementation of which will usually require some local R&D to be undertaken. More recent figures for Scotland (2001) indicate that Scotland is increasing its expenditure on business R&D and at a faster rate than the UK, though no international comparison is at present available.

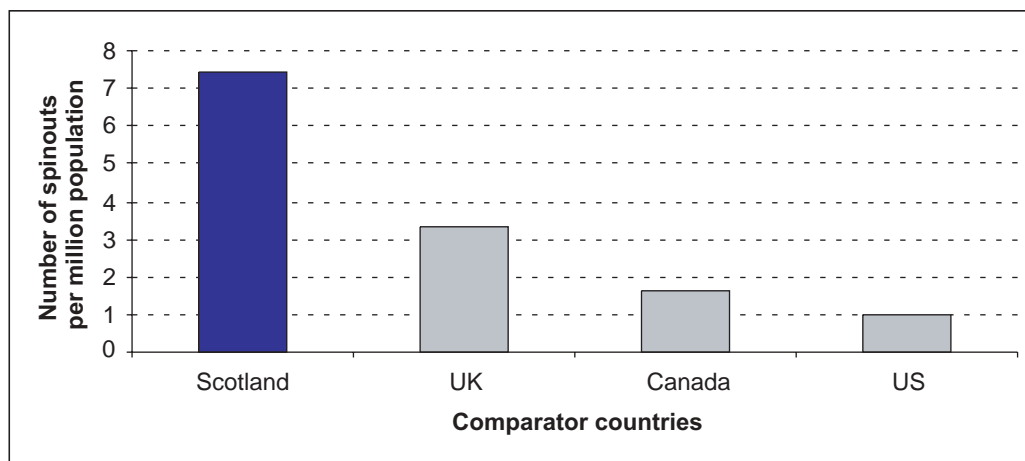
4B – NUMBER OF ACADEMIC SPINOUTS

Why this measure?

Universities not only help train much of the workforce of tomorrow, they also create knowledge that can be commercialised and add to economic growth. A spinout is determined as an enterprise where higher education institutions or employees hold equity stakes, allowing them to exploit the knowledge arising from academic research.

How does Scotland perform?

Number of academic spinouts per million of the population (1999-2000)



Source: HEBI Survey, 2001; Census of Population, 2001 & OECD Statistical Compendium

Data on this indicator are difficult to determine so as a proxy indicator the number of spinout companies per million of the population is used. Scotland performs well, though comparisons are only possible with a limited number of comparison countries: the UK, the USA and Canada. Over the period 1999-2000, 38 spinout companies were determined as coming from Scotland with evidence to suggest that this represents a significant increase on previous years. Each of the 38 companies identified cost on average £5.9 million of research expenditure to establish compared with £8.6 million for each UK company. In Canada and the US the sums were £13.9 million and £53.1 million respectively.

What does this mean for Scotland?

Though with such small numbers there must always be an element of caution, the rate of increase in the number of firms, their number given the size of Scotland and the quite substantially lower research costs involved in establishing each firm are a positive indicator for Scotland. They also appear to confound the conventional wisdom that the higher education system in Scotland, and the UK as a whole, lags behind North America, at least in terms of spinout productivity per pound of research expenditure.

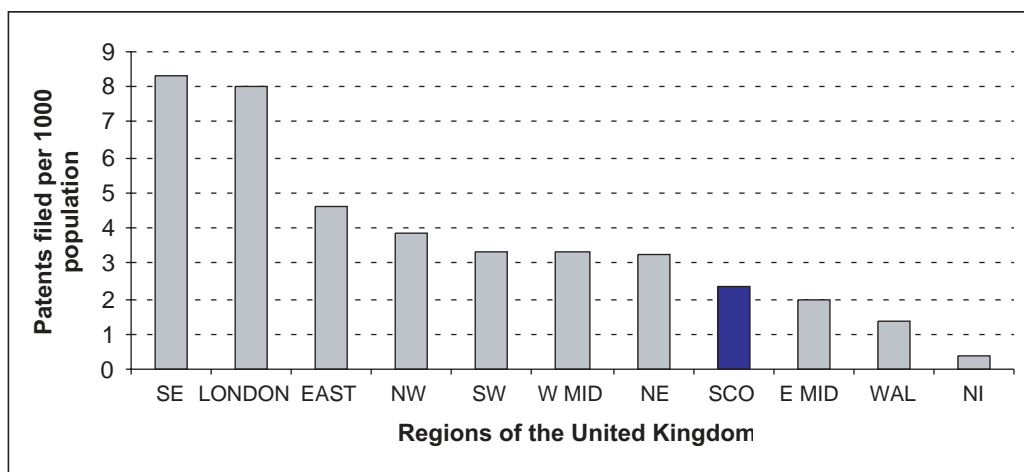
4C – NUMBER OF PATENTS FILED (ACADEMIC AND INDUSTRY)

Why this measure?

The number of patents filed gives an indication of how successful Scotland is at converting the knowledge it creates into products or processes. That does not mean, however, that the number of patents is a direct, or the sole, reflection of success – many products are not patented or may have separate patents for each part of one whole product or process – but as a comparison with other parts of the UK it does indicate how Scotland fares.

How does Scotland perform?

Patents filed per ten thousand of the population (2000-01)



Source: The Patent Office Annual Facts and Figures 2000-2001 and 2001 Census

The number of patent applications filed in The Patent Office per 10,000 of the population by region of the UK for 2000-2001 is used as the measure of comparison. A total of 1198 patent applications were made from Scotland – representing 5.8% of the UK total. Scotland does not perform well, though it does perform better than both Wales and Northern Ireland. There is no information from the last report to compare Scotland's current patent rate with that last year, but there is evidence that the UK as a whole performs poorly internationally in terms of the number of patents filed. Information compiled by the DTI suggests that the UK under-performs nearly all its major competitors in terms of patents granted to UK firms by the US and EU patent offices – given Scotland's position relative to the UK average Scotland would not perform well by this measure. This statement must be conditioned by remembering that US patents in the US patent office are domestic patents – this is not the case for the other countries studied in the DTI report as they are registering either in the US or at the EU patent office, neither of which are domestic patent offices for any of the other countries. However, both Germany and France outperform the UK at the EU patent office.

What does this mean for Scotland?

It should not be surprising that Scotland has a lower patenting rate than the South East and East of England and London, but it does lag behind areas with a broadly similar economic structure such as the South West of England and West Midlands. A gap of such magnitude as that between the South East of England and Scotland probably reflects the location of headquarters and corporate R&D departments but may also indicate that Scotland is failing to capitalise fully on converting knowledge into successful products and processes.

LEAD INDICATOR

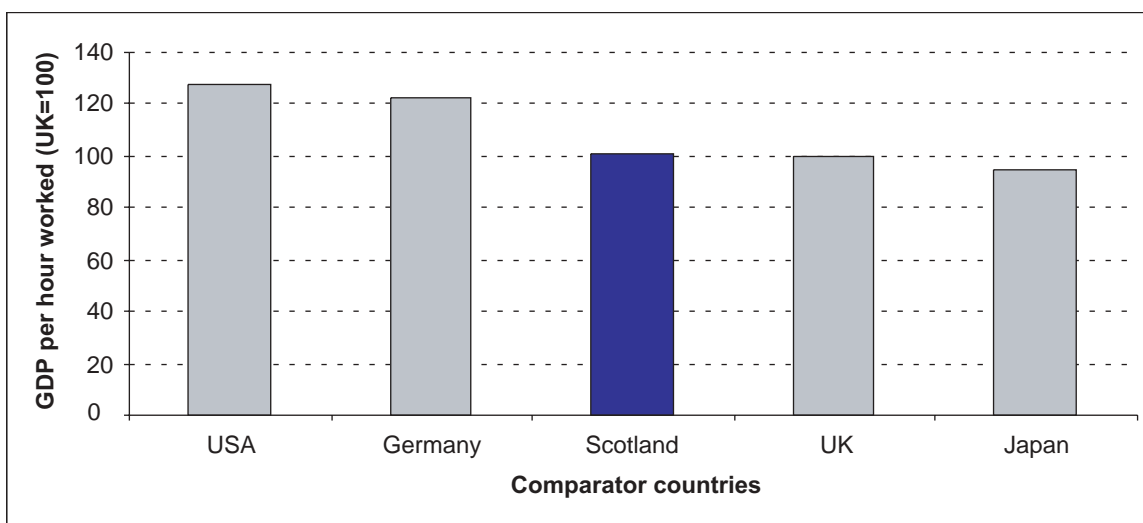
5A – PRODUCTIVITY LEVELS IN SCOTTISH INDUSTRY

Why this measure?

GDP per hour worked is a measure of the value of labour and capital in the production process. GDP per capita is a useful measure of economic welfare, but it doesn't indicate how many worker hours are involved in GDP creation. Comparing GDP per hour worked across countries allows a relative measure of the labour intensity involved in wealth creation. By using an index (with the UK set equal to 100) it is possible to see if those countries with high GDP per head are using high value labour inputs. An alternative measure would have been GDP per employee. A limitation of this measure is that it does not take account of variations between countries of the number of hours worked.

How does Scotland perform?

GDP per hour worked (1999)



Sources: "International Comparisons of Productivity", ONS (Richardson) and Economic Trends, May 2001, "Introducing New and Improved Labour Productivity Data", (Daffin)

Data from the OECD for this measure are experimental currently and limited in range, but they do allow Scotland to be compared against some of the comparator countries. Scotland ranks fractionally higher than the UK at 100.9, with the USA and Germany performing considerably better at 127.7 and 122.8 respectively. The surprise is the poor performance of Japan at 94.2. On this basis it may be tentatively concluded that Scotland would lie in the third quartile along with the UK.

What does this mean for Scotland?

The data on GDP per head (Indicator 1) indicated that Scotland performed less well than both the UK and Japan. By this measure this position is reversed. GDP per hour worked will reflect the capital intensity of production – the more capital available to employees the more will be produced per hour worked. High levels of GDP per hour found in the USA and Germany do indicate that Scotland has scope for considerable improvement. This improvement may come through increasing the capital available within Scottish businesses, but also through increasing the rate of product and process innovation.

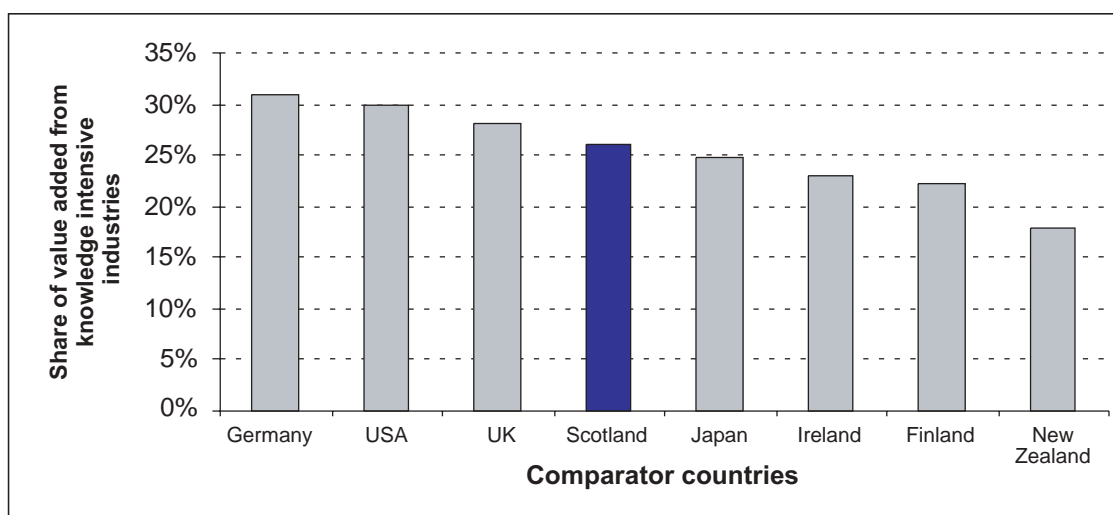
5B – A KNOWLEDGE-BASED INDUSTRIES INDEX

Why this measure?

Knowledge-based industries,⁸ such as the electronics and biotechnology sectors, form an important part of the Scottish economy. An index of how these industries are performing is not available currently. Instead the value added⁹ (net output) in these sectors from Scotland's Input-Output tables was used as a proxy and compared with information available on a comparable basis for the OECD.

How does Scotland perform?

Share of value added from knowledge-intensive industries (1999)



Source: OECD STI Scoreboard 2001 (1998 data for most countries) and Scottish Executive Input-Output Tables (1999)

Scotland is in the first quartile, as it was last year, ranking 6th in a 28-country comparison with 26.5% of value added coming from knowledge-intensive sectors. The first quartile is led by Switzerland with 36% and also includes the UK with 28.1%. This measure is slightly limited in that it does not contain data for the health and education sectors. Though the OECD defines them as knowledge-intensive the coverage of data would have limited the sample available and it would have included only two of the comparison countries.

What does this mean for Scotland?

Scotland performs strongly against its global competitors. Knowledge-based industries represent an important part of the Scottish economy and include many sectors with foreign-owned firms. Evidence suggests that foreign-owned firms have higher productivity levels per worker and greater levels of investment per worker than have indigenous firms.

⁸ The full OECD classification of technology and knowledge intensive industries is: pharmaceuticals; office machinery and computers; aerospace; electronics-communications; scientific instruments; post and telecommunications; finance and insurance; business activities (not including real estate); motor vehicles; electrical machinery; chemicals; other transport equipment; non-electrical machinery.

⁹ Value added can be defined as the difference between the revenue derived from sales and the cost of the inputs to production. In this way the "value added" by the production process can be measured.

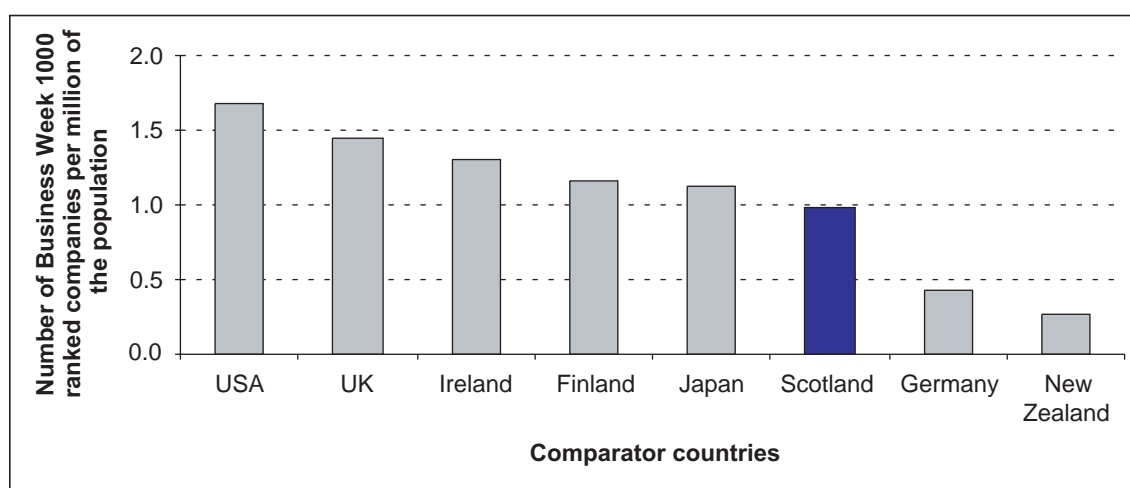
5C – NUMBER OF NEW GLOBAL/EUROPEAN HQs

Why this measure?

The number of new global or European headquarters gives an indication of the attractiveness of Scotland as a business destination, not only for the production of goods and services, but as a location for business management functions.

How does Scotland perform?

Number of Business Week 1000 ranked companies per million of the population (2002)



Source: Business Week 1000, (2002)

There is no measure of the number of new global or European headquarters so instead the number of firms in the Business Week 1000¹⁰ per million of the population is used as a proxy. With five companies – the same number as last year – Scotland ranks below the UK, with the USA as the lead country.

What does this mean for Scotland?

It is difficult to draw too many concrete conclusions from this result. It is certainly the case that the largest firms headquartered in Scotland are of Scottish origin. Since this indicator seeks to measure the development of world-class companies in Scotland it may be assumed that companies that would be included in the Business Week 1000 will have to come from within, rather than start outwith, Scotland.

¹⁰The Business Week 1000 is a publication by the American magazine “Business Week” that lists annually the 1000 largest firms in the world by stock market value.

LEAD INDICATOR

6A – COST AND COVERAGE OF BROADBAND

Why this measure?

Broadband technology is vital to allow the development of on-line activity and its availability will help encourage firms to locate in Scotland and allow those firms already there to expand their businesses and connect with the rest of the world. Though development of the physical infrastructure is of great importance, it must be done at reasonable cost if businesses and households are to derive the benefits of fast Internet access.

How does Scotland perform?

The definition of broadband used for indicator 3a (on use of broadband) is over 128kbps.

If we move up to 500kbps and over (e.g. DSL and cable modem – sometimes referred to as mainstream broadband), approximately 53% of the Scottish population and 66% of the UK population have access to broadband services. Everyone can get access to broadband no matter where they live if they connect using satellite broadband. However, this has far higher costs than standard connection to a line. Recent OFTEL benchmarking on these type of services show that prices are now as cheap in the UK, and by extension, Scotland, as they are in a number of other European countries.

Results for price level, price index and bandwidth for business broadband services (cable modem services included)

	No minimum bandwidth			Minimum GM bandwidth of 500 kbit/s			Minimum GM bandwidth of 1000 kbit/s		
	Price level £/month	Price index	Bandwidth -DS kbit/s	Price level £/month	Price index	Bandwidth -GM kbit/s	Price level £/month	Price index	Bandwidth -GM kbit/s
France	120	277	1,000	120	100	506			
Germany	50	117	456	121	101	618	380		1,000
Sweden	36	83	512	36	30	512	117		1,012
US	37	85	942	56	46	699	98		1,100
UK (April)	29	68	512	98	82	506			

Note: DS = downstream, GM = geometric mean

Source: OFTEL International benchmarking study of internet access (dial-up and broadband), 2002

Some companies will need a higher capacity connection of 2Mbps or more. There is no average figure for the cost of 'Mbps leased line'. In the UK, the cost of lease lines is related to a number of factors such as the distance between the customer and provider, level of competition etc. Research has demonstrated that, in general, lease line costs are significantly higher in Scotland than other parts of the UK, such as, for example, the south-east of England.

What does this mean for Scotland?

These figures indicate that the UK is well placed in terms of the relative cost of 'mainstream' broadband services at over 500kbps capacity. Coverage, at least by cable, is likely to be less uniform due to the geography of Scotland, but the majority of the Scottish population will live and work in areas where cable connection is likely. Data for the take up of broadband by businesses (Indicator 3c) show that even with Scotland's strong performance in terms of cost, take-up remains low. Given the strong focus of telecommunications companies on broadband communication during 2002 Scotland's businesses may be expected to increase their take-up rate over the next year.

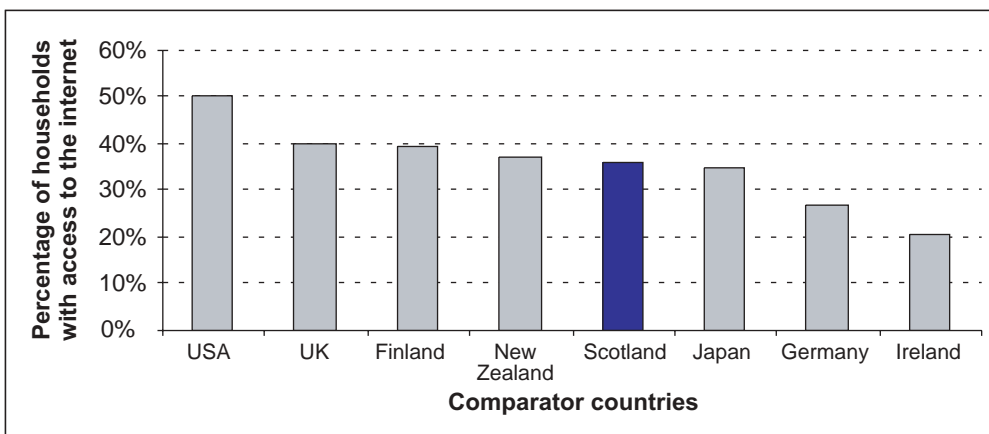
6B – SHARE OF POPULATION ONLINE

Why this measure?

The number of people on-line gives an indication both as to the supply of information that can be accessed online and the ease with which it can be accessed as well as the availability of online connection. An Internet conscious and skilled population is increasingly important for business, but it is also becoming an increasingly important social connection, of which failure to have access to can lead to exclusion.

How does Scotland perform?

Percentage of households with access to the Internet (2001)



Source: OECD, ICT database, August 2002 and Expenditure and Food Survey, ONS

Rather than the percentage of the population online, the percentage of households online has been used as the measure. It can reasonably be assumed that if a household is connected to the Internet that all those within it have access. Scotland is ranked ninth out of an OECD sample of 21 countries, placing it in the second quartile, alongside Finland, New Zealand and the UK – though it does have 4% fewer households connected than the UK. Denmark leads the first quartile with almost 60% of households online. It should also be remembered that individuals will, in many cases, have access to the internet from work, public libraries and schools and this may be a substitute for access from home. All information available indicates the percentage of households online has increased year on year, as would be expected as the costs of connection fall.

What does this mean for Scotland?

The results show that Scotland has comparatively good access to the Internet, with a connectivity rating higher than many OECD countries. The much higher level of households online in the USA may indicate that the “head start” they enjoyed in Internet access shows the level of Internet penetration that continued growth in connections will lead to in Scotland.

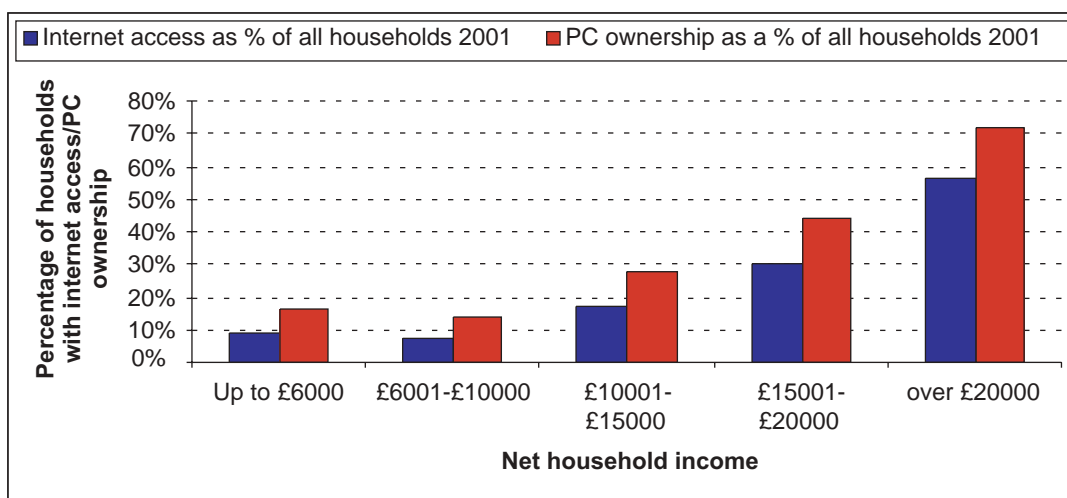
6C – SHARE OF THE POPULATION IN SOCIAL INCLUSION PARTNERSHIPS AND OTHER FRAGILE AREAS WITH INTERNET ACCESS

Why this measure?

This measure is one of the Scottish Executive's social justice targets. The Internet, and access to it, is becoming ever more important. Failure to have online access leads to missed opportunities in terms of access to employment as the Internet becomes an increasingly important employment search tool. However, exclusion can go further than that to other levels of social interaction with the prospect of the so-called 'digital divide' having long term socially disjunctive effects.

How does Scotland perform?

Percentage of households with Internet access/PC ownership by income band (2001)



Source: Scottish Household Survey, 2001

There are no data available to indicate the level of Internet access in SIPs, however using net household income as a proxy does indicate Internet access for different levels of affluence. It is clear that both PC ownership and Internet access are positively related to household income, with Internet access higher as a percentage of PC ownership for higher income bands. No directly comparable information is available across time.

What does this mean for Scotland?

The benefits of Internet access are not being enjoyed across the Scottish population. Though the costs of Internet access have dropped over the recent past, there are still significant set-up costs involved in getting on-line and they appear to act as a barrier to greater participation in Internet benefits.

LEAD INDICATOR

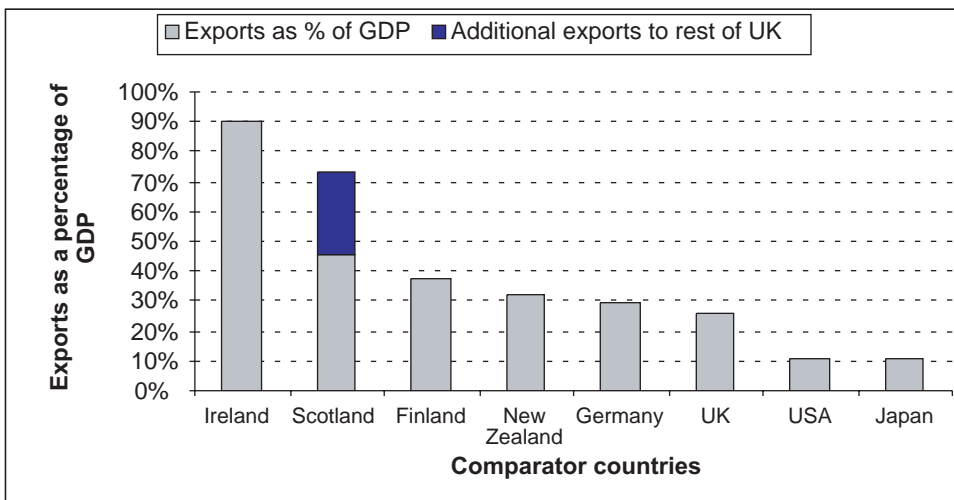
7A – PROPORTION OF EMPLOYERS EXPORTING

Why this measure?

The proportion of employers exporting is a tangible measure of the more intangible concept of openness to foreign trade. As a small economy Scotland should perform well by this measure, as much through necessity as choice, but openness does not reflect only exposure to trade, it measures exposure to ideas and knowledge. The increased competition of the global market makes the necessity for Scotland to learn from competitors and preserve its comparative advantage all the greater.

How does Scotland perform?

Exports as a percentage of GDP (1999)



Sources: OECD in Figures 2000 and SCDI Survey of Scottish Sales and Exports in 2000.

The measure used as a proxy for the proportion of employers exporting was exports as a percentage of GDP. Scotland lies in the first quartile of a 31-country OECD sample when exports to the rest of the UK are included and in the second quartile when they are excluded. Ireland, Belgium and Luxembourg lead the first quartile with the Scandinavian countries in the second quartile. Unsurprisingly the large countries – USA and Japan – are in the fourth quartile. Ireland's strong export focus, due to the presence of many multinational firms, puts it some way above the other comparator countries. The high value of export sales as a percentage of GDP may be partly accounted for by transfer pricing, which may raise the price of exports, undertaken by multinationals to take advantage of the low corporation tax rates within Ireland. But the level of this activity will depend crucially on the value of exports accounted for by intermediate sales – sales within such companies – as opposed to sales of final market goods.

What does this mean for Scotland?

Scotland continues its strong export performance to the rest of the UK and the rest of the world as shown in last year's report. This reflects the strong export focus of many of Scotland's businesses and the relatively small size of the Scottish economy.

7B – PROPORTION OF EMPLOYERS WITH OVERSEAS ALLIANCES, OPERATIONS, JOINT VENTURES, MERGERS AND ACQUISITIONS

Why this measure?

As well as exports, the ways in which Scottish businesses interact with overseas firms will heavily influence the development of ideas and productive techniques in Scotland's economy. The acquisition of these skills will help raise Scottish productivity while exposure to different business environments will improve the exchange of ideas.

How does Scotland perform?

There is no data source available currently that measures the proportion of employers with overseas alliances, operations, joint ventures, mergers and acquisitions. However, a recent survey by Scottish Enterprise of 957 manufacturing firms does give an indication of the relative importance of each. A total of 521 overseas operations were undertaken by these companies, though the data do not allow a breakdown of how many of these operations each firm engages in, however, the most common were the establishment of representative offices and strategic alliances while joint ventures and franchising were the least common. The survey also gave a geographical breakdown of each activity and unsurprisingly North America and Europe were the dominant areas.

What does this mean for Scotland?

As a small open economy Scotland should perform well in this measure, but there is no international comparison available to allow a conclusion to be drawn.

7C – EXPORT SALES PER WORKER

Why this measure?

Export sales per worker indicate how successful Scotland's businesses are at looking outwards to the global market and offering products and services that are capable of competing in that market.

How does Scotland perform?

Export sales per worker (2000)



Sources: OECD in Figures 2002 and OECD Statistical Compendium 2001-2, SCDI Survey of Exports and Sales in 2000 and Labour Force Survey, ONS

Including exports to the rest of the UK puts Scotland in the first quartile of a 31-country OECD sample, while excluding them places Scotland in the second quartile alongside countries such as Canada, Finland and Germany. We should expect small economies to export more, however, the gap between Ireland and Scotland indicates the exceptional focus of the Irish economy on exports through their strong multinational company presence. As with indicator 7a the figure for Ireland may be higher than expected due to transfer pricing by many multi-national companies found there.

What does this mean for Scotland?

The results show that Scotland is an open economy engaged heavily in external trade. It should be noted that the figure given is for gross exports per worker and takes no account of the value of imports per worker. This figure should be high for Scotland given the relative size of the economy and will vary across industrial sectors with, for example, the electronics industry having a high value of imports per worker while the whisky industry has a low value of imports per worker.

LEAD INDICATOR

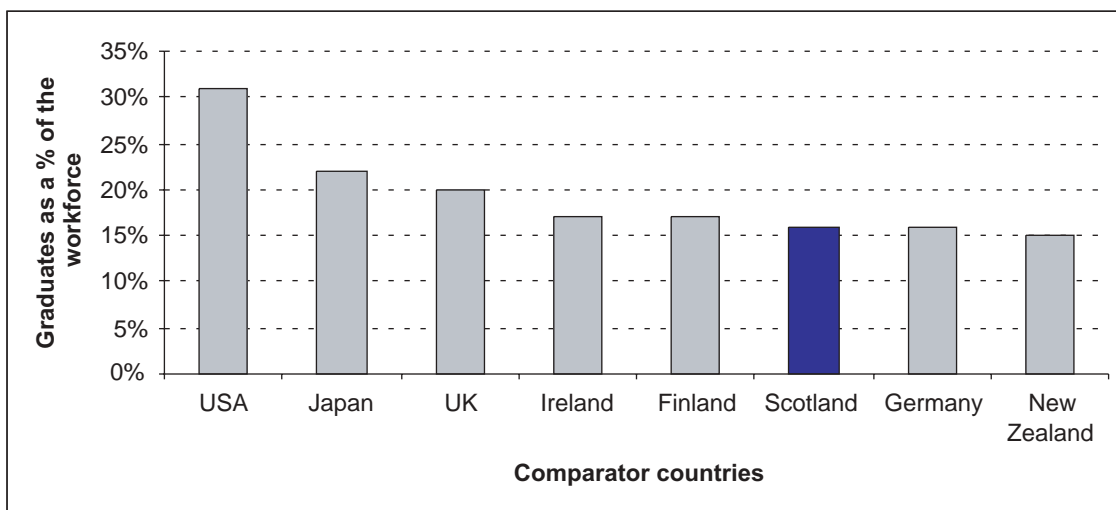
8A – GRADUATES AS A PERCENTAGE OF THE WORKFORCE

Why this measure?

Higher education provides individuals with valuable skills, not just in their discipline of study, but in the transferable skills that are important to ensure productivity growth. A high number of graduates in the workforce will make Scotland an attractive location for overseas firms to establish bases and provide a skilled workforce for existing firms to grow.

How does Scotland perform?

Graduates as a percentage of the workforce (2001)



Source: OECD Education at a Glance 2002 and Scottish Executive

Scotland is 17th in a 31-country sample with 16% of the workforce (taken as 25-64) having a degree,¹¹ placing it in the third quartile. The United Kingdom (20%) lies at the top of the second quartile. The best performing country is the USA, with 31% of the workforce being graduates. Other evidence indicates that Scotland has the highest graduation rate as a percentage of the population of all the OECD countries for which data are available.

What does this mean for Scotland?

With a highly developed higher education sector Scotland may have been expected to have a higher percentage of graduates in the workforce. Given the better performance of the UK and the higher graduation rate from Scotland it would appear that Scotland has a poor retention rate of graduates and so is a net exporter of higher education level skills.

¹¹Higher education has a wider definition than degree level courses. 25% of the population have a higher education qualification. This includes, for example, HNDs.

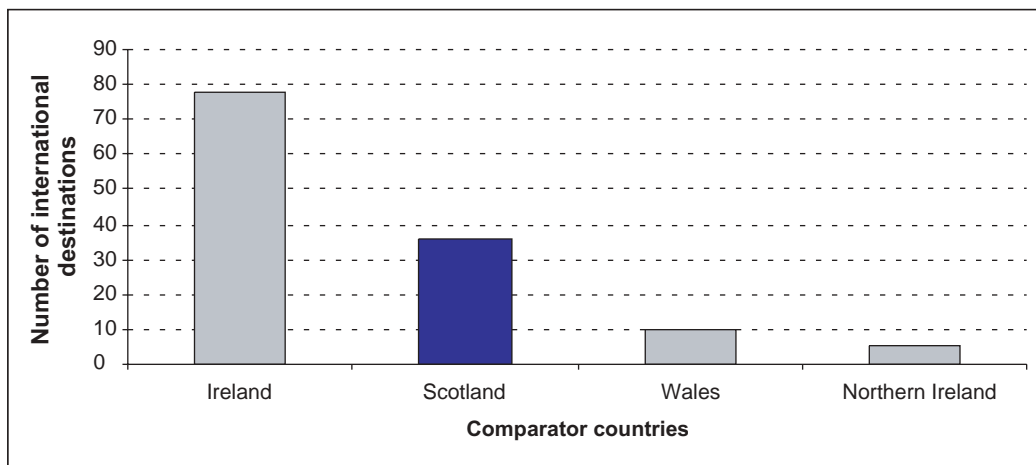
8B – AVAILABILITY, FREQUENCY, COST OF DIRECT INTERNATIONAL TRANSPORT LINKS

Why this measure?

Physical links with other parts of the world give an indication of how well connected Scotland is to the rest of the world. There is no index or composite measure of availability, frequency and cost of such links so instead the number of international destinations with at least daily flights from Scotland is used. At present it is not possible to include cost within this measure.

How does Scotland perform?

Number of international destinations (2002)



Source: Department of Transport, Scottish Executive and websites for Dublin, Shannon, Knock, Kerry, Cork, Cardiff International, Belfast City, Belfast and Londonderry Airports.

The Republic of Ireland, Wales and Northern Ireland were taken as comparisons for this measure, having many physical similarities to Scotland. The comparison is stark – Ireland has direct flights to over twice as many international destinations as does Scotland, while Scotland has more than Wales and Northern Ireland. It is worth noting that Scotland has one scheduled ferry route to continental Europe while the Republic of Ireland has two.

What does this mean for Scotland?

This comparison should be read with some caution as Ireland is a sovereign nation and all flights outwith the country are counted as international. Scotland has frequent scheduled flights to 36 international airports but that number increases hugely if flights from Heathrow and Gatwick are included. The same is the case for Wales and Northern Ireland. As parts of the UK the majority of international flights will be made through these two airports – the hubs for Britain’s international airlines. It may well be possible to increase passenger numbers to Scotland (as well as Wales and Northern Ireland) quite substantially without increasing dramatically the number of direct scheduled international flights to Scotland.

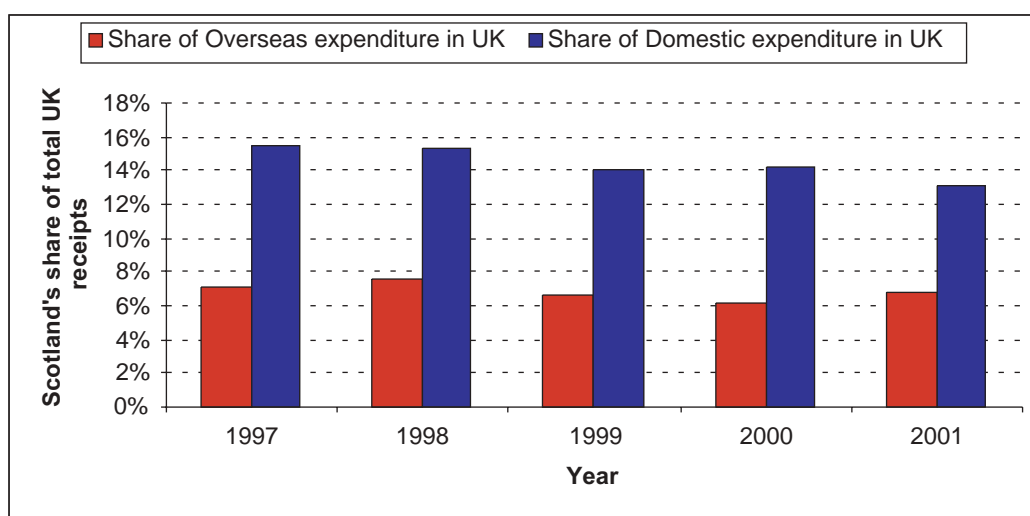
8C – OVERSEAS AND BRITISH VISITOR EXPENDITURE

Why this measure?

Visitor expenditure and visitor numbers give an indication of how attractive Scotland is. This will measure not only those coming to Scotland as a holiday location, but also of those travelling to Scotland for business.

How does Scotland perform?

Scotland's share of domestic and overseas UK tourism expenditure (1997-2001)



Source: Travel Trends – Report on the International Passenger Survey, 2002 and Star UK, Domestic Tourism Trends 1995-2001

Scotland receives a far greater share of domestic travel expenditure in the UK than it does of international travel expenditure. However, the share of domestic expenditure has declined over the years studied. International expenditure is around half the level of domestic expenditure. In each year studied, domestic expenditure in Scotland as a percentage of total expenditure in the UK was higher than the share of trips to Scotland while for international trips the situation was reversed with Scotland attracting a higher percentage of visitors than it did their expenditure.

What does this mean for Scotland?

The figures show that Scotland gets a greater percentage of domestic trip expenditure than it does of international trip expenditure. This may well be accounted for by the London effect – that is that London is more expensive than the rest of the UK and attracts a far greater proportion of expenditure than it does of total visitors. There is no ready explanation of why Scotland receives a greater proportion of domestic expenditure than it does of domestic trips – this may be because Scotland is peripheral and distant from the population centres of the UK, so the travel cost component of tourist expenditure will be higher. It may also be because the average stay of domestic tourists visiting Scotland is slightly longer than it is for domestic tourists visiting the rest of the UK.

choosing to live and work in Scotland

LEAD INDICATOR

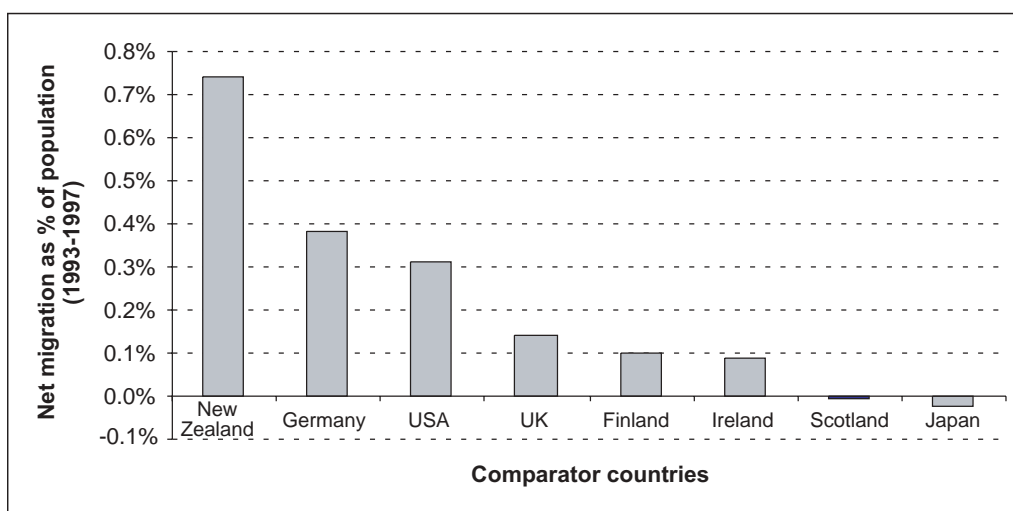
9A – NET MIGRATION (WORKING AGE) AS A PERCENTAGE OF THE POPULATION

Why this measure?

Net migration measures the difference between how many people enter and leave a country in any one year. A positive measure indicates that people find Scotland an attractive economic location and living environment.

How does Scotland perform?

Net migration as a percentage of the population (1993-1997)



Source: OECD Statistical Compendium, GROS, Census of Population, ONS and Central Statistics Office for Ireland

In a 27-country OECD sample, Scotland is in the fourth quartile along with Iceland and Ireland. Luxembourg leads the first quartile. The data were obtained from the average net-migration figures for the period 1993-1997, the last year available for OECD countries, for the total population as working-age statistics were unavailable. There is evidence to suggest that in the recent past Scotland's position has improved from being a country of historical net out-migration to one of, on average, net migration balance. There was positive net-migration during the late 1980s and early 1990s. This then reversed during the mid-1990s before returning to net in-migration in the late 1990s. Ireland too had volatility in migration rates with net out-migration in the early 1990s being reversed to net in-migration in the mid to late 1990s.

What does this mean for Scotland?

The data show that more people are leaving Scotland than entering, though only just, and significantly less than the historical pattern. This will generally mean skills deficiencies will develop as the most economically skilled individuals are normally the most mobile. It must be borne in mind that people are particularly mobile in the unitary labour market of the UK and that small economic differences are more likely to have larger migration effects than would be the case between separate countries.

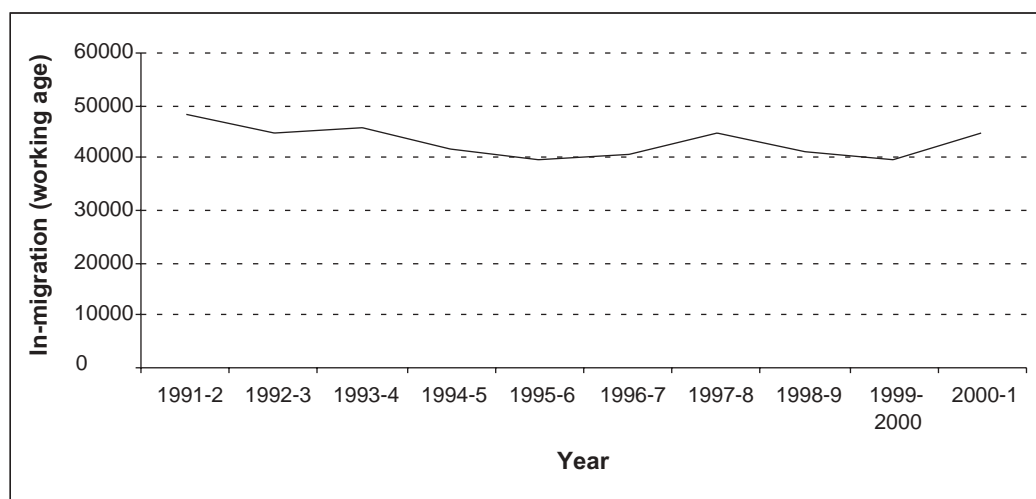
9B – IN-MIGRATION (WORKING AGE)

Why this measure?

In-migration serves as an indicator of the attractiveness of Scotland as a place to live and work. The in-migration figures will include new entrants to Scotland as well as Scots who return to Scotland. When individuals enter Scotland for the first time, or return after a period away, they bring new skills and abilities to the workforce.

How does Scotland perform?

Working age in-migration (1991-2001)



Source: General Register Office for Scotland and Scottish Executive

International data are not available for this measure so, instead, figures for in-migration of working-age individuals – 15-64 for men and 15-59 for women – were used. Over the past 10 years the number of people moving to Scotland has been between 40,000-49,000 per year, although the trend has been slightly downwards.

What does this mean for Scotland?

In-migration is, of course, a gross migration figure – with the net migration figure showing a general, though slight, outflow of individuals for Scotland from 1993-97. In-migration can be broken down further into different economic groups to indicate what skills can be expected will be brought to the Scottish economy. The in-migration figures presented do not make that distinction, though evidence shows that it is younger individuals who are the most likely to move to Scotland, but equally they are the group most likely to move away.

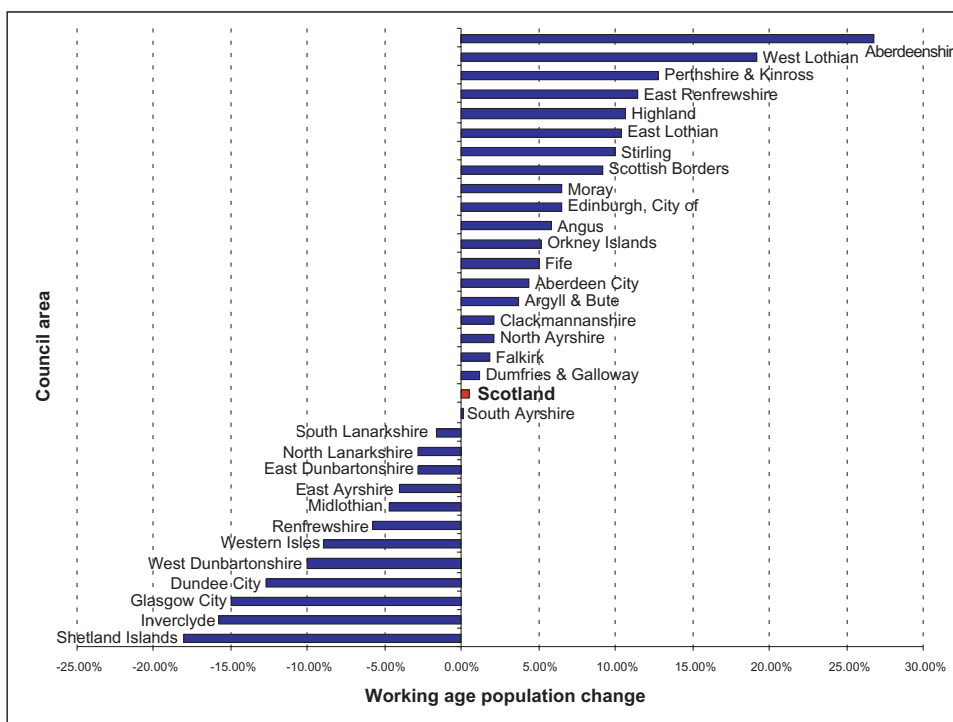
9C – WORKING AGE POPULATION CHANGE IN EACH LOCAL ENTERPRISE COMPANY AREA

Why this measure?

The previous measures have shown how Scotland will benefit from in-migration. This measure seeks to show how those benefits are spread across Scotland. The figures show the popularity of each area as one in which to live and work.

How does Scotland perform?

Working-age population change by council area (1981-2001)



Source: Mid-Year Population Estimates, ONS (NOMIS) and General Register Office for Scotland

The figures given are for council areas rather than LECs as figures on the basis of LECs were not available. The figures displayed are for the years 1981-2001. They show that the largest increases in population took place, principally, in the east of Scotland, with population declining in large areas of west-central and western Scotland. Over the 20-year period measured Scotland’s working-age population increased marginally.

What does this mean for Scotland?

Scotland’s population is falling, though over the longer time scale of this measure it can be seen to rise. There are a number of reasons why population may decline in some areas and rise in others: individuals may be relocating from one council area to another or moving out of Scotland altogether. Also, some areas have a greater number of inhabitants approaching retirement age than others and these individuals can be counted as being part of the working age population one year, but not in the next. This would be reflected as a decrease in working-age population even though the people themselves have not moved. Whatever the causes, a reduction in working-age population can lead to skill shortages and to a weakening of the social fabric of communities.

improving the operation of the Scottish labour market

LEAD INDICATOR

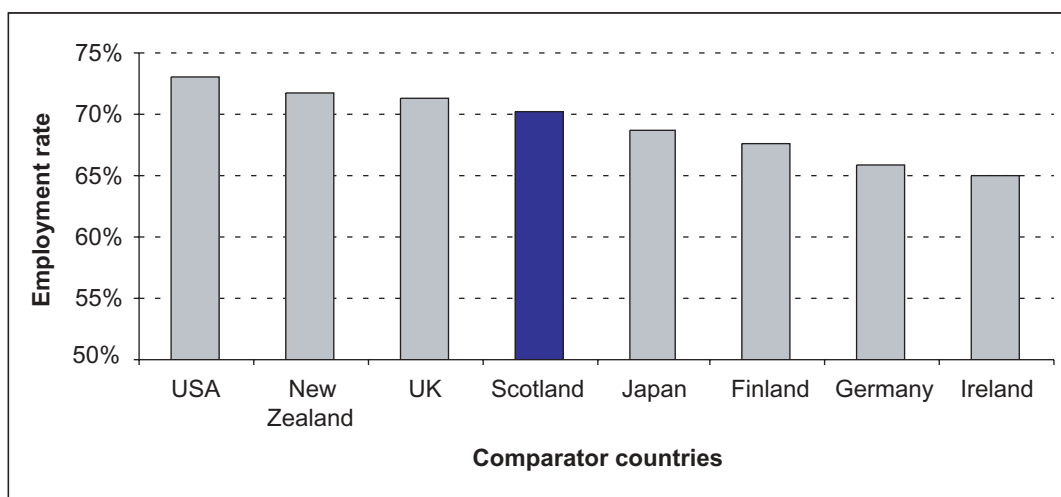
10A – PROPORTION OF THE WORKING AGE POPULATION IN EMPLOYMENT

Why this measure?

The percentage of the working age population in employment is an indicator of how successfully the benefits of Scotland's economic growth and prosperity are being shared across the workforce. Full employment on this measure will not be possible because those who are not actively seeking work, by undergoing education and training for instance, are still included, so the supplementary indicators help determine Scotland's performance.

How does Scotland perform?

Employment rate (2001)

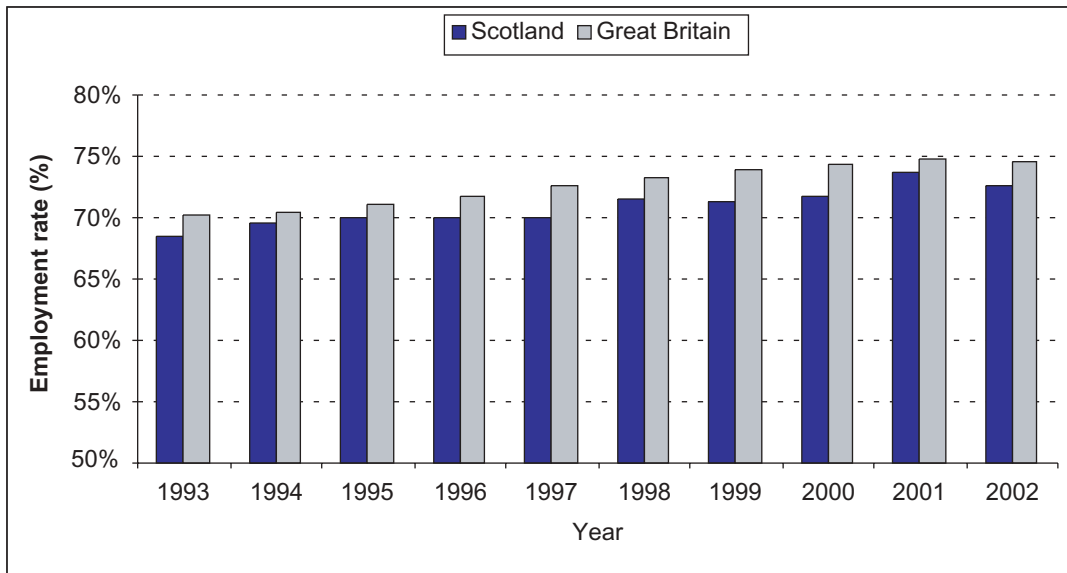


Source: OECD Society at a Glance 2002, Table SS2.1 & LFS for Scotland¹²

Scotland is 11th in a 31-country OECD sample, placing it in the second quartile. A figure for Scotland comparable with the OECD data was not available due to differences in the definition of the working age population, so instead the figure for Scotland from the Labour Force Survey was used to scale Scotland relative to the UK. This gives Scotland an employment rate of 70.3% against the UK figure of 71.3% – the LFS rates being 73.4% and 74.4% respectively. Alongside Scotland and the UK in the second quartile are Australia and Japan.

¹²From mid-April 2003 onwards data for this indicator and the other labour market indicators in this report based on the Labour Force Survey will be revised when ONS starts to incorporate population data at sub-UK level from the 2001 Census. Since summer 2002 it has not been possible to compare Scottish LFS data with UK LFS data. Thus in order to allow comparisons with the UK and its constituent parts, historical data provided for both Scotland and the UK (up until October 2002) have been used in this report. While not ideal, in that it does not take account of Population Census revisions, it does at least allow direct comparisons to be made between Scotland and the UK, England, Wales, Northern Ireland and the English regions.

Employment rate (1993-2002)



Source: Labour Force Survey (Spring Quarters), ONS (NOMIS)

There is very little difference in the employment rate between Scotland and Great Britain. Though while the employment rate for both has increased over the past 10 years with the gap between them decreasing to less than 2% this still amounts to around 20,000 jobs and serves to indicate how relatively small percentage gaps equate to large absolute numbers of jobs.

What does this mean for Scotland?

Scotland's international performance is creditable. The second quartile performance may indicate the relatively high number of part-time workers in the Scottish labour market. It could also be the case, however, that Scotland's mid-ranking position reflects comparative inefficiencies in the breadth of the product and labour markets that limit take-up of available labour resources.

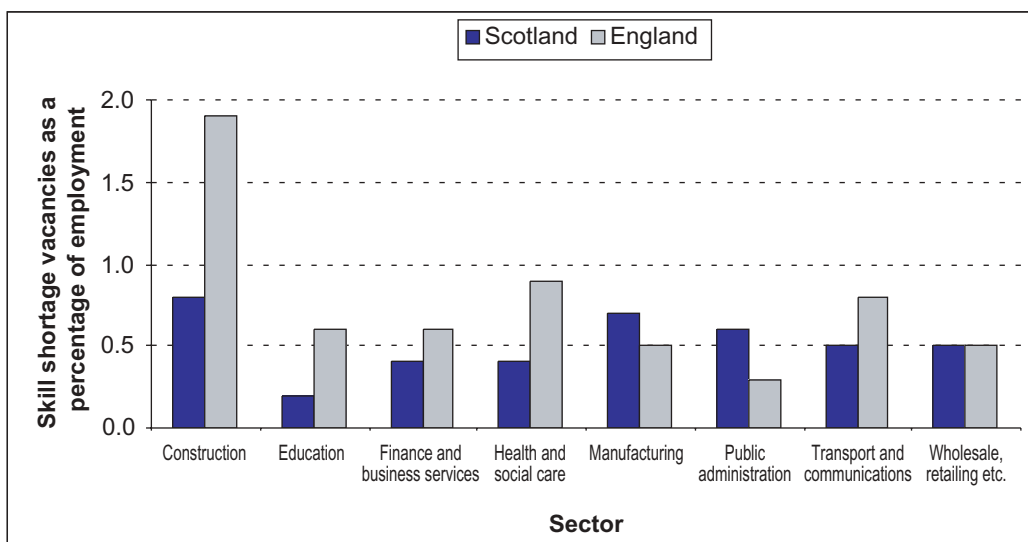
10B – SKILL SHORTAGES

Why this measure?

There will be skill shortages where the demand for a particular skill outstrips its supply. One measure of the efficiency of a labour market is its ability to balance these forces and allow the market to return to equilibrium. Firms' growth will be constrained by skill shortages and a labour market that effectively signals where shortages lie and allows workers to see where there are employment opportunities will be an attractive one to businesses.

How does Scotland perform?

Skill shortage vacancies as a percentage of employment, by sector (2002)



Source: Skills in Scotland 2002, The Employers' View: Future Skills Scotland

No international data are available, but from a report by Future Skills Scotland it is possible to compare vacancies due to skills shortages¹³ as a percentage of employment as between Scotland and England, with a higher number indicating higher skills shortages. Only in the Manufacturing and Public Administration sectors does England have a lower number of vacancies as a percentage of employment than Scotland.

¹³Skill shortage vacancies were defined in this survey as those positions that firms were having difficulty filling due to being unable to find candidates with the required skills, qualifications or experience. This definition differs slightly from that used for the English Employers Skills Survey, where skill shortage vacancies were those hard to fill vacancies caused by a low number of applicants with the required skills, qualifications or personal qualities.

What does this mean for Scotland?

Skill shortages are relatively uncommon in both Scotland and England. The survey found that skill shortages were more likely to occur in establishments where there were high levels of part-time employment, seasonal employment and within small businesses. Given the very small absolute numbers of vacancies that are hard to fill because of skill shortages, Scotland seems well placed to match jobs with those able to fill them. However, the generally lower level of skill shortages in Scotland may reflect a weaker demand by companies for such skills. Further research is necessary to develop a better understanding of the nature of skill shortages in Scotland.

10C – RATIO OF UNEMPLOYED TO UNFILLED VACANCIES

Why this measure?

A well functioning labour market should provide the correct signals to ensure that those individuals with the skills to do a particular job are able to find a job demanding those skills. A high ratio of unemployment to unfilled vacancies would indicate that these signals are not being communicated clearly, either in signalling what skills workers need to equip themselves with or where the unfilled jobs are to be found. The ratio will also vary inversely with the pressure of aggregate demand in the economy. Slack demand conditions would see the ratio higher than in periods of strong demand.

How does Scotland perform?

Internationally comparable data were not available so a comparison was possible only with Great Britain – consistent data for Northern Ireland were unavailable. Data were used from Jobcentre Plus, though it is worth remembering that not all vacancies go through job centres. Scotland performs almost identically to Great Britain with a ratio of around 3.2 unemployed people to every unfilled vacancy. Due to a change in the measurement method employed, data were only available between June and October 2002 on a consistent basis. Past trends indicate that Scotland has had a higher ratio of unemployed to unfilled vacancies for some time but that the ratio has come down significantly in recent years.

What does this mean for Scotland?

Scotland performs similarly to Great Britain. This could well reflect the unitary UK labour market where it is reasonably easy to move in order to find employment. This measure will then give an indication of the structural unemployment in the economy where the skills people possess are not matched to those employers require.

best start for all our young people

LEAD INDICATOR

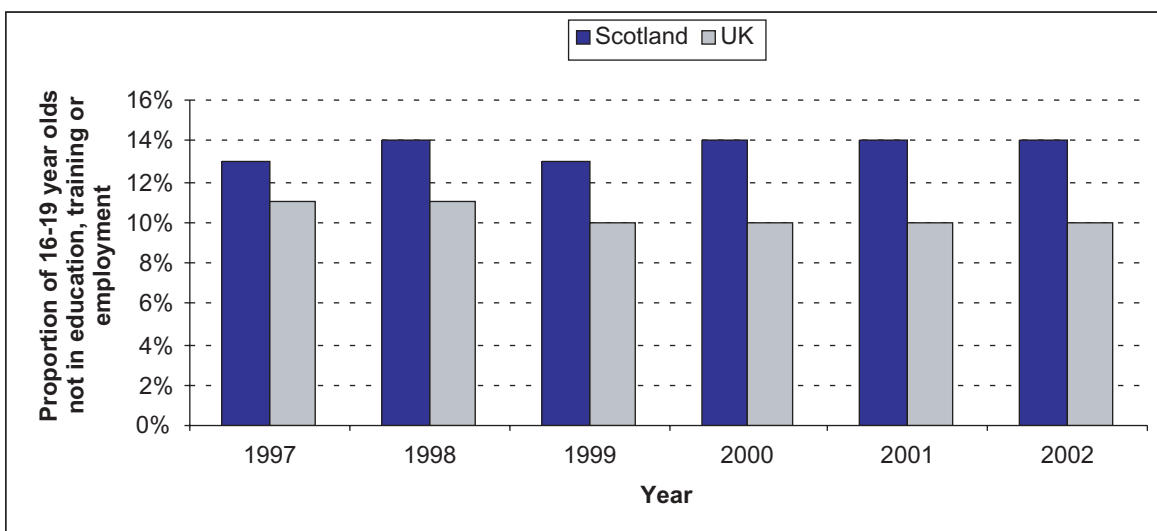
11A – PROPORTION OF 16-19 YEAR OLDS WHO ARE NOT IN EDUCATION, TRAINING OR EMPLOYMENT

Why this measure?

Not only does education, training or employment at an early age post school level education allow individuals to develop their skills for later life, but exclusion from these three options is a strong predictor of unemployment at age 21 and into later life. A high number of youngsters in education, training and employment will not only mean a more skilled workforce in the future, it should, other things being equal, lead to a lower unemployment rate in the future.

How does Scotland perform?

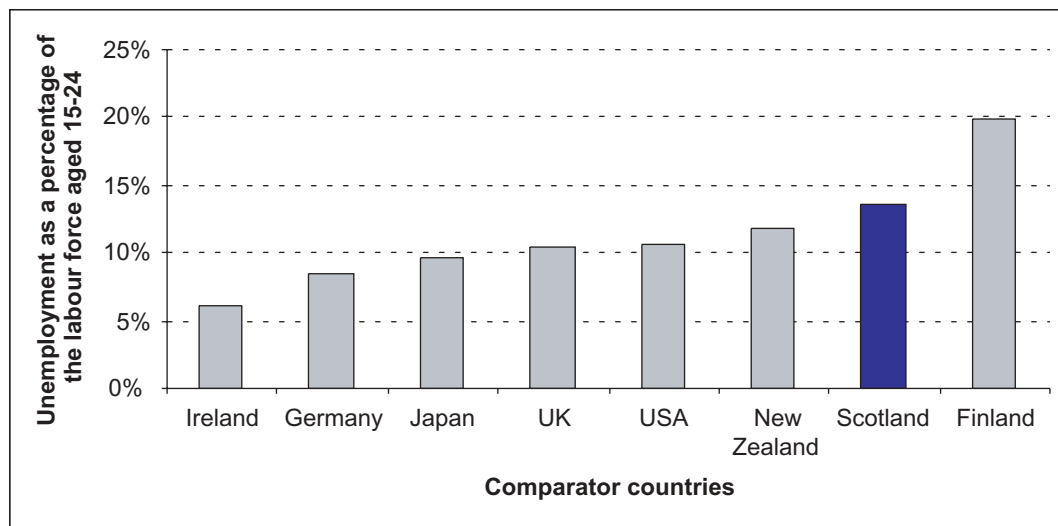
Proportion of 16-19 year olds not in education, training or employment (1997-2002)



Source: Labour force survey, ONS (Spring quarters)

Scotland has had a higher percentage of 16-19 year olds not in education, training or employment over all the years studied. The gap between Scotland and the UK fluctuated over the late 1990s, but since 2000 the gap has been constant at 4%.

Unemployment as a percentage of the labour force for the 15-24 age group, 2001



Source: OECD Society at a Glance 2002, Table SS2.1

A figure for Scotland, on a comparable basis with those figures available from the OECD was unavailable. Instead the ratio of unemployment as between Scotland and the UK was used to scale Scotland relative to the OECD figure for the UK. This gives Scotland a 13.6% unemployment rate for the 15-24 labour force and the UK a figure of 10.5%. This puts Scotland 21st in an OECD sample of 31 countries, placing it in the third quartile. Other data available show the breakdown of activity amongst 15-19 year olds. Scotland and Finland have high unemployment rates amongst this age group, but Scotland has a high employment rate while that in Finland is much lower. The employment rates of Scotland and the UK are very similar. Scotland and the UK have a much lower percentage of 15-19 year olds not in the labour force than is the case in the comparison countries, with a rate of 74.7% not in the labour force in Finland. There are differences in the percentage of 15-19 year olds in education between the comparison countries. The UK and Scotland have education rates of 76.2% and 70.9% respectively while in the comparison countries it ranges from 80.3% in Ireland to 88.5% in Germany. The low figure for Scotland undoubtedly reflects the fact that compulsory education ends at 16, younger than is the case in the comparison countries.

What does this mean for Scotland?

Failure to be employed or be engaged in education or training increases the likelihood of unemployment throughout life and given Scotland's position relative to the UK its young people should be considered more likely to face long-term unemployment than the UK. Paradoxically, however, long term unemployment for young people is less of a problem in Scotland than the UK.

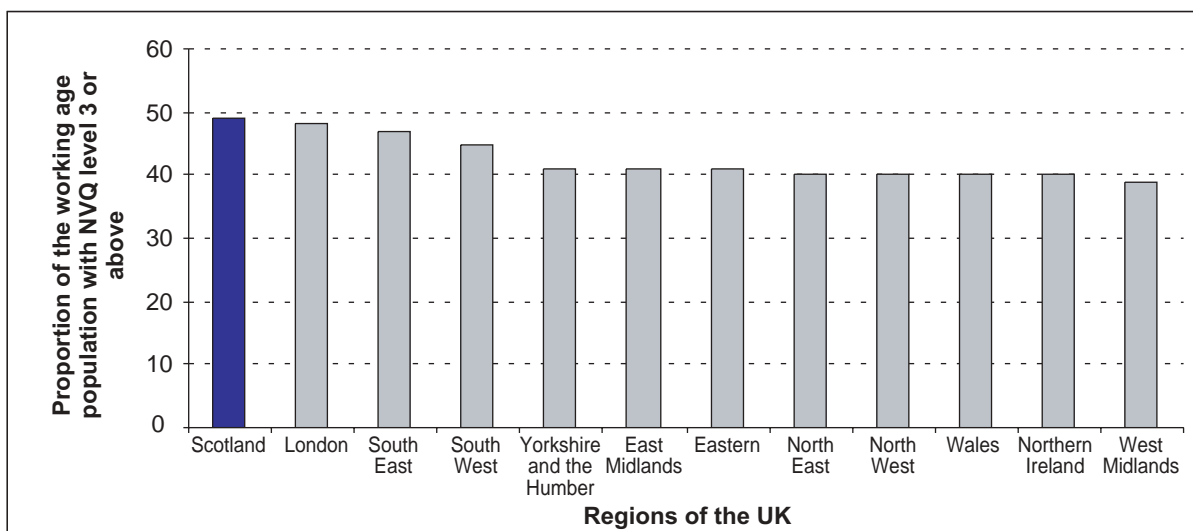
11B – PROPORTION OF YOUNG PEOPLE ACHIEVING A QUALIFICATION AT LEVEL 3 OR EQUIVALENT AT AGE 25

Why this measure?

The skills held by young people are crucial in ensuring that as new entrants into the labour market they are sufficiently qualified to take advantage of job opportunities that arise over the course of their working lives. A workforce being augmented with young, skilled people will be best placed to respond to changes in job specifications and cope with the introduction of new technologies. Although many workers take advantage of learning and training over the course of their working life, this measure seeks to capture the educational attainment of young entrants to the labour force.

How does Scotland perform?

Proportion of the working age population with NVQ Level 3 qualifications (2002)



Source: Statistics of Education: Education and Training Statistics for the UK, DfES

Scotland performs very strongly against the other areas of the UK with 49% of the working age population having a qualification at NVQ Level 3. Comparable international data are not available, nor do data allow the level of education qualification of those aged 25 to be determined. What is clear, however, is that Scotland's performance has improved over the past two years for which data are available. This should be expected as young qualified individuals join the working age population while older individuals, who are less likely to have qualifications equivalent to Level 3, move out of the working age population.

What does this mean for Scotland?

Scotland's position indicates that it performs strongly against other areas of the UK in terms of the education levels of school-leavers. This should allow Scotland's young people the maximum opportunity for future education and employment and provide them with the core skills sought by employers.

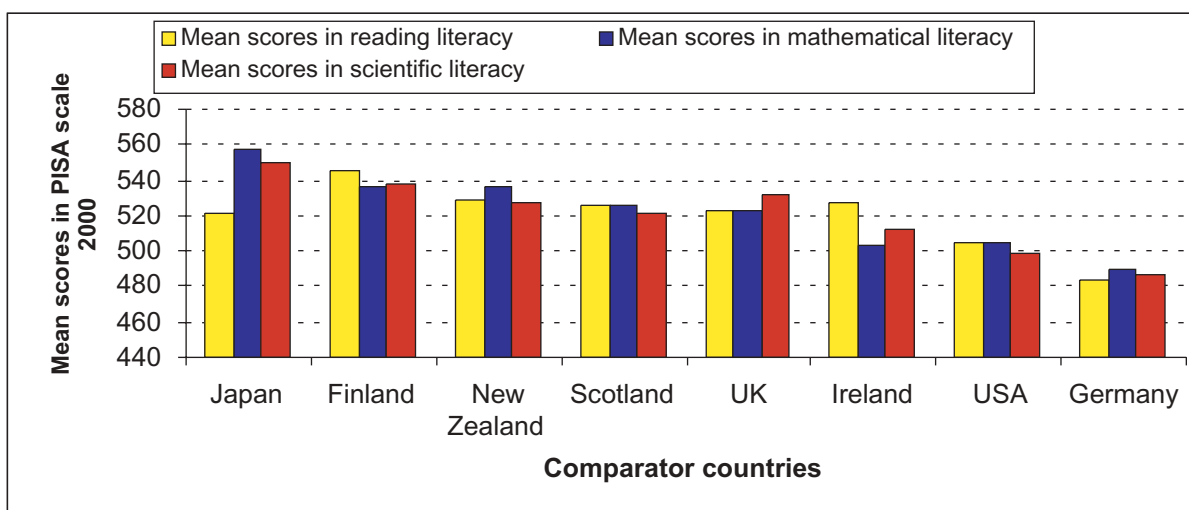
11C – PROPORTION OF YOUNG PEOPLE WITH ADEQUATE TRANSFERABLE SKILLS

Why this measure?

The number of jobs suitable for unskilled labour is falling: without adequate transferable skills young people will find themselves being squeezed out of the labour market. However, having such skills within the workforce makes Scotland an attractive location for business and will help Scotland's productivity rate grow. It will also give Scotland's young people the best chance to realise their own potential in the workplace.

How does Scotland perform?

Mean scores in reading, mathematical and scientific literacy (2000)



Source: Programme for International Student Assessment – Scottish Report (2002)

The measure used is mean scores for reading, mathematical and scientific literacy. Scotland ranks in the first quartile for reading and mathematical literacy and the second quartile for scientific literacy from an OECD sample of 28 countries. Scotland ranks above the UK for reading and mathematical literacy, but below for scientific literacy. Against the comparator countries Scotland holds a middle ranking, with leadership consistently being held by a combination of Finland, New Zealand and Japan. No comparison is available with last year, but given the time required to acquire skills and the demographics of the population it is unrealistic to expect there to have been a dramatic change in such a short time.

What does this mean for Scotland?

The results prove that Scotland performs well against other countries in the OECD and has a developed future workforce adaptable to change. Providing this level of skills is maintained and augmented as each individual progresses through the workforce, Scotland will remain an attractive location with an adaptable workforce. However, as our comparator countries show, Scotland can improve on an already good situation.

narrowing the gap in unemployment

LEAD INDICATOR

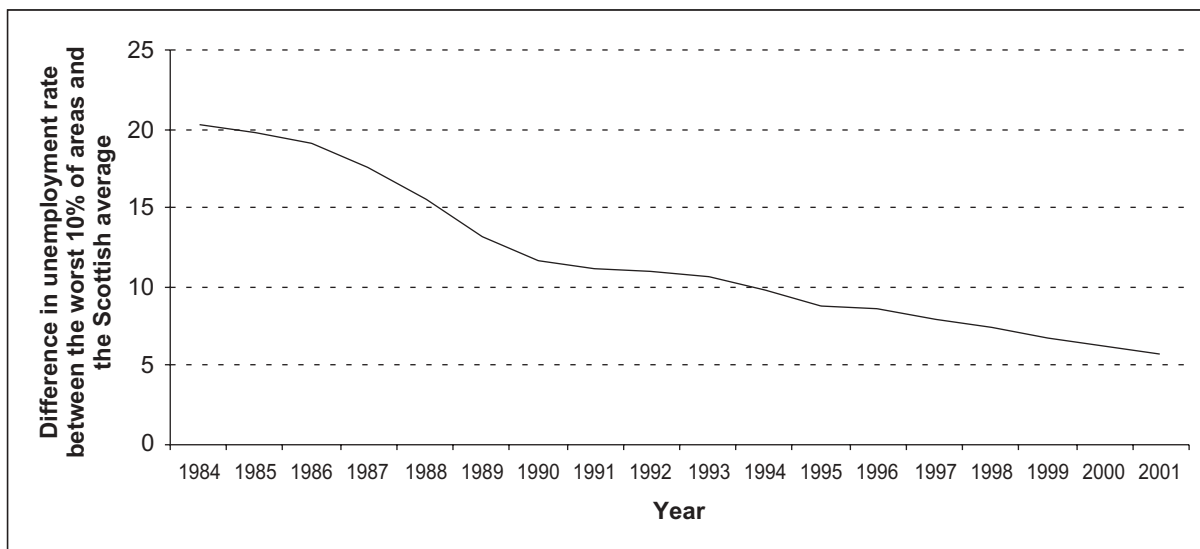
12A – REDUCING THE GAP IN UNEMPLOYMENT BETWEEN THE WORST 10 PER CENT OF AREAS AND THE SCOTTISH AVERAGE

Why this measure?

Unemployment will decrease during periods of economic growth and increase during economic downturns, but the reduction in unemployment will not be uniform across all areas of Scotland. Unemployment will decrease fastest in those areas where there are jobs available and individuals with the skills required to do those jobs. This measure gives an indication of how well the economic benefits of growth – in terms of reduced unemployment – are felt across Scotland.

How does Scotland perform?

Difference in unemployment rates between the worst 10% of areas and the Scottish average (1984-2001)



Source: Scottish Executive Social Justice Measures, Milestone 24. Information taken from Labour Force Survey, ONS

It is not possible to make an international comparison on this measure, nor would it necessarily be meaningful. The worst 10% of areas¹⁴ were first defined in 1991 and since then the difference between unemployment in the worst 10% of areas and the Scottish average has been measured. Over ten years the size of that gap has fallen from just over 20% to under 6%.

¹⁴ Although the worst 10 per cent of areas was first defined in 1991 it has been regularly updated since then.

narrowing the gap in unemployment

What does this mean for Scotland?

This measure indicates the effect of long-term policy on removing some of the inequalities associated with economic growth. It would be unusual were the benefits of growth to be experienced across a country uniformly and since high unemployment is generally linked with long-term unemployment the trend illustrated here shows that in the worst unemployment areas in Scotland the risk of unemployment becoming persistent has decreased.

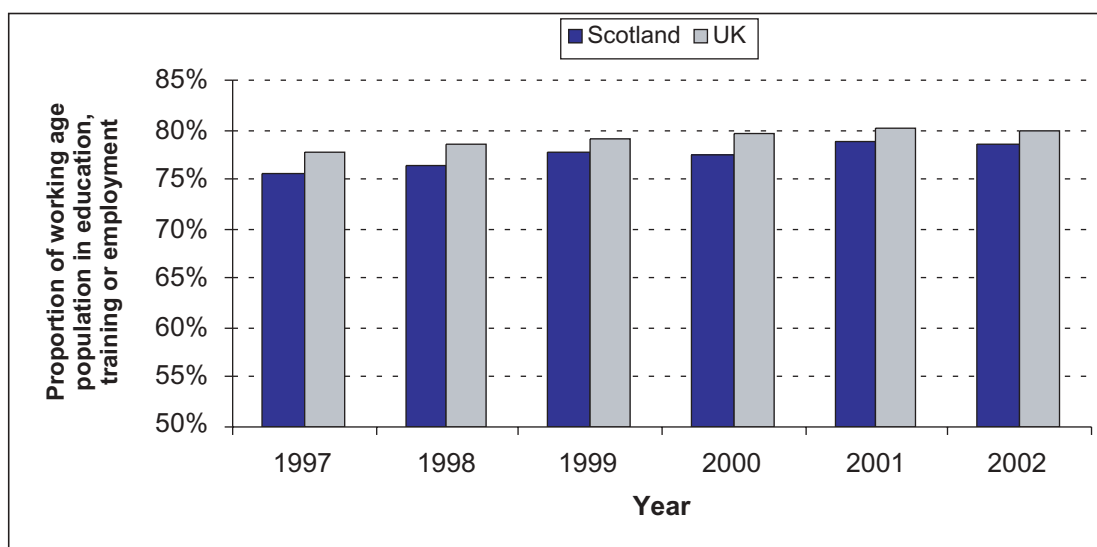
12B – NUMBER OF WORKING AGE PEOPLE IN EDUCATION, TRAINING OR EMPLOYMENT

Why this measure?

Continuous development and augmentation of skills is vital if Scotland's workforce is to offer added value to employers. These skills can be learned through formalised qualification-based education, on- or off-site training, or by development of skills as a part of everyday employment. By ensuring that skills, especially transferable skills, are developed, unemployment should be reduced and be more transitory where it does occur.

How does Scotland perform?

Proportion of working-age people in employment, education or training (1997-2002)



Source: Labour Force Survey, ONS (Spring quarters)

Directly comparable international data were not available for this measure. The proportion of people in employment, education or training has increased in both Scotland and the UK over the past six years. The UK has always been ahead of Scotland, but the gap has seldom been more than 2%.

What does this mean for Scotland?

Scotland's performance does not lag far behind the UK. This indicator shows that Scotland's workforce updates its skills regularly, is flexible enough to deal with labour and product markets change and minimises the prospects of any unemployment becoming long-term.

narrowing the gap in unemployment

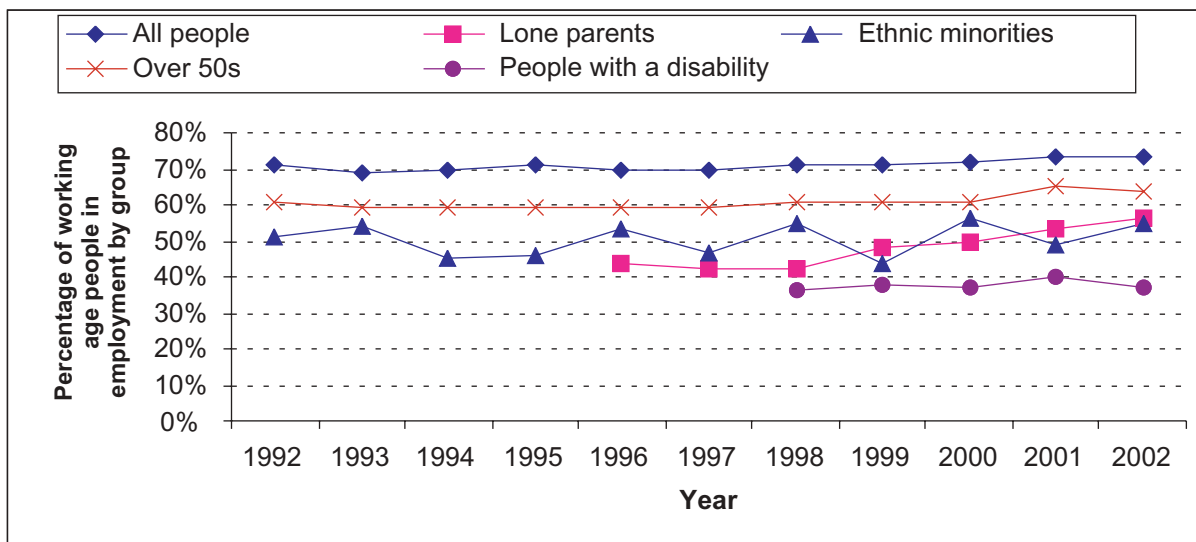
12C – EMPLOYMENT RATES OF RELATIVELY DISADVANTAGED GROUPS

Why this measure?

It is important that the benefits of economic growth and employment are enjoyed by all. Employment is the main method by which to earn income and accumulate wealth. If employment in certain groups within society falls behind that of the economy as a whole then it can be assumed reasonably that these groups are not enjoying the benefits enjoyed by the rest of society.

How does Scotland perform?

Employment rates of relatively disadvantaged groups (1992-2002)



Source: Scottish Executive, Social Justice Annual Report 2002

It was not possible to make comparisons with other countries but, as a Social Justice target, information for Scotland over time is available. Those with disabilities are the least likely to be employed and their employment rate has decreased between 2001 and 2002. The other groups, with the exception of a very slight fall in employment of the over 50s, have been on an upward trend, though there would appear to be much greater volatility in the employment rate of ethnic minorities.

What does this mean for Scotland?

There continues to be a considerable gap between the employment rate of some disadvantaged groups and the employment rate as a whole. This gap has shown some signs of narrowing in the recent past, especially for lone parents. However, the gap remains and that gap does indicate that some groups within society will not receive the benefits deriving to other groups from employment.

improved demand for high quality in-work training

LEAD INDICATOR

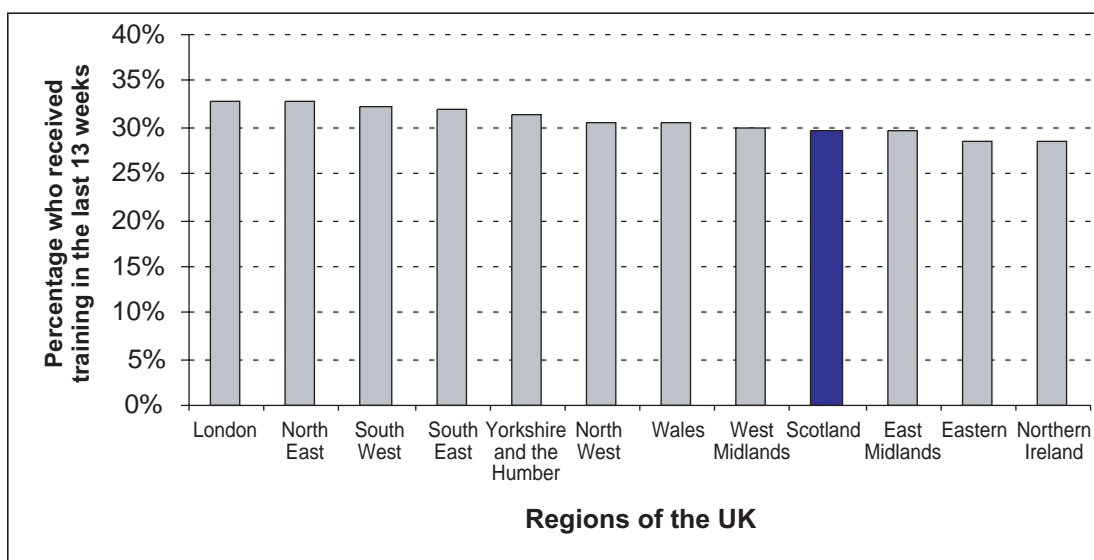
13A – PROPORTION OF THOSE IN EMPLOYMENT UNDERTAKING TRAINING

Why this measure?

A smart, successful Scotland needs a workforce that is constantly seeking to improve its skills. In an increasingly competitive and dynamic global environment employees cannot afford, and their employers cannot allow them, to rely on skills learned in the past. By undertaking training while employed, workers equip themselves for the current demands of the economy. By doing so new skills and techniques can be introduced to the entire workforce rather than only to those currently leaving formal education.

How does Scotland perform?

Proportion of working age employees receiving training in the last 13 weeks (2002)



Source: DfES, Statistics of Education: Education and Training Statistics for the United Kingdom, 2002

Scotland (29.6%) does not perform as well as the UK as a whole (30.8%). The gap is not big, and statistics show that Scotland has narrowed the gap on the UK, having moved from 11th to 9th since 2000. London and the North East of England are the two best performing areas. Directly comparable figures to allow a comparison between Scotland and the OECD were not available. The measure used here is training undertaken in the last 13 weeks; in the OECD data it is in the last year. In the UK 40% of those aged 25-64 undertook training within the period of a year, placing it fifth in an OECD sample of 20 countries. Given that Scotland's training rate over 13 weeks is slightly below that of the UK average it may be concluded that over a year the percentage of people undertaking training would be slightly below that of the UK. On this basis it may be concluded that Scotland would be in the second quartile.

improved demand for high quality in-work training

What does this mean for Scotland?

Scotland's lower number of individuals undertaking training means that it will not, other things being equal, be as attractive a business location as other areas of the UK due to a poorer uptake of in-work training. However, the gap between Scotland and the UK is small and the trend is upward for both countries. Should the proportion of employees in training continue to increase the small gap between the take-up rate in Scotland and the UK average will become less significant.

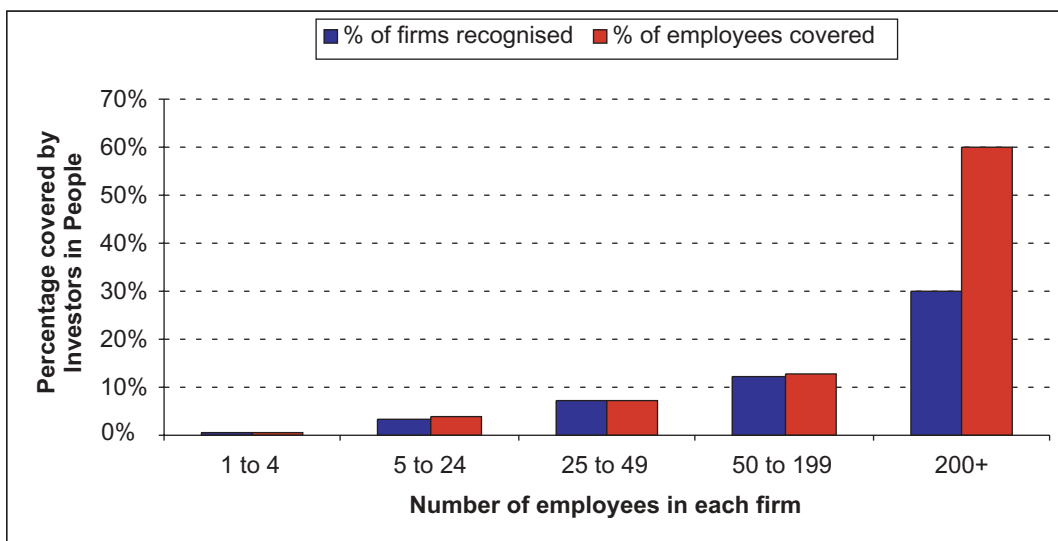
13B – NUMBER OF, AND EMPLOYMENT IN, INVESTORS IN PEOPLE ACCREDITED COMPANIES

Why this measure?

The Investors in People standard was developed in 1990. It sought to provide a framework for improving business performance and competitiveness through setting business objectives and helping people develop to meet these objectives. The measure is important because having a workforce with the skills to take advantage of opportunities and manage technologies is crucial in the global marketplace. Businesses must apply for the Investors in People Standard and the total number of holders year-on-year gives a good measure of the demand for high quality in-work training.

How does Scotland perform?

Proportion and employment in firms in Scotland recognised by Investors in People (2002)



Source: Enterprise Networks, 2002

As a measure specific to the United Kingdom, it is not possible to make any international comparison. Instead the percentage of firms and employment within those firms that possess the Investors in People award is presented broken down by employment size. It is little surprise that recognition by Investors in People is positively related to the employment size of firms. Evidence suggests that more Scottish firms than before are applying for and receiving the Investors in People award, though that rate would appear to be lower than that for the UK as a whole.

What does this mean for Scotland?

Accreditation by Investors in People involves both financial and administrative costs. This is undoubtedly the reason that take-up is higher in larger firms. Although the benefits of Investors in People awards are applicable to all firms, it would be surprising if take-up amongst smaller firms were to increase without policy changes to address this.

improved demand for high quality in-work training

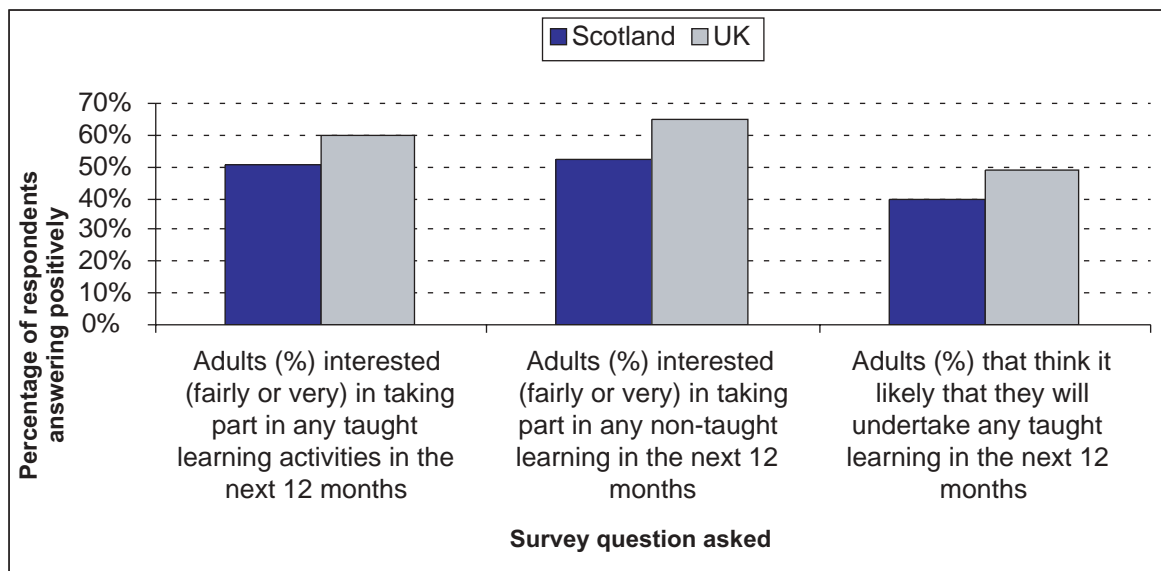
13C – DEMAND FOR LEARNING TO ENHANCE TRANSFERABLE CORE SKILLS

Why this measure?

There are certain skills that can be considered desirable for individuals to have irrespective of their current employment. These “transferable” skills are those that allow the workforce to be suitably fluid to ensure transition from one employment to another without the need for extensive re-training. Where re-training is required, the possession of transferable skills should make the training more effective.

How does Scotland perform?

Percentage of respondents interested in, or likely to undertake, taught or non-taught learning in the next 12 months (1998, 2001 and 2002)



Sources: “Attitude to Learning in Scotland - Final Report”: Prepared for Scottish Enterprise 2001; “Attitude to Learning in Highlands and Islands”: Prepared for HIE, 2002; Campaign for Learning 1998 “State of the Nation Survey”

The measure used was of individuals who were interested in or likely to undertake, taught or non-taught learning over the next 12 months. Results for Scotland fall around 10% behind those of the UK. Unfortunately there is no information on how this variable has changed over time. However, a recently released report noted Scotland playing a leading role in the development of core skills at school and it may be hoped that today’s schoolchildren continue to demand transferable core skills as they move through adulthood.

What does this mean for Scotland?

Statistics compiled on attitude must always be regarded with some caution – there is often a large difference between what people claim they will do and what they actually do – but it does at least give an indication. The gap between Scotland and the UK is concerning. Though the absolute number in both countries is quite high the gap could be because Scots believe they have less need for developing transferable core skills than the rest of the UK.

PERFORMANCE

The report published last year provided a snapshot of Scotland's strengths and showed areas where Scotland's economic performance needs to improve significantly. It showed that performance was mixed. Scotland was doing better than average, or significantly better than average, in just over half of the lead indicators chosen where international comparisons were possible.

As one would expect after one year, the Fraser of Allander Institute finds only limited movement in the lead indicators *vis-à-vis* comparator OECD countries. The Institute suggests that some progress is being made in moving towards better performance against the indicators.

These findings suggest that the present strategic approach in *Smart, Successful Scotland* remains broadly correct. Supporting innovation and high skills levels are key actions to achieve improved productivity and competitiveness. Better global connections remain important in order to exploit Scotland's advantages. The last section of this report indicates the actions which are being taken by the Enterprise Networks to promote the improvements that are required.

ACTION TO ACHIEVE A SMART, SUCCESSFUL SCOTLAND

Scottish Enterprise (SEn) and Highlands and Islands Enterprise (HIE) take account of *Smart, Successful Scotland* and the key messages emerging from performance measurement in drawing up plans for their operations. Both organisations publish Annual Operating Plans which will increasingly take at least a three year forward look. The plans set out proposed activities and outputs and how these relate to the themes and priorities of *Smart, Successful Scotland*. Both organisations also publish Annual Reports and Accounts which report on achievement of output targets and set out how funds have been deployed. (For details of related documents see Annex B.)

This section does not aim to replace either Operating Plans or Annual Reports but gives a flavour of how Scottish Enterprise and Highlands and Islands Enterprise are responding to the strategic direction provided by *Smart, Successful Scotland* and the performance measurement framework. Given this common background their actions necessarily have similarities but specific programmes and projects reflect differences in operating environments.

GROWING BUSINESSES

Entrepreneurial Dynamism and Creativity & More E-business

Scottish Enterprise takes action to support an increase in the number and quality of new and existing businesses. The Business Gateway will provide start-up and growth services to businesses of all sizes. Tailored assistance is provided to Key Account Companies to help them innovate and realise their potential. Seminars and access to e-business advisers encourage more firms to market and transact on-line and become e-enabled.

In the Highlands and Islands, business start-up activity was at record levels in the last year, notably in Ross & Cromarty, Moray, Badenoch & Strathspey and Argyll. E-business adoption in the Highlands & Islands has proceeded rapidly, with 76% Internet use and 45% own website use among local businesses. Highlands & Islands Enterprise's efforts will therefore concentrate on expanding awareness of, and demand for, broadband. For business support more generally, Highlands & Islands Enterprise is currently undertaking a Product & Process Review to simplify and modernise the delivery of services to its customers. This includes a streamlined procedure for small applications, a rationalisation of the range of products and the creation of a single customer database for the entire Network.

Increased Research and Commercialisation

SEn's activities help translate the knowledge in our universities into commercial opportunities so as to boost the number of companies spinning out of academic institutions and increase investment in supporting Research, Design & Development (R,D&D) in companies and other organisations. SEn will build on the success of Enterprise Fellowships and the Proof of Concept Fund and will deliver the first stages of the Intermediary Technology Institutes. SEn and HIE also assist existing small- and medium-sized enterprises (SMEs) to develop and introduce new products and processes, including through financial assistance.

Global Success in Key Industries

As well as working at the level of individual firms, SEn and HIE focus on a number of key industries such as biotechnology, opto and micro-electronics, forestry, food and drink and the creative industries. SEn works with these industries to identify their specific requirements and applies resources where they will have the greatest impact. This includes development of initiatives such as the Pacific Quay Digital Media Park in Glasgow and the Centre for Bio-medical Research in Edinburgh. This work will also help provide the right environment to increase the number of Global or European HQs in Scotland through inward investment.

In the Highlands and Islands, the exploitation of opportunities stemming from renewable energy is at the forefront of business development efforts. This follows the opening of the Vestas Celtic factory near Campbeltown for the production of wind turbines and Western Isles Enterprise investment in the refurbishment of the Arnish yard in Lewis. The HIE Network is also pursuing business opportunities which will arise from experience of nuclear decommissioning at Dounreay. This will involve integrated work between SEn and HIE to maximise long-term benefits to the Scottish economy.

GLOBAL CONNECTIONS

Digital Connectivity

Improvements in telecoms will help make Scotland a globally attractive location for international and Scottish businesses. The continued roll-out of ATLAS (Accessing Telecoms Links Across Scotland) will deliver high quality broadband coverage at competitive prices. Pilot projects are looking at ways of extending broadband access across the Highlands & Islands. These include powerline transmission trials in Kintyre and wireless backbone roll-out in the Western Isles.

Globally Attractive Locations

Initiatives such as the regeneration of the Clyde and the Edinburgh Waterfront project improve the quality and perception of Scotland as a place to do business. Provision of bespoke property to inward investors and Scottish businesses alike provides world-class infrastructure. Domestic and international transport links affect Scotland's attractiveness for business and tourism for overseas and British visitors alike. HIE has recently seen improvements in ferry and air routes. The Air Routes Development initiative will improve direct international air links.

Increased Involvement in Global Markets

Scottish Development International (SDI), the Scottish Enterprise/Scottish Executive joint venture, has a pan-Scotland remit to increase involvement in global markets. SDI focuses both on increasing exporting activity and on increasing the number of companies with wider global links (such as joint ventures and overseas alliances). Inward investment activities focus on attracting high value and R,D&D-related projects. The Globalscot project is establishing an international network of individuals who want to contribute to Scotland's economic success.

Choosing to Live and Work in Scotland

Linked to other activities to make Scotland a globally attractive location, SEN is working to enhance Scotland's image as a place for people to live and work. SEN's activities focus not just on retaining economically active people, but also on attracting skilled people to the country. Talent Scotland and Bio-Dundee will attract highly skilled people to Scotland in specific clusters.

HIE sees the establishment of a University of the Highlands & Islands (UHIMI) as a key means of improving not just skills but attractiveness of the area as a place to do business, live and work. The HIE Network is working in close collaboration with UHIMI, the Scottish Higher Education Funding Council (SHEFC) and the Executive to map out the path to future university status and, towards that end, has agreed to invest a further £800,000 jointly with UHIMI in a range of academic development initiatives.

SKILLS AND LEARNING

Improving the Operation of the Scottish Labour Market

SEn and HIE work to help individuals and businesses develop and apply skills and knowledge so as to increase competitiveness. Central to this is an effective labour market where supply and demand can be quickly matched to ensure employment rates are high and skill shortages are reduced. To help achieve this, Careers Scotland and Future Skills Scotland provide advice and information to individuals and businesses making decisions in the labour market.

The Best Start for Young People

SEn and HIE provide young people with learning opportunities. Programmes such as Modern Apprenticeships offer training which raises the skills level of our young people and contributes to the productivity of businesses. Initiatives such as Get Ready for Work, focus on engaging those young people who have dropped out of training, education and employment in the opportunities available. Young people also benefit from the support provided by Careers Scotland.

Narrowing the Gap in Unemployment

SEn also helps to ensure that fewer adults are economically inactive so that growth is balanced across different localities and groups. By connecting job creation activities and personal skills development activities people are helped to overcome barriers to finding and keeping a job. For example, Modern Apprenticeships for Adults, Training for Work and workforce development plans for specific industries, e.g. construction, provide training to meet the specific demands of businesses. Programmes such as the New Futures Fund and Programme for Basic Skills work with the most disadvantaged to help them move closer to the labour market. With low unemployment across many parts of the Highlands and Islands, programmes to support the unemployed into work increasingly focus on particular client groups facing multiple barriers to employment.

Improved Demand for High Quality In-work Training

SEn will work with employers and individuals to increase their understanding of the values and benefits of learning and training and to promote a culture of lifelong learning. Focus on small and owner-managed businesses will be achieved through new initiatives such as Business Learning Accounts, the Business Advisory Service and Investors in People. In the HIE area, there is strong demand for workforce training with assistance to SMEs including a Management Leadership Programme. This strengthens the link between skills development and business performance.

STRENGTHENING COMMUNITIES

Highlands and Islands Enterprise has an additional objective of strengthening communities which builds on the social development remit of the predecessor body, the Highlands & Islands Development Board. HIE has set out its approach to this and other themes in *A Smart, Successful Scotland – the Highlands and Islands Dimension*.

The Community Energy Unit provides support for the development of local energy solutions, with project officers distributed around the area. Interest in community land issues has been strengthened with the passage of the Land Reform (Scotland) Act 2003 through the Scottish Parliament and the Community Land Unit will continue to provide support for community land initiatives. Initiative at the Edge (Iomairt aig an Oir) assists local groups to produce development plans and implement a range of small-scale community projects.

HIE will be actively involved in the proposed Scottish Year of Highland Culture which has been supported by Ministers and which will temper disappointment at Inverness not being included on the short-list of cities for the European Capital of Culture 2008. Gaelic language development is moving forward with the establishment of Bord na Gaidhlig and discussions with the new body on joint working with the HIE Network have commenced.

INTEGRATING ACTIVITY

There are close connections between the *Smart, Successful Scotland* themes and priorities and each cannot be viewed in isolation. Although initiatives and projects may be “classified” under one category, they will invariably contribute to a number of other areas. For example, the Clyde Regeneration initiative will not only contribute to Scotland being a globally attractive location but will provide employment opportunities for Glasgow’s people, whilst the Pacific Quay element of the initiative will contribute to global success for the creative industries cluster.

In addition, SEn and HIE work closely together where appropriate. The Intermediary Technology Institute for energy will complement HIE’s interest in renewable energy as a business opportunity. Increasingly, Scottish Enterprise and Highlands and Islands Enterprise are also the point of access for companies to schemes of support administered directly by the Scottish Executive. LECs advise companies to apply for SMART, SPUR and Regional Selective Assistance where this is appropriate to their needs and build this into a wider package of support.

conclusion

Smart, Successful Scotland provided strategic direction to the Enterprise Networks – a direction intended for the medium term. *Measuring Scotland's progress towards a Smart, Successful Scotland* sets out progress measures which identify whether Scotland is heading in the right direction and which add to the strategic steer of *Smart, Successful Scotland*. Progress will be properly identified by seeing a trend – not by single year figures. The intention therefore is that this report is one of a series.

JOINT PERFORMANCE TEAM (JPT)

As at March 2003, the members of the JPT are:

Charlie Woods, Director, Knowledge Management, Scottish Enterprise

Sandy Brady, Director, Strategy, Highlands & Islands Enterprise

Andrew Goudie, Chief Economic Adviser, Scottish Executive

John Ireland, Head, ELLD Analytical Services Division, Scottish Executive

Jane Morgan, Head, Enterprise Networks Division, Scottish Executive

The JPT reports to the Head of the Enterprise and Lifelong Learning Department of the Scottish Executive and the Chief Executives of Scottish Enterprise and Highlands and Islands Enterprise.

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