CPPR ANALYSIS OF SCOTTISH GOVERNMENT TARGETS

A critique of the existing targets and a presentation of some alternatives

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EXECUTIVE SUMMARY

Following on from the CPPR paper of May 2008, on progress with regards to the Scottish Governments 7 economic targets, this new paper looks at the appropriateness of these targets and whether they are achievable given current circumstances.

The analyses highlights several key points:

- **It will be difficult to meet each of the 7 targets over time. In particular there is likely to be some element of trade-off between growth-biased targets and equity-biased targets.**

- **As a result, greater clarity is needed over the prioritisation of these targets. In particular, is increasing sustainable economic growth more important than meeting the "Golden Rules" over equity?**

- **We would suggest that the productivity target is the most important, as this is the key driver of long-term improvements in economic performance.**

- **Significant progress is needed in order to meet the growth and productivity targets. At the same time, and based on current government policies, it is unclear how any step change will come about that will bring about major improvements in Scotland.**

- **The paper assesses the relevance of each Target and highlights a number of possible revisions (a full list of these recommendations follows). An overarching recommendation is, however, the need for greater consistency in the choice of the comparator group (namely, we propose a group of 24 OECD countries as the most appropriate, rather than different sub-groups for different targets).**

- **Some of these revised targets require more research to understand fully their wider implications. Greater certainty of some of the data, especially where currently they are based on relatively small survey numbers, is also required.**

REVISED RECOMMENDED TARGETS: (all to be achieved on a maintainable basis)

TARGET 1: GROWTH –*To raise the GDP growth rate to the UK level by 2011 and to reach the second highest quartile of OECD24 countries by 2017*

TARGET 2: PRODUCTIVITY – *To rank in the top quartile for productivity in the OECD24 by 2017*

TARGET 3: LABOUR MARKET – ***To raise the employment rate of Scotland to be in the top quartile of OECD24 members by 2017 - OR - To raise the employment rate of those over the age of 22 to be in the top quartile of OECD24 countries by 2017.***

TARGET 4: POPULATION – ***To match OECD24 population growth over the period from 2007 to 2017 – OR – To improve the demographic make-up of the Scottish population so that the proportion of inactive older citizens does not rise above a target level of the total labour force.***

TARGET 5: SHARED GROWTH/SOCIAL EQUITY/SOLIDARITY – ***To increase the proportion of income earned by the lowest income decile as a group by 2017 – OR – To lower Scotland's Gini Co-efficient to be within the top quartile of OECD24 nations by 2017***

TARGET 6: SHARED GROWTH/REGIONAL EQUITY/COHESION – ***To narrow the gap in participation between Scotland's median and worst performing region by 2017 - OR - To introduce a new Index of Equality for Scottish neighbourhood's and aim to reduce the gap between Scotland's median and worst performing neighbourhoods by 2017***

TARGET 7: SUSTAINABILITY/INTERGENERATIONAL EQUITY/ ENVIRONMENT – ***To reduce greenhouse gas emissions over the period to 2011 and by 80% by 2050, and that this remains at least within the top quartile of the OECD24 in terms of targeted cuts – OR – To ensure future generations inherit the same stock of natural assets that Scotland currently enjoys. To survey these assets and measure their variation over time and to ensure that no significant deterioration below a 2010 baseline occurs.***

CURRENT PERFORMANCE

- **Based on these revised Targets, Scotland's position, where known, is slightly worse than if judged by the existing Targets.**

- **On Productivity, for example, Scotland slips down the rankings, due to the exclusion of less developed countries like Turkey, Poland and Mexico. The equity targets are also likely to be tougher to meet.**

- **This means that the achieving of the revised targets is likely to be more difficult than for the existing targets.**

WHERE NEXT?

Given the evidence highlighted in this paper we believe that the most important issues that need to be addressed are:

- raising business R&D and innovation levels
- trying out new forms of subsidised employment as active labour market policies
- examining policies for increasing the employment rate of post 50 year olds
- examining policies to reduce numbers on incapacity benefits
- making early decisions on energy investment choices, in particular over nuclear and renewable energy

Some of these policies will need further research before the best option(s) for Scotland are known. In particular, Scotland needs more in-depth information on:

- the implications of an ageing society, in terms of both employees being older on average and citizens living longer
- what long term energy policy it wishes to pursue
- how to deal with equality issues if growth issues can be overcome

At present the implications of the current financial crisis engulfing world markets and impacting on economies hangs over everything. Relative shifts and trends are more difficult to decipher during a downturn and any apparent gains on comparator countries may only be temporary. It will only be when real positive growth rates return that a more considered judgement can be made. This may not be by 2011 but it should, hopefully be possible by 2017.

INTRODUCTION

After coming to power in May 2007, the current Scottish Government was quick to focus attention on its main ambition, to grow the Scottish economy at a faster pace than had previously been experienced. To this end it published, in November 2007, a new Government Economic Strategy (GES), which included a set of Government Economic Targets (GET).

In response CPPR has published a number of commentaries on both the strategy and the Scottish Government's targets[1]. Overall, we have argued that being willing to set aspirational targets was to be applauded as it gave a clear signal that the then new government had put economic growth at the top of its agenda. However, since much of the evidence supporting the government's choices was lacking, we indicated we would return to look at the appropriateness of the chosen targets and their aims. This paper addresses these issues and considers the possibility of alternative targets.

The commentary is in two sections:

- Section 1 covers general issues that are of relevance to all targets. It looks in brief at: economic growth theory; the idea of, and need for, 'sustainability', where the different meanings of sustainability are each drawn out; the need for a consistent set of comparators to benchmark; the need for care in interpreting performance at any particular review date; and finally, what the end purpose of these Targets should be.

- Section 2 then looks at each target in detail, offering an assessment on: whether each target appears to be the most appropriate and how it might best be met; what lessons might be learnt from economic theory and evidence; what the Scottish Government and its Council of Economic Advisors suggest might aid delivery; and finally, whether current policy is enough to meet the targets. We also propose possible alternatives to the chosen targets or identify issues that need further work before resolving what is the best set of targets.

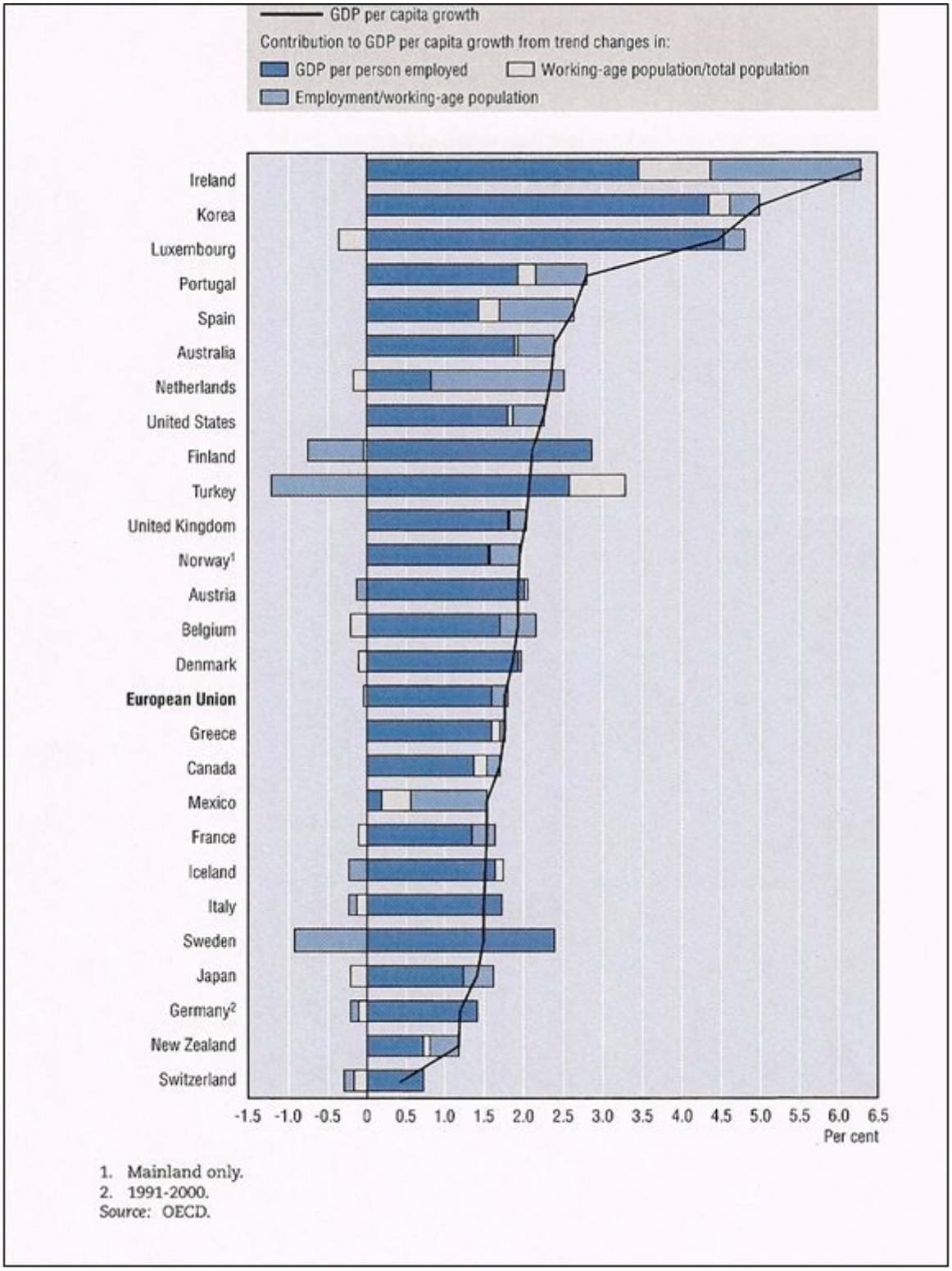
SECTION 1 – GENERAL ISSUES AND ISSUES OF CONSISTENCY

(a) What drives growth - economic growth theory

Any rationale for such target setting implies an underlying 'model' of economic growth. Most economic theory in this area acknowledges that the most important long-run driver

[1] See http://www.cppr.ac.uk/media/media_76596_en.pdf; http://www.cppr.ac.uk/media/media_76597_en.doc and http://www.cppr.ac.uk/media/media_55080_en.pdf

Figure 1: The Driving Forces of GDP per capita Growth, 1990-2000

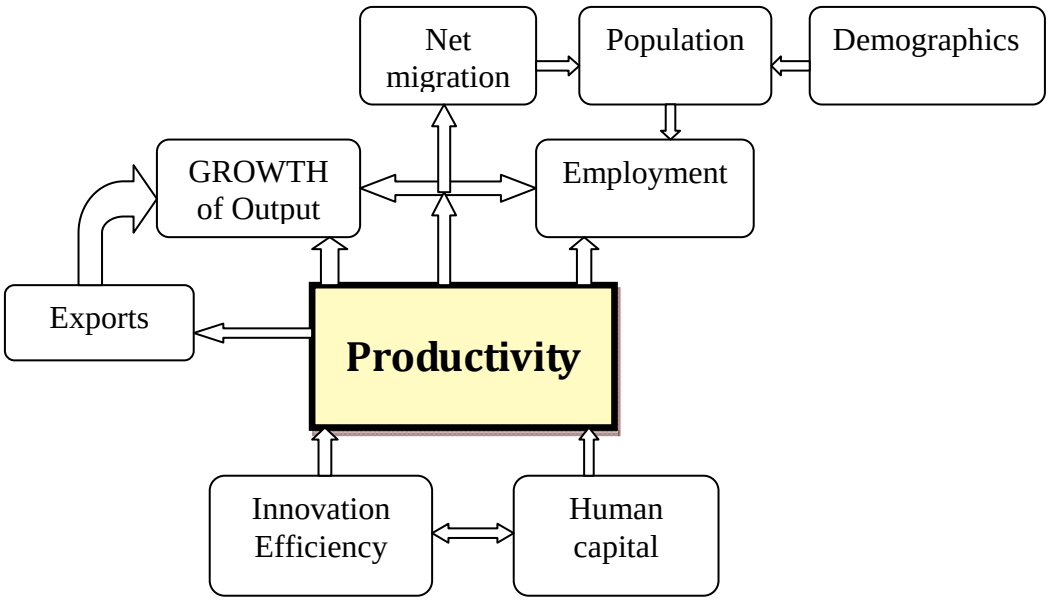


of growth is productivity[2], which itself is determined by technological progress (i.e. innovation whereby new products and processes are produced – see e.g. HM Treasury, 2001) and increases in efficiency (e.g. technology transfer allowing 'catch-up' to occur, increased quality of labour and capital used in produced and better management techniques).[3] In all, enterprises acquire knowledge assets, which are key in determining competitiveness, productivity, and ultimately output growth (see Harris, 2008a, for a recent overview of the literature on regional economic growth).

The central importance of productivity in explaining differences in GDP per capita growth is well documented. For example, Figure 1 (taken from a 2003 major study by the OECD into the sources of economic growth) shows that the most important contribution is GDP per person employed (i.e. productivity). Similar evidence is available for the UK regions (see BERR, 2008).

Figure 2 is a simple attempt by CPPR to map-out the linkages between productivity and other key variables in the economy, showing how economic targets are inter-related but more importantly that productivity is ultimately the (long-run) driver of a higher growth rate.

Figure 2: Productivity and growth



[2] As Paul Krugman notes in his book *The Age of Diminished Expectations*, "Productivity isn't everything, but in the long run it is almost everything" and US economist William Baumol similarly states that "without exaggeration in the long run probably nothing is as important for economic welfare as the rate of productivity growth" (Baumol, 1984).

[3] Economists refer to innovation as the 'pushing' outward of the technology frontier of the economy; whereas improving efficiency moves an economy closer to the existing 'best practice' technology frontier.

Using Figure 2 helps to put into context our approach to the economic targets set by the Scottish Government. For example, we agree with the statement put forward in the Scottish Government's Economic Strategy document that the growth of output (Scottish GDP) can be accelerated by increased productivity, higher participation in the labour market (i.e. increased employment), and more population. But participation and population growth are not the key long-run drivers of growth, as they are largely determined by other factors in the economic model; greater employment depends on firms wishing to produce more output[4], and population is determined by demographics (birth and death rates) and net migration, which itself is largely determined by economic opportunities in the economy (such as higher wages and higher growth, both of which are directly linked to productivity).

Given this approach, it would seem reasonable to suggest that Target 1, of accelerating Scottish GDP growth, is the Scottish government's over-arching objective and Targets 2, 3 and 4 (relating to productivity, employment rates, and population growth) contribute to its delivery.

Moreover, to make it easier for the Scottish Government to achieve Targets 5 and 6 (which are concerned with the distribution of incomes and employment), then Target 1 may be a necessary if not sufficient condition. However, Targets 5, 6 and especially 7 (on environmental issues), could also be interpreted as constraints on Target 1. In effect they limit potential growth as it would appear the Scottish Government's main objective of faster growth will only be viewed as being successful if the other targets are being achieved at the same time. If such a condition were to be strictly enforced it is likely to act as a real constraint as there will be few conditions under which all Targets can be met simultaneously.

There is further discussion of this issue of potential mutual incompatibility in (b) and (e) below.

(b) Sustainability

This section discusses the idea of 'sustainability' from three different perspectives.

The first perspective concerns the ability to maintain any step change or improvement in the longer term, that is that any improvement is sustained over time.

The second perspective concerns the ability to sustain all of the targets all of the time, that is whether the meeting of one target, say growth, can be reconciled with reductions in inequality in incomes or across Scotland, or whether some form of 'trade-off' is inevitable.

[4] Of course participation can increase through 'supply-side' government policies (that increase human capital and thus skills) to make individuals more 'attractive' to potential employers, and through 'encouraging' non-participants to seek work. But such increased supply must be met by increased demand for workers in order to increase output.

The third perspective is that used by the government when they talk of "increasing sustainable economic growth"; that is where growth does not come at the cost of missing the environmental (i.e. emissions) target.

The use of the expression 'sustainable' is the most appropriate one for each of these perspectives. However, in the interests of clarity, and for the remainder of this document, we will use the word 'sustainable' only with reference to the third of these perspectives. The second will be referred to in terms of any 'trade-offs' that may emerge or be required. The first will be referred to as the target being 'maintained over the long-term'.

MAINTENANCE OVER TIME

The Scottish Government's Economic Strategy is currently couched in terms of meeting targets at certain dates. However, meeting a target for a particular year clearly does not necessarily mean that such an improvement can be maintained over the long term (see later with regard to the impact of the economic cycle on the Scottish versus UK growth rate). Thus we here define such 'sustainability' as – 'reaching and then maintaining the target in the long-run'. To achieve this means that it comes about not by short-run movements in, say, demand (the business cycle effect) but by a rise in the trend rate of growth which is achieved by a faster rise in the supply-side capacity of the economy. Ultimately, this therefore requires a change in the long-run fundamentals that drive such supply-side growth – which, as we set out in the previous section, means in particular productivity growth. Finally, achieving the targets when the comparator or benchmark target is slowing or falling and not rising faster than Scotland should *not* be viewed as achieving the target over time.

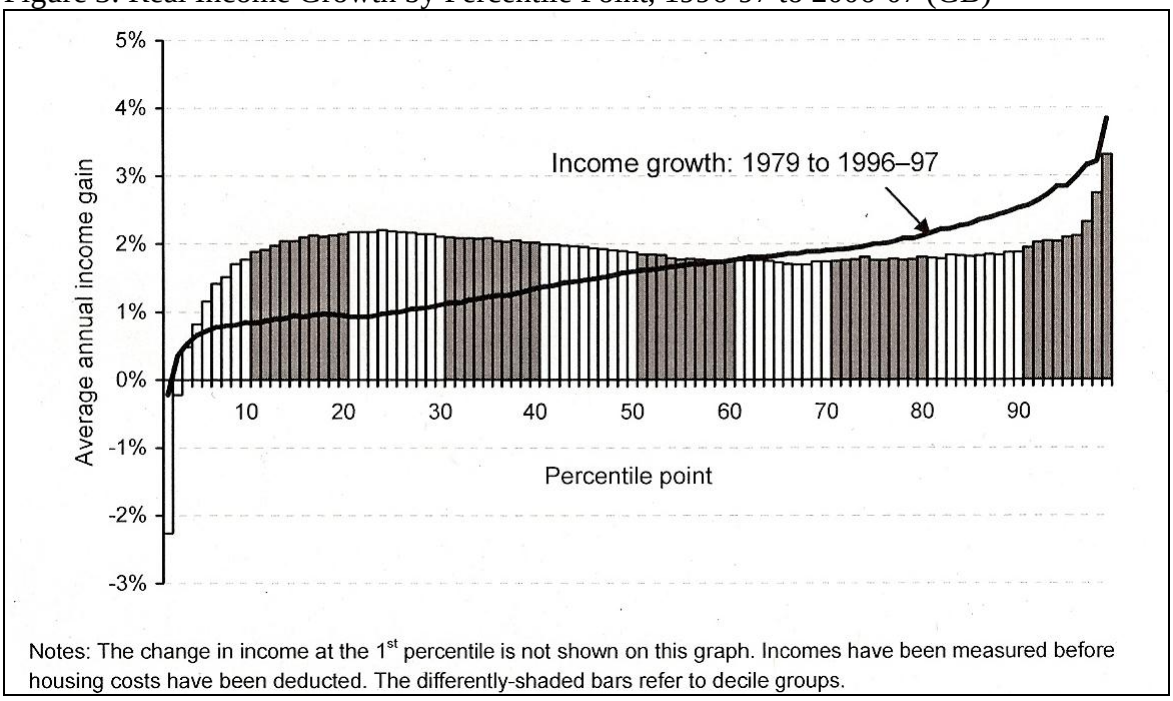
TRADE-OFFS BETWEEN TARGETS

There is also a question mark over whether the meeting of all of these targets simultaneously can be maintained over time. For example, can faster GDP growth consistently narrow the distribution of income (and ultimately wealth) among all Scots and the distribution of employment across Scotland? In the first case, if everyone gains from higher growth in absolute terms (i.e. incomes rise for all sub-groups of the population) then depending on which income groups are benefiting the most means that there could be difficulties with meeting the Scottish Government's social solidarity (i.e. equity) targets. If there is lower relative growth for lower income sub-groups this would imply a potential trade-off between targets of higher growth (efficiency gains) and more equality in society (equity gains). Put another way, if redistribution is pursued, does this constrain the economy's ability to meet a higher absolute growth rate? This issue becomes even more problematic if higher GDP growth results in some people (at the lower end of the distribution) actually seeing an absolute (real) decline in their standard of living.

The evidence on whether faster GDP growth increases and/or narrows the distribution of income is not straightforward, although there is substantial evidence of rising inequality in individual earnings in advanced industrialised countries in recent decades (Gottschalk

and Smeeding, 2000). In the UK, the IFS (2008) show that for the majority, real incomes have grown since 1979 but income inequality between the highest and lowest income groups has continued to widen even in the last 10 years under a Labour Government (it widened dramatically in 1979-97 under various Conservative Governments – see Figure 3). Thus, at least in the UK, sustained higher levels of growth have coincided with higher inequality, suggesting that any policy to lower inequality may constrain the rate of growth of the economy as a whole.

Figure 3: Real Income Growth by Percentile Point, 1996-97 to 2006-07 (GB)



Notes: The change in income at the 1st percentile is not shown on this graph. Incomes have been measured before housing costs have been deducted. The differently-shaded bars refer to decile groups.

Source: IFS (2008, Figure 3.4)

It is not clear to what extent this growth-equity complementarity is possible or where, on balance, the Scottish Government's preference lies if it is. Indeed, it is also not clear to what extent any government can deliver both faster growth AND a preferred level of distribution ex ante.

SUSTAINABILITY OF THE ENVIRONMENT

The third meaning of 'sustainability' is in the sense of 'sustainable growth', that is growth that does not threaten or damage the environment. Currently, international efforts on protecting the environment are concentrated on the reduction of greenhouse gas (GHG) emissions. Hence, 'sustainable growth' is growth that can occur within the confines of targets to reduce these harmful emissions. However, there are also wider definitions which could be used that go beyond GHG's and these are discussed in greater detail under Target 7.

As already mentioned, for the remainder of this paper we will be using the term "sustainable" only in its environmental sense.

(c) Comparators and aims

A key rationale for having targets is to determine Scotland's relative position vis-à-vis the chosen comparator(s). We believe that, as far as possible, it should be the case that when the comparison is between countries, the same group should be used to judge just such a relative performance. The Scottish Government's current approach is to select a variety of comparator countries across the various targets, moving from small EU countries, to all EU countries and to all OECD countries, but offering limited or no rationale for the differing selections.

To prevent the challenge that the chosen comparator countries are a "pick-and-mix" selection that may favour Scotland on a target by target basis, the most appropriate selection of countries should be the performance of a subset of OECD countries and where the performance of each country is accorded equal weight. The rationale for a sub-set is that the comparators should first exclude those less economically developed nations who, to some degree, are still in a position of 'catch-up' and so do not have an economic structure similar to Scotland's, and secondly, excludes Luxembourg where large cross-border daily migration patterns distort the figures.

This OECD selection would leave a comparator set of 24 countries (hereafter referred to as OECD24), which includes:

- Australia, Austria, Belgium, Canada, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Korea, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, USA.

But excludes:

- Hungary, Luxembourg, Mexico, Poland, Slovak Republic, Turkey

For most targets the aim should be to be within the top quartile of the OECD24, i.e. to rank alongside the top 6 countries (i.e. consistent with the current Target 2 aim). However, it should also be borne in mind that the size of gap can be as important as the position amongst countries. So, for example, ranking 13th in a Target where all countries perform to a similar standard may be better than being 8th but a long way behind the top performers.

An alternative set of countries could be considered e.g., those countries with a similar composition in terms of key economic variables (such as size and industrial structure). In practice, no ideal comparator set usually emerges, and we therefore argue that until a more compelling case is made, the OECD24 group is preferred.

(d) Time frame for delivery

The overall rationale for having these targets is both the need for a step change in Scotland's overall performance (be that economic growth or social cohesion) as well as for this change to be maintained. However, in the absence of any significant economic or social crisis to be addressed, it is difficult to set specific *target dates* for such achievements. Politics will therefore play a key role in setting dates for monitoring performance and to see whether or not targets have been achieved. As a result the dates for the CPPR alternative targets have largely remained those dates chosen by the Scottish Government. Nonetheless, it is important, when considering the degree of success or failure, that judgement is made over the piece; that is, over the decade or so leading up to a target date of, say, 2017. An atypical rise or fall that coincides with the target date should not distract from the underlying picture.

There will inevitably be difficulty in judging the degree of success or failure across the targets. This is not unusual, and we have already seen it in action in relation to the meeting of the UK's Golden Rules; a degree of uncertainty is probably inevitable given the type of long-term targets that have been put in place. Perhaps what is more important about setting targets is that they are aspirational and help politicians to focus on priorities and develop coherent policies.

(e) To what end / purpose?

The purpose of these targets is clearly stated in the Scottish Government's economic strategy – "to create a more successful country" – and that this is to be achieved – "through increasing sustainable economic growth".

Unfortunately, as is so often the case with aims and targets like this, initial clarity gives way to obscurity once this purpose and method are looked at more closely. What is "success"? Is it simply increasing sustainable economic growth or is that merely the way to achieve some other, less tangible, thing?

Perhaps not surprisingly, and as few nations have done so, a definition of success beyond economic growth has not emerged. One of the key problems with this is that when it is found that some targets may need to be (at least temporarily) foregone in order to meet others, as they almost inevitably will, some form of moral, social or philosophical compass is needed in order to say what target(s) will better help in reaching the ultimate aim.

In this document we do not make such a judgement. Rather, we concentrate on improving economic growth, within the confines of also meeting a set emissions target. The latter may prove a limiting condition but it is taken as set here.

Given this ultimate aim we believe that Target 2 (relating to productivity) is the key driver in achieving and maintaining a step change in economic growth that leads to greater individual and national prosperity.

In Section Two we continue to look at all 7 targets and in places to offer alternatives. We believe these all to be important and that, under certain conditions (e.g. where types of inequality start to widen) the distributional targets may take precedence over economic and productivity growth. However, their principal role is to act as stabilisers, restricting the inequity aspects of higher growth, while the main aim remains to increase the overall growth rate.

In the absence of some definition of ultimate "success", the judgement over whether or not faster economic growth leads to a more successful Scotland will be for others (or perhaps more appropriately each individual) to decide.

SECTION TWO – DISCUSSION BY INDIVIDUAL TARGET

TARGET 1: GROWTH – *"To raise the GDP growth rate to the UK level by 2011 and to match the GDP growth rate of the small independent EU countries by 2017"*

I About the current target

(i) Is it the most appropriate variable to measure?

GDP measures the size of, and growth in, the economy as a whole but it is more typical to use GDP per capita to measure the level and increase in prosperity, i.e. it acts as a better measure of the standard of living. The main reason for this is that growth can be caused just by an increasing population, and any such increase does not raise the standard of living of existing citizens, just the overall size of the economy.

Relatively fast GDP growth and GDP per capita growth will often be linked, as a healthy economy tends to attract economic migrants, but the former will tend to exaggerate the benefits that are actually being experienced by citizens.

However, although GDP per capita is a better measure of the level of wealth, simple GDP growth is attractive as a target in acting as a measure of increasing prosperity year on year, when populations will change little. It is also attractive in that it is already measured and published on a quarterly basis, whereas population estimates are made annually and with as significant lag of around a year. In addition, GDP per capita is sometimes used as a proxy for productivity, which Target 2 addresses, using the more exacting GDP per hour measure.

(ii) Is it maintainable?

Improvements to GDP growth relative to the comparator countries have occurred in the past, but maintaining any relative improvement is, we would argue, what Scotland needs to do. When such improvements are experienced on a short-term basis it is difficult to judge whether they can be maintained over the long run. A year or more of meeting these targets does not necessarily mean that such an improvement is maintainable. For example, in the early 1990s Scotland outgrew the UK in 4 consecutive years (1989-1992). However, when faster growth returned from the mid 1990s Scotland once again fell behind the UK's growth rate. For this reason judgement of long run maintainability is made over the decade or so leading up to the target date of 2017. By 2011, especially given the current downturn, it will be difficult to judge whether the UK target has been met on a permanent basis.

If the increases in long-term growth needed to reach both targets can be achieved, then there is no reason to believe that this position cannot be maintained, but the initial reaching of such a position in the first place looks extremely challenging.

(iii) What should the comparators and aim be?

Domestically, and given Scotland's traditionally more sluggish performance, the UK is a reasonable intermediate comparator, especially given the strong economic linkages that exist between Scotland and the rest of the UK (e.g. in terms of trade, financial markets, etc).

In relation to an international comparator, we see no clear rationale for using small EU countries. No evidence or arguments have been put forward by the Scottish Government to support this comparator as a good benchmark for Scotland. It would be better, and more consistent, to use the OECD24 countries and to aim to be among the top quartile in growth terms.

II **About meeting the target**

(i) What does economic theory point to?

This subject has already been covered in large part in the Introduction. To reiterate, the main determinants are: innovation of products and processes; technology transfer; increases in quality of labour and capital; and better management techniques.

(ii) What do the Scottish Government and the Council of Economic Advisers point to?

The Scottish Government's Economic Strategy (GES) document identifies three means by which the sustainable rate of economic growth in Scotland can be accelerated (productivity, participation and population) and each of these means has a separate target identified with it. We address appropriate policies in detail under each of these targets.

(iii) What is currently being done via Scottish and UK policies?

The principle policy interventions are again discussed primarily under each of the following targets. Within Scotland these policies are still being worked up post the GES publication.

(iv) Where do we stand with meeting the target?

In our recent assessment (CPPR, 2008), the key points were:

- ⇒ Recent Scottish GVA growth lags considerably behind both the UK and small EU countries and has done so for most of the last 30 years. However, Scotland tends to outperform the UK when the latter experiences a significant economic slowdown.
- ⇒ For Scotland to reach long term parity will require changes to the structure of the economy (i.e., changing the sectoral share of Scotland's GVA) alongside substantial productivity improvements.
- ⇒ The target requires parity with the UK by 2011, and presumably on a maintainable basis. Consequently, the expected slowdown in the UK's economic growth may

temporarily assist Scotland to achieve this target, but not necessarily on a maintainable basis.

Of the OECD24, Scotland is currently 21st, based on growth over the decade 1997-2007. This puts it firmly in the bottom quartile.

(v) Is current policy enough?

The adequacy of existing policy interventions are again discussed primarily under each of the following targets, 2, 3 and 4.

III Recommended revised target

To raise the GDP growth rate to the UK level by 2011 and to reach the second highest quartile of OECD24 countries by 2017

TARGET 2: PRODUCTIVITY – *"To rank in the top quartile for productivity (amongst our key trading partners) in the OECD by 2017"*

I About the current target

(i) Is it the most appropriate variable to measure?

The best measure of productivity is generally accepted by economists to be total factor productivity (i.e. the productivity associated with both labour *and* capital). However, comparable data is not available for Scotland, and therefore labour productivity is used as the next best indicator. The current measure used here is GDP per hour worked, which is the most appropriate one (as opposed to GDP per capita or GDP per worker), as this takes into account differences in labour inputs based on total hours worked and not just a count of the numbers employed.

(ii) Is it maintainable?

If Scotland is able to reach the top quartile of OECD member countries, a big if at present, then it is reasonable to assume that it could maintain this position for some time. This is because moving into the top quartile will require a step-change in productivity and thus significant improvements in such factors as the rate of innovation and R&D. However, such change is generally 'path dependent' (i.e. dependent on cumulative past decisions and investments, both intentional and unintentional) and therefore takes time to move over to the new path.

(iii) What should the comparators and aim be?

In general terms the choice of comparators and the overall aim seem appropriate. However, a move to the OECD24 is again recommended for the reasons alluded to in Section 1 (c).

II About meeting the target

(i) What does economic theory/evidence point to?

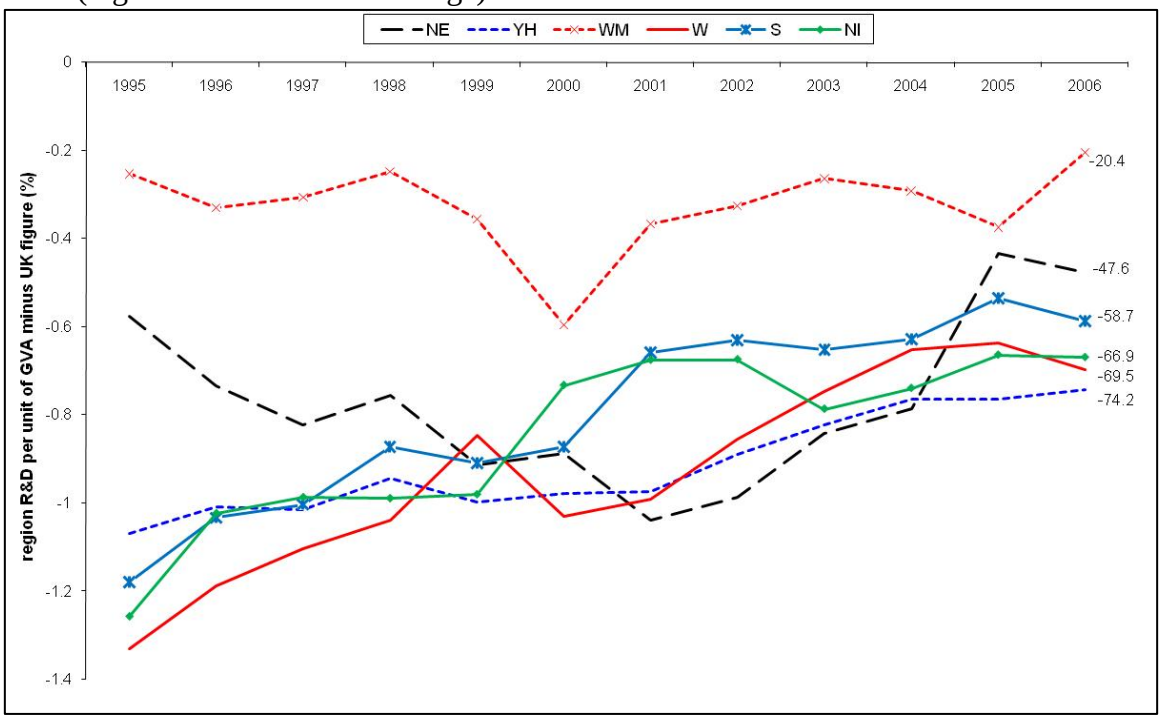
We limit our comments here to productivity in the market-based sectors of the economy.[5] More recent micro-based research has shown that firms that export and/or undertake

[5] Productivity in public services is important but more difficult to measure (due to the lack of 'markets' for goods and services, and thus prices for these goods). Achieving productivity improvements in the public sector is usually associated with achieving efficiency gains i.e., more output or outcomes per resource input. However, with current statistical measures it is difficult to distinguish whether output has been increased (for a given level of resources), or if resource inputs have been cut (alongside outputs). Crafts (2005) highlights the increasing importance of productivity improvements in the public sector but points to the difficulties in delivering it or proving it has been delivered. That is not to argue productivity in the public sector is not possible: Armstrong (2007) shows that effective benchmarking and targeted incentives has substantially increased productivity in Scotland's publicly-owned water sector.

R&D are more competitive, have higher productivity, and are more likely to produce significant new products and services (see Harris and Li, 2006, for a review). Consequently they will invest more heavily in physical and intellectual (R&D and human) capital. A large part of the reason for this higher productivity is that such firms are able to exploit knowledge-based intangible assets (such as R&D and propriety know-how, intellectual property, workforce skills, world-class supply networks and brands), and they are especially able to internalize external knowledge (i.e. they have higher 'absorptive capacity'). Making better and more extensive use of these assets allows firms to break down the barriers to entering overseas markets, and to commercially developing new products and processes. Thus, to improve productivity, theory suggests that Scotland needs to ensure it has adequate stocks of these firm-based knowledge assets, and the absorptive capacity to exploit such stocks.

Perhaps the most important long-term driver of productivity is R&D. Figure 4 shows that in 2006 business sector R&D spending in Scotland was nearly 59% below the UK average (relative to the size of the economy as depicted by GVA), while in 1995 it was 118% below the UK average. Thus, while the direction in the last 10 years has been upward, Scotland is still a long way behind the UK average.

Figure 4: Percentage deviation from UK average of real Business R&D / GVA, 1995-2006 (regions below the UK average)



Source: MA14 (various issues); UK Regional Accounts (various). Only includes intramural R&D.

In terms of a wider context to boost productivity, ensuring that there is adequate infrastructure investment and creating an enterprise culture are often cited as being of

vital importance. Clearly both are important, but two general points are worth making. First, with respect to infrastructure, there is often a debate in policy circles as to whether government interventions in the market should be aimed directly at economic agents (such as firms or people) or should concentrate instead on improving the infrastructure and environment in which agents interact. It is worth noting that: (i) much transfer of knowledge is tacit and the evidence available suggests that it mostly occurs through firm-to-firm (i.e., market-based) linkages, rather than as 'spillovers' (i.e., through being located in a cluster or agglomeration of firms whereby close proximity to other firms produces benefits that 'seep-out' to all firms located near-by); (ii) even if spillovers are large, firms need to be able to internalise such knowledge, and that requires firm-specific intangible assets associated with adequate absorptive capacity so as to be able to benefit from external spillover effects.

Second, with respect to fostering enterprise, this is often associated with encouraging a high level of new firm start-ups. Besides the latter not being equivalent to entrepreneurship, statistical evidence shows that very few new (and overwhelmingly small) firms survive more than a short period in the market-place; and of those that do survive an even smaller proportion of firms actually grow (i.e. increase turnover and employment).[6] Therefore, fostering 'enterprise' is difficult both because it is as much an outcome of high growth economies, and because it is very difficult to 'pick' and support potential winners in a cost-effective manner.

Lastly, innovation and productivity are also linked to the level of investment in (higher) education and science. Ensuring there is sufficient (high quality) capacity to interact with industry (e.g. supply graduates, spin-out scientific breakthroughs, and supply knowledge and information to companies to enhance their innovative capacities) is argued to be a major source of productivity growth in advanced economies.

(ii) What do the Scottish Government and the Council of Economic Advisers point to?

The Scottish Government's Economic Strategy document points to four sources to improve Scotland's productivity performance: investment; skill levels; R&D and innovation; and enterprise.

The CoEA policy proposals include recommendations on:

- planning
- local economic development
- energy sector and its supply chain
- reducing non-domestic business rates

as well as interventions promoting enterprise, innovation and investment, both general and in key sectors such as the food industry, life sciences and the health sector. However, there are as yet no details on how they intend to implement these recommendations.

[6] For evidence, see Harris (2008b).

(iii) What is currently being done via Scottish and UK policies?

Current Scottish policy on innovation, R&D and improving productivity is linked mostly to providing advice and financial help (e.g. see http://www.scottish-enterprise.com/). There is a significant concentration of efforts on new business start-ups and business support for high growth companies (the latter via Scottish Enterprise's account- and client-managed programmes).

In the field of R&D, the Scottish Government has introduced some new initiatives through the Saltire Prize and continued support of Intermediate Technology Institutes. However, these are public-sector led (which is not where the R&D deficiency lies in Scotland) and relatively small scale.

In a wider UK-context, financial assistance is available to companies to undertake (productivity enhancing) capital investment (via RSA); help for R&D (via schemes like SMART); and assistance for indigenous firms to entering export markets and overseas FDI firms to invests in Scotland (via Scottish Development International).

(iv) Where do we stand with meeting the target?

In our recent assessment (CPPR, 2008), the key points were:

- ⇒ Scotland is currently ranked 17th for productivity amongst OECD trading partners, placing it at the top of the third quartile, just below the UK.
- ⇒ Using the OECD24 grouping, Scotland comes out at 16th, in the middle of the 3rd quartile.
- ⇒ The productivity gap between Scotland and the bottom country in the top quartile was 14.3 percentage points in 2006. Using the OECD24, the gap to matching the lowest member of the top quartile (i.e. France) was 20.3 percentage points.
- ⇒ There has been little change in Scotland's relative ranking (and the size of the 'productivity gap') in the last 5-10 years

(v) Is current policy enough?

Judging by the little change that has taken place in Scotland's position over the last 5-10 years, coupled with the absence of any new radical policies, it seems unlikely there will be a step change in the near future.

III Recommended revised target

"To rank in the top quartile for productivity in the OECD24 by 2017"

TARGET 3: LABOUR MARKET – *"To (A) maintain our position on labour market participation as the top performing country in the UK and (B) to close the gap on labour market participation with the top 5 OECD economies by 2017"*

I About the current target

(i) Is it the most appropriate variable to measure?

The measure used for both parts (A) and (B) is the employment rate for those of working age (rather than the participation rate, which includes those unemployed, implied in the Target). In part this target is linked to Target 1, in that achieving high GDP growth should translate into more jobs for the economy through increased demand for labour. The target relates to the supply-side of the economy, to ensure that the demand for labour is not constrained by too high a level of inactive participation in the labour market (which can be for a number of reasons including sickness and long-term ill-health, and looking after family[7]). A high level of employment will also lead to a higher level of taxation income for government, which can be used to finance public benefits to the extent and quality necessary to meet public demand.

More fundamentally, given concerns about declines in the size of the working age population, which is due in part to demographic trends, the target might be altered to consider not just those of working age (16-59/64). A wider measure for which to set a target might be the employment rate of all adults over 22 years of age (i.e. post tertiary education). Currently Scotland has 61.5% of its population over 22 in employment compared to 76.3% based on the 16-59/64 working age population[8]. (See also Target 4 for further discussion).

However, we recognise that such a target is breaking new ground for this, or any other, government. Hence, we would advise that more research is undertaken as to the repercussions of any such target in the short, medium and long-term.

(ii) Is it maintainable?

As to whether the employment rate can be maintained at a higher level than in other parts of the UK in the long-run (i.e. not because of short-run movements in demand reflecting the business cycle), this depends on a number of factors including (a) the trend level of output (i.e. the demand for labour); (b) participation rates in the labour market (the supply of labour); and (c) the structure of the economy (i.e. in which industries jobs are being created). It seems likely that if Scotland experiences a slower relative downturn in output

[7] In the first quarter of 2008 there were nearly 8 million people of working age in the UK who were classified as inactive. The major reasons given for men were: long-term sick/injured/disabled (36.9%), being a student (32.7%), and retired (12.7%); for women: at home/looking after family (43.6%), student (22.2%), and long-term sick/injured/disabled (21.1%).

[8] The comparable employment rate for England, Wales and Northern Ireland for all adults over 22 is 61.6%, 56.4%, and 59.4%, respectively.

in the next year or two, then Target 3 will (continue to) be achieved but not necessarily because of any increase in Scotland's trend level of output (see the discussion of Target 1 earlier).

Figure 5: UK labour market rates[a], first quarter 2006 and 2008

[a] based on the population of working age Source: LFS

Figure 5 shows that Scotland currently has the highest employment rate in the UK (by country) and that this coincided between 2006 and 2008 with falls in both unemployment and non-participation in the labour market (i.e. an expansion of the supply of labour). As shown in our previous review of this target (CPPR, 2008, Figure 7), Scotland overtook England during this period as a result of relatively higher employment growth (although the upward trend in Scotland's performance dates from earlier and deserves further investigation). As stated above, the issue of long run maintainability also depends on where these jobs were created. Based on data from the Labour Force Survey, Table 6 shows that during the two years between 2006 (first quarter) and 2008 (first quarter), Scotland experienced an increase in employment of some 62,500.[9] The majority of these extra jobs (see the column headed '% total') were in the public sector, other business services, hotels and restaurants, and construction, while Scotland experienced significant declines in the transport & communications and financial services sectors. In comparison, the relatively smaller number of new jobs created in England were concentrated in the tradable services sector and construction, with declines in the public sector and

[9] Note, the LFS data being considered here is subject to an unknown margin of error (especially when a sectoral breakdown is undertaken); thus it is important that these trends be confirmed when data based on larger samples become available using other statistical sources (e.g. the ABI).

Table 6: UK Employment change 2006 (first quarter) to 2008 (first quarter)

	England				Wales			
	ΔE	%Δ	% total	ΔE (FTE)	ΔE	%Δ	% total	ΔE (FTE)
Agriculture etc.	35,816	13.7	12.1	35,440	-3,025	-11.8	-35.8	-3,862
Extraction	19,338	38.2	6.5	17,492	-227	-6.9	-2.7	-460
Manufacturing	-80,620	-2.6	-27.3	-79,954	-15,491	-8.3	-183.4	-13,155
Utilities	28,455	21.1	9.6	25,337	-73	-0.9	-0.9	-248
Construction	73,434	3.9	24.8	65,890	-6,247	-6.0	-73.9	-7,118
Wholesale/retail	-37,966	-1.1	-12.8	-22,099	24,491	14.3	289.9	19,662
Hotels/Restaurants	70,166	7.2	23.7	61,183	-638	-1.0	-7.6	-1,038
Transport/communications	59,228	3.6	20.0	63,356	-7,181	-9.2	-85.0	-6,024
Financial services	37,567	3.5	12.7	40,399	1,864	5.0	22.1	2,123
Other business services	201,107	7.2	68.0	188,182	11,340	12.2	134.2	6,615
Public sector	-150,418	-2.3	-50.9	-140,427	4,411	1.0	52.2	4,028
Other services	39,501	2.8	13.4	40,197	-776	-1.1	-9.2	-2,237
Total	295,608	1.3	100.0	294,995	8,448	0.7	100.0	-1,715

	Scotland				Northern Ireland			
	ΔE	%Δ	% total	ΔE (FTE)	ΔE	%Δ	% total	ΔE (FTE)
Agriculture etc.	2,526	6.3	4.0	2,107	-4,169	-17.0	-24.7	-4,362
Extraction	7,051	15.0	11.3	8,245	-291	-9.4	-1.7	-291
Manufacturing	-9,248	-3.6	-14.8	-12,821	-10,382	-10.1	-61.6	-10,617
Utilities	4,183	18.6	6.7	3,340	-701	-23.3	-4.2	-579
Construction	14,101	6.9	22.6	14,288	5,762	7.8	34.2	5,207
Wholesale/retail	10,704	3.4	17.1	9,694	125	0.1	0.7	3,352
Hotels/Restaurants	19,492	16.2	31.2	14,886	-6,556	-21.1	-38.9	-6,130
Transport/communications	-25,252	-15.2	-40.4	-27,675	-6,352	-18.1	-37.7	-6,264
Financial services	-23,890	-19.1	-38.2	-21,741	1,133	5.5	6.7	1,521
Other business services	35,421	17.8	56.7	33,530	13,738	27.5	81.5	11,043
Public sector	41,984	5.7	67.1	41,672	13,623	5.5	80.8	8,397
Other services	-14,546	-9.7	-23.3	-14,832	10,920	39.5	64.8	8,125
Total	62,526	2.6	100.0	50,692	16,850	2.3	100.0	9,402

ΔE = change in employment 2006.Q1 to 2008.Q1; %Δ = % change in employment 2006.Q1 to 2008.Q1; % total = % of total employment increase 2006.Q1 to 2008.Q1; ΔE (FTE) = change in FTE (i.e. weighting each part-time job as 0.5) employment 2006.Q1 to 2008.Q1 Source: LFS

manufacturing. The concentration on jobs growth in Scotland in non-tradable sectors, where productivity growth is likely to be slower, does suggest that there will be difficulties in meeting this target over the long-run. Moreover we also need to ask, is this growth in public sector and related employment likely to be maintained in the long-term given the slowdown in public sector spending and the growing need for efficiency savings?

Similar concerns to those already outlined above apply with regards to the long-term achieving and maintaining of Target 3(b), of closing the gap on the top 5 OECD countries by 2017. This will require further analysis to be undertaken in subsequent work, although this will be difficult because of a lack of comparable data.

(iii) What should the comparators and aim be?

Part (A) of Target 3 is reasonable but, given the international perspective of the GET's in general, is the less important of the two.

For part (B), we recommend that the international measure be amended to the OECD24 and that, as with Target 2, the aim should be to reach the top quartile of the OECD24, rather than to close the gap with the top 5 OECD economies.

For the alternative target of looking at the employment rate of those over the age of 22, we should be looking to be in the top quartile of OECD24 countries by 2017.

II About meeting the target

(i) What does economic theory/evidence point to?

In practice, the countries with the highest employment rates (based on 2007 OECD data) are Iceland (85.7%) and Switzerland (78.6%). Both achieve their positions through having high employment rates in the 55-64 age groups for both men and women. Iceland also has a very high employment rate for the young and low skilled category. These two small countries are followed by similarly small Nordic countries (Norway, 77.5%; Denmark, 77.3%, and Sweden, 75.7%). All the countries mentioned have relatively high spending on active labour market policies (ALMP) designed to increase labour market participation (e.g. of the 28 OECD countries providing information for 2005, Denmark spent 1.74% of GDP on such policies; Sweden, 1.32%, and Norway 0.75%, with the (unweighted) average across all 28 countries being 0.60[10]). ALMP's cover placement services, training, employment incentives, supported employment, direct job creation, and start-up incentives (they do not cover income maintenance and support for the out-of-work, which are deemed 'passive' policies).

[10] The figure for the UK was 0.49%.

In terms of whether ALMP's are successful in increasing higher labour market participation and thus employment rates, this depends on the types of policies pursued. Estevão (2007) has used OECD data to consider whether ALMP increases the employment rate *in the business sector* (i.e. he abstracts from employment in public services), finding that during 1985-2000 (and the shorter period 1993-2000) policies that subsidised employment (i.e. provided employers with a wage subsidy for taking on those covered by the schemes) did lead to some increases in business employment rates. However, placement-type policies actually reduced employment rates (as did passive policies) probably because they displaced other workers (while income maintenance and support acts as a disincentive to enter employment). Labour market training policy was found to have a positive, but statistically insignificant impact.[11]

Denmark has recently been singled out as an example of a country which has been successful at increasing the employment rate at least partly through ALMP. Kvist and Pedersen (2007) have recently evaluated the effectiveness of Danish policies showing that targeting specific out-of-work groups has a strong motivational effect, leading to high rates of exit from unemployment some 8 months after activation begins. But impacts depend again on the type of ALMP used: private job training has the largest job impact with adult participants on average seeing a 20% increase in employment rates (although only some 10% of all participants in ALMP schemes receive private job training). The most frequently applied measure in Denmark is employment projects, but this only increases employment rates by some 3%; similarly individual job training in public workplaces is popular and only increases employment rates by some 6%; while increased educational qualifications had very small impacts.

In the UK, there have been a large number of ALMP initiatives under the New Deal programme since 1998. According to OECD data, the bulk of UK spending is on placement activities, followed by support for apprenticeships, rather than private sector workplace training or policies that subsidised employment. The most recent initiative (Pathways to Work) have recently been the subject of pilot evaluations (Dorsett, 2007), and this finds that generally 18 months after the initial involvement in the scheme the effect was an increase in employment rates of about 7% for those involved (i.e. 93% did not benefit from a return to work specifically related to the Pathways to Work programme – other changes to employment status would have happened in the absence of the programme). Moreover, when disaggregated by age and gender, almost all the impact was related to females under 50 who had dependent children; the impact on men on incapacity benefit was statistically zero.

[11] Note, Estevão (2007) obtains these results by estimating a model where ALMP is only one of the factors that impact on employment rates. Other important impacts that lowered the growth of employment were higher replacement rates (weekly out-of-work benefits as a ratio to average weekly wages), union membership, and the tax wedge (the average share of taxes and social security payments paid by employers as a proportion of total labour costs). Overall, these other determinants of employment rates were more important in influencing the supply-side of the labour market, and are also susceptible to policy interventions.

Lastly, a recent review of ALMP in Scotland (Adams and Thomas, 2007) found that despite all the various schemes in place since 1997 (with a particular emphasis on reducing spatial inequalities in the incidence of unemployment) if anything employment rates in the poorest performing labour markets became relatively worse. Adams and Thomas (op. cit.) argue that "the ALMP effect has been both marginal and highly transitory in the worst affected unemployment areas in (Scotland). The "jobs" created during the 1996-2004 period have been predominantly short-term, low paid and unskilled". And this is against a backdrop of ALMP being expensive to undertake, and therefore raising issues of 'value for money'.

(ii) What do the Scottish Government and the Council of Economic Advisers point to?

The Scottish Government highlight the 1,013,000 economically inactive in Scotland (of working age population), of whom some 241,000 are on Incapacity Benefit (nearly 64% of the latter are located in the Strathclyde region).[12]

There are currently no CoEA recommended policy proposals explicitly geared to this target.

(iii) What is currently being done via Scottish and UK policies?

Most employment policy is at the UK level and since 1998 has been rolled out under the New Deal initiative. The most recent policy initiative to reduce the numbers on Incapacity Benefit is the Pathways to Work programme. See section II(i) above for an evaluation of this programme.

There are few policies in place to prolong working life beyond 65, although the state pension (retirement) age for women is due to be moved up to 65 (consistent with men) over the period 2010 to 2020 and then for both sexes to increase to 68 years by 2046.

(iv) Where do we stand in terms of meeting the current target?

Scotland has met target (A) since the beginning of 2005.

In terms of target (B):

- ⇒ The latest OECD data for 2007 shows that Scotland was ranked equal 9th on the basis of its employment rate. The gap between Scotland and Sweden (which is ranked 5th) was some 2.6 percentage points in 2007.[13]
- ⇒ Scotland maintains this 9th position if the comparator is replaced by the OECD24, putting it in the middle of the second quartile

[12] Figures reported here are from the 2008.Q1 Labour Force Survey.
[13] This is an improvement on 2006 data, which we used in our earlier analysis of the Government's Economic Targets.

⇒ The gap between Scotland and the top 5 OECD economies did narrow between 1999 and 2004, but there is evidence that the gap has widened in the last three years.

Alternative target: an employment rate for those over the age of 22 of around 67% would be needed to reach the equivalent figure for Finland, which is placed 5th.

(v) Is current policy enough?

The preceding analysis highlights the difficulty of maintaining Scotland's top position within the UK. On the international front it seems likely that there will need to be a step change in the employment rate of older workers (post 55) in order to move up the OECD24 ladder.

Alternative target: current policy is not geared to meeting this.

III Recommended revised target

To raise the employment rate of Scotland to be in the top quartile of OECD24 members by 2017

OR, in the longer term once more research has been carried out

To raise the employment rate of those over the age of 22 to be in the top quartile of OECD24 countries by 2017.

TARGET 4: POPULATION – *"To match average European (EU15) population growth over the period from 2007 to 2017, supported by increased healthy life expectancy"*

I About the current target

(i) Is it the most appropriate variable to measure?

There is a big question mark hanging over the choice of the main target related to whether an increasing population of itself is a good thing. If it is, at what rate should it grow and should this growth last indefinitely? None of these questions are suitably addressed at present and so the targets rationale, economic or otherwise, remains unclear.

Discussion of population targets in the past has tended to be rather simplistic. In the 1960s and 1970s the worry was of overpopulation and the impact on the planet if high birth rates were maintained. Since the 1990s the reverse has been the major concern, with many countries birth rates falling below the replacement rate and turning the demographic makeup into a major economic and social concern. However, little effort has been spent on what sort of collective or individual goals with regards to population growth are desirable. A growing population may be a sign of a healthy and wealthy economy and society but at what rate should it be growing and at what point does perpetual growth become a problem? These are issues which are still in their infancy in terms of political and economic discussion.

Scotland has limited control of how many people can (or will) come to (or leave) the country. What it might rightly be more concerned with is, whatever the size of its population, whether the demographic breakdown within this number is supportable especially given increases in longevity. This basically means ensuring that the number of dependents does not place too high a burden on those of working age.

Such a "burden" might arise at a point when those in employment, and who provide the majority of taxes from which government services are funded, are subject to increasingly high tax rates in order to pay for the health and pensions costs of those retired and who provide little in the way of taxes. This position will become increasingly likely as people live longer and as older age cohorts grow relative to younger ones, and especially if retirement ages do not take this into account in some way.

While the ratio of those of working age to those of all other ages, the dependency ratio, might vary a little over time it might be desirable to keep it below a target level, or within a target range. Alternatively, the ratio might be better measured as the ratio of those in employment to those of all other ages. Both measures would help temper difficulties over inter-generational equity and consequent social tensions. However, further work needs to be carried out in order to understand the scale and timing of the problem as well as what any appropriate target ratio might be.

In Scotland the current dependency ratio is 0.59 and, even with future changes to state pension age included, this is predicted to rise to 0.67 by 2031.

If the dependency ratio rises dramatically then future generations may experience too narrow a work-base to ensure that most or all enjoy a steadily improving quality of life. By concentrating instead on the demographic make-up of the country this prime objective might be better able to be met.

(Note: OECD has data on the ratio of inactive elderly (over 65) to total labour force. In 2005, Iceland is the lowest, at 21%, with the UK at 31%. By 2050 the UK is estimated to have risen to 58%, not as good as some (Iceland at 41% and Sweden at 49%) but better than most (e.g. four countries over 90%). This gives some indication of the scale and inevitability of the problem.)

The current target also seeks to achieve healthy life expectancy, a good measure of a successful society but it is questionable whether this measure should come under this target or be placed as part of the Solidarity or Cohesion target and act as a measure of inequality across Scotland. Either way it should be recalibrated to be a relative measure rather than an absolute measure, as the latter is not very challenging given consistent medical and health advances.

(ii) Is it maintainable?

An ever growing population could, ultimately, lead to negative externalities, which could in turn impact on other targets e.g. Target 7 for emissions. In addition, the maintainability of different sized populations with different demographic compositions is unknown but beyond certain limits a larger population is likely to result in the exacerbation of undesirable social and economic pressures (e.g. congestion). For both these reasons more work needs to be done on the implications of (i) different population levels and (ii) different demographic compositions of Scotland.

(iii) What should the comparators and aim be?

If an international target is deemed desirable then again we would suggest using the top quartile of the OECD24 as the comparator.

If a new target, along the lines set out above (i.e. with an emphasis on the demographic make-up rather than the size of the population), is chosen then, given that such a target has a specific ratio range that is being aimed at, no comparators are needed. However, attention should be paid to those countries that have what is considered to be a “good” demographic structure and how they have achieved this.

II About meeting the target

While we suggest that the target should be changed, this does not impact heavily on the sorts of policies needed to reach the target(s).

(i) What does economic theory/evidence point to?

There are three main ways of improving the current and future demographic make-up of a country:

- increase the birth rate
- increase the rate of net inward migration
- increase the participation rate of existing citizens

In terms of the **birth rate**, small improvements have been seen in recent years, although the Scottish birth rate (1.73) is still relatively low and well below the replacement rate of 2.1. The record of developed industrial nations in improving birth rates, through financial incentives and family friendly policies, is not very encouraging. While some short term gains have been seen these typically do not last. The biggest impact tends to be as a by-product of in-migration, as migrants usually have a higher birth rate than the indigenous population, at least in the first generation.

The OECD24 countries with the highest fertility rates are: the USA, Iceland, New Zealand, Ireland and France. The lowest are Korea, Japan, the Czech Republic, Greece Spain and Italy.

France has pursued pro-natalist policies with some success. However, for others the results of these policies has been mixed (as with Sweden,) or very poor (as with Singapore).

Net inward **migration** to Scotland has improved dramatically in recent years, both in terms of international migration and migration within the UK. Both are now positive (i.e. net inward) in almost all age groupings. In international terms much of this success is down to movement from the most recent EU accession (i.e. Eastern European) countries. It is unclear how long this impact will last.

Economic immigration can be both wanted and unwanted. Many countries with more 'open door' policies, like Canada, attempt to both welcome migrants as well as vet them, usually using a points based system of compatibility.

The literature on the economic impact of high inward migration is mixed. Generally there is seen to be little overall impact in terms of GDP per capita, although within this overall effect, lower earners may suffer (these being often the previous wave of immigrants) while high earners gain.

(Policies relating to the **participation rate** are reviewed under Target 3. In addition initiatives with regards to (compulsory) retirement age might also be important here.)

(ii) What do the Scottish Government and the Council of Economic Advisers point to?

The Scottish Government's Economic Strategy document points to an increasing healthy life expectancy being important as it is only the over 60 age group that is predicted to grow in Scotland.

The CoEA current "Recommended Policy Proposals" in this area are to:

- encourage better use of migrant's skills
- introduce/enhance Scottish flexibilities within the Points Based System for Managed Migration
- develop a more focussed Diaspora strategy

All 3 proposals have merit although clearly more detail is needed on how these general points made might be taken forward.

(iii) What is currently being done via Scottish and UK policies?

Neither the Scottish nor UK Government's have an official birth rate policy at present, though a more family friendly environment is pursued e.g. through improved early years care and provision.

The principal migration policy initiative in Scotland is 'Fresh Talent'. The latter established a Relocation Advisory Service and introduced a scheme to encourage international students to stay and live and work in Scotland for 2 years without the need of a work permit (later extended across the UK and now subsumed into the new points-based system).This is due to be enhanced with a big push via the 'Homecoming Scotland 2009' initiative, in part celebrating the 250th anniversary of Robert Burns birth.

UK migration policy has recently (2008) changed to a new Points Based system intended to manage numbers and broken into 5 tiers of desirability.

(iv) Where do we stand with meeting the target?

Current target: GRoS population projections imply that we are already on course to meeting it. However, such projections are volatile, especially in relation to the impact of net migration trends.

Alternative target: currently some inroads are being made to improving Scotland's demographic structure, largely through the impact of net inward migration from Eastern Europe. However, this beneficial effect may well prove to be a temporary one and further measures need to be put in place to ensure that Scotland remains an attractive destination for economic migrants. It also seems inevitable that some degree of greater participation by older citizens will be needed in the future, either on a voluntary or compulsory basis. More research needs to be carried out into the views of Scottish citizens on what

initiatives would be most welcome in this field; we also need more information on which would be most effective in terms of productivity.

(v) Is current policy enough?

Current target: the judgement above on meeting the target would suggest that current policy is probably adequate to meet the Governments existing targets. However, migration patterns can change dramatically and if current Eastern European in-migration falters then the main target may prove elusive in the longer term.

Alternative target: current policy is not geared to meeting this.

III Recommended revised target

To match average OECD24 population growth over the period from 2007 to 2017

OR, in the longer term once more research has been carried out

To improve the demographic make-up of the Scottish population so that the ratio of inactive older citizens does not rise above a target level of total labour force.

TARGET 5: SHARED GROWTH/SOCIAL EQUITY/SOLIDARITY – *"To increase overall income and the proportion of income earned by the three lowest income deciles as a group by 2017"*

I About the current target

(i) Is it the most appropriate variable to measure?

The first part of the target is largely meaningless given that nominal income will almost certainly rise over time due to both real growth being usually positive and non-zero inflation. It appears unlikely that in any year since records began in 1963 has nominal income in Scotland failed to rise.

On the second part of the target, the choice of the lowest *three* income deciles seems to be arbitrary. No evidence is provided to support why it should be the bottom three that need targeting. A better case might be made for the bottom decile on its own as it is here that inequality is greatest and where citizens face the greatest hardships.

However, government economists have informed CPPR that the data for the top and bottom deciles are not reliable/robust enough for meaningful analysis over time. This leads us to ask when does this data become reliable, or how can the data be made more reliable? In the latter case presumably an enhanced sample size would allow for the results for any decile to be considered on their own.

An alternative measure, and the one most commonly used in international studies of income inequality, relates to the Gini Co-efficient. This measures income inequality across households or individuals on a scale of 1 to 0, where 0 equals complete equality and 1 equals complete inequality (i.e. all income is held by one individual/household). A new target might be to have a low Gini Co-efficient that puts Scotland in the top quartile amongst OECD24 countries. In 2000, the OECD(21)[14] average was just under 0.30 (higher than in the mid 1990s and the mid 1980s), while the Scottish Gini was 0.34 in 2000-01. The Scottish figure has moved around a narrow band of 0.29 (2004-05) to 0.34 (2000-01) over the decade 1996-97 to 2005-06, with no obvious trend up or down. To be within the top quartile (top 5 countries), Scotland would need to be at or below 0.26. However, problems with the Scottish income data alluded to above would also affect the Gini calculation so that enhancement of the existing data would be needed to ensure the robustness of this calculation.

(ii) Is it maintainable?

The current target is not maintainable in the long term as it implies eventual convergence of all incomes. The same criticism would apply using only the bottom income decile.

The alternative Gini Co-efficient target would be more meaningful in the long term.

[14] 21 rather than the previously used 24 as there is no Gini data for Iceland, Belgium or Korea

(iii) What should the comparators and aim be?

As already discussed, the existing target should be amended to concentrate on the lowest income decile.

In the case of the alternative target, the comparators should be the OECD24 countries and the aim would be to be within the top quartile by 2017.

II About meeting the target

(i) What does economic evidence/theory point to?

Faster economic growth is usually very difficult to reconcile with greater income equality. The UK is an example of this in recent times, with faster growth usually leading to a higher Gini Co-efficient (see also the discussion under 'sustainability' in Section One). However, in Ireland there has been some decline in the Gini Co-efficient, from the mid 1980's to 2000, at a time of very fast growth.

Academic theory and research has so far proven inconclusive on the existence of a growth versus equity trade-off. While theoretical arguments can be made for a both a positive and a negative correlation between equality and growth, most of the recent research (see Helpman (2004)) has tended to find an insignificant or even negative correlation between the two, with the latter more prevalent in the case of high-income countries.

If growth is extended to the concept of well-being, or happiness, there is again mixed evidence over whether any one system outperforms another. While an individual's perception of their relative position in society is thought to contribute to their sense of well-being, no temporal correlation has been found between happiness and income inequality.

OECD data show that those countries with the lowest Gini co-efficients are the Scandinavian nations, Austria, the Czech Republic, Netherlands and Switzerland. This list tends to show that those with large public sectors and extensive welfare compensation systems perform relatively well in terms of income equality.

Even if it were accepted that income inequality slows growth or diminished well-being, little is understood about the channels through which this impact occurs. This makes it a particularly difficult target for which to prescribe relevant policy initiatives.

(ii) What do the Scottish Government and the Council of Economic Advisers point to?

The Scottish Government's Economic Strategy document does not point to any particular problem area or policy solutions, nor does the CoEA currently recommend policy proposals in relation to this target.

(iii) What is currently being done via Scottish and UK policies?

The UK Government is the prime mover here, with control of almost all taxation and benefit rates and levels. Since 1997 the UK government has introduced initiatives like the minimum wage and tax credits to boost the income of those on low incomes. Such changes have led to the cessation of the increase in income inequality observed over the 1980s and early 1990s. (See IFS and Philips, both (2008), for more details).

Post devolution there has been little that the Scottish Government has undertaken that would affect such figures. However, existing proposals for the move from council tax to a form of local taxation could have an impact, although what this might be cannot be predicted at present without greater detail on the structure and level of such a tax.

(iv) Where do we stand with meeting the target?

Currently the data is not of a sufficiently high standard to be able to tell in which direction either the existing target or the Gini co-efficient is heading. In particular, the top decile data looks surprisingly erratic and we have been advised that the data for both the top and bottom deciles is not robust enough to withstand analysis over time.

(v) Is current policy enough?

This is difficult to comment on as the Scottish Government has not outlined the desired scale of narrowing of income differentials. It seems highly unlikely that current policy is sufficient to result in a significant narrowing of the gap over the next 10 years, given the general drift, even under a variety of different economic and political conditions, in recent decades.

III Recommended revised target

To increase the proportion of income earned by the lowest income decile by 2017

OR

To lower Scotland's Gini Co-efficient so as to be within the top quartile of OECD24 nations by 2017

TARGET 6: SHARED GROWTH/REGIONAL EQUITY/COHESION – *"To narrow the gap in participation between Scotland's best and worst performing regions by 2017"*

I About the current target

(i) Is it the most appropriate variable to measure?

The Scottish Government's target actually measures the employment, rather than the participation, rate for the top 3 and bottom 3 local authorities.

Once again there is no clear rationale as to why the bottom 3 should be chosen as opposed to the bottom 1 or 5 local authorities; or of whether judgement should be made in comparison to the Scottish average or median or the top 1 to 5 local authorities, rather than the top 3. In fact the worst performing local authority, Glasgow, lies considerably below any other LA (with an employment rate of 66.7%, almost 2 full percentage points below the next worst LA, Inverclyde). Coupled with its size, the biggest LA in Scotland, this suggests that targeting Glasgow would be more productive at present.

However, from a wider perspective CPPR believes that if it is the reduction of inequality that is the main raisin d'etre for this target, then two fundamental changes are necessary.

First, we need to have a wider ranging measure of inequality based on a small number of key variables available for all areas, in order to give a more balanced view of the inequalities in the quality of life experienced across Scotland.

Second, there is a need to reduce the spatial scale for the target. For example, Glasgow local authority's general poor performance hides the fact that it contains many of the most privileged as well as many of the most deprived neighbourhoods in Scotland. Conversely Edinburgh has pockets of high deprivation within its overall high standing.

The best way of achieving both these aims is by using the neighbourhood statistics data that is available to the Scottish Government. In terms of scale, this alone breaks Glasgow down into 56 neighbourhoods and allows us to differentiate Drumchapel from Hyndland. These neighbourhood statistics incorporate 30 indicators and a subset might be employed for comparison e.g. income deprived, workless, GCSE's of S4 pupils, vandalism, longevity.

Narrowing this neighbourhood gap would be much more challenging than narrowing the gap between local authorities, but it would also be much more meaningful in terms of ensuring progress on cohesion across different parts of Scotland.

(ii) Is it maintainable?

The current target is not realistic in the long term as it implies eventual convergence of all employment rates. The same criticism would apply using any other similar measure.

The alternative use of neighbourhood statistics would need to be analysed in more detail before a sensible target was devised but a general aim might be to have all neighbourhoods within a set range (e.g. 10-20%) of the average or median score.

(iii) What should the comparators and aim be?

The comparators would be neighbourhoods, as defined on the Scottish Government website under 'Scottish Neighbourhood Statistics'.

II About meeting the target

(i) What does economic theory/evidence point to?

OECD statistics show that geographic concentration of unemployment has traditionally been highest in Australia and Canada and lowest in Denmark, the Netherlands and Ireland. Equally, disparities in participation rates have been highest in Canada and Germany and lowest in Sweden, Norway, the Netherlands, Ireland, Belgium and the Czech Republic.

Looking at wider measures of regional equity tends to show that, in general:

- the Scandinavian countries and Netherlands do well
- the USA and poorer countries (e.g. Turkey and Mexico) do badly

Ireland is an interesting example in that it targets cohesion through its six year National Development Plans, where specific funds are allocated to 9 Gateway centres in order to bring this cohesion about.

In general, regional equity is addressed by governments through public funding systems that allow for different regions to benefit from public services of a similar quantity and quality. In the UK the Barnett Formula is part of this system. Most countries have some sort of compensation system whereby those regions with a low tax base, relative to their population, receive transfers from those regions with a high tax base.

For those countries with generally the lowest inequality between regions, further government transfers (in the form of income and benefits supplements) tend to be more generous e.g. Scandinavia.

(ii) What do the Scottish Government and the Council of Economic Advisers point to?

The Scottish Government's Economic Strategy document points to variations in incapacity rates as a key factor along with earnings variation.

The CoEA currently have no recommended policy proposals in relation to this target.

(iii) What is currently being done via Scottish and UK policies?

Both Government's have in place policies to increase the employment rate (see Target 3), and presumably there is an expectation that areas with the highest levels of economic inactivity will benefit most from such policies. However, such an assertion is not backed by any hard evidence (e.g., see Adam and Thomas, 2007).

There are no government policies in relation to targets at the neighbourhood level. A Scottish Index of Multiple Deprivation is calculated for neighbourhoods in Scotland, based on 7 different domains (income, employment, health, education, housing, geographic access and crime). However, this is not used to target regional inequality, although it is intended to allow for "effective targeting of policies and funding" in order to tackle areas of high concentration of serious multiple deprivation.

(iv) Where do we stand with meeting the target?

Existing Target: Some progress would appear to have made in recent years, although the quality of the data may not be sufficient to say this with much certainty.

Alternative target: current policy is not geared to meeting this.

(v) Is current policy enough?

Existing Target: there is no reason to believe that current policy, which is not explicitly discriminatory towards those areas with the worst levels of inactivity, will be enough. Any future success is likely to be the result of other factors (such as some regions doing relatively better/worse in a downturn) rather than planned design.

Alternative target: no policy is currently in place to help achieve such a target.

III Recommended revised target

To narrow the gap in participation between Scotland's median and worst performing region by 2017

OR, in the longer term once more research has been carried out

To introduce a new Index of Equality for Scottish neighbourhood's and aim to reduce the gap between Scotland's median and worst performing neighbourhoods by 2017

TARGET 7: SUSTAINABILITY/INTERGENERATIONAL EQUITY/ ENVIRONMENT – *"To reduce greenhouse gas emissions over the period to 2011 and by 80% by 2050"*

(Note: these targets are subject to continuing consultation on the 2008 Scottish Climate Change Bill.)

I About the current target

(i) Is it the most appropriate variable to measure?

Targeting of a basket of six greenhouse gases, (GHGs) - carbon dioxide, methane, nitrous oxide and three types of fluorinated gases (sulphur hexafluoride, hydrofluorocompounds (HFC's) and perfluocarbons (PFC's) - is preferable to simply targeting carbon dioxide (CO2). This basket would then be measured in terms of tonnes of carbon equivalent, so taking account of the fact that some GHGs are more powerful than others.

There is also the question of whether the target should be based on source emissions (emissions produced in Scotland) rather than on an end user inventory (emissions consumed in Scotland). The source emissions route has the advantage of including exported energy related emissions, for example, but the disadvantage that all emissions could potentially be outsourced. The end user inventory route overcomes the outsourcing issue but brings back into play the energy exports issue. In practice, cognisance must be given to both routes.

An alternative target might be in terms of the maintenance of Scotland's stock of natural assets. The environment is actually a strong positive for Scotland and so the maintenance, or enhancement, of it could be seen as a more comprehensive way of ensuring that present and future Scots, as well as visitors, continue to benefit from it. This also allows for some of the more complicated environmental issues to be taken on board e.g. the environmental impact of wind power turbines versus nuclear power versus coal fired power stations can be assessed with a greater degree of finesse. Of course, in order to be able to do this would require a significant research project to assess the stock of natural assets and how it changes over time, as well as making difficult decisions over the environmental impact of the different sorts of energy sources alluded to above. However, in a wider sense a more comprehensive environmental target would allow for a better judgement of the condition of Scotland's environment and thus how "sustainable" is the level and growth of economic activity.

One possible way forward would be to develop an Index of Sustainable Economic Well-being (ISEW). This is an index that takes into account economic, social and environmental factors in order to show how prosperity is growing after some of the negative side effects of pure economic growth are taken into account e.g. crime, pollution and depletion of natural resources. An initial calculation of such an Index has been published by NHS Health Scotland, although this also highlights the shortfalls that currently exist in available data so that more work needs to be done to refine the index

and to make the findings more robust. However, such an index might be seen to be a better replacement for "increasing sustainable economic growth", rather than as an explicit environmental target.

(ii) Is it maintainable?

In the context of Target 7 this means that the quality of the environment should be "maintained"; however, using CO2 or all greenhouse gas emissions is a very narrow definition of the potential economic damage that can be caused by unregulated economic growth. In the past the damage done to our rivers, beaches, landscape, even the foundations for buildings in mining areas have all impacted negatively on the overall Scottish environment, not just the degree of air pollution.

Hence the need for a wider definition, perhaps one where each generation inherits the same net position in terms of the stock of natural resources. If this were to be the case we need a measure of the stock (adjusted for quality), as opposed to simply measuring carbon equivalent emissions. Different ways of reducing emissions would then be just part of a series of policies/initiatives to achieve this wider goal.

(iii) What should the comparators and aim be?

There are no comparators at present, simply a stand alone Scottish target. It would be useful to gauge where Scotland stands vs the OECD24 in order to judge the degree of ambition within these targets.

Another weakness of initial current target was the lack of emphasis on interim target between 2011 and 2050, a gap of almost 40 years. Decade by decade interim "guide targets" would be a useful addition, helping to promote sound market signals and instil a greater sense of business confidence and certainty all round. The Scottish Government has recognised this to some extent and intend to set an interim target to reduce GHG emissions by 50% by 2030. However, further interim targets may still prove useful.

II About meeting the target

(i) What does economic theory/evidence point to?

The economics of sustainable growth and of climate change are complicated.

As the Stern Report makes clear the reduction of GHG emissions will probably slow growth in the short to medium term, but this cost is likely to be more than offset by the long term savings in avoiding any sudden or catastrophic environmental changes which would come at an even greater cost in terms of economic growth. Stern also highlights the inevitable uncertainty over these costs and savings. The bottom line is that it is worth investing in GHG emission reductions in order to protect against potentially huge future

losses, or as the Stern Report puts it – "the benefits of strong and early action far outweigh the economic costs of not acting".

However, even within this basic position there could be short-term economic winners. If a country has a competitive advantage in areas of new technology that can support a change towards lower emissions, then it could grow faster even in the short-medium term. Scotland is potentially in this position given its abundance of renewable energy sources and the potential to build up and export physical output and skills/expertise in this area.

There is yet another debate over which type of low GHG energy sources are best. For example, the debate over nuclear vs renewables involves not just future cost projections but also: certainty of supply; moral judgement; geopolitical concerns etc. Often it is very difficult, if not impossible, to quantify these risks in financial terms.

One example of the dangers/difficulties of meeting such a target, while simultaneously achieving higher economic growth, is provided by Ireland. Whereas Scottish emissions are currently below 1990 levels, those for faster growing Ireland are approximately 25% higher than 1990 levels

(ii) What do the Scottish Government and the Council of Economic Advisers point to?

The Governments Economic Strategy document points to a problem with Scotland's ecological footprint, which is thought to be three times too large. This point was reinforced in a recent WWF report that found Scotland to have the 15th worst ecological footprint amongst 150 countries.

The CoEA currently have no recommended policy proposals in relation to this target.

(iii) What is currently being done via Scottish and UK policies?

The Scottish Government is concentrating on building on Scotland's natural advantage in the field of renewable energy sources. Scotland has an estimated potential for 25% of total EU wind and tidal power and 10% of wave power. However, the Scottish Government has also ruled out any further investment in nuclear energy on the grounds of future cost uncertainty. This approach restricts the options available to cutting future emissions and increases the risk of failing to meet its targets by opting for as yet unproven low carbon energy sources.

Until recently the UK government had a slightly less ambitious target of reducing emissions of carbon dioxide by 60% by 2050, but this has now been raised to match the Scottish target of 80%. There are a wide variety of policies in place to help achieve this target, covering the transport sector, the energy supply sector, the household sector and the business and public sector. These policies range from Emissions Trading Schemes, to carbon based duties and levies, to zero carbon homes.

(iv) Where do we stand with meeting the target?

Between 2000 and 2005 Scotland reduced its carbon emissions year-on-year, and by 12% overall, suggesting it is on line to deliver on this short-term environment target. However, in 2006 there was a 5.4% increase, mainly due to a switch to coal fuelled electricity generation caused by a rise in gas prices. This suggests that constant vigilance is needed to understand the true level of progress being made.

In comparison to OECD24 nations, Scotland is generally leading in terms of setting and meeting ambitious targets.

(v) Is current policy enough?

It is very difficult to make a judgement on this, particularly looking forward to 2050. However, decisions in relation to future energy sources will play an important role. In ruling out nuclear power and concentrating on renewables the Scottish Government is restricting its options. However, with the necessary commitment in terms of a strong planning policy and possibly considerable extra funding to encourage investment in both the necessary infrastructure and in improving the cost efficiency of renewables, the target may be achievable.

III Recommended revised target

To reduce greenhouse gas emissions over the period to 2011 and by 80% by 2050, and that this remains at least within the top decile of the OECD24 in terms of targeted cuts.

OR, in light of further research

To ensure future generations inherit the same stock of natural assets that Scotland currently enjoys. To survey these assets and measure their variation over time and to ensure that no significant deterioration below a 2010 baseline occurs.

CONCLUSIONS AND RECOMMENDATIONS

To begin, it might be worth asking the question – should we be setting any such Targets at all? After all, few, if any, other countries carry out a similar exercise.

Our answer is that, at this stage, the Targets are (a) a political reality; and (b) worthwhile as an expression of the Scottish government's priorities. As such they are worth engaging with and developing further. Apart from anything else, they highlight some of the difficult trade-offs that are inevitable in such areas.

If Scotland were to develop a greater capacity to produce a forecasting model of its economy then this might supercede the need for many of these targets. The feeding in of such forecasts to a National Plan, as happens in Ireland, might again lead to a different approach from the current one of Targets. However, at this stage, given the breadth and quality of data available, this does not appear to be an option.

It should be clear from earlier comments that we believe that Target 2 on Productivity is the most important one in terms of improving Scotland's long-term economic performance. Achieving Targets 1, 3 and 4 should all be assisted if an improvement to productivity can be made.

However, it remains very unclear what sort of short and long-term trade-offs there will be between the growth and the equity Targets. A judgement on this will need to be made over the years and any necessary adjustments made or we run the risk of serious underachievement by 2017.

There are a number of points in Section 2 where reference has been made to further work that needs to be carried out in order to discover the most appropriate target in a number of areas. This work is probably best carried out by the Government, or at least commissioned by them. In general an improvement in data quality is needed, even where it is already being collected, and existing surveys need to be bolstered in order to improve their reliability.

REVISED RECOMMENDED TARGETS: (all to be achieved on a maintainable basis)

TARGET 1: GROWTH –*To raise the GDP growth rate to the UK level by 2011 and to reach the second highest quartile of OECD24 countries by 2017*

TARGET 2: PRODUCTIVITY – *To rank in the top quartile for productivity in the OECD24 by 2017*

TARGET 3: LABOUR MARKET – *To raise the employment rate of Scotland to be in the top quartile of OECD24 members by 2017 - OR - To raise the employment rate of those over the age of 22 to be in the top quartile of OECD24 countries by 2017.*

TARGET 4: POPULATION – ***To match OECD24 population growth over the period from 2007 to 2017 – OR – To improve the demographic make-up of the Scottish population so that the proportion of inactive older citizens does not rise above a target level of the total labour force.***

TARGET 5: SHARED GROWTH/SOCIAL EQUITY/SOLIDARITY – ***To increase the proportion of income earned by the lowest income decile as a group by 2017 – OR – To lower Scotland's Gini Co-efficient to be within the top quartile of OECD24 nations by 2017***

TARGET 6: SHARED GROWTH/REGIONAL EQUITY/COHESION – ***To narrow the gap in participation between Scotland's median and worst performing region by 2017 - OR - To introduce a new Index of Equality for Scottish neighbourhood's and aim to reduce the gap between Scotland's median and worst performing neighbourhoods by 2017***

TARGET 7: SUSTAINABILITY/INTERGENERATIONAL EQUITY/ ENVIRONMENT – ***To reduce greenhouse gas emissions over the period to 2011 and by 80% by 2050, and that this remains at least within the top quartile of the OECD24 in terms of targeted cuts – OR – To ensure future generations inherit the same stock of natural assets that Scotland currently enjoys. To survey these assets and measure their variation over time and to ensure that no significant deterioration below a 2010 baseline occurs.***

Given these targets, what are the key "known" policies Scotland should pursue?

Given the evidence highlighted in this paper we believe that the most important issues that need to be addressed are:

- raising business R&D and innovation levels (see Target 2)
- trying out new forms of subsidised employment as active labour market policies (see Target 3)
- examining policies for increasing the employment rate of post 50 year olds (see Target 4)
- examining policies to reduce numbers on incapacity benefits (see Targets 5 and 6)
- making early decisions on energy investment choices, in particular over nuclear and renewable energy (see Target 7)

Some of these policies will need further research before the best option(s) for Scotland are known. In particular, Scotland more in-depth information on:

- the implications of an ageing society, in terms of both employees being older on average and citizens living longer.
- what long term energy policy it wishes to pursue

- how to deal with equality issues if growth issues can be overcome

On this last point, it is interesting that the USA is currently in the throes of such a discussion. Economists and senior officials like Larry Summers and Alan Greenspan are exercised over the issue of how to hold society together and to better share the spoils of increasing wealth. This is in large part caused by the fact that while the distribution of shares of national income between capital and labour have not changed much in the last half century, how labours' share is distributed has changed, with the lower skilled losing out.

Finally, a word on the current financial crisis engulfing world markets and impacting on economies: relative shifts and trends are more difficult to decipher during a downturn as any apparent gains on comparator countries may turn out to be temporary. It will only be when real positive growth rates return that a more considered judgement can be made. This may not be by 2011 but it should, hopefully, be possible by 2017.

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