



Centre for
**Health Service Economics
& Organisation**

Cost-efficiency review of the health professional regulators

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1. Executive summary

The statutory regulation of healthcare professionals costs about £200 million a year to operate.

The Government maintains an interest in the efficiency and effectiveness with which the system operates because:

- professional regulators possess a degree of monopoly pricing power in the charging of fees to registrants – i.e. statutorily registered professionals must be registered as a condition of practice and cannot exercise choice either about whether they wish to be registered or whom they wish to be registered with;
- recent pay restraint for some healthcare professionals (particularly those operating in the NHS) may have limited registrants' ability to pay fees for registration and renewal; and
- taxpayers make an implicit contribution to the cost of the system, because registration fees are tax deductible and because regulators receive a degree of grant funding and certain small tax concessions – the percentage split in the burden of running costs is estimated to be about 70% borne by registrants and up to 30% by taxpayers.

This report presents information collected from the UK's 9 statutory regulators to compare unit operating costs across a core set of 6 regulatory functions, in order to comment on the potential for significant efficiency savings to be realised.

In addition, it includes information collected directly from registrants and education & training providers to estimate the compliance costs imposed by regulators on third parties. This is done in order to determine whether regulators operate efficiently merely by shifting costs onto others.

The key findings from this report are summarised under the following three headings.

1.1. Economies of scale

- There is evidence to suggest that regulation of healthcare professionals exhibits economies of scale.
- On average, a doubling of the registrant base is associated with a 19% decrease in unit operating costs.
- Most scale economies appear to be realised once regulators achieve a registrant base of around 100,000 to 200,000.
- Economies of scale appear to be prevalent across each of the core regulatory functions, although the degree and strength of the relationship varies: the assurance of education & training providers and the setting of professional standards exhibit the strongest scale economies, whereas the unit operating costs of processing fitness to practise complaints appear to be least influenced by scale.
- Experiments to illustrate the potential savings that might be realised, through consolidation of entire regulators or specific functions within them, indicate the following potential annual savings:
 - consolidation of two small regulators: £0.6m;
 - consolidation of one small regulator with a large regulator: £1.2m;
 - consolidation of two small regulators with a large regulator: £2.5m; and
 - consolidation of a specific function (education and training) across three medium sized regulators: £1.1m.

- It should be noted, however, that the above estimates do not take into account any potential upfront or transition costs associated with consolidation, which may be significant.

1.2. Scale-adjusted efficiency

- By controlling for the influence of scale, it is possible to calculate scale-adjusted unit costs.
- 'Scale-adjusted' unit costs may vary because:
 - the 'task' faced by each regulator is different, due to varying complexity and/or regulatory force required;
 - the level of effectiveness that a regulator operates at may vary; and
 - the level of efficiency that a regulator operates at may vary.
- By attempting to account for the degree to which each regulator's task varies (and by assuming that effectiveness is constant), it is possible to comment on each regulator's scale-adjusted efficiency.
- There is evidence to suggest that some of the variation in scale-adjusted unit operating costs can be explained by variation in 'task'.
- However, there remain some deviations that cannot be easily explained in this way. It is suggested that further investigation is required in order to determine whether such deviations can be explained by: a) a different level of effectiveness (and, if so, whether this is desirable from the point of view of value for money); and/or b) a different level of efficiency (and, if so, what specific processes are driving apparent under-/over-performance).
- For the regulator with the largest (positive) deviation in unit operating costs that cannot be explained by their task, reducing their unit operating costs to a level that might be expected of a regulator of the same size and task is estimated to deliver savings of about £0.65 million. This is of similar magnitude to the merging of two small regulators (referred to above).
- It should again be noted that the above estimate does not take into account any potential upfront or transition costs associated with the adoption of best practice, which may be significant.

1.3. Compliance costs

- Compliance costs imposed on registrants and education & training providers are estimated to be equivalent to around one fifth of the total operating costs, or about £37.5 million a year.
- There is no clear evidence to suggest that regulators achieve low unit operating costs by shifting the burden to registrants and education & training providers.

2. Introduction

2.1. Context

There are nine statutory regulators of healthcare professionals operating in the UK. A list of these regulators, along with the professions that they regulate, can be found in Annex 1. Their primary focus is patient safety and the protection of the public and, more specifically, their responsibilities can be divided into the following core regulatory functions (taken from the CHRE annual review of regulators' performance¹):

- Standards and guidance;
- Registration;
- Education and training; and
- Fitness to Practise (FtP);

plus a further two functions, capturing:

- Continuing Fitness to Practise (Continuing FtP)²; and
- Governance.

The system of statutory regulation of healthcare professionals costs (in 2010/11 prices) about £200 million a year to operate. The Government maintains an interest in the efficiency and effectiveness with which the system operates because:

- professional regulators possess a degree of monopoly pricing power in the charging of fees to registrants – i.e. statutorily registered professionals must be registered as a condition of practice and cannot exercise choice either about whether they wish to be registered or whom they wish to be registered with;
- recent pay restraint for some healthcare professionals (particularly those operating in the NHS) may have limited registrants' ability to pay fees for registration and renewal; and
- taxpayers make an implicit contribution to the cost of the system, because registration fees are tax deductible and because regulators receive a degree of grant funding and certain small tax concessions – the percentage split in the burden of running costs is estimated to be about 70% borne by registrants³ and up to 30% by taxpayers (see Annex 2).

Enabling Excellence, the Command Paper published by the Department of Health in February 2011⁴, commissioned the Council for Regulatory Excellence (CHRE, the body that oversees the nine statutory regulators), 'to lead a sector-wide review of the cost-efficiency

¹ Performance review report, Changing regulation in changing times 2010/11; see http://www.chre.org.uk/_img/pics/library/110623_Final_-_CHRE_Performance_Review_report_2010-11_%28Colour_for_web_-_PDF_version%29.pdf

² This function covers activities relating to the on-going assessment of registrants' performance, such as monitoring compliance with Continuing Professional Development and planning for the introduction of periodic revalidation.

³ In some instances, the cost of paying fees associated with registering with a particular statutory regulator is passed from the registrant to the employer – i.e. either in the form of the employer directly paying the fee on behalf of the registrant or indirectly through the annual wage negotiation process. Since the extent to which this practice occurs is not known (and the associated tax implications are hard to discern), the estimation of the implicit taxpayer contribution is made on the assumption that registrants meet the cost of fees.

⁴ See http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_124359, paragraph 2.6, page 11

and effectiveness of each regulator within CHRE's remit, with a view to identifying significant cost savings'.

This report has been prepared to support CHRE in responding to this commission. It follows an analytical approach to comparing expenditure across each of the regulators, with a view to quantifying possible efficiency savings.

This is the first time that a review of the cost-efficiency of the health professionals' regulators has been formally conducted. The absence of an established process for collecting and comparing expenditure incurred by the regulators, using a consistent set of standards and data definitions, has required data to be collected specifically for the purpose of this review. While efforts have been made to establish clear and consistent definitions and to validate the submitted data against other sources, much of the data analysed in this review has been self-reported by the regulators (submitted to tight timescales) and is therefore potentially subject to a degree of reporting error. However, sensitivity analysis has been conducted, where possible, to test the robustness of the report's key analytical findings.

Furthermore, observing expenditure across just nine organisations has necessarily limited the sophistication of the analytical techniques adopted.

The analysis that follows represents a predominantly desk-based review of self-reported data. The aim of the analysis is to identify the stand-out differences in relative cost-efficiency across regulators at a particular point in time. As such, it does not comment on the absolute efficiency of any particular regulator or of the system as a whole – merely whether there is evidence that some regulators appear to operate more efficiently than others.

In addition, since this review observes regulators at a single point in time – i.e. the year 2010 or its closest annual equivalent – it does not reflect any changes in relative efficiency since then, nor any proposed future changes.

2.2. Structure of the report

More specifically, the purpose of this report is:

- to identify whether scale economies exist in the regulation of healthcare professionals, and where appropriate, to estimate the potential for efficiency savings to be realised through consolidation;
- to provide an initial benchmarking of regulators to help identify areas where efficiency savings may be realised through the adoption of best practice;
- to estimate the key compliance costs imposed on individuals and organisations by the system of professional regulation; and
- to establish an analytical framework for possible future iterations of this review.

Section 3 of this report, describes the approach taken to collect operating expenditure in order to produce a set of *unit* operating costs by regulator for each of the regulatory functions.

Section 4 uses the operating expenditure collected to explore the relationship between unit operating costs and scale of operation, by regulator and regulatory function.

Section 5 controls for the scale effects identified in Section 4 and comments on regulators' 'scale-adjusted efficiency' at overall level and for each regulatory function by attempting to control for variation in regulatory 'task' across regulators.

Section 6 describes the approach taken to estimate the key compliance costs imposed by regulators on third parties (i.e. registrants and education and training providers) with a view to establishing the total size of compliance costs imposed and whether regulators that appear to be efficient from an operating expenditure point of view achieve such apparent efficiency by transferring costs onto other parts of the system.

Section 7 summarises the report's main findings and makes some recommendations for further work.

The general format of the report includes core analysis and key messages within the main body of the report, with further detail included within a number of annexes.

3. Operating Costs

3.1. Introduction

The purpose of this section is to describe the approach adopted in arriving at a set of data, relating to the operating costs of regulating healthcare professionals, that can then be compared and analysed on a consistent basis in the main sections of this report – i.e. sections 4 and 5.

Each of the nine statutory regulators of the UK's healthcare professions are required to publicly report their annual expenditure incurred in carrying out their regulatory duties. For the year 2010, or its nearest equivalent, this data is shown in the table below.

Table 3A: Total operating expenditure by regulator, 2010/11

Year	Start of financial year	Regulator	Total expenditure
2010/11	01-Apr	NMC	£44,716,000
2010	01-Jan	GMC	£87,342,000
2010/11	01-Apr	HPC	£16,257,000
2010	01-Jan	GDC	£26,796,000
2010/11	01-Apr	GPhC	£8,339,000
2010/11	01-Apr	GOC	£5,156,909
2010/11	01-Apr	GOsC	£3,030,577
2010	01-Jan	GCC	£2,971,547
2010/11	01-May	PSNI	£870,966
Total			£195,479,999

Source: Regulators' Annual Reports

Commenting on relative efficiency by comparing the total expenditure of each regulator would not only be crude, but also inappropriate, for the following reasons:

1. Not all regulators are required to carry out the same regulatory functions. For example, some regulators are required to register businesses as well as individual healthcare professionals.
2. Regulators choose to report their expenditure by regulatory function either in different ways, or not at all.
3. Regulators do not regulate the same volume of professionals.
4. Regulators do not regulate the same professions.

3.2. Data collection

To overcome the first two issues, data was collected from each regulator using the Operating Expenditure Template presented in Annex 3.1. The purpose of this exercise was to enable expenditure (in a common set of core functions) to be summarised at a high level, excluding (as far as possible) expenditure on non-core functions – i.e. those functions not carried out by all.

(The Operating Expenditure Template was also used to collect some information used to interpret variation in scale-adjusted unit costs, presented in more detail in Section 5).

To overcome the third issue, expenditure has been calculated per registrant to provide a unit operating cost for each core function and each regulator. This is done by dividing expenditure in a particular core function (or overall) by the number of registrants regulated (or, in some instances, a more appropriate denominator of scale). Unit operating costs and their relationship to scale is explored further in Section 4.

The table below presents data on the number of registrants at the end of 2010 (or nearest equivalent), submitted by each statutory regulator through means of the Operating Expenditure Template.

Table 3B: Number of registrants by regulator, 2010/11

Regulator	Number of registrants	As at (date)
NMC	662,417	31-Mar-11
GMC	239,253	31-Dec-10
HPC	215,095	31-Mar-11
GDC	95,463	31-Dec-10
GPhC	62,825	31-Mar-11
GOC	18,582	31-Mar-11
GOsC	4,456	31-Mar-11
GCC	2,663	31-Dec-10
PSNI	2,103	30-Apr-11

Source: Completed Operating Expenditure Templates
GOC figure excludes students and bodies corporate

The fourth issue – that of heterogeneity of professions – is explored further in Section 5 of this report.

3.3. Quality assuring the submitted data

Since the data submitted by regulators through means of the Operating Expenditure Template was self-reported, a degree of quality assurance of the returns was undertaken in order to identify obvious issues or possible inconsistencies.

Total expenditure and total number of registrants were reconciled to published sources. In addition, the percentage split between direct and overhead costs, the percentage shares of expenditure across functions and the method of overhead apportionment across regulators were examined for consistency. Regulators were asked to explain significant anomalies.

3.4. Removing ‘non-core’ activity

Expenditure incurred in the regulation of main registrants (i.e. not including the regulation of students and/or businesses) in the following six functions was defined as ‘core’:

- Standards and guidance;
- Registration;
- Education and training; and
- Fitness to Practise (FtP).

(These function headings are taken from CHRE's annual review of regulators' performance⁵).

Plus additional functions for:

- Continuing Fitness to Practise (Continuing FtP); and
- Governance.

Exceptional, one-off items of expenditure incurred in the year being analysed were also removed.

Finally, expenditure reported under a function described as 'Other' was either re-allocated directly to one of the six core functions listed above or added to overheads and apportioned in the same way as all other overheads.

The following table details the impact of excluding non-core expenditure and exceptional items on the unit operating costs of the nine regulators.

Table 3C: Summary of adjustments made to operating expenditure submitted by regulators

2010, 2010/11	Total expenditure per registrant (derived from Tables 3A and 3B) £	Total expenditure per registrant (minus exceptional, one-off items and non-core activities)* £	% change	Reason for adjustment
NMC	68	68	0%	
GMC	365	368	1%	Reversal of a provision not fully offset by the costs of merging with PMETB
HPC	76	76	0%	
GDC	281	278	-1%	'Compensation payouts'
GPhC	217 ⁽¹⁾	165	-24%	Transition costs associated with the transfer of functions from the RPSGB and regulation of premises
GOC	209 ⁽²⁾	192	-8%	Regulation of students, regulation of Bodies Corporate and the costs of a major restructuring
GOsC	711 ⁽³⁾	711	0%	
GCC	1,116	721	-35%	Costs associated with letting out a significant share of meeting room space and the costs of processing Claims Complaints
PSNI	414	340	-18%	'Professional body' functions and regulation of premises

(1) Unaudited expenditure data for year commencing 1st September 2010.

(2) Includes expenditure on students and bodies corporate and registrant numbers for these groups and excludes IT capital expenditure reported in error as revenue expenditure in the 2010/11 Annual Accounts

(3) Expenditure includes 'designated spending' of £138,870

* Source: Completed Operating Expenditure Templates

⁵ Performance review report, Changing regulation in changing times 2010/11; see http://www.chre.org.uk/_img/pics/library/110623_Final_-_CHRE_Performance_Review_report_2010-11_%28Colour_for_web_-_PDF_version%29.pdf

Table 3C above is not only helpful in setting out the impact of regulator-specific adjustments, it also reveals that making even quite significant amendments – up to a 35% reduction - to the reported figures in order to arrive at a more consistent set of data does not significantly alter the rank order of regulators in terms of their unit operating cost.

This suggests that even if there remain differences in the way regulators have allocated expenditure to particular functions or classified overheads, this is unlikely to significantly alter the distribution in unit operating costs across regulators.

3.5. Other sensitivity analysis – business premises

Another possible distortion to operating expenditure figures submitted by the regulators is the variable arrangements each have in terms of the business premises they occupy. For example, some regulators own their premises outright (whether through donation or through a mortgage they have repaid in full), some are repaying debt used to buy their premises, while others are renting through either a short or more long-term leasing agreement.

Sensitivity analysis was undertaken to estimate the impact of different premises arrangements on regulators' reported expenditure. The value of fixed assets (land and buildings) reported in each organisation's Annual Accounts was used to impute an equivalent annual mortgage repayment. The details of this are shown in Annex 3.3. Again, the implied impact on regulators' unit operating expenditure does not alter significantly the distribution of unit costs across regulators.

3.6. Table of unit operating costs by regulator and function

The adjustments to regulators' submitted expenditure summarised in Table 3C above, can be combined with the re-allocation of 'Other' expenditure to the core functions to produce a table of unit operating costs (per registrant) by regulator and function (see Table 3D). These figures form the basis of the analysis presented in Sections 4 and 5.

The far right column of Table 3D presents overall unit operating costs across the regulators as a whole. It is equivalent to an average of the unit costs of the individual regulators weighted by each regulator's number of registrants. It is important to note that the overall expenditure per registrant shown in the table is based on the current configuration of regulators, with varying registrant bases.

3.7. Theoretical determinants of unit operating costs

Since unit operating costs form the basis for the analysis contained within this report it is helpful, at this stage, to provide an overview of those factors that theoretically determine unit operating costs:

- scale – a lower unit operating cost might be expected to be achieved at a greater scale of operation;
- 'task' – a more costly regulatory 'task' might be expected to lead to a higher unit operating cost;
- effectiveness – a higher level of effectiveness in performing regulatory functions might be expected to lead to a higher unit operating cost (on the assumption that higher quality is usually associated with higher cost); and

- 'scale-adjusted' efficiency – a higher level of efficiency, having accounted for the influence of scale on unit operating cost, might be expected to lead to a lower unit operating cost.

These issues are explored in more detail in the remainder of this report, particularly in Sections 4 and 5.

Table 3D: Unit operating costs by core function and regulator, after adjustments (listed in Table 3C) and re-allocation 'Other' expenditure

		Regulator									Overall
		NMC	GMC	HPC	GDC	GPhC	GOC	GOsC	GCC	PSNI	
Function	Standards	£5.30	£5.82	£2.94	£6.09	£6.39	£9.77	£131.65	£25.18	£23.49	£5.68
	Registration	£11.18	£64.48	£15.68	£63.06	£33.55	£31.81	£141.60	£104.07	£47.16	£27.58
	Education & Training	£2.66	£20.28	£6.87	£12.60	£21.53	£24.11	£52.52	£0.00	£56.60	£8.79
	FTP	£41.83	£244.37	£45.25	£179.10	£73.43	£73.30	£205.53	£409.75	£65.90	£92.97
	Continuing FTP	£0.54	£11.50	£0.41	£2.91	£10.20	£19.36	£75.14	£73.63	£103.78	£4.01
	Governance	£5.99	£21.93	£4.43	£14.61	£19.52	£33.87	£104.83	£108.37	£43.15	£10.95
	Total	£67.50	£368.39	£75.58	£278.36	£164.62	£192.22	£711.28	£721.00	£340.07	£149.98

Source: Completed Operating Expenditure Templates

4. Scale analysis

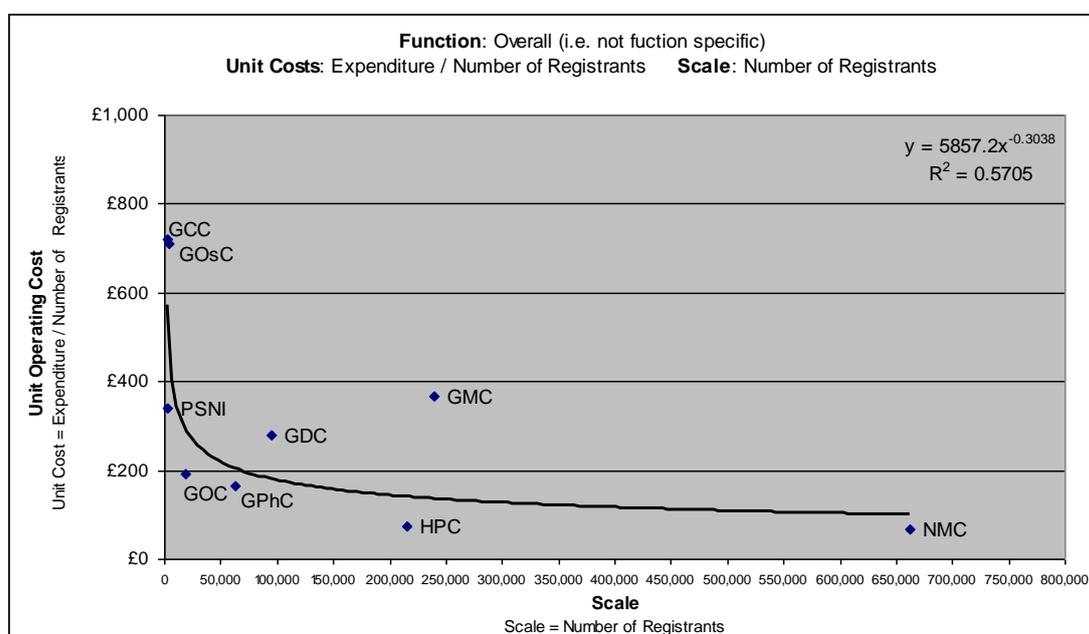
The purpose of this section is to explore whether there is evidence of a relationship between regulators' unit operating costs and their scale of operation, and if so, to quantify the strength of that relationship.

4.1. Scale economies

4.1.1. Overall level

Chart 4A plots each regulator's overall unit operating costs (expenditure per registrant - see Table 3D, Section 3) against the size of the regulator (number of registrants, see Table 3B, Section 3).

Chart 4A: Unit operating costs against scale



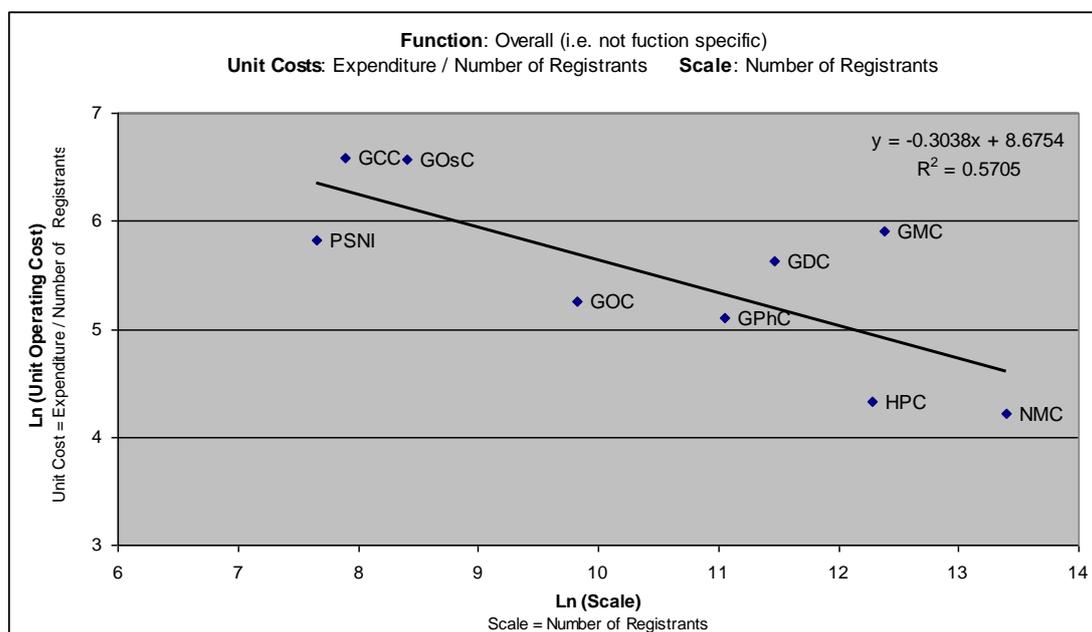
There are only nine data points, therefore this chart needs to be interpreted with caution. However, the chart indicates that there do appear to be significant scale economies – as a regulator's size (number of registrants) increases, unit operating costs decrease. The shape appears to be a 'power' relationship (see line of best fit) - where a percentage increase in size leads to a percentage decrease in unit costs. Although there are only nine data points, the R^2 statistic⁶ of 0.5705 (see chart) indicates that this relationship appears to be relatively strong. This apparent scale economy can also be observed at a more simplistic level through the fact that the four smallest regulators, on average, have a unit operating cost of around £500 whereas the four largest regulators, on average, have a unit operating cost of £200.

⁶ An R^2 statistic ranges from 0 to 1 and indicates the proportion of variability in a data set that is accounted for by the statistical model (in this case, the 'power' relationship line of best fit). If the regression line (line of best fit) were to pass exactly through every point on the scatter plot it would be able explain all of the variation - and the R^2 statistic would be 1.

The chart indicates that a scale of around 100,000 to 200,000 registrants appears to be sufficient to achieve most of the scale economies – i.e. regulators do not appear to significantly benefit from being really large. There are, however, no regulators of size 650,000 registrants or more, therefore, it is not possible to comment definitively on expected unit costs for regulators beyond this size. The chart also indicates that regulators of around 2,000 to 4,000 registrants do not appear to be large enough to benefit from significant scale economies.

A good way to visualise a “power” relationship is to take natural logarithms of both variables. A “power” relationship then appears as a straight line, allowing the potential scale economies to be visualised more easily – see Chart 4B. (Note that a natural logarithm is referred to as “Ln”.)

Chart 4B: Ln-Ln chart of unit operating costs against scale



The downward slope indicates potential scale economies, with the steepness of the slope indicating the strength of the scale economies. The slope coefficient is -0.3038. This means that a doubling of the number of registrants appears to lead to a 19% decrease in unit operating costs⁷.

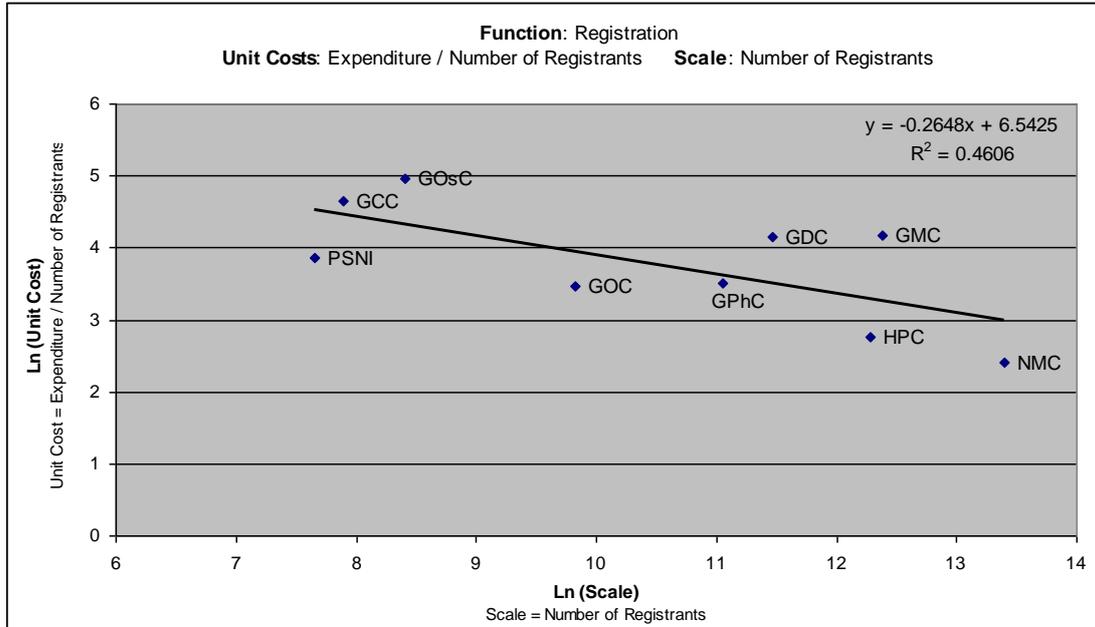
(It should be noted that whilst this chart demonstrates which regulators are above and below the fitted line, it must be kept in mind that this is a Ln-Ln chart and therefore the distances from the line are not linear and not comparable to each other in a straightforward way. Please refer to Chart 4A for the absolute distance from the line. Each regulator’s relative distance from the fitted line is explored in detail in Section 5).

⁷ $1 - (2^{-0.3038})$

4.1.2. Function level

Scale economies can also be presented at regulatory function level. Chart 4C below is a Ln-Ln chart, similar to Chart 4B, however it relates to expenditure on the 'registration' function only.

Chart 4C: Ln-Ln chart of unit operating costs against scale for 'registration' function



Again, the downward slope indicates potential scale economies, with the steepness of the slope indicating the strength of the scale economies. The slope coefficient is -0.2648. This means that, for the 'registration' function, a doubling of the number of registrants appears to lead to a 17% decrease in unit costs⁸.

Up to this point unit operating costs have been defined as 'expenditure per registrant' (either at overall or function level). It is intuitive that the scale of a regulator should be defined predominantly by the number of registrants that it regulates. However, examination of unit costs at function level highlights that, for some functions, scale can be better defined using alternative denominators. In particular, for the 'education and training' function, it is arguable that scale can also be thought of as driven by the number of courses assured. Similarly, for the 'FtP' function it is arguable that scale might also be driven by the number of 'FtP' complaints received. Therefore, for these functions, unit costs can also be defined as 'education and training expenditure per course assured' and 'fitness to practise expenditure per complaint received'.

Charts of scale versus unit costs for each function (and where appropriate also using alternative denominators) have been plotted and can be found in Annex 4.1 (non Ln-Ln charts) and Annex 4.2 (Ln-Ln charts). Table 4D below summarises the strength of the scale economies that appear to be present at overall and function levels.

⁸ $1 - (2^{-0.2648})$

Table 4D: Summary of scale economies at overall and function level

Regulatory Function	Denominator	Scale Coefficient	Doubling of scale appears to lead to x% reduction in unit costs	R ² statistic ⁹
Overall	Number of registrants	-0.3038	19%	0.5705
Standards	Number of registrants	-0.4419	26%	0.6568
Registration	Number of registrants	-0.2648	17%	0.4606
Education & Training	Number of registrants	-0.4498	27%	0.7949
	Number of pre-registration courses that are assured	-0.5137	30%	0.4920
Fitness to Practise	Number of registrants	-0.1561	10%	0.1661
	Number of complaints	-0.1895	12%	0.2497
Governance	Number of registrants	-0.4626	27%	0.7748

Table 4D indicates that scale economies appear to be prevalent across each of the functions, although the strength of the relationship varies.

The 'education and training' function appears to exhibit the strongest scale economies, with a doubling of the *number of pre-registration courses assured* being associated with a 30% reduction in unit cost. (Using the alternative *per registrant* denominator, a doubling of the number of registrants is associated with a 27% reduction in unit costs). However, it should be noted that two of the regulators (the NMC and the GOsC) outsource the quality assurance of training courses to third parties. Therefore, the unit costs achieved for these two regulators, are, in some sense, driven by the scale of third party organisations.

The 'standards' function also appears to exhibit strong scale economies (a doubling of the number of registrants is associated with a 26% reduction in unit costs). However, whilst not insignificant, the 'FtP' function appears to be least influenced by scale (a doubling of the number of registrants is associated with a 10% reduction in unit costs).

It should be noted that the 'continuing FtP' function (not included in Table 4D) appears to exhibit particularly large economies of scale (a doubling in the number of

⁹ An R² statistic ranges from 0 to 1 and indicates the proportion of variability in a data set that is accounted for by the statistical model (in this case, the 'power' relationship line of best fit). If the regression line (line of best fit) were to pass exactly through every point on the scatter plot it would be able explain all of the variation - and the R² statistic would be 1.

registrants is associated with a 45% reduction in unit costs). However, this relationship is somewhat artificial since a significant share of expenditure in this function is supported by central grants allocated to help regulators plan for possible future revalidation of registrants' fitness to practise. Without knowing exactly how government have allocated these grants, it seems likely that scale of operation – i.e. the number of registrants – was an important consideration. More generally, the 'continuing FtP' function is not directly analysed in this report because regulators are at different stages in the process of preparing for revalidation so comparison in a given year would not be appropriate.

As described in Section 3.7, unit operating costs are not only potentially determined by size of organisation, but also by the regulator's 'task' (a more complex task being assumed to be more costly to perform), level of effectiveness (a higher level of effectiveness being assumed to be more costly to achieve) and the level of scale-adjusted efficiency. It has not been possible to quantitatively control for variation in 'task' and effectiveness; it is therefore acknowledged that the relationships identified above may be influenced by these other factors. If there is a strong correlation between 'task' and/or effectiveness and scale (i.e. larger regulators have a less complex 'task' to perform and/or achieve lower levels of effectiveness (and vice versa)) then the scale economy relationships identified above could be artificial. However, the data that has been gathered relating to each regulator's task (for use within Section 5 – see table of metrics, Table A5G, Annex 5.2) indicates that there is no obvious relationship between scale and complexity of task. In addition, there is no evidence to suggest that larger regulators operate less effectively or smaller regulators more effectively. Furthermore, the apparent scale economies, identified above, appear to be pervasive across each of the regulatory functions. In order for these relationships to be artificial, a strong relationship between size and costliness of 'task' and/or effectiveness would need to be present across each of these functions – which is somewhat unlikely. Therefore, it is possible to be relatively confident that strong scale economies appear to exist.

4.2. Potential savings through consolidation

Section 4.1 demonstrates that there appear to be strong scale economies both at the overall level and at individual function levels. This finding naturally leads to a consideration of how large the potential efficiency savings through consolidation of regulators (either at overall or at function level) might be.

Table 4E, below, presents some example *theoretical* experiments to provide estimates of the *order of* savings that might be realised through consolidation of regulators at overall or function level.

It should be noted that transition or upfront costs associated with consolidation are not directly addressed in this report and that these costs may be significant. Additionally there may be political or practical issues that affect the feasibility of consolidation which are also not considered here. However, the aim of these calculations is to provide estimates of the *order of savings* that could be achieved through consolidation to allow comparison with other means of improving efficiency.

Table 4E presents estimates of the potential savings in a number of ways: Column A presents estimates of the absolute value of the savings, Column B sets these savings in the context of the overall operating costs across the 9 regulators, Column C provides estimates of the impact on unit operating costs and Columns D and E

provide estimates of the maximum up-front costs that can be incurred in order for net savings to be realised after 1 or 3 years (respectively).

It is also important to note that these experiments assume that those regulators being consolidated are the same in every way except for the scale of their operations (i.e. they have the same costliness of task and operate at the same level of effectiveness and scale-adjusted efficiency). These experiments therefore isolate the effect of changing a regulator's scale through consolidation. Details of each of the calculations can be located in Annex 4.3.

Table 4E: Theoretical experiments to provide estimates of the order of savings that might be realised through consolidation

Description of consolidation	(Column A) Estimate of the order of savings that could be realised	(Column B) % of total annual operating costs across all 9 regulators (i.e. approx. £195million)	(Column C) Impact on unit operating costs	(Column D) In order for savings to start to be realised after 1 year, upfront costs must be no more than:	(Column E) In order for savings to start to be realised after 3 years, upfront costs must be no more than:
Consolidation of two small regulators (each of size 3,000 registrants)	£0.6m per year	Approx. 0.3%	19% reduction in unit operating costs for both regulators	£0.6m	£1.8m
Consolidation of one small regulator (of size 3,000 registrants) with a large regulator (of size 200,000 registrants)	£1.2m per year	Approx. 0.6%	Regulator of size 3,000 registrants – 72% reduction in unit operating costs Regulator of size 200,000 registrants – 0.45% reduction in unit operating costs	£1.2m	£3.6m
Consolidation of two small regulators (each of size 3,000 registrants) with a large regulator (of size 200,000 registrants)	£2.5m per year	Approx. 1.2%	Regulators of size 3,000 registrants – 72% reduction in unit operating costs Regulator of size 200,000 registrants – 0.89% reduction in unit operating costs	£2.5m	£7.5m
Consolidation of the 'education & training' function of three medium sized regulators (each accrediting 50 pre-registration courses)	£1.1m per year	Approx. 0.6%	43% reduction in 'education and training' unit operating costs for all three regulators	£1.1m	£3.3m
Consolidation of all regulators (except the NMC ¹⁰) to a super-regulator of size 640,000 registrants	£38m per year	Approx. 19%	26% - 82% reduction in unit operating costs depending upon regulator	£38m	£114m

Whilst some of the estimated savings presented in Table 4E do not appear to be particularly large when set in the context of the overall operating costs across the nine regulators (Column B), the impact on unit operating costs (which can be thought

¹⁰ This consolidation experiment excludes the NMC (which is of size 662,417 registrants). If the NMC were included in the theoretical 'super-regulator' its size would be 1.3 million registrants. As described in Section 4.1.1, it is not possible to comment on the impact on unit costs associated with a scale of operation beyond around 650,000 registrants.

of as a proxy for the impact on registrant fees) (Column C) indicates that the impact on those registrants moving from being regulated by a small scale regulator to a large scale regulator could be particularly significant (e.g. a 72% reduction in unit operating costs/registrant fees).

5. Scale-adjusted analysis

5.1. Introduction

Section 4 examines the relationship between unit costs and scale in order to identify whether there is a relationship between the size of register and efficiency (i.e. whether there appear to be economies of scale in the regulation of healthcare professionals). This involved plotting a line of best fit at overall and regulatory function levels (see section 4.1). These fitted lines can be used to identify whether a particular regulator appears to have a higher or lower unit cost than would be expected for an organisation of their size by examining (i) whether the regulator appears above or below the line and (ii) their distance from the line. This deviation from the fitted line can be thought of as a measure of their 'scale-adjusted' unit cost.

'Scale-adjusted' unit costs, or in other words, deviation from the fitted line may be due to one of three factors:

1. **Task:** the task that regulators are faced with potentially varies and some regulators' tasks may therefore warrant a higher unit cost (for example, some professions may warrant a greater 'regulatory force' than others and some professions may be operationally more complex to regulate).
2. **Level of effectiveness:** the level of effectiveness that a regulator operates at may vary. For example, two regulators may have the same task and work with the same levels of efficiency, however, one regulator meets the task to a superior level of effectiveness – thereby incurring higher unit costs (on the assumption that higher quality is usually associated with higher cost).
3. **Level of scale-adjusted efficiency:** the level of efficiency that a regulator operates at, given their scale, may vary. For example, two regulators may have the same task, work to the same level of effectiveness, but one regulator meets the task with greater efficiency – thereby incurring lower unit costs.

The aim of this section is to inform the assessment of regulators' scale-adjusted efficiency (factor 3 above). An assessment of regulators' scale-adjusted efficiency should allow those areas where it may be possible for efficiency savings to be realised through the adoption of best practice to be identified. In order to assess scale-adjusted efficiency, in theory, it is necessary to account for the other two factors listed above (factors 1 and 2).

5.1.1. Accounting for 'Task' (factor 1)

Whilst it is difficult to fully define each regulator's 'task' and thereby identify variation in 'task' across regulators, a number of metrics have been developed to do this (see table of metrics, Table A5G, Annex 5.2). The metrics are described further in section 5.2.2.

5.1.2. Accounting for 'Effectiveness' (factor 2)

It has not been possible to formally account for effectiveness due to limited data availability. As such, the impact of potential variation in effectiveness needs to be kept in mind when interpreting deviation from the fitted line.

5.2. Approach

As stated earlier, the aim of this section is to inform the assessment of regulators' scale-adjusted efficiency in order to identify areas where efficiency savings could be realised through the adoption of best practice. In order to do this, regulatory functions are considered in turn by:

- presenting a 'distance-from-the-line' chart, for each function – these charts provide a measure of 'scale-adjusted' unit cost (by function and regulator) and are described further, below (section 5.2.1);
- presenting metrics that attempt to capture regulators' varying 'task', (described further below in section 5.2.2); and
- using the 'distance-from-the-line' chart and 'task' metrics (to control for variation in 'task') in order to comment on 'scale-adjusted' efficiency, where possible.

Accounting for 'task' cannot be carried out in a quantitative way and, as such, the approach taken in this section is less formal and more qualitative than other sections. It should also be noted that this is a desk-based analysis with the aim of providing a framework to allow each regulator's scale-adjusted unit costs (or distance from the fitted line) to be examined. Relevant information is provided to aid the interpretation of the scale-adjusted unit costs through use of the metrics. However, there may be other factors that have not been accounted for fully (or at all, given data constraints).

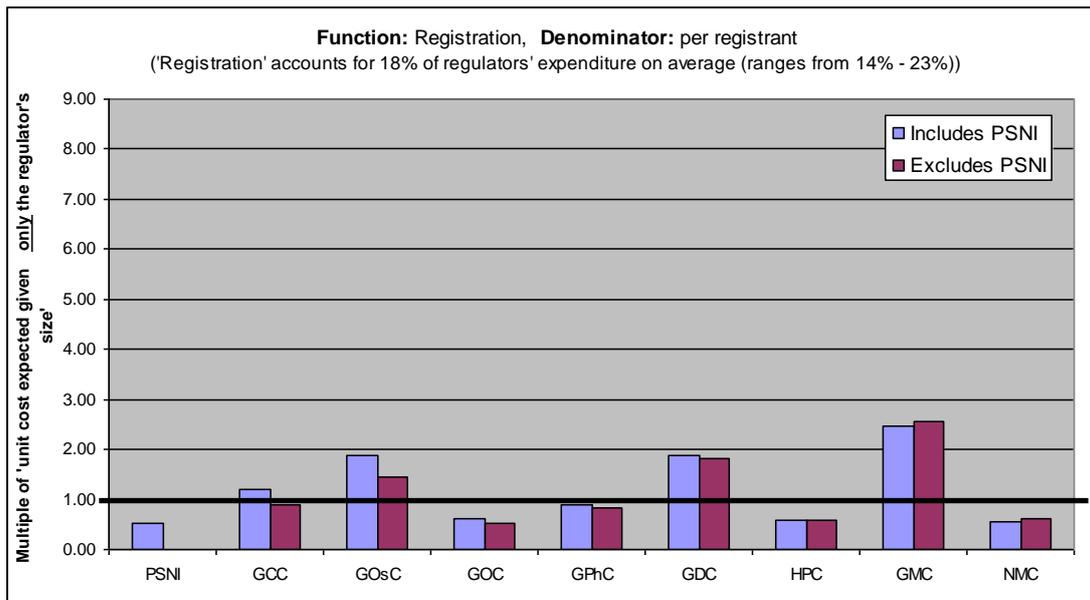
This report does not discuss the distance from the line for every regulator for each of the regulatory functions (6 regulatory functions and 9 regulators, i.e. 54 data points). Rather, the approach is to discuss the notable points where:

- a regulator appears to be significantly above or below the line; or
- a regulator's position in relation to the line might be questionable given what has been understood about their 'task'.

Finally, it should be noted that, as with the consolidation experiments described in section 4.2, transition or upfront costs associated with the adoption of best practice are not directly considered in this report. Whilst upfront costs associated with the adoption of best practice are likely to be lower than those associated with consolidation of regulators or regulatory functions, they may still be significant.

5.2.1. 'Distance-from-the-line' charts

The chart below provides an example 'distance-from-the-line' chart for the 'registration' function:



The 'distance-from-the-line' charts present the same data as the 'scale versus unit operating cost' charts presented in Section 4.1 – however, in a format where it is easier to see clearly the distance from the fitted line. The charts present each regulator's unit operating costs in terms of a '*multiple of unit cost expected given only a regulator's size*'. Where a regulator's expected unit operating cost – based solely on the regulator's size – is equal to its actual unit cost, the multiple of expected unit cost to actual unit cost is equal to 1. This is exactly equivalent to a point located on the line of best fit between scale and unit cost (see charts presented in Section 4.1). Therefore, the horizontal lines of the 'distance-from-the-line' charts (represented in bold above in the example chart) are equivalent to the lines of best fit in the scale charts in Section 4.1.

These charts allow deviations from the line to be presented on a consistent basis (independent of both the absolute size of the deviation and a particular regulator's size). In addition, each of the 'distance-from-the-line' charts are presented on a common scale, so that deviations can be compared across functions on a consistent basis.

In keeping with the approach adopted in Section 4.1, regulators are ordered along the horizontal axis from smallest (at the left) to largest (at the right), on the basis of the number of registrants.

Caution is required when interpreting the 'distance-from-the-line' for the small regulators (towards the left-hand side of the chart). This is because the lines of best fit (in Section 4.1) are more sensitive to changes in reported expenditure for the smaller regulators than for the larger regulators. In addition, the PSNI is different to other regulators in ways that might make their unit cost less directly comparable (described further below). For this reason, the 'distance-from-the-line' for individual regulators has been calculated in two ways: one which includes all regulators in determining the relationship between scale and unit cost; the other which excludes the PSNI in determining this relationship. The PSNI is excluded from the second 'distance-from-the-line' calculation because it is different from other regulators in the following ways:

- Since it regulates professionals registered to practise only in Northern Ireland, it has a different relationship with the government department responsible for health and social care, including the requirement on it to provide various ‘professional body’-type functions. Isolating expenditure on these additional functions from their core functions is difficult, particularly in the case of a small organisation where staff are more likely to operate across a range of activities.
- The PSNI works closely with its equivalent regulator on the mainland – the GPhC. This raises the possibility that, by sharing certain activities and/or information with the GPhC, it benefits (to an unknown degree) from some of the larger organisation’s scale economies.
- In the area of expenditure generally considered to be the largest – ‘FtP’ – the PSNI have been granted a comparatively limited set of sanctions – i.e. the only action it can take is to remove somebody from the register.

Finally, the smallest of the core functions in expenditure terms – ‘Continuing FtP’ – has been excluded from the discussion that follows. This is because expenditure in this area has, over the period studied, been heavily influenced by the allocation of central grants to support regulators in planning for future revalidation of registrants. While not necessarily explicitly so, the size of these grants is likely to have been influenced by each regulator’s number of registrants, creating a potentially ‘circular’ relationship to scale. In addition, in terms of planning for future revalidation of registrants (an activity that forms part of the ‘Continuing FtP’ function), regulators are at different stages of development, so comparing expenditure (for this function) at a particular point in time would not be appropriate.

5.2.2. ‘Task’ metrics

As described above, metrics are used to attempt to describe regulators’ varying regulatory ‘tasks’. A full set of these metrics can be found in Annex 5.2, Table A5G). These metrics have been derived using a combination of the following approaches:

- consultation with CHRE;
- common sense/ intelligent interpretation;
- some supporting analysis, identifying the key case/registant characteristics associated with varying case-level FtP costs; and
- academic literature, where available.

Conceptually, regulators’ ‘tasks’ may vary in two ways; in terms of:

- the regulatory force required to regulate their profession or professions; and
- the operational complexity of the ‘task’.

Also, a metric may capture a certain measure of ‘task’ that holds at overall level (i.e. across each of the regulatory functions) – for example, the regulatory force required. However some metrics are applicable only to a particular function. As such, in Table A5G, Annex 5.2, each metric is classified according to whether it attempts to measure regulatory force required or operational complexity of task and whether it is applicable to a particular function or holds at overall level.

For ease of reference, for each metric, regulators have been rated as red, amber and green depending on how their particular metric value compares to the other regulators. Where the distribution in values does not naturally divide into three distinct groups, it has been necessary to allocate regulators to groups of five (and sometimes two) groups. In any case, a rating of red is associated with a relatively

more costly task and a rating of green is associated with a relatively less costly task (with red/amber, amber and amber/green representing progressively less costly intermediate positions).

In order to aid the reader, summary metrics are presented in the main body of this report. Those summary metrics applicable to a particular function are presented above the corresponding 'distance-from-the-line' chart. However, those summary metrics that hold across each of the regulatory functions are presented up front. It is important to note that since these metrics hold across each function, they are drawn-upon within each function-specific section.

Where possible, metrics for the GDC have been split into two (GDC – dentists and GDC – dental care professionals (DCPs)). This is because, unlike other regulators, the GDC has a rather more dichotomous regulatory task, with its registrant base split into two groups of professionals – dentists (approximately 40% of their registrant base) and dental care professionals (approximately 60%) of their registrant base. These two groups of professions, arguably, could be considered quite different in terms of the regulatory force required to regulate them.

5.3. Interpretation of ‘distance from the line’

5.3.1. Overall summary metrics

The following summary metrics hold at overall level and are drawn-upon within each function-specific section:

SUMMARY METRIC 1: Overall – regulatory force required: body of knowledge				
<ul style="list-style-type: none"> What is the typical length of pre-registration education and training (FTE)? (Metric 0.1, Annex 5.2) 				
Red	Red/Amber	Amber	Amber/ Green	Green
GMC GDC (dentists)		GPhC/PSNI GOsC GCC		NMC GOC HPC GDC (DCPs)

SUMMARY METRIC 2: Overall – regulatory force required – likelihood and extent of harm				
<ul style="list-style-type: none"> Frequency of harm – proxy: rate of complaints (number of complaints received in 2010 per 100 registrants) (see Annex 5.2.1) Extent of harm – proxy: US malpractice pay-outs by profession. (see Annex 5.2.1) These underlying metrics are multiplied together (for different central measures of malpractice pay-outs) and ranked by regulator. The table below is therefore derived from the distribution in average rank across regulators (Metric 0.2, Annex 5.2) 				
Red	Red/Amber	Amber	Amber/ Green	Green
GMC	NMC GDC (dentists)	GOC	GCC HPC GPhC/PSNI	GDC (DCPs)

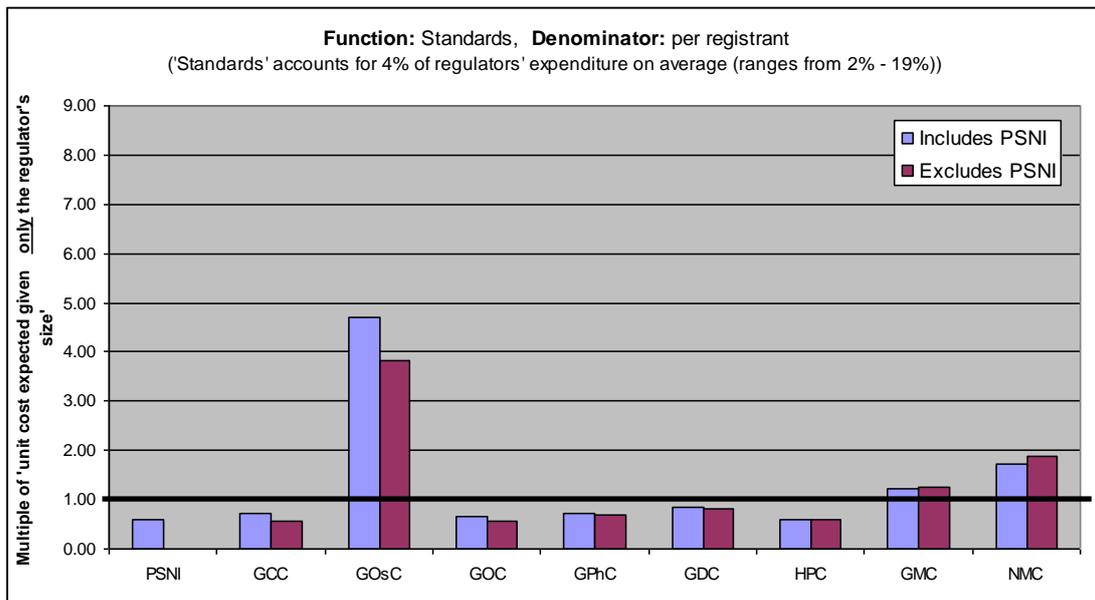
Comparable figures for the GOsC are not available due to significant differences in the role of an ‘Osteopath’ in the US. However, looking at the table above, it seems reasonable to conclude that the regulatory force associated with regulating UK would be in the range amber-green.

SUMMARY METRIC 3: Overall – operational complexity of task – number of professions				
<ul style="list-style-type: none"> Number of professions regulated (Metric 0.3, Annex 5.2) 				
Red	Red/Amber	Amber	Amber/ Green	Green
HPC		GDC		GMC GOsC GCC GPhC PSNI GOC NMC

5.3.2. Standards and guidance

SUMMARY METRIC 4: Standards – operational complexity of task – maturity of profession				
<ul style="list-style-type: none"> Maturity of profession (years since act of establishment) (Metric 1.1, Annex 5.2) 				
Red	Red/Amber	Amber	Amber/ Green	Green
GCC GOsC	HPC GDC (DCPs)	GOC	PSNI GDC (dentists) NMC	GPhC GMC

Chart 5A: Distance-from-the-line for 'standards and guidance'



Examination of the chart above highlights the following features:

5.3.2.1. GOsC

The GOsC appears to be a clear outlier, with a unit cost for 'standards and guidance' of around 4 times that which might be expected given their size. However, it should be noted that the GOsC is a small regulator and, since the distance from the line has been calculated with just one year's worth of data, caution must be exercised when interpreting this deviation. However, that being duly noted, the deviation does appear to be large.

The GOsC does not appear to require a greater than average regulatory force (see summary metrics 1 and 2) and regulates just one profession as opposed to many (see summary metric 3). Both these factors might lead one to expect the GOsC's unit costs for this function to be close to the average (i.e. close to the line).

However, osteopathy is not a particularly 'mature' profession (see summary metric 4) in relation to some (e.g. doctors, pharmacists and nurses) and therefore may warrant greater investment in 'standards and guidance'. Having said that, the GCC (which probably requires a similar regulatory force, has a similar level of professional

maturity and regulates just one profession) has significantly lower unit costs for this function at around 0.6 to 0.7 times that which would be expected given the organisation's size.

5.3.2.2. *NMC*

The NMC also appears to be significantly above the line with a unit cost of around 1.8 times that which might be expected given the organisation's size. It is unclear whether the professions regulated by the NMC (nurses and midwives) require a greater regulatory force than the average regulated profession. (Summary metric 1 indicates that the body of knowledge associated with nursing or midwifery is no greater than many of the other regulated professions. However, summary metric 2 indicates that nurses and midwives potentially have a greater than average likelihood or extent of harm). It is therefore unclear as to whether 'regulatory-force' required can be used to justify the greater than expected unit costs (given the organisation's size).

However, the NMC's distance from the line is greater than that for the GMC for this function (the GMC's unit costs for this function are around 1.2 times those expected given the organisation's size). The NMC and GMC are similar in the facts that the professions that they regulate are of similar maturities (see summary metric 4) and both organisations regulate just one or two professions (see summary metric 3). However, it is arguable that the GMC potentially requires a greater regulatory force than the NMC (summary metrics 1 and 2) which leads to the question of why the NMC's unit costs for 'standards and guidance' for this function are, relatively speaking, greater than those for the GMC.

5.3.2.3. *HPC*

The HPC is significantly below the line. Whilst it is arguable that those professions regulated by the HPC do not require a greater than average regulatory force (summary metrics 1 and 2) their low unit cost for 'standards and guidance' is notable since the HPC regulates 15 professions (summary metric 3) which are on the whole not particularly mature professions (summary metric 4). The fact that the HPC is able to operate a low scale-adjusted unit cost for this function (and assuming their effectiveness is not compromised) potentially indicates a notable scale-adjusted efficiency on the part of the HPC.

5.3.3. Registration

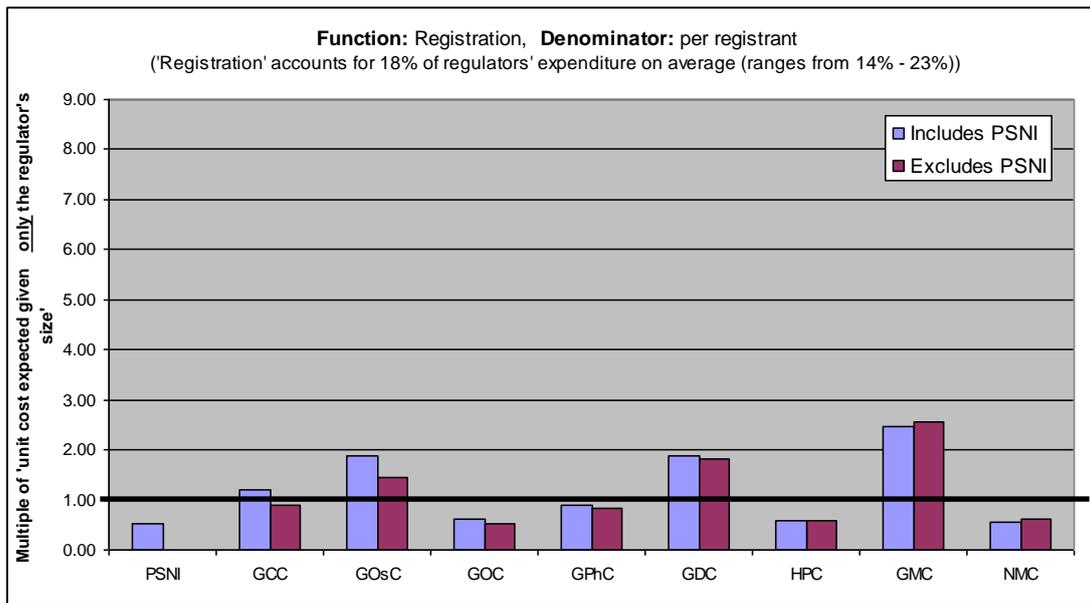
SUMMARY METRIC 5: Registration – new registrants				
<ul style="list-style-type: none"> Proportion of registrations that are new (i.e. initial registrations as opposed to renewals) (Metric 2.1, Annex 5.2) 				
Red	Red/Amber	Amber	Amber/ Green	Green
GPhC PSNI		GMC HPC GDC GOsC GCC GOC		NMC

SUMMARY METRIC 6: Registration – non-UK				
<ul style="list-style-type: none"> Proportion of initial registrations that are non-UK (Metric 2.2, Annex 5.2) 				
Red	Red/Amber	Amber	Amber/ Green	Green
GDC GMC		NMC		GOC GOsC GCC PSNI

No data provided by HPC and GPhC

SUMMARY METRIC 7: Registration – specialist registers				
<ul style="list-style-type: none"> Does the regulator manage any specialist registers in addition to the main register? (Metric 2.3, Annex 5.2) 				
Red	Red/Amber	Amber	Amber/ Green	Green
GMC GDC GOC PSNI				NMC HPC GPhC GOsC GCC

Chart 5B: Distance-from-the-line for 'registration'



Examination of the chart above highlights the following features:

5.3.3.1. GMC

The GMC appears to be significantly above the line, with a unit cost for 'registration' of around 2.5 times that which might be expected given their size. However, it is arguable that the profession regulated by the GMC (doctors) requires a greater regulatory force than the average regulated profession (summary metrics 1 and 2). It might be argued, however, that this is tempered a little by the fact that the GMC only regulates one profession as opposed to multiple professions (summary metric 3). The GMC also appears to have a higher than average proportion of non-UK initial registrations as compared to the other regulators (summary metric 6). And they manage a number of specialist registers in addition to the core register (summary metric 7).

There appear to be legitimate factors that potentially justify the GMC having a greater than average unit cost for 'registration'.

5.3.3.2. GDC

The GDC also appears to be significantly above the line, with a unit cost for 'registration' of around 1.8 times that which might be expected given their size.

The GDC regulates dentists as well as dental care professionals. It is arguable that regulation of *dentists* requires a greater regulatory force than the average regulated profession but potentially less so for dental care professionals (summary metrics 1 and 2). Given this split, it might be argued that the GDC's position above the line is consistent with the GMC's position above the line.

5.3.3.3. GOsC

The GOsC also appears to be above the line, with a unit cost for 'registration' of around 1.4 to 1.9 times that which might be expected given their size. However, it should be noted that the GOsC is a small regulator and since the distance from the line has been calculated with just one year's worth of data, caution must be exercised when interpreting this deviation.

The GOsC arguably does not require a greater than average regulatory force (summary metrics 1 and 2) and regulates just one profession as opposed to many (summary metric 3). The GOsC does not have a particularly high rate of new registrations (summary metric 5) and does not have a particularly high rate of non-UK registrations (summary metric 6) or manage a specialist register (summary metric 7). The above factors might lead one to expect the GOsC's unit cost for this function to be close to the average (i.e. close to the line).

5.3.3.4. NMC

The NMC appears to be significantly below the line for this function. Whilst it is unclear whether the professions regulated by the NMC (nurses and midwives) require a greater regulatory force than the average regulated profession, summary metrics 1 and 2 do appear to indicate that the NMC might warrant a greater regulatory force than the other regulators that are also significantly below the line for this function (i.e. the GOC and HPC). This therefore leads to the question of whether the regulatory force required for the NMC is being achieved in an efficient manner (i.e. at lower cost) or whether the regulatory force required is not being appropriately applied.

5.3.4. Education and training

It should be noted that, for the 'education and training' regulatory function, the denominator used here is 'per pre-registration course'. For most of the other regulatory functions the denominator used is 'per registrant' (see Section 4).

SUMMARY METRIC 8: Education and training – how extensive is the task?

- What is the typical length of pre-registration education and training (FTE)? (Metric 3.1, Annex 5.2)
- Is there also a pre-registration training year (in addition to the institutional pre-registration education and training)? (Metric 3.2, Annex 5.2).
- Does the regulator also assure post-registration education and training? If so, do all registrants enter into post-registration education and training or just some? (Metric 3.3, Annex 5.2)

Red	Red/Amber	Amber	Amber/ Green	Green
GMC	GPhC PSNI	GDC (dentists) GOC	NMC HPC GOsC GCC	GDC (DCPs)

SUMMARY METRIC 9: Education and training – how institutionally diverse is the task?

- Number of institutions (Metric 3.4, Annex 5.2)

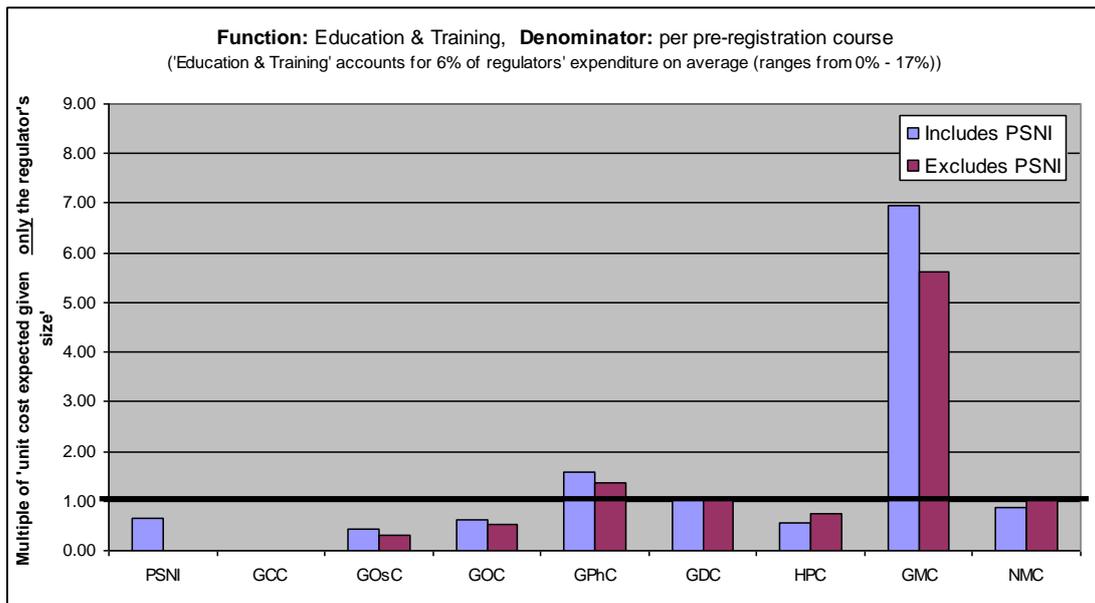
Red	Red/Amber	Amber	Amber/ Green	Green
NMC HPC		GMC GDC GPhC		GOC GOsC GCC PSNI

SUMMARY METRIC 10: Education and training – how professionally diverse is the task?

- Number of professions covered by the regulator (Metric 0.3, Annex 5.2)

Red	Red/Amber	Amber	Amber/ Green	Green
HPC		GDC		GMC GOsC GCC GPhC PSNI NMC GOC

Chart 5C: Distance-from-the-line for 'education and training'



Examination of the chart above highlights the following features:

5.3.4.1. GMC

The GMC is a clear outlier, with a unit cost for 'education and training' of around 5.6 to 7 times that which might be expected given their size. However, it is important to note that the GMC's remit with regards to 'education and training' is significantly more extensive than for the other regulators because the GMC is tasked with assuring post-registration education and training as well as pre-registration education and training for *all* of its registrants. Doctors' pre-registration education and training FTE duration is one of the longest, there is a pre-registration training year (foundation year 1) that requires assurance and the GMC assures a moderately large number of institutions. Given these features, it is clear that the GMC's scale-adjusted unit cost for this function would be expected to be significantly higher than average (above the line). However, it is difficult to comment upon the extent of the GMC's distance from the line and whether fully justified – this requires further investigation.

5.3.4.2. GPhC

Whilst not as stark, the GPhC also appears to be significantly above the line with a scale-adjusted unit cost of around 1.4 to 1.65 times that which might be expected given their size. However, it is arguable that the professions regulated by the GPhC (predominantly pharmacists) require a regulatory force greater than the average regulated profession (summary metrics 1 and 2). Also, the GPhC's 'education and training' assurance 'task' is arguably more extensive than the average regulator's with a relatively long pre-registration education and training FTE duration and a pre-registration training year which requires assurance (summary metric 8).

5.3.4.3. NMC and GOsC

It should be noted that both the GOsC and NMC outsource the assurance of their 'education and training' to external organisations. It is therefore not straightforward to

interpret their unit costs for this function. However, it should be noted that both these regulators appear to be around or below the line.

5.3.4.4. GCC

The GCC did not report any expenditure on this function for the year studied. This is likely to be due to the fact that the GCC is a small regulator and that expenditure within particular functions may fluctuate year-on-year.

5.3.5. *Fitness to Practise (FtP)*

In the case of the 'FtP' function, the number of registrants is perhaps a less suitable denominator for expressing unit costs than it is in the case of other regulatory functions (where the workload is more directly influenced by the number of registrants). This is because the key volume driver of 'FtP' costs is the number of complaints received, which will only be equivalent to expressing unit costs per registrant if the number of complaints received per registrant is the same across all regulators. The fact that the rate of complaints per registrant varies quite significantly means that a decision needs to be made about which is the most appropriate denominator for expressing a regulator's efficiency.

It is beyond the remit of this research to investigate the factors driving the number of complaints received per registrant. On the one hand it seems reasonable to assume that regulators can, by (for example) setting effective standards and accrediting the quality of professional training, contain the number of complaints made about registrants. But on the other hand, factors such as the propensity for people to make a complaint about a registrant and the average veracity of complaints received appear less obviously within the direct control of regulators. Further research is required to better understand why certain professions receive consistently higher complaints than others. However, the limited research that does exist suggests that factors such as the gender mix of registers is important in determining the number of complaints (independently of the type of allegation being made) – complaints are substantially less likely to be lodged against women. It is not clear what lies behind this finding – i.e. whether this is due to intrinsic differences between men and women or whether it is related to some other underlying explanation - for example, the tendency for men to occupy relatively more senior (risk-bearing) positions – but, whatever the reason, it is clear that the gender mix of the register is not something that can be influenced by regulators.

In light of how well the gender mix of registers appears to be related to the rate of complaints received (see metrics 4.0 and 4.1, Annex 5.2), the interpretation of scale-adjusted efficiency is made on the basis of cost per complaint rather than cost per registrant.

SUMMARY METRIC 11: Fitness to Practise – what is the source of complaints received?				
<ul style="list-style-type: none"> Percentage of complaints received from employers or referred by the regulator (3-year average, 2008-2010) (Metric 4.2, Annex 5.2) Percentage of complaints received directly from members of the public (3-year average, 2008-2010) (Metric 4.3, Annex 5.2) 				
Red	Red/Amber	Amber	Amber/ Green	Green
NMC HPC	PSNI	GDC GOC	GMC	GOsC GCC

No data available for GPhC

SUMMARY METRIC 12: Fitness to Practise – what type of allegations are made?				
<ul style="list-style-type: none"> Percentage of complaints where the main allegation relates to professional competence (3-year average, 2008-2010) (Metric 4.4, Annex 5.2) Percentage of complaints where the main allegation relates to a police caution or conviction (3-year average, 2008-2010) (Metric 4.5, Annex 5.2) 				
Red	Red/Amber	Amber	Amber/ Green	Green
	HPC GCC GDC	(PSNI)	GMC	NMC GOC GOsC

No data available for GPhC; GOC and GOsC figures are for % cautions/convictions only; PSNI rates red on one metric and green on the other

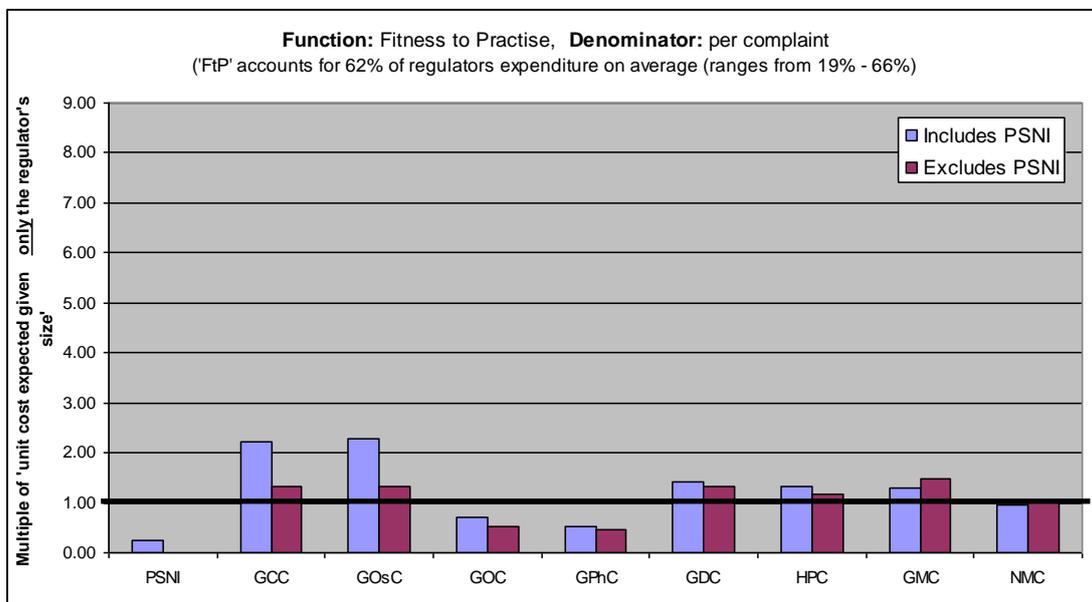
SUMMARY METRIC 13: Fitness to Practise – how far along the FtP pathway do complaints reach before being closed?				
<ul style="list-style-type: none"> Percentage of complaints closed before reaching an Investigating Committee hearing (3-year average, 2008-2010) (Metric 4.6, Annex 5.2) Percentage of complaints closed before reaching a Final hearing (3-year average, 2008-2010) (Metric 4.7, Annex 5.2) 				
Red	Red/Amber	Amber	Amber/ Green	Green
GOsC	GOC GCC	NMC HPC GDC		GMC GPhC PSNI

SUMMARY METRIC 14: Fitness to Practise – what financial means do registrants have for defending allegations made against them?

- Average salaries (weighted by number of registrants per profession, where more than one profession is regulated) (Metric 4.8, Annex 5.2)

Red	Red/Amber	Amber	Amber/ Green	Green
GMC GDC GDC (dentists)				NMC HPC GOC GDC (DCPs) GPhC GOsC GCC PSNI

Chart 5D: Distance-from-the-line for 'FtP'



Examination of the chart above highlights the following key messages.

5.3.5.1. GCC and GOsC

Both the GCC and the GOsC are above the line, although (as previously stated) this needs to be interpreted with caution because both organisations are relatively small. This cannot obviously be explained with reference to the summary metrics of either regulatory force required (where the GCC and GOsC are at the relatively less intensive end of the spectrum), the source of complaints (summary metric 11), the type of allegations made (summary metric 12) or the financial means for registrants to defend allegations made against them (summary metric 14). The possible exception to this is the GCC’s mix of allegations, which is more costly than average.

The stand-out difference in FtP complexity metrics for these two regulators is that complaints made to the GCC and GOsC are significantly more likely to reach the end stages of the investigative process (summary metric 13). In particular, all complaints

are heard by an Investigating Committee. This can be explained by restrictions in the way the legislation establishing these regulators was originally framed. However, it is surprising, given the relatively less complex mix of complaints received, that such a high proportion of complaints are nevertheless referred from the Investigating Committee to a Final Hearing (particularly in the case of the GOsC).

This is likely to be a key factor in explaining the relatively high costs per complaint (than expected given their scale) in the GCC and GOsC. Whether or not the high proportion of complaints making it to a Final Hearing is warranted or not – i.e. because perhaps the proportion of complaints that are well-founded is high – requires further investigation.

5.3.5.2. GOC and GPhC

The GOC and GPhC are furthest below the line (excluding PSNI). Given that summary metrics 1 and 2 indicate that their regulatory force required is greater than some, it might be expected that these two regulators would be closer to line. Data on the source and type of complaints (summary metrics 11 and 12) is not available for the GPhC, so it is not possible to comment on this. In the case of the GOC, their source of complaints appears to be of average complexity. It is only their relatively high proportion of cautions and convictions that indicates a less complex than average mix of cases.

The stand-out explanation for the GPhC's distance from the line is the very high proportion of cases closed before being considered by an Investigating Committee, which feeds through to a very low proportion of cases making it to a Final Hearing (summary metric 13). Again, further investigation is required to understand whether this low proportion is warranted (although CHRE's recent review of a sample of regulators' FtP cases¹¹ would suggest that it is).

In contrast, the GOC – for reasons of legislative constraints, as in the case of the GCC and GOsC above – refer almost all of their complaints to an Investigating Committee. However, where the GOC differ from the GCC and GOsC is that their Investigating Committee refer a much smaller proportion of cases to a Final Hearing. Again, further investigation is required to understand whether such a high closure rate by the Investigating Committee is warranted. If it is, it would suggest that the referral rate from Investigating Committee to Final Hearing is much more important in driving scale-adjusted efficiency than the closure of cases prior to reaching the Investigating Committee.

5.3.5.3. NMC

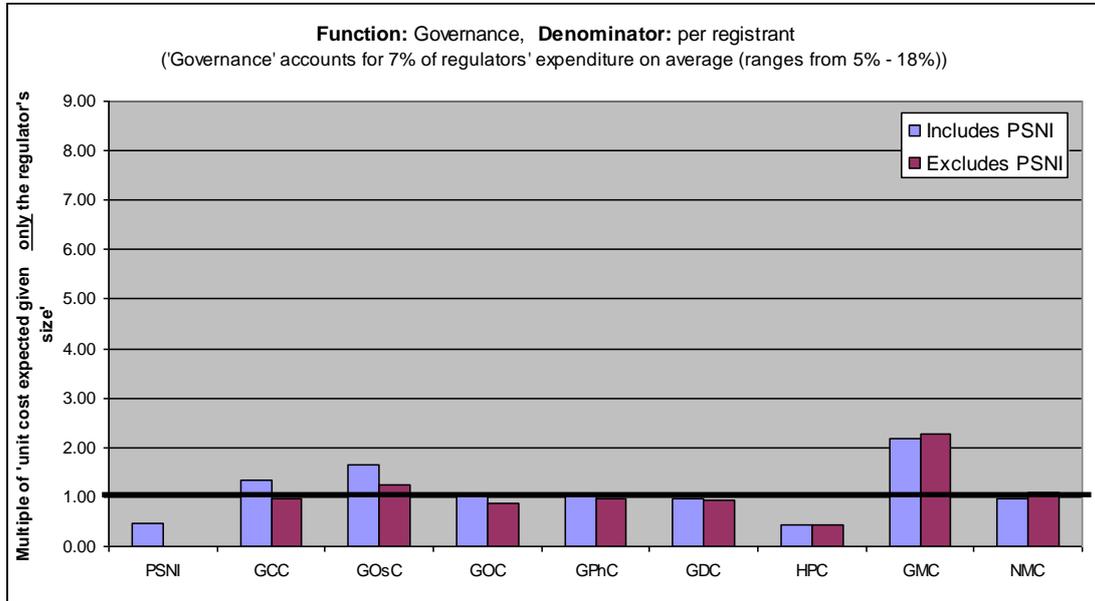
While the NMC is on or close to the line, their relatively high regulatory force required (summary metric 2) suggests that one might expect them to be above the line, particularly in light of their relatively complex mix of complaints (summary metric 11) (with a high proportion of complaints received from employers and a low proportion from the public).

¹¹ See http://www.chre.org.uk/img/pics/library/110426_FTP_audit_report_2010-2011_amended.pdf

5.3.6. Governance

It should be noted that there are no function-specific metrics for the 'Governance' regulatory function.

Chart 5E: Distance-from-the-line for 'governance'



5.3.6.1. GMC

The GMC appears to be significantly above the line with a unit cost for 'governance' of around 2.1 times that which might be expected given their size. However, it is arguable that the profession regulated by the GMC (doctors) requires a greater regulatory force than the average regulated profession (summary metrics 1 and 2) and that it would be expected that the GMC's scale-adjusted unit cost for this function might be above the line. However, it is difficult to comment upon the *extent* of the GMC's distance from the line and whether fully justified – this requires further investigation.

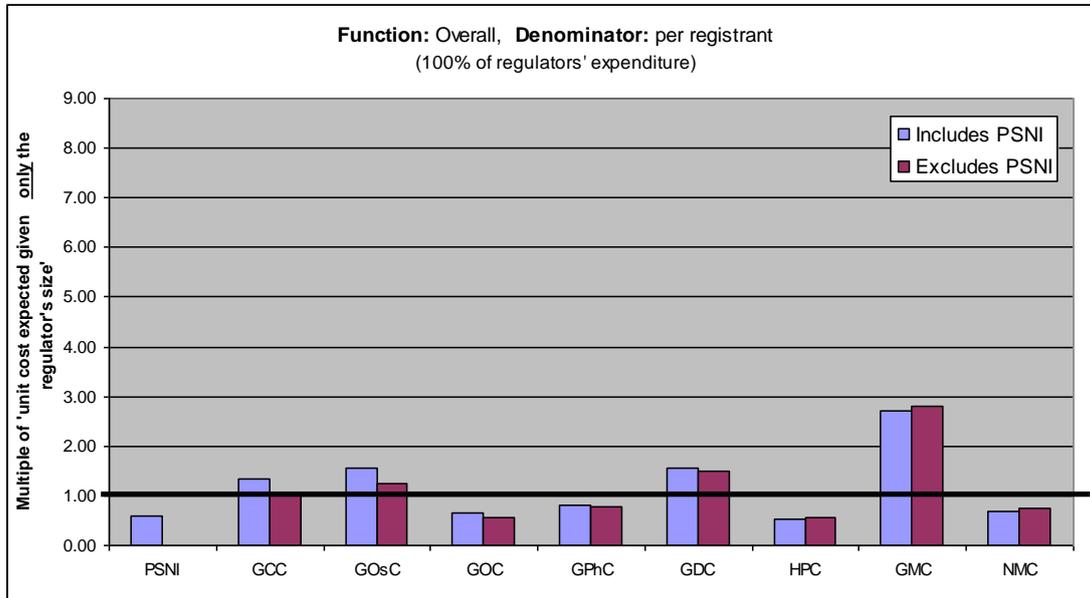
5.3.6.2. HPC

The HPC appears to be significantly below the line. Whilst it is arguable that those professions regulated by the HPC do not require a greater than average regulatory-force (summary metrics 1 and 2) and therefore may well be expected to be below the line, the HPC's low scale-adjusted unit costs are notable since there are other regulators with similar regulatory force required (e.g. GOC, GOsC, GCC) that have significantly higher scale-adjusted unit costs. However, it is unclear, without further information regarding effectiveness, whether this represents notable scale-adjusted efficiency or a shortfall in effectiveness.

5.3.7. Overall

(See summary metrics 1,2 and 3 above)

Chart 5F: Distance-from-the-line for 'overall'



Examination of the distance-from-the-line chart at overall level – i.e. covering expenditure in all of the core regulatory functions – suggests that, in most cases, the distance from the line given each organisation's size is consistent with what one might expect based on their task. For example, the GMC (who require the greatest regulatory force) are the furthest above the line, followed by the GDC. And the HPC, with relatively less regulatory force required, are significantly below the line. The exceptions to this rule appear to be the GCC, the GOsC and the NMC, who might be expected to be closer to the line given their regulatory force required – with the GCC and the GOsC higher than one might expect, and the NMC lower. In the case of the GCC and GOsC, where their regulatory force required might arguably be similar to the HPC and GOC, one might expect them to be below the scale-adjusted line to a similar degree.

It is important to note, that whilst there is evidence to suggest that, in terms of overall unit operating costs, the GCC and GOsC have a higher scale-adjusted unit cost than their regulatory force required would suggest, both regulators have announced fee level changes since the year of data analysed in this report – i.e. since 2010/11. The GOsC have announced that their main renewal fee (for practitioners with three or more years on the register) will be reduced from £750 to £675, a reduction of 10%¹²; and the GCC announced that their registration fee for practising chiropractors will reduce from £1,250 to £750 (a reduction of 40%) and their renewal fee for practising chiropractors will reduce from £1,000 to £800 (a reduction of 20%)¹³. If these reduced fee levels can be maintained, it suggests that (scale-adjusted) efficiencies within these regulators have already, to some extent, been realised.

¹² See http://www.osteopathy.org.uk/uploads/gosc_to_reduce_registration_fees.pdf

¹³ See http://www.gcc-uk.org/files/page_file/GCC_to_reduce_registration_fees.pdf

The NMC's registration and renewal fees have remained unchanged.

5.4. Summary

Interpretation of the significant deviations from the line of expected scale-adjusted unit cost described above can be summarised as set out in the following table.

Table 5G: Summary of significant 'distances-from-the-line'

		Explained by 'task' metrics	Partially explained by 'task' metrics	Not explained by 'task' metrics
Significantly above the line	Standards			GOsC* NMC
	Registration	GMC GDC		GOsC*
	Education and Training	GPhC	GMC	
	FtP		GCC* GOsC*	
	Governance		GMC	
	Overall			GCC* GOsC*
Significantly below the line	Standards			HPC
	Registration			NMC
	Education and Training	NMC GOsC*		
	FtP		GOC GPhC	NMC
	Governance			HPC
	Overall			NMC

*As described in section 5.2.1 caution is required when interpreting the 'distance-from-the-line' for the small regulators. This is because the lines of best fit (in Section 4.1) are more sensitive to changes in reported expenditure for the smaller regulators than for the larger regulators.

Due to the relatively less quantitative approach taken in this section, and the problem of making judgements about relative efficiency on the basis of a small number of observations, it should be noted that where a significant deviation from the line of expected scale-adjusted unit cost is shown in the table above as not being obviously supported by metrics on variation in 'task', this should not be taken as emphatic evidence of relative inefficiency.

As stated at the beginning of this section, distance-from-the-line can be explained by three key factors: variation in 'task', variation in effectiveness and variation in efficiency. Even if variation in task has been comprehensively captured by the chosen metrics, which seems unlikely, there still remains the question of effectiveness, which is outside the scope of this research.

The summary findings from this section, as shown in the table above, are therefore best viewed as an informed starting point for further discussion – identifying the stand-out differences requiring further investigation.

In the table above, regulator-specific deviations from the line are marked as 'Explained by 'task' metrics' where there is evidence (provided by the 'task' metrics - whether representing regulatory force required or complexity of 'task') that the deviation might be legitimately explained by a regulator's apparently different 'task'.

Deviations from the line are marked as 'Partially explained by 'task' metrics' where either there is some evidence that the deviation can be explained by their 'task' (but where the evidence is not particularly strong) or where the evidence points in the right direction – e.g. a more costly task being associated with a position above the line – but does not necessarily support the magnitude of the relative deviation.

Deviations from the line marked as 'Not explained by 'task' metrics' require further investigation because this report has gathered no evidence to suggest that the deviation is the result of a difference in 'task'. In such cases, it is recommended that the first thing to do is to determine whether the deviation can be explained by effectiveness – i.e. relative over- or under-performance. Where it can, a decision will need to be taken about whether the extra effectiveness delivered by a given additional level of expenditure (or conversely the reduced effectiveness delivered by a lower level of expenditure) is warranted from a value-for-money perspective. Secondly, and having ruled out effectiveness as a possible explanation, where no evidence of relative over- or under-performance is found, this would tend to point to actual efficiency or inefficiency of operation. In such cases, further investigation is required to understand which particular business processes are driving the apparent relative efficiency or inefficiency. Efficient business practices should be disseminated widely, whereas inefficient business practices should be replaced by more efficient practices.

5.5. Potential efficiency savings

In order to help set potential savings associated with improvements in 'scale-adjusted' efficiency against savings that might potentially be achieved through exploitation of scale economies (through consolidation of regulators either at overall or function level), it is helpful to consider the size of the largest deviation from the line that does not appear to be obviously justified by 'task'. By examining the overall distance-from-the-line chart (Chart 5F) and the summary information in Table 5G, elimination of the largest deviation from the line, that does not appear to be supported by 'task' equates to a potential efficiency saving of £0.65m per year.

The £0.65m per year saving stated above relates to just one regulator. In order to estimate potential 'scale-adjusted' efficiency savings across all regulators, all 'non-legitimate' deviations-from-the-line would need to be aggregated (which is difficult because it has only been possible to allude to the potential size of these rather than quantify them definitively) and these potential savings would need to be offset by any *increase* in expenditure that may be required due to regulators operating at sub-standard effectiveness.

6. Compliance costs

6.1. Introduction

Sections 4 and 5 explore regulators' unit operating costs. However, regulators also impose compliance costs on various parties in carrying out their regulatory functions. Compliance costs are imposed at any point during the regulatory process where external parties (such as registrants and education providers) are required to comply with an obligation to provide the regulator with information. They do not include costs associated with third parties carrying out their usual business activities. To provide an example in the context of regulating healthcare professionals, the cost to an individual of carrying out Continuing Professional Development (CPD) is not a compliance cost because it is considered to be an important part of being an effective healthcare professional. However, the cost to an individual of having to *demonstrate* compliance with this activity to the regulator – for example, by having to periodically submit a record of CPD – *is* considered to be a compliance cost.

Compliance costs can include both cash and non-cash costs – for example, the cost of posting an application form to the regulator (a cash cost) and the time taken to fill in the form (a non-cash cost). Where there is a combination of cash and non-cash costs, it is possible to denominate all costs in terms of monetary values – for example, by multiplying a quantity of time spent by an appropriate hourly wage.

This section examines those compliance costs that are imposed by regulators with the aim of exploring:

- the size of the total annual monetised compliance cost imposed by regulators and how this compares to regulators' total annual operating costs; and
- how compliance costs vary across regulators and whether compliance costs:
 - move in the same direction as unit operating costs (i.e. a regulator with high unit operating costs imposes high unit compliance costs and vice versa); or
 - move in opposite directions (i.e. exhibit an offsetting relationship where a regulator with low unit operating costs imposes high unit compliance costs and vice versa).

6.2. Where in the regulatory process are compliance costs imposed?

Compliance costs are imposed at any point during the regulatory process where external parties (such as registrants and education providers) are required to comply with an obligation to provide the regulator with information. Table 6A below sets out the regulatory functions where the key compliance activities lie, along with a brief description of the obligation imposed on external parties.

Table 6A: Description of key compliance activities by regulatory function

Function	Key compliance activity imposed on external parties
Registration	Registrants must comply with regulators' registration, renewal and CPD reporting processes.
Education & Training	<p>Pre-registration education and training providers must comply with regulators' pre-registration education and training assurance processes which consists of:</p> <ul style="list-style-type: none"> • initial programme approval; • annual programme monitoring; • programme re-approval; and • major change approval. <p>Post-registration education and training providers must comply with regulators' post-registration education and training assurance processes. For some regulators this is similar to the pre-registration assurance processes, however, for others, the assurance process includes assurance of trainee posts and trainers as opposed to institutional courses.</p>
Fitness to Practise	Various parties (such as registrants, employers and members of public) need to comply with regulators' Fitness to Practise processes where appropriate.

This report focuses on measuring the compliance costs associated with the 'registration' function and those associated with the pre-registration activities of the 'education and training' function.

6.3. Methodology

Two anonymous online surveys were developed: one for initial registration – aimed at registrants that have recently been through the initial registration process; and another for both the renewal and CPD reporting processes – aimed at registrants that have been registered for a year or more. 1,077 complete and valid responses were received to the renewal and CPD reporting survey and 53 responses to the registration survey. The higher response rate to the renewal and CPD reporting survey was to be expected since, at any one point in time, there are significantly more registrants that have been registered for a year or more compared to those registrants that have been through the initial registration process within the last year.

A paper-based survey of pre-registration education and training providers was also developed, in order to measure their costs of compliance with pre-registration education and training assurance processes described in Table 6A above. Responses were received from three institutions, covering a range of courses assured by a range of regulators. For most regulators, at least one estimate was obtained of the compliance costs associated with annual programme monitoring and programme re-approval. However, estimates for initial programme approval and programme major change were only obtained for a few courses assured by a few regulators.

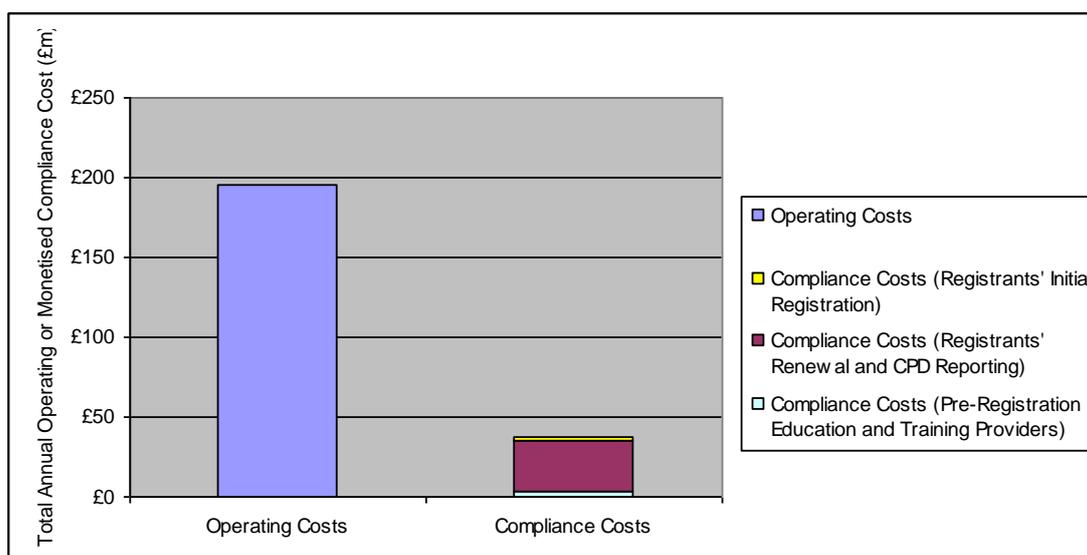
Annexes 6 and 7 provide full details of the methodologies and results for the registrants' and education providers' surveys respectively. However, the key results

are presented here. In some cases, the number of responses relating to particular professions and regulators are low. This means that the survey results should be treated with caution. Further details are contained in Annexes 6 and 7.

6.4. Size of total annual monetised compliance costs

Chart 6B below presents an estimate of the total annual monetised compliance costs imposed on registrants and pre-registration education and training providers alongside the total annual operating costs across all regulators.

Chart 6B: Comparison of size of total annual operating costs and total annual monetised key compliance costs

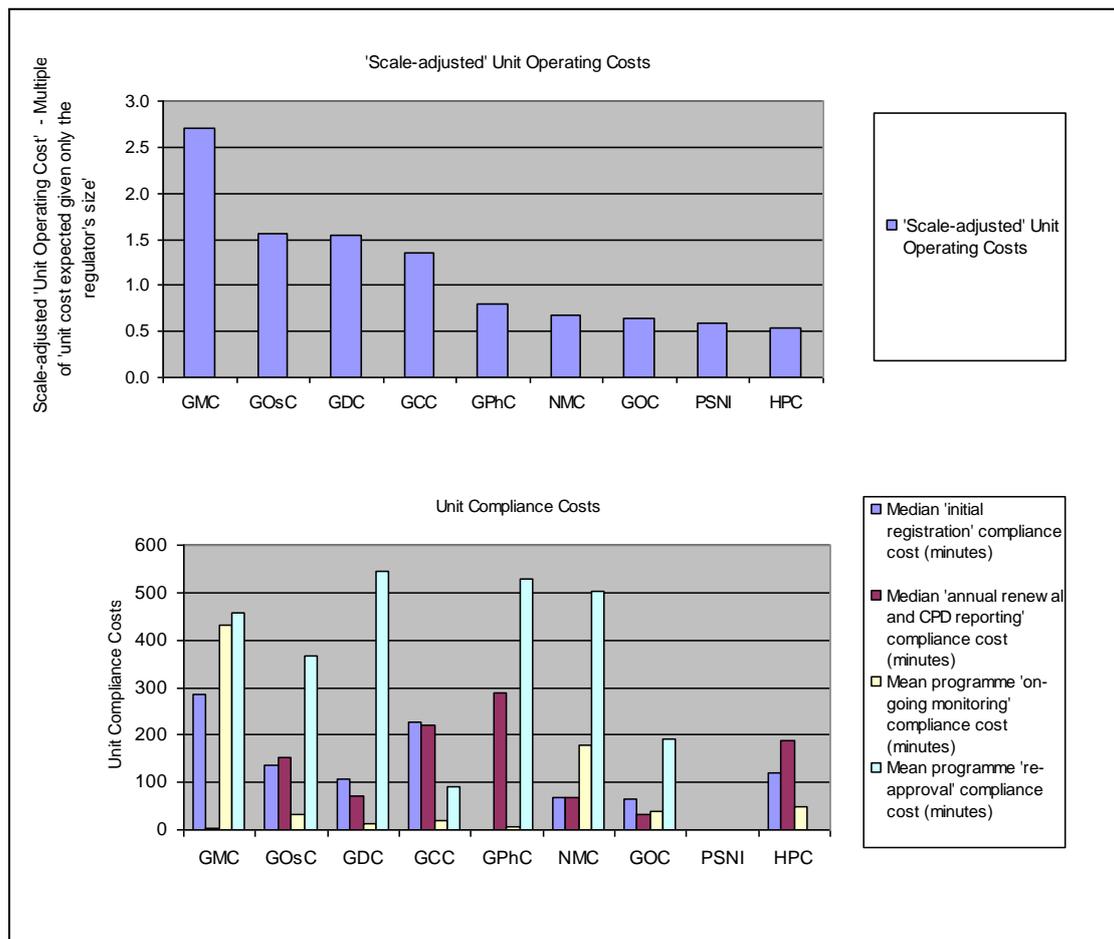


As described in Section 3, total annual operating costs across all regulators are estimated at around £200m per year. Total annual compliance costs imposed on registrants and pre-registration education & training providers are estimated to be approximately equivalent to one fifth of the total annual operating costs at around £37.5m per year. This estimate consists of estimates of the total annual compliance costs associated with registrants' renewal & CPD reporting, registrants' initial registration, and assurance of pre-registration education & training providers of £32.5m, £2m and £3m respectively. It should be noted that estimates of the costs of complying with initial registration and education & training assurance requirements are based on small samples. However, the estimate for registrants' renewal and CPD reporting (the largest compliance cost) is based upon a large number of responses - 1,077 registrants. It should also be kept in mind that, as explained earlier, these compliance cost estimates do not include compliance costs associated with the assurance of *post-registration* education & training and fitness to practise which may be significant in size. Lastly, CPD estimates are not included for the GMC as they do not require their registrants to submit CPD information.

6.5. Variation in compliance costs across regulators

Figure 6C below consists of a chart of regulators' 'scale-adjusted' unit operating costs alongside a chart of estimates of each regulator's unit compliance costs (for registrants' initial registration, renewal and CPD reporting and education providers' on-going monitoring and re-approval processes). It should be noted that regulators, in both charts, are ordered according to their 'scale-adjusted' unit operating costs – regulators with high scale-adjusted unit operating costs appear towards the left and those with low unit operating costs to the right.

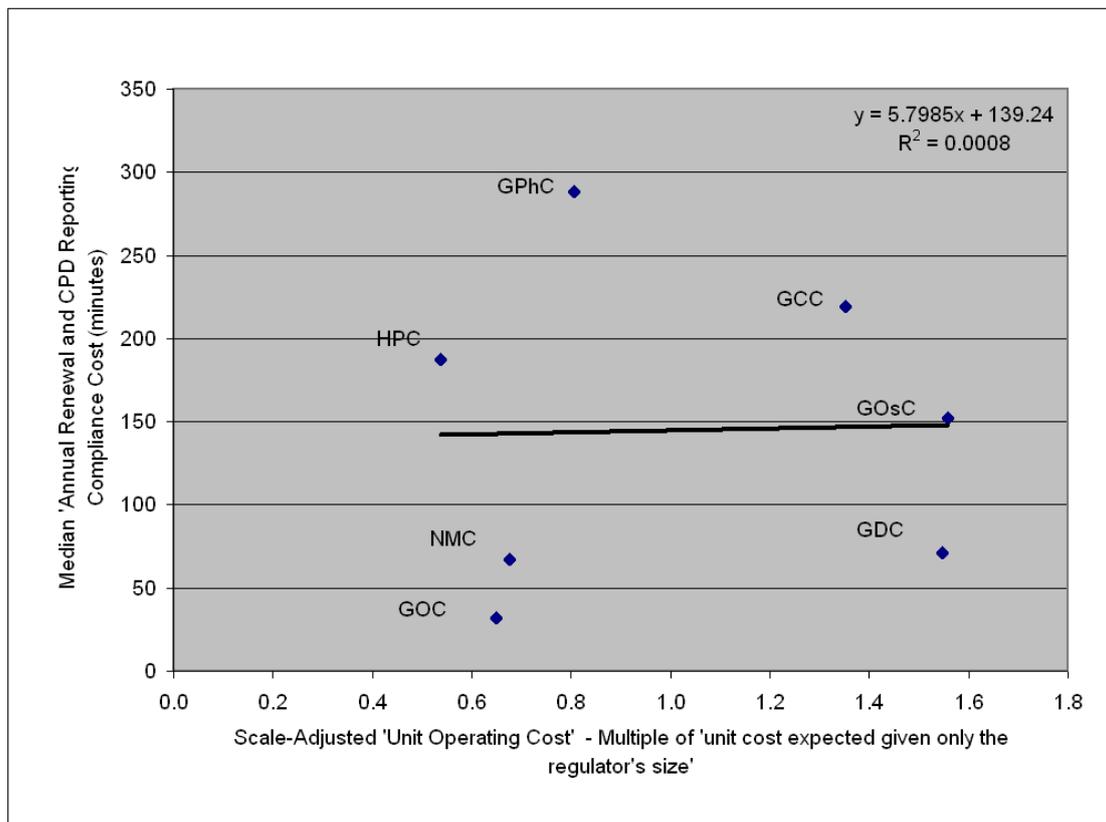
Figure 6C: Variation in unit operating costs and compliance costs across regulators



Examination of the unit compliance costs chart within Figure 6C indicates that there appears to be considerable variability across regulators and across compliance activities. Examination of both the operating costs and compliance costs charts within Figure 6C also indicates that there does not appear to be a particularly strong relationship between unit operating costs and unit compliance costs. However, it should be kept in mind that the compliance costs estimates for registrants' initial registration and education providers' on-going monitoring and re-approval are based upon smaller sample sizes than those for registrants' 'annual renewal'. With this in mind, Chart 6D plots (scale-adjusted) unit operating costs against registrants' renewal and CPD reporting compliance cost estimates (i.e. the compliance costs estimates based upon a larger sample size). It should be noted that the GMC is

excluded from the chart for consistency reasons because it does not require its registrants to submit CPD.

Chart 6D: Scatterplot of 'scale-adjusted' unit operating costs against registrants' annual renewal and CPD reporting unit compliance costs



The R^2 statistic¹⁴ indicates that there appears to be no relationship between (scale-adjusted) unit costs and registrants' renewal and CPD reporting compliance costs. Figure 6C and Chart 6D indicate that there is no clear evidence to suggest that regulators achieve low unit operating costs by shifting the burden to registrants and education & training providers.

¹⁴ An R^2 statistic ranges from 0 to 1 and indicates the proportion of variability in a data set that is accounted for by the statistical model (in this case the line of best fit). If the regression line (line of best fit) were to pass exactly through every point on the scatter plot it would be able explain all of the variation - and the R^2 statistic would be 1.

7. Concluding remarks

7.1. Key findings

- There is evidence to suggest that the statutory regulation of UK healthcare professionals exhibits economies of scale. On average a doubling of the registrant base is associated with a 19% reduction in unit operating costs. However, it should be noted that this estimate does not take into account any potential upfront or transition costs which may well be significant. Evidence of scale economies can be found across all core regulatory functions, to varying degrees.
- There is some evidence to suggest the potential for scale-adjusted efficiencies to be realised – i.e. as distinct from savings that might be realised through consolidation of existing regulators.
- There is no evidence to support the claim that regulators achieve low unit operating costs by shifting costs onto third parties.

7.2. Recommended next steps

In order to build on the main messages emanating from this report, the following further research is recommended:

- Establish a core dataset, with common standards and consistent definitions, to facilitate future benchmarking of regulators' costs and performance.
- Investigate the regulator-specific deviations from scale-adjusted efficiency which cannot be readily explained by reference to variable regulatory task (see Summary Table 5G). In particular, where differences are found to be due to higher or lower effectiveness, determine whether this is warranted on conventional thresholds of cost-effectiveness. And where differences appear to be due to relative efficiency or inefficiency, identify the specific business processes responsible and disseminate best practice accordingly.
- Estimate the up-front costs of: a) consolidation; and b) adoption of best practice – and add these to the estimates of annual savings in running costs, so that informed decisions can be made about the relative merits of these courses of action.
- Commission longer-term research to determine the absolute efficiency of the current system of regulating healthcare professions. Rather than seek to operate the current system at optimal efficiency, this research would consider what system of regulation would achieve the desired outcomes most efficiently, drawing on the regulation of healthcare professionals in other countries and the regulation of professionals practising in different sectors of the economy.



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