CPPR
Centre for Public Policy for Regions

Scottish Government Budget Options

Briefing Series No 1

SPENDING ON SCHOOL EDUCATION

October 2009

CONTENTS

CPPR BRIEFING PAPER ON SPENDING ON SCHOOL EDUCATION

EXECUTIVE SUMMARY

- This is the first of a series of briefing papers by CPPR which will look at the potential for maintaining the quantity and quality of public services in Scotland as the Scottish Government manages the upcoming real terms budget reductions.

- School education has been chosen as the existing levels of spending per pupil in Scotland appear high relative to the other home nations (England, Wales and Northern Ireland).

- A closer look at funding levels suggests that Scotland appears to benefit from a considerably higher spend per pupil than elsewhere in the UK. Initial figures put this figure at between 23 and 82%, BUT…

- …this finding is very much provisional as the comparability of data across nations is subject to much uncertainty.

- Nevertheless differences in funding per pupil are of such a scale that further work urgently needs to be done to understand better the true relative funding position.

- Even within Scotland there is considerable variation in spend per pupil (on the mainland alone +/- over 10% from the Scottish average). Some of this is understandable in terms of sparsity, e.g. the island local authorities (LA's), or relating to deprivation levels, e.g. Glasgow. However, much variation remains across LA's that is difficult to explain. For example, Stirling has above average attainment results but is in the bottom 3 of spenders (per pupil).

- A recent Audit Commission paper highlights the variation in spend for basic costs in English LA's and the uncertainty over what increases in spending over the last decade have had the biggest impact on attainment results. Figures for both Scotland and England show spend on "other employees" rising faster than spend on teachers.

- In terms of attainment, Scotland has flatlined since devolution while each of the other home nations has improved, particularly England.

- International studies also show that while Scotland's overall position is quite high, in recent years it has either stood still or declined, in relative terms.

- In terms of what initiatives might be best to pursue, academic evidence suggests that attempting to improve teacher quality as opposed to reducing class sizes may offer the best returns.

- Unfortunately the same evidence shows that it is not easy to achieve improvements in teacher quality.

- The introduction of greater incentives, in terms of greater parental choice or in terms of greater rewards for top performing teachers, may offer scope for further improvements without the need for increased funding.

- Overall, it seems there may well be scope to cut spending without necessarily worsening quality, OR, of improving quality with the same funding level.

- Based on data in this report it is estimated that replication of best practice across Scotland and the UK might result in the saving of between £340-680mn on school funding.

- However, further research is needed on exactly how to do this and on collection of the basic data that will allow for proper comparability of school inputs and outputs.

CPPR BRIEFING PAPER ON THE SCHOOL EDUCATION BUDGET

1. INTRODUCTION

The briefing note looks at spending on schools level education in Scotland and how it might be amended in light of the impending downturn in Budget prospects for the Scottish Government.

It looks at the potential for savings from the existing Budget and then considers how school education might be improved within that Budget. In other words it offers a choice of attempting to reduce spending without reducing quality OR one of increasing quality without increasing spending.

It should be emphasised that, at this stage, the findings are more indicative than prescriptive. This is inevitable given the poor level of research and understanding we have of what our education service currently delivers. To form firm recommendations for future funding requires more analysis of the data discussed here. However, it is hoped that the following highlights the issues that still need to be understood better.

The note examines the following elements:

- relative funding levels across the UK
- relative attainment levels across the UK
- international evidence on attainment and funding
- differences in funding and attainment across Scotland
- evidence on successful, or otherwise, school education policies
- recommendations for further analysis.

It is important to stress that CPPR believes that a good, well funded, school system is essential in order to help provide:

- a productive economy
- a stable society
- equality of opportunity

and that to achieve this the position of teachers within society is such that potential new teachers find the career to be an attractive one. If this is the case then the education system will have a wide variety of potential teachers to choose from and so should lead to an improvement in the quality and suitability of future teachers.

The purpose of this paper is therefore not to find a cheap alternative to the existing school education system but rather to see if the significant expansion in school spend over recent years has been well spent or whether some savings could be made. It also seeks to identify potential savings from the application of best practice at both a domestic and international level.

Having done this the analysis leaves open the options of either, identifying cuts that should have little or no impact on existing quality in schools, or, of attempting to improve quality but from the existing schools budget rather than a rising one.

2. INPUTS: Funding levels across the UK

Before looking at figures on funding it is worth stressing the difficulties inherent in trying to make comparisons, even across the four home nations of the United Kingdom. There may be differences in for example, starting ages; how long pupils attend at different types of school; how funds per pupil are aggregated; how funds are accounted etc.. Indeed a recent report to the Northern Irish government avoided making such comparisons due to these potential inconsistencies.

However, we have included them here precisely because (a) the differences are so dramatically large and (b) they show Scotland to be the highest spender by a considerable margin. It is then hoped that these stark results might spur others to collect and analyse the data in more detail and allow for properly adjusted comparisons.

Primary and secondary education

Scotland's per pupil spend would seem to be well above that experienced in England, Wales or Northern Ireland, although it is difficult to obtain precise data for such comparisons. The reason(s) for such differentials are not clear.

Table 1 below shows some comparisons.

Table 1: Spending on primary & secondary education in Scotland, England, Wales & Northern Ireland – 2007-08 (£)

Spend per pupil	**Primary**	**Secondary**
Northern Ireland	2,544	3,923
Wales	3,212	3,865
England	3,580	4,620
Scotland	4,638	6,326
PESA figures		
England	5215	
Wales	4326	
Northern Ireland	3950	
Scotland	6418	

Sources: The Primary Review independent enquiry into the condition and future of primary education in England; House of Commons Library Note on Unit funding and expenditure in (English) education; Northern Ireland Assembly Research paper on Primary School Funding; Expenditure on school education in Scotland, 2007-08 statistics; and PESA 2009.

The scale of the differences between Scotland and Wales and Northern Ireland, at 50%+, are scarcely credible and particular attention needs to be paid to further understanding them.

Despite the data health warnings, the clear and consistent message from table 1 is that all of the figures show that Scottish spending per pupil is well above that seen in any of the other nations of the UK. In addition, this differential is not trifling but ranges between 23% and 82%. While the figures for Wales and Northern Ireland seem especially low in relation to Scotland, at around only 2/3rds, they are consistent across the different Education Departments figures and the PESA figures.

Box 1: Important areas of concern over data comparability.

Great caution is necessary in considering the figures shown in table 1 as they may not be entirely consistent. For example, the PESA data used to calculate per pupil spend is higher across the board than for other figures. PESA data also suggests that Scotland's advantage lies very much in the Primary school sector. Problems with allocation across spending sectors in PESA are not unknown and so care should be taken in interpreting these figures, but they are published by the Treasury as an accurate reflection of spending patterns.

Further uncertainty exists in relation to the non PESA figures. For example:

- pre-primary and special school spend should have been excluded but it is not certain whether this has been done on an entirely consistent basis;
- data is in relation to LA maintained schools only, although the position of quasi independent schools is uncertain. In addition, the mere fact of excluding private fee paying schools can have an impact e.g. in their higher than average post 16 staying on rates;
- data excludes capital spend, although in Scotland some (minor) revenue contributions to capital are included;
- data on which support services are included across each country is particularly uncertain;
- the position of post 16 pupils can effect figures, in relation to both the rates staying on (post 16 education tends to be more expensive) and to whether this education is carried out at school or at a Further Education college.

All these reasons highlight the reason for caution in drawing conclusions, but rather than avoiding comparison we think that this simply highlights the need for further work to finesse the above results.

Where comparisons have been thought valid across the UK, they have found that Northern Irish spend on Primary education per pupil was around 17% less than in Wales, but with no difference at Secondary level. Also that English spending, overall, was around 10% higher than in Wales. This data supports the ranking in table 1 of N.I. having the lowest per pupil spend, followed by Wales, then England.

Why might this be so?

There are a variety of reasons that could help explain this finding:

- higher unit costs in Scotland e.g. staff costs
- lower school and/or class sizes in Scotland for policy reasons
- lower school and/or class sizes in Scotland for non policy reasons e.g. sparsity

Table 2 highlights some existing differences:

Table 2:

Measures		Scotland	England	Wales	N. Ireland
Pupil-Teacher ratio	- Primary	17.1	22	20.7	20.5
	- Post-primary	12.3	16.6	16.7	14.4
Average size of school	Primary	180	238	172	230
	Post primary	824	980	945	660
Schools per 1000 pupils	- Primary	5.57	4.2	5.82	5.31
	- Post primary	1.21	1.02	1.06	1.51
Persons/km sq		65	385	142	126

Source: Report of the Independent Strategic Review of Education, Northern Ireland government paper, 2006

On sparsity, due to geographical differences across nations, the evidence is inconclusive. While greater sparsity, especially in the Highlands and Islands, suggests higher implicit costs of providing education in Scotland as against England, it is not clear that this inequity would account for a large discrepancy.

When the Treasury was looking at relative needs in the mid 1980's its estimate of the sparsity factor in relation to schools was that it only increased current expenditure needs per capita by 2.6% over English needs. The recent House of Lords Barnett Formula study also suggests that such a sparsity factor might be slight, worth only 1-2% extra.

In other areas where geography and sparsity might be thought to be related to higher relative spend, for example law and order, Scotland has a lower per head spend than England.

Staffing costs are missing from table 2 as it is difficult to get comparable estimates across countries due to differences in terms and conditions, wage structures and the like. However, OECD data suggests that, in general, salaries are higher in Scotland than in England although not by a large margin.

At present it is impossible to be certain how much higher spending is warranted in Scotland and how much is due to deliberate policy choices, but with greater time and effort it should be possible to get a better understanding of the existing reasons for the inequality in spend than currently exists.

3. **OUTPUTS – attainment levels across the UK and in international studies**

Scotland's apparent higher level of input, in terms of spend per pupil, might be justified if we could show that it delivers greater outputs. So what evidence is there for this?

The core measures used here to compare outputs are: examination results in the final year of compulsory education and international survey results.

UK attainment levels across the UK in the last year of compulsory education (16)

School pupils results in the last year of compulsory education show that England, which lagged Scotland in 1998/99, had caught up with and overtaken Scotland by 2006/07, see Table 3A. This relative improvement has come about through a considerable raising of the English results while those for Scotland have remained largely unchanged. Both Wales and Northern Ireland have also seen improvements over time, although not as dramatic as for England.

Table 3A: ATTAINMENT DATA: the % of pupils in their last year of compulsory education who achieve 5 or more grades A-C GCSE's or SNQ equivalents

%	1998-99	2006-07	Change (in % points)
Scotland	57.8	57.5	-0.3
England	47.9	62	+14.1
Wales	47.5	54.2	+6.7
Northern Ireland	56.0	64.5	+8.5

Table 3B: ATTAINMENT DATA: the % of pupils in their last year of compulsory education who achieve grades A-C GCSE's or SNQ equivalents by selected subjects

%		Scotland	England	Wales	N. Ireland
English	98-99	70.6	52.7	52.1	58.7
	06-07	69.8	60.2	58.9	62.9
	change	-0.8	+7.5	+6.8	+4.2
Maths	98-99	50.9	44.9	42.9	48.8
	06-07	48.3	54.6	50	54.7
	change	-2.6	+9.7	+7.1	+5.9
Any Science	98-99	60.7	45.7	47	44.2
	06-07	57	51.3	48.7	59.5
	change	-3.7	+5.6	+1.7	+15.3
Any Modern Language	98-99	50.4	39.2	26.8	43.9
	06-07	48.6	30.9	21.1	43.5
	change	-1.8	-8.3	-5.7	-0.4

Sources: Regional Trends 35, 41.

Table 3B shows results across the four home nations broken down by subject. It shows Scotland occupying the top position in all the subjects shown in 1998-99. However, by 2006-07 this lead has either narrowed, as with English, or disappeared. In Maths, Scotland has fallen from first to fourth. Only in Modern Languages has Scotland retained its lead, although, even here its attainment level is a little down on 1998-99.

International Survey evidence

There are three international surveys of school pupils that identify results for both Scotland and England:

- TIMSS (Trends in International Maths and Science Survey, run by the IEA), which assesses 10 and 14 year olds
- PIRLS (Progress in International Reading Literacy Study, also run by the IEA), which assesses 10 year olds
- PISA (Programme for International Student Assessment, run by the OECD and covering maths, science and reading), which assesses 15 year olds

The surveys are occasional rather than annual but some conclusions can be drawn from comparing the findings of those conducted around the time of devolution with those found in the most recent surveys.

Table 4 shows that within the UK the picture is mixed, but with a slant in favour of England. TIMSS finds that, in general, England's scores are significantly higher than Scotland's scores in both Maths and Science and that this difference widened between the survey years of 1995 and 2007.

PIRLS finds that while the England reading score fell by more than the Scotland score between 2001 and 2006, it remained significantly higher.

PISA found that while the scores for both England and Scotland had fallen for all three measures of Reading, Maths and Science between 2000 and 2006, the scores were not significantly different under any of the three measures. Relatively, this is a slight improvement over the piece for Scotland, which had lagged behind England in Science in 2000.

Table 4 International Education Surveys

			Scotland	England
PISA	Maths	2000	533	529
		2006	506	495
	Science	2000	522	533
		2006	515	516
	Reading	2000	526	523
		2006	499	496
PIRLS	Reading	2001	528	553
		2006	527	539
TIMSS	Maths	1995	493-493	484-498
		2007	494-487	541-513
	Science	1995	514-501	528-533
		2007	500-496	542-542

Data sources: OECD website; TIMSS & PIRLS International Study Centre; Scottish Government "Highlights from Scotland's Results" reports on TIMSS (2007), PIRLS (2006) and PISA (2006). The ranges shown under TIMSS show the results at 4th grade and 8th grade, i.e. roughly 10 and 14 years of age. For PISA and PIRLS the ages tested equate to 15 and 10 respectively.

While there are problems in all these surveys with regards to issues like strict comparability and sample size, nevertheless they are taken seriously by participating countries. Hence, when the TIMSS report came out late last year the Scottish education minister commented that the ***"survey highlights unacceptable failings in Maths and Science in Scotland's schools and confirms the urgent need to act"*** and that while Scotland stood still, other nations "***pushed by***", or, as in the case of England, further ahead.

Overall, the recent picture for education looks better for England than for Scotland. In some senses a slight relative English improvement in this area would not be a surprise, as there was scope for catch-up with the higher Scottish rates of pre devolution. Nonetheless, the UK and international results look disappointing from a Scottish perspective and brings into question the impact that relative changes have had across the different borders of the UK. In particular, what benefits has the Scottish schooling system received as a result of the McCrone agreement in 2001, (which was supposed to improve the conditions of service and pay for teachers and so provide an improving ***"world class education service"***) and what benefits are accruing from the continuing higher spend per pupil in Scotland?

There are also issues that could be further investigated like the degree to which exams have become easier to pass. There is some evidence for England that, at 'A' level standard, the improvement in attainment levels may be due in large part to the ability to do re-sits and to greater 'teaching to the exam'. However, it is not clear the degree to which this might also have occurred in other countries.

4. WITHIN SCOTLAND – comparison of spending and attainment levels across Scottish LA's

Further potentially useful information on spending variation comes from within Scotland. Table 5 shows the expenditure per pupil in primary and secondary schools by Local Authority (LA) alongside their exam achievements.

Table 5: Gross revenue expenditure per pupil in primary and secondary schools by LA and exam achievements by in terms of 5 or more good standard grades and by the Unified Points Score Scale (UPSS), 2006-07

Local Authority	Primary spend p.p.	Secondary spend p.p.	5+ good grades (%) A	UPSS B	Ranking [A]	Ranking [B]
Scotland	100 (£4403)	100 (£6120)	57.5	267		
Aberdeen City	114	111	54	257	23	18
Aberdeenshire	98	102	67	273	5	7
Angus	89	94	56	261	22	13
Argyle and Bute	120	108	64	258	7	17
Clackmannanshire	94	92	51	258	28	15
Dumfries & Galloway	107	105	58	257	17	16
Dundee City	95	105	46	233	31	29
East Ayrshire	93	97	54	236	25	26
East Dunbartonshire	98	100	75	298	1	2
East Lothian	106	110	62	273	9	6
East Renfrewshire	100	102	70	302	2	1
Edinburgh City	103	106	57	272	20	8
Eilean Siar/Western Isles	186	157	59	257	13	19
Falkirk	100	104	53	240	26	23
Fife	103	97	54	261	24	14
Glasgow City	106	115	45	210	32	31
Highland	101	100	62	267	10	10
Inverclyde	100	98	61	235	11	24
Midlothian	98	104	59	238	14	24
Moray	90	89	65	242	6	22
North Ayrshire	105	93	50	233	29	27
North Lanarkshire	101	95	51	216	27	30
Orkney Islands	158	125	67	262	4	12
Perth & Kinross	101	96	58	280	18	4
Renfrewshire	95	92	61	246	12	20
Scottish Borders	97	98	62	277	8	5
Shetland Islands	152	171	70	270	3	9
South Ayrshire	109	101	59	265	15	11
South Lanarkshire	95	90	57	244	19	21
Stirling	86	91	59	288	16	3
West Dunbartonshire	113	103	48	201	30	32
West Lothian	94	93	57	236	21	25

Sources: Expenditure in School Education in Scotland, 2007-08, Scottish Government; Subregional examination achievements, 2006-07, ONS Regional Snapshot

While there is a fair degree of correlation between spending per pupil and attainment levels, there are also some intriguing comparisons.

- Clearly the Island LA's have much higher costs for obvious reasons. Also, Glasgow has high spend and poor attainment but this needs to be considered in light of it's containing much of the worst areas of multiple deprivation in Scotland.

- Stirling has a very low spend at both primary and secondary level but good (UPSS) to average attainment results.

- In contrast, Aberdeen City has a high spend per pupil at both school levels but below average results.

- East Dunbartonshire and East Renfrewshire come out as the top two performers although both spend at just around the Scottish average level.

- It is also interesting in terms of the costs relating to sparsity that Highlands, which achieves above average results, has a spend per pupil no different to the Scottish average.

The recent Audit Commission report for England on improving economy and efficiency in schools found great variation between school's spending on standard items, which suggested considerable scope for savings. They also found that since 1997 there were, in England, 32,000 more teachers; 100,000 more teaching assistants; and 70,000 more support staff, to attend to 80,000 fewer pupils.

Some of this variation in resources increase has also been seen in Scotland. Between 2002-03 and 2007-08, expenditure on teachers at both Primary and Secondary schools increased by almost 30%, while, again in both cases, expenditure on "other employees" rose by over 50%.

In both Scotland and England further work is needed to understand the relative benefit to pupils of the growth in these different types of staff.

Clearly greater analysis of the figures in table 5 is necessary in order to take into account important factors like socio-economic background, but they do offer the opportunity for lessons to be learned in terms of best practice that could be applied across Scotland and result in net savings to the Scottish Budget.

5. IMPLICATIONS OF INPUT AND OUTPUT STATISTICS

A significant funding gap appears to exist in favour of Scotland. However, this funding gap does not seem to have led to an improved relative performance, rather, Scotland's attainment levels have worsened relative to those of England, Wales and Northern Ireland.

In terms of examination achievements in the last year of compulsory education, Scotland has stood still while English results have improved markedly.

Furthermore, the Head of the UK Audit Commission has recently highlighted the need to include Education (and Health) in the search for any Spending Review efficiencies. In particular, the Audit Commission has published a paper which questions the existing efficiency seen in English schools. If that is the case in England then it simply reinforces the case for taking a close look at Scottish spending on schools.

This leaves us with a worrying picture of much higher spend in Scotland but with no resulting higher output, in terms of levels of attainment, or faster growth in outputs.

What then might be the best ways to use the extra money already in the system to improve the quality of education in Scotland?

6. POLICIES FOR SUCCESS – evidence over what does, and what doesn't work

There is an increasing literature from across the world on what works in terms of improving school performance. The general thrust of this literature is summed up by the OECD in their Education Today Perspective (Jan 2009). Under the Schools section the policy priorities are outlined as:

- "emphasise teacher quality over teacher quantity"
- ensure teachers have the best skills by (i) making entry more flexible and (ii) making the criteria for selection more rigorous
- ensuring strong leadership within schools
- continual development of teachers skills

The OECD do not recommend any particular style of school structure as most effective but recent research has come up with some interesting findings.

First, smaller class sizes are not strongly correlated with higher attainment. This is hinted at in the first of the bullet points above but it is also a common finding in research publications. For example, in the USA the 3 states with the largest reductions in their student to teacher ratios between 1995 and 2005 (Alaska, North Dakota and Rhode Island) all registered a decline in performance relative to the rest of the US.

The principle reason for this finding could be associated with the concern of a number of researchers that the effects of class size reduction are offset by the effects of teacher quality reduction. Research suggests that while some benefits are achieved in

early years of education, these gains dwindle over time and are relatively expensive to achieve.

Second, non-selective schooling can be the most successful system. The best example of this is Finland, which tops the international education league and which teaches to mixed ability classes. It does not do this without intervention though and where a student is falling behind they receive support from 'special education' teachers.

Research also suggests that the effects of streaming can be quite large for lower ability groups but the gains for high ability groups are quite small.

Taken together these two findings act as a big challenge to commonly perceived solutions to Scottish schooling issues. Often the discussion revolves around the issue that classroom sizes are too big and that mixed ability classes slow overall progress. Furthermore, the inference is that both these issues allow for unruly behaviour by a minority to reduce teaching effectiveness.

Again, research suggests that in a bad school system this may occur but it doesn't have to. The key to getting it right appears to lie in the quality of the teachers employed. Well trained teachers with the right skills and back up will produce the best results. This is what lies behind the success in Finland, Alberta, Singapore etc. It is not the number of teachers but the skill of the teacher that results in success. In each of these places teachers are not that plentiful, in terms of teaching to small classes, but are carefully selected into an attractive profession with good compensation.

However, as Hanushek and others point out it is not a simple task to identify how to improve teacher quality as correlations between quality and other measures have yet to be firmly established.

Some pointers in the right direction might be seen from:

- greater flexibility and screening in attracting would be teachers
- increased pay and status
- improved incentives in terms of pay (for teachers) and vouchers (for schools) to try and identify and reward high performance

Where does Scotland stand in international terms? In 2007 the OECD published a report on the Scottish education system. In relation to schools it found:

- good overall performance
- large performance differences within schools rather than between schools
- a significant correlation between poor performance and socio-economic background

These results can be taken to be consistent with the evidence based findings above. Performance differences within schools suggests that it is individual teachers rather than individual schools that are having a greater impact. The socio-economic finding suggests that schools and teachers are not having the impact we know that they can do in terms of raising the standard of those children who come to school with lower knowledge and skills levels.

The answer would seem to be suggested by the finding that we should emphasise teacher quality over teacher quantity. If a way can be found to do this then Scotland could both improve overall performance and at the same time reduce inequity.

However, if we compare the attributes of the Scottish school system with those of the Finnish system it is difficult to spot significant variations that point to easy to adopt initiatives. For example, on wages, which can affect the standard of student who trains to be a teacher as well as the perceived standing of the profession in a country, OECD data suggests that Scottish teachers are better off than Finnish teachers. Whilst this result emphasizes the difficulty in identifying policies that improve teacher quality, as measured by outputs (attainment) rather than inputs (teachers experience and personal qualifications), it also highlights the potential to improve Scottish educational standards without necessarily increasing the associated costs.

One way of approaching this policy dilemma is to further investigate and experiment with new incentives to improve quality. This can be done from the demand side, by introducing greater parental choice, or from the supply side, by introducing increased teacher payment directly related to performance.

Research on US teachers and survey results of English teachers suggest that the relative academic ability level of teachers has been falling over time, particularly in subjects like science where salaries may be uncompetitive. Again, this provides a strong challenge over how to improve teacher quality without increasing costs, unless you also accept larger class sizes.

Interestingly, some of the pointers above may at first suggest some contradiction in relation to the effect of the McCrone deal to improve wages and conditions. However, the McCrone deal only dealt with part of the equation as, for example, it left the same teachers in place.

In recent years it has been the quantity of the inputs rather than the quality of the inputs that has been concentrated on when trying to improve the quality of the outcome. As a result the obsession by Scottish political parties over issues like class sizes should be re-assessed and efforts re-focused elsewhere.

All this will take time to change but the debate must change first, away from “common sense” arguments and towards “evidence” based findings.

7. POTENTIAL SAVINGS

As a rough approximation, using information from Tables 1 and 5, and averaging across Primary and Secondary schools, we have calculated the potential size of savings that could be made:

- if spend per pupil was the same as in England, i.e. roughly 20% lower on average than in Scotland, this would be save roughly £1000 per pupil, or around £680mn in total
- if spend per pupil was the same as in Stirling, i.e. roughly 10% lower on average than in Scotland as a whole, this would save roughly £500 per pupil, or around £340mn in total

No similar calculation has been done at an international level, but, in the longer term at least, the evidence from Finland suggests that structural changes could be put in place that would improve the quality of Scottish Education but without increasing the cost.

8. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this briefing note has not been to provide answers but to provide pointers to where further analysis needs to be undertaken in order to explore the scope for making cuts to the education budget in Scotland that might at the same time have little or no negative impact on its quality.

At first glance there would appear to be considerable scope for such savings. Evidence from within Scotland, within the UK and across the world, all point to ways of providing as good a service but for less cost. In some cases the suggestion is that these savings could be considerable.

However, in order to ensure that these findings are robust more research needs to be undertaken in order to understand the data and to ensure that it is truly comparable.

On Inputs

- improved comparability and understanding of the spend per pupil data
- better understanding of the financial implications of factors like sparsity as against deliberate policy choice

On Attainment

- greater understanding of whether “grade inflation” has had any differential impact across countries. In particular, the impact of issues like exam resits and “teaching to the exam”.

On Incentives

- the strength of evidence on which work
- how to integrate into the existing system without causing disruption
- how to affect change in a consensual way

At present far too little evidence exists of how quality and cost effective the Scottish system is. It would be ideal if all interested parties (i.e. parents, children, teachers and government) worked together to improve our information base and then openly discussed the potential of various alternatives to improve Scotland's school level education.

In the current financial environment, evidence-based policy is essential in ensuring scarce resources are allocated where return is best and in deciding which incentives are the most suitable to attract and retain the best teachers.

REFERENCES

- Audit Commission – Valuable Lessons – improving economy and efficiency in schools, 2009
- Blatchford, P. – Class size, in Psychology of Classroom Learning, an Encyclopedia, Detroit: MacMillan, 2009
- Civitas – A-level teachers views on today's A-levels, 2009
- Eide, E., Goldhaber, Brewer – The Teacher Labour Market and Teacher Quality, Oxford Review of Economic Policy Vol 20 No 2, 2004
- Day, Christopher et al – Effective Classroom Practice: a mixed method study of influences and outcomes, ESRC, 2009
- H. M. Treasury – Public Expenditure Statistical Analysis (PESA), 2009
- House of Lords – Select Committee on the Barnett Formula Report, 2009, HL Paper 139
- Hanushek, E. A. – Efficiency and Equity in Education, NBER, 2001
- International Association for the Evaluation of Educational Achievement (IEA): PIRLS and TIMSS results (various years)
- Noden, P. and West – The Funding of English Primary Education, The Primary Review Interim Report 10/1, 2008
- Northern Ireland Assembly Research and Library Services – Research Paper 76/08, Primary School Funding, 2008
- Northern Ireland government – Report of the Independent Strategic Review of Education, 2006
- OECD – PISA results (various years)
- OECD Insight – Human Capital, 2007
- OECD – Education Today the OECD Perspective, 2009
- OECD – Quality and Equity of Schooling in Scotland, 2007
- OECD – Teachers Matter: Attracting, Developing and Retaining Effective Teachers, 2005
- OECD – The Finnish Success in PISA and some reasons behind it, 2003
- OECD – Education at a Glance, 2009
- Reform Scotland – Parent Power, 2009
- Regional Trends – ONS
- Reynolds, D. – Funded to Fail: How the Welsh Assembly Government cheats our children, 2008/09
- Rivkin, S.G., Hanushek and Kain – Teachers, Schools and Academic Achievement, Econometrica Vol 73 No 2, 2005
- Scottish Executive – CSWG 2006 Review
- Scottish Government – PISA 2006, Highlights from Scotland's results, 2007
- Scottish Government – TIMSS 2007, Highlights from Scotland's results, 2008
- Scottish Government – PIRLS 2006, Highlights from Scotland's results, 2007
- Scottish Office – website has various documents relating to discussions between H.M. Treasury and the Scottish Office over relative needs from 1984
- Smithers, A. and Robinson – The Good Teacher Training Guide 2009, University of Buckingham Centre for Education and Employment Research
- Whelan, F. – Lessons Learned, How Good Policies Produce Better Schools, 2009