

## Education

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Category	Sub category	Data type	Data source examples
Pre primary education		Number of pupils*	School census
Primary education		Number of pupils*	School census
Secondary education		Number of pupils*	School census
Special Education		Number of pupils*	School census
Initial Teacher training (ITT)	Primary and secondary undergraduate/postgraduate	Number of trainees	HEFCW Higher Education Students Early Statistics Survey Scottish Funding Council
Healthcare training	Nursing, midwifery, chiropody, physiotherapy, occupational therapy etc	Number of new entrants	Health Education England (HEE) Higher Education statistics agency (HESA)

## Quality

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### System of National Accounts 2008

“The “output volume method” is the recommended method for compiling indicators of volume change of non-market services. The method is based on quantity indicators, **adequately quality adjusted**, weighted together using average cost weights”.

## Quality

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### European System of Accounts 2010

“In the European Union, given the conceptual difficulties and the absence of consensus on output methods adjusted for quality (based on outcome), such methods are **excluded** from the central framework in order to preserve the comparability of the results.”

### Education - Schools- GCSE Average point score\*

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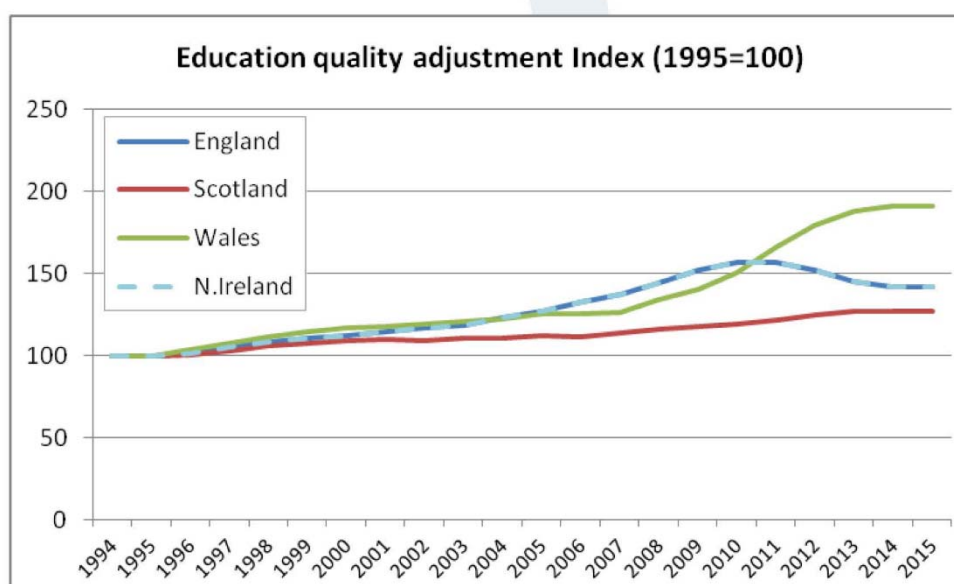
Pass Grades	Pass Points
A*	8
A	7
B	6
C	5
D	4
E	3
F	2
G	1

## Education - Schools- GCSE Average point score\*

Pass Grades	Number of subjects		Pass Points	Total
A*	5	x	8	40
A	2	x	7	14
B	2	x	6	12
C	2	x	5	10
D	0	x	4	0
E	0	x	3	0
F	0	x	2	0
G	0	x	1	0
Total GCSE		11	Total points	76
Average point score (Total points/total GCSE)				6.9

Percentage of pupils attaining 5 A\* GCSE

## Education - Schools- Quality measure\*

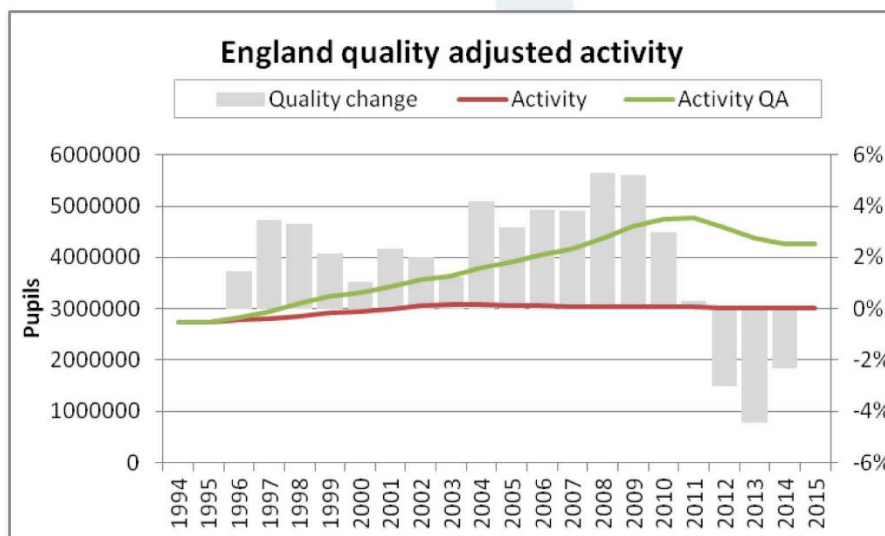


Percentage of pupils attaining 5 A\* GCSE

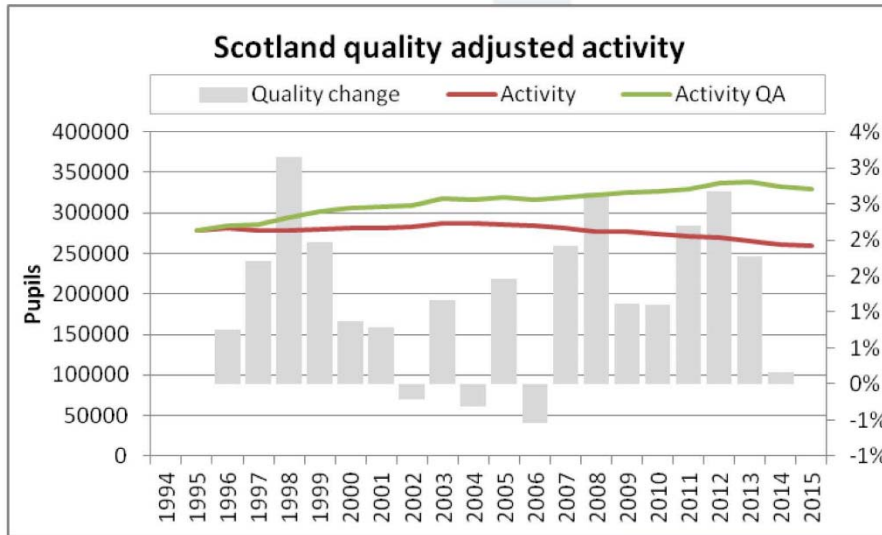
## Education - Schools- Quality measure\*

$$\frac{\left( \frac{\text{Attendance adjusted}}{\text{pupils numbers}} \right) \times \left( \frac{\text{Quality}}{\text{index}} \right)}{100} \times \text{Cost weight}$$

## Education - Schools- Quality adjustment

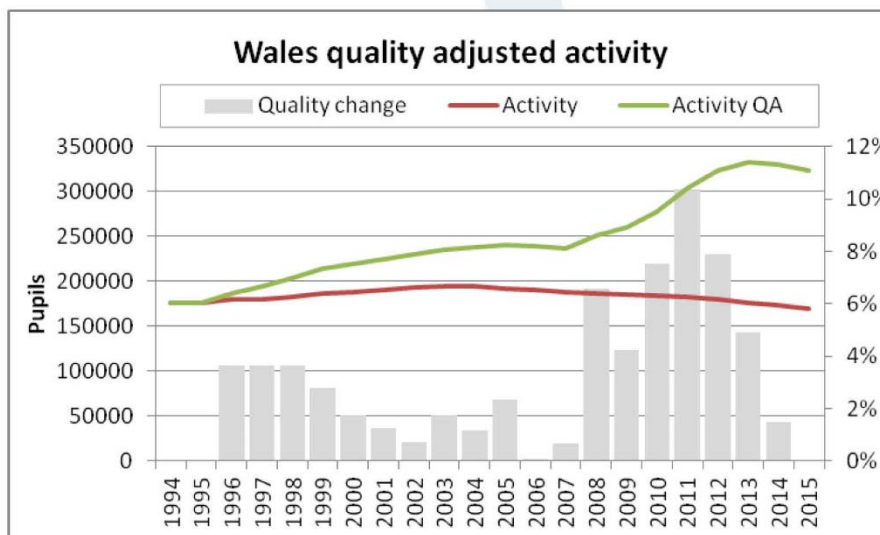


## Education - Schools- Quality adjustment



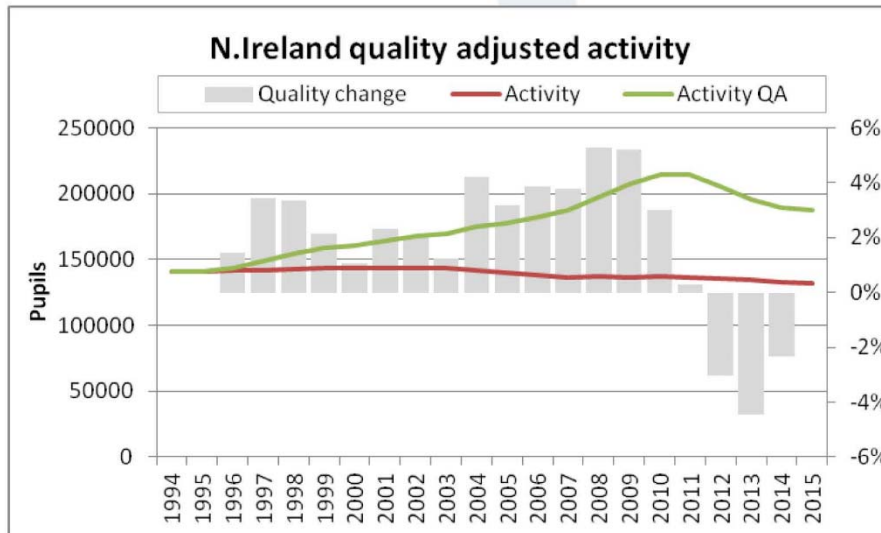
Percentage of pupils attaining 5 A\* C

## Education - Schools- Quality adjustment



Percentage of pupils attaining 5 A\* C

## Education - Schools- Quality adjustment



Percentage of pupils attaining 5 A\*

## Quality – Eurostat task force

### Input indicators that can be used to adjust for changes in quality

- **Class size.** Pupil/teacher ratios are proposed as indicators of quality. However, it is recommended that this is based on a sound analysis of the relationship between the ratio and the quality of classroom teaching.
- **Teacher's education or skills.** The teacher's education is essential for the teaching consumed of pupils.

#### Advantages

Easy to measure  
Data is available

#### Disadvantages

not known if there is a  
relationship between  
class size and quality

## Quality – Eurostat task force

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### Output indicators that can be used for quality adjustment

- Quality of education could be measured through school **inspections**. This would mean using the quality judgments made about schools in inspections.
- **Student satisfaction surveys** for tertiary education

#### Advantages

- consistency in inspection standards across schools
- cover all aspects of education

#### Disadvantages

- changes its inspection procedures
- Schools prepare for inspection and there may be an artificial climate

## Quality – Eurostat task force

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### Outcome indicators that can be used to adjust for changes in quality

- **Examination results**, perhaps with a "value added" approach, where pupil abilities are measured before and after a period of schooling.
- **Standardised assessment tests**, if these are widely used in schools, since they may overcome the problems of different examination standards in different regions or schools.

#### Advantages

- measure of the final outcome of schooling
- transparent and easy to implement

#### Disadvantages

- Timing difference between change in inputs and outcomes

## Gu and Wong (2012)

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**Cost approach** - Total expenditures include teacher salaries, intermediate inputs, and a capital consumption allowance.

**Value approach** - The value of education in terms of its effect on lifetime income is calculated as the difference between the lifetime income of an individual enrolled in that education level and the lifetime income of an individual with a lower education level.

## Education productivity

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