

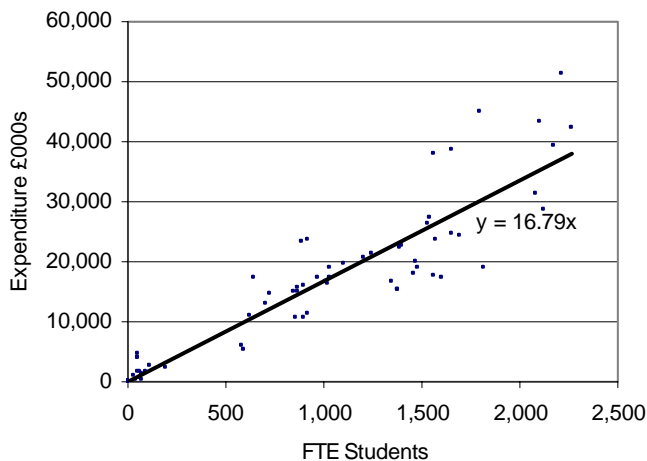
Annex A

Plots of expenditure against FTE for each cost centre

Each plot is a scatter graph of expenditure against FTE students. The data have been displayed in this way so that the reader can appreciate both the correlation and the spread in any particular cost centre. There are three years' worth of underlying data (1999-2000, 2000-01 and 2001-02), so there are three points marked for each institution. Specialist institutions and the Open University have not been included.

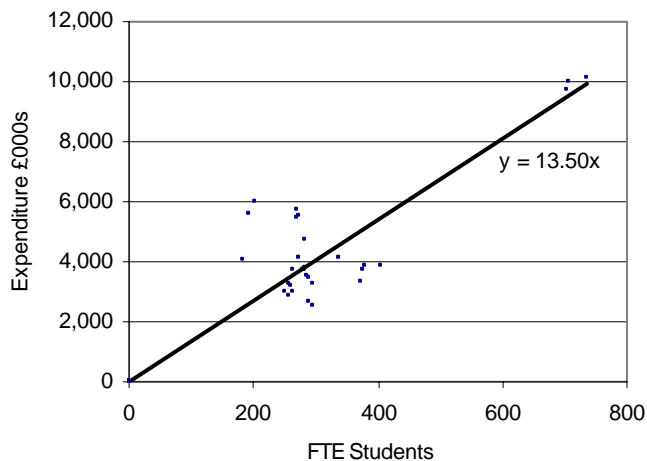
Also shown is the line of best fit and the equation of that line. Although the gradients of the lines appear similar, in fact they vary considerably since the scales are different for each plot. The coefficient of the equation represents the average based on the least squares regression. Also shown for comparison between cost centres are the mean (total expenditure divided by total FTE), and both the median and standard deviation (stdv) of the individual rates associated with each observation.

1 Clinical Medicine



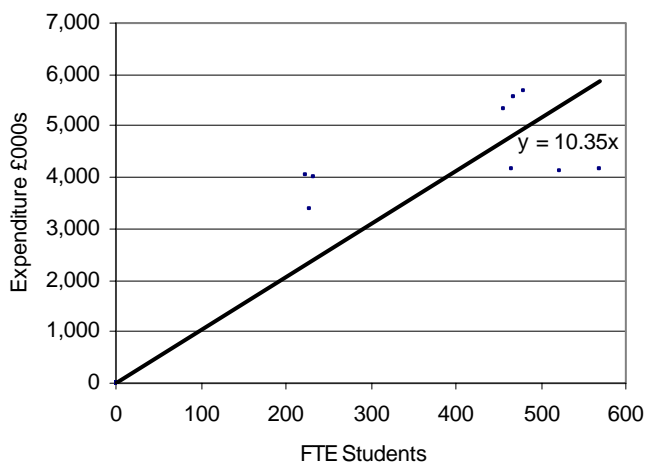
mean = 16.85 median = 17.15 stdv = 15.22

2 Clinical Dentistry



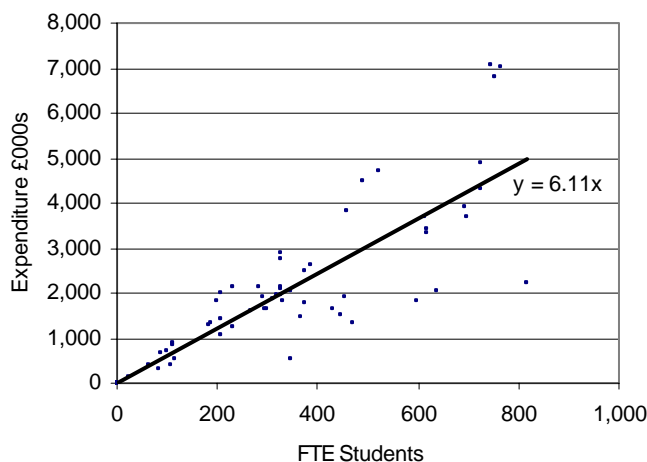
mean = 13.85 median = 12.96 stdv = 5.40

3 Veterinary Science



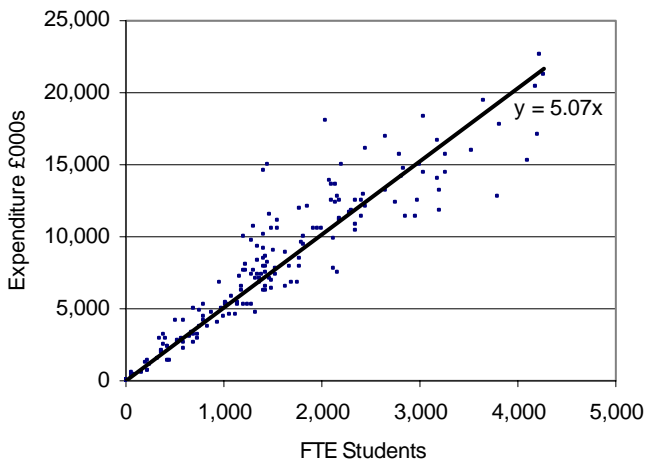
mean = 11.10 median = 11.84 stdv = 3.86

4 Anatomy and Physiology



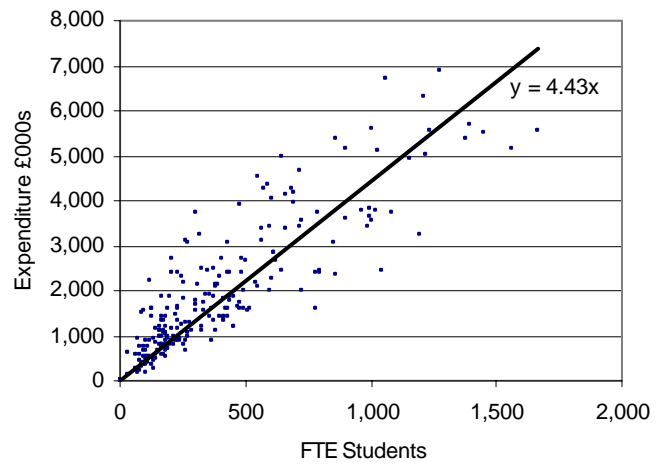
mean = 6.12 median = 6.05 stdv = 1.97

5 Nursing and Paramedical Studies



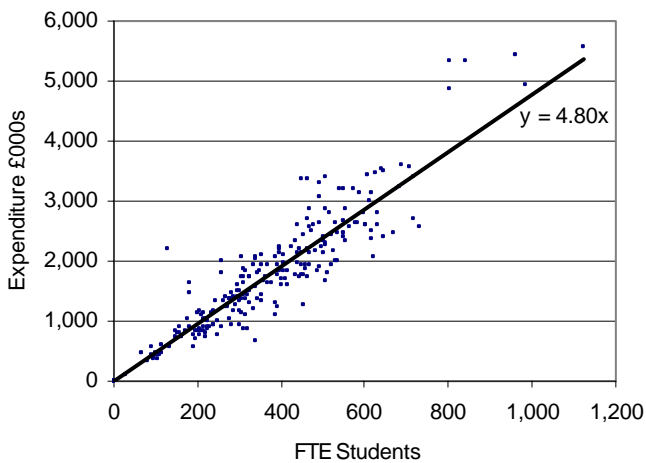
mean = 5.24 median = 5.21 stdv = 1.30

6 Health and Community Studies



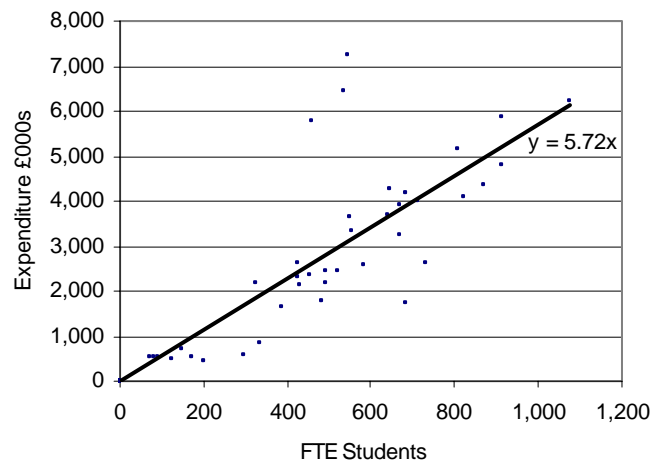
mean = 4.85 median = 4.72 stdv = 2.78

7 Psychology and Behavioural Sciences



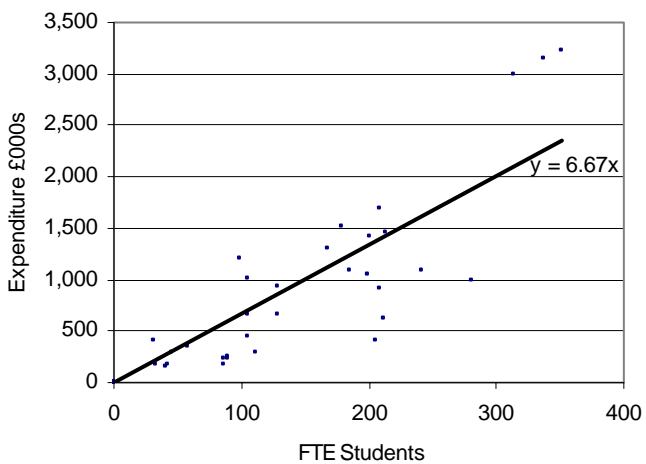
mean = 4.76 median = 4.63 stdv = 1.27

8 Pharmacy



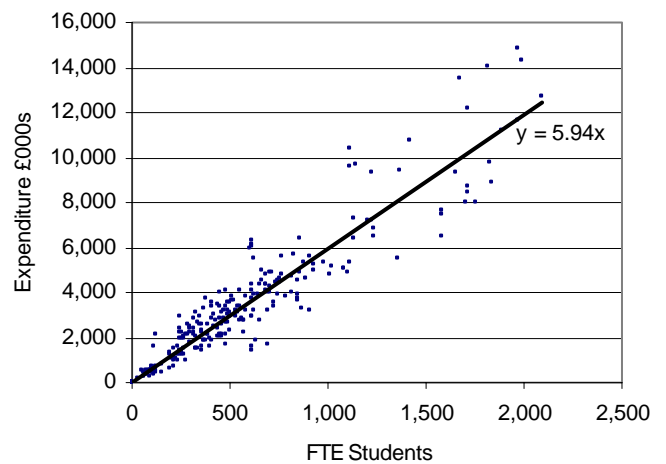
mean = 5.71 median = 5.25 stdv = 2.44

9 Pharmacology



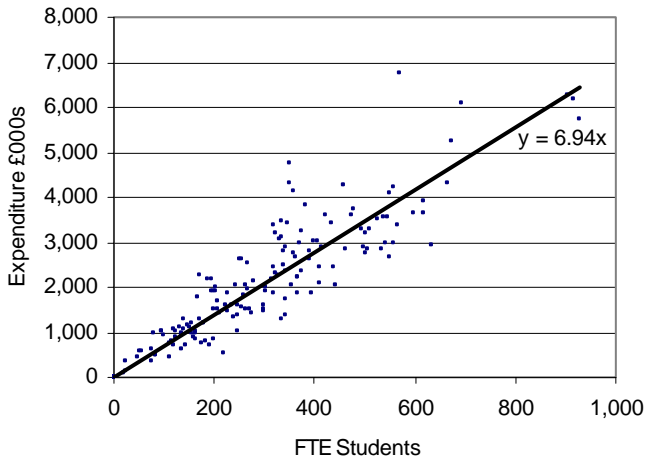
mean = 6.25 median = 5.71 stdv = 2.90

10 Biosciences



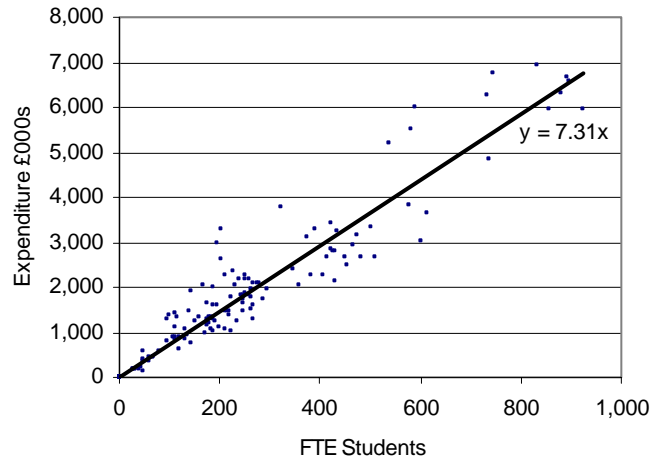
mean = 6.00 median = 5.87 stdv = 1.88

11 Chemistry



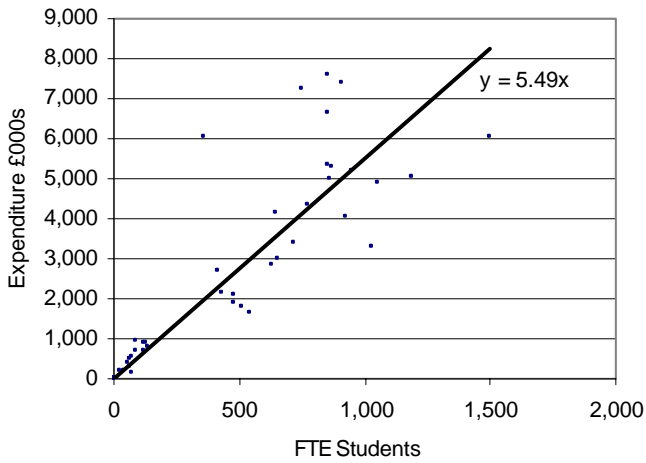
mean = 7.08 median = 6.93 stdv = 2.14

12 Physics



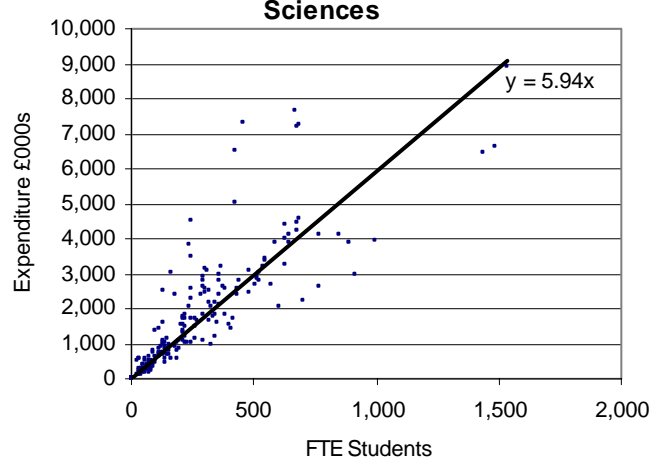
mean = 7.43 median = 7.09 stdv = 2.29

13 Agriculture and Forestry



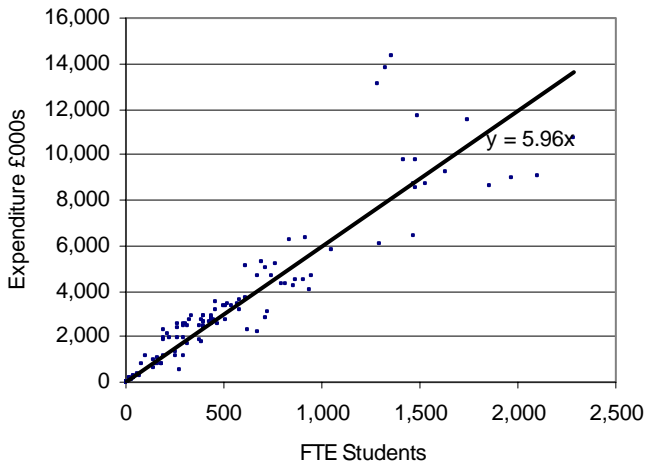
mean = 5.75 median = 5.90 stdv = 2.68

14 Earth, Marine and Environmental Sciences



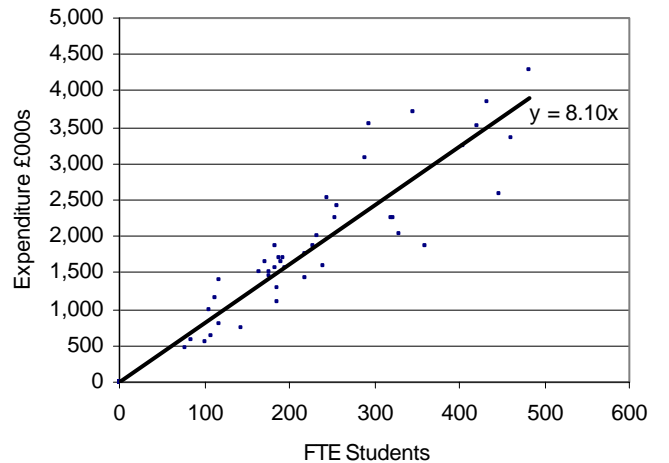
mean = 6.45 median = 5.93 stdv = 3.25

16 General Engineering



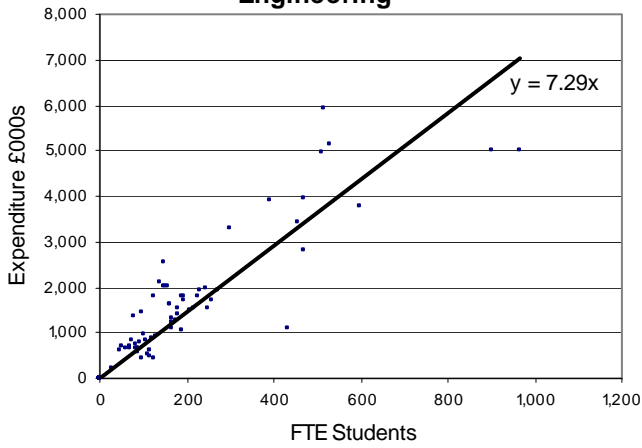
mean = 6.16 median = 6.14 stdv = 1.82

17 Chemical Engineering



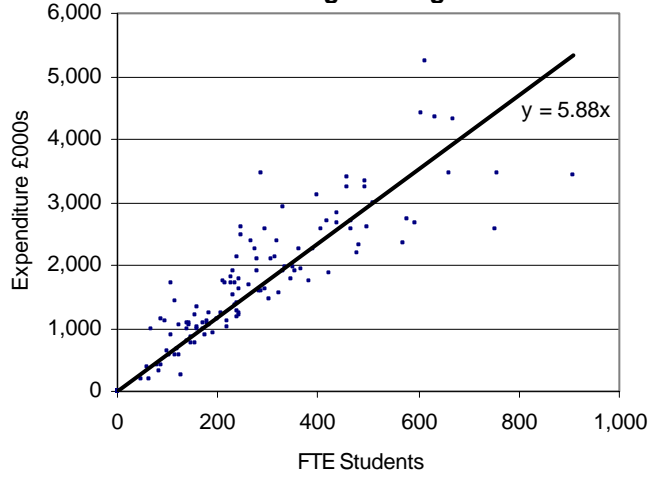
mean = 8.16 median = 8.28 stdv = 1.77

18 Mineral, Metallurgy and Materials Engineering



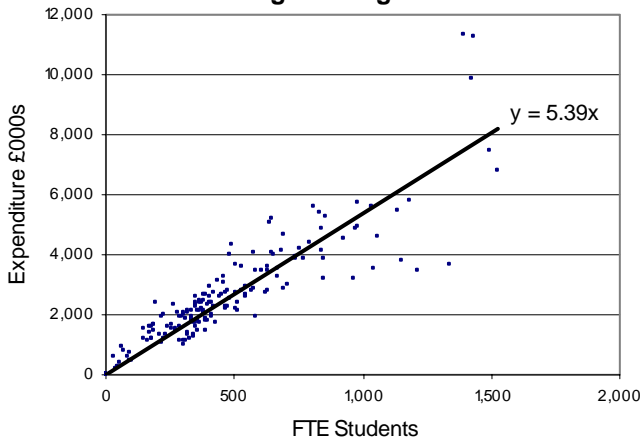
mean = 8.11 median = 8.25 stdv = 3.23

19 Civil Engineering



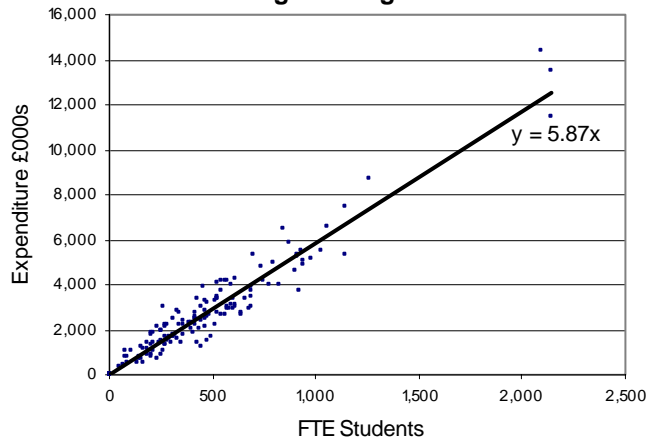
mean = 6.22 median = 6.10 stdv = 2.19

20 Electrical, Electronic and Computer Engineering



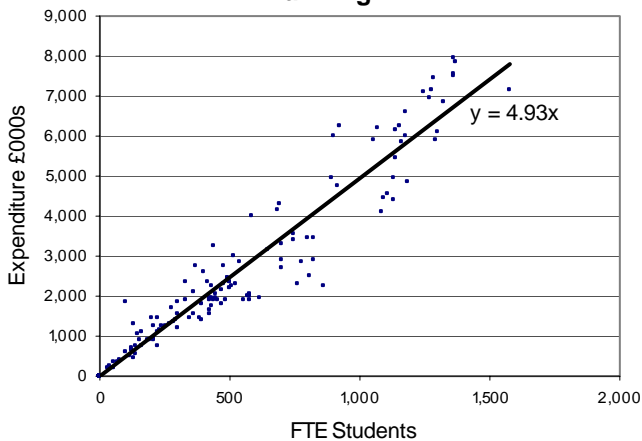
mean = 5.57 median = 5.76 stdv = 1.95

21 Mechanical, Aero and Production Engineering



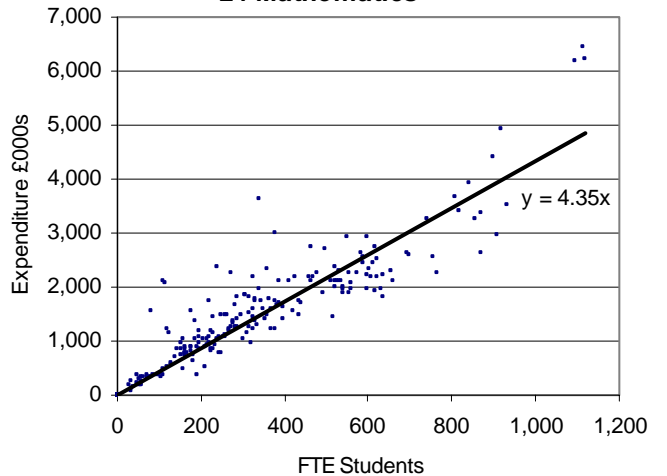
mean = 5.85 median = 5.72 stdv = 1.64

23 Architecture, Built Environment and Planning



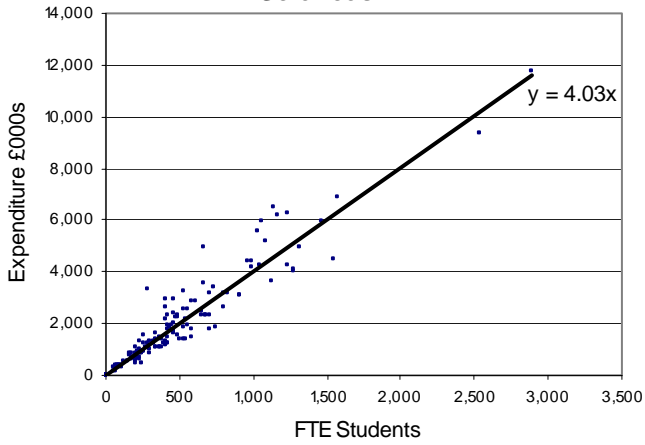
mean = 4.91 median = 4.88 stdv = 1.66

24 Mathematics



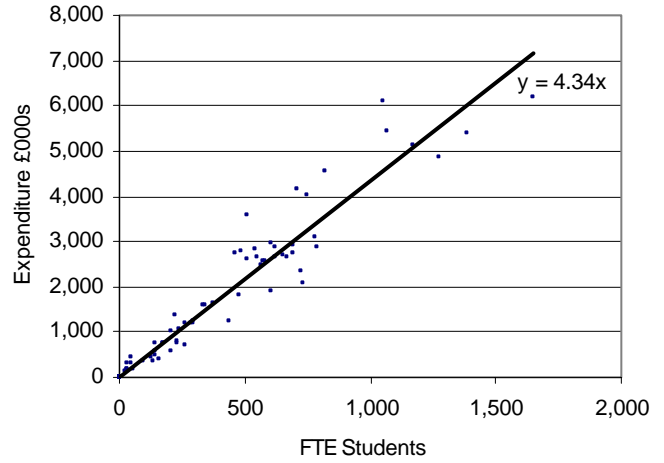
mean = 4.51 median = 4.42 stdv = 2.19

25 Information Technology and Systems Sciences



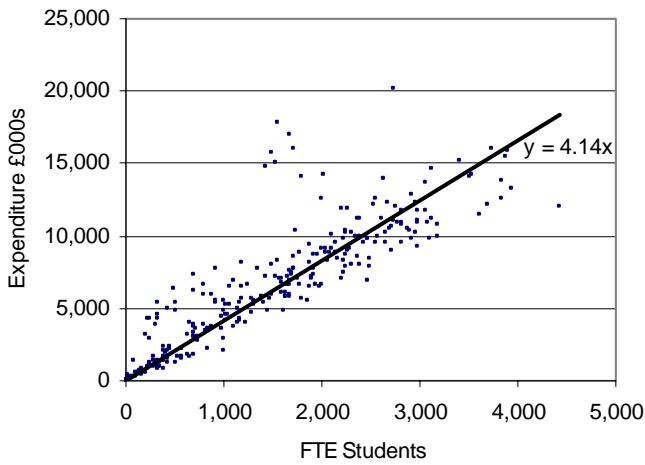
mean = 4.05 median = 3.81 stdv = 1.22

26 Catering and Hospitality Management



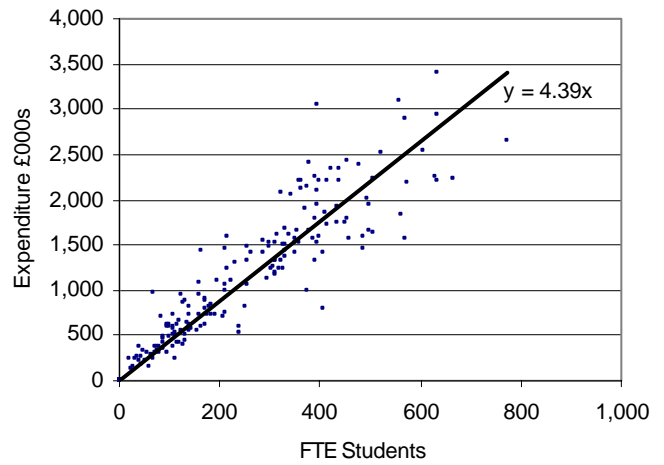
mean = 4.39 median = 4.27 stdv = 1.29

27 Business and Management Studies



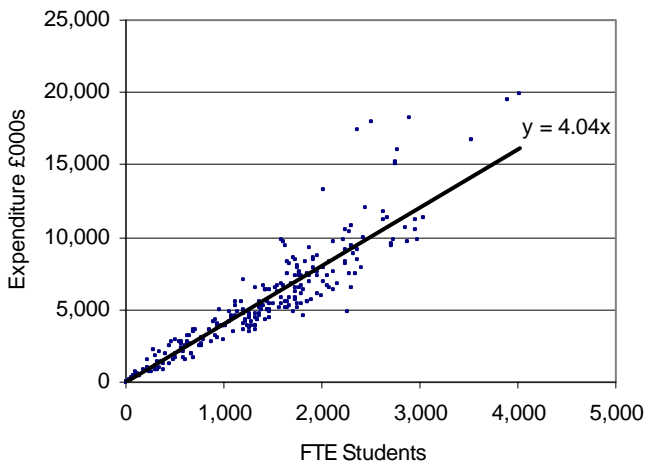
mean = 4.38 median = 4.21 stdv = 2.78

28 Geography



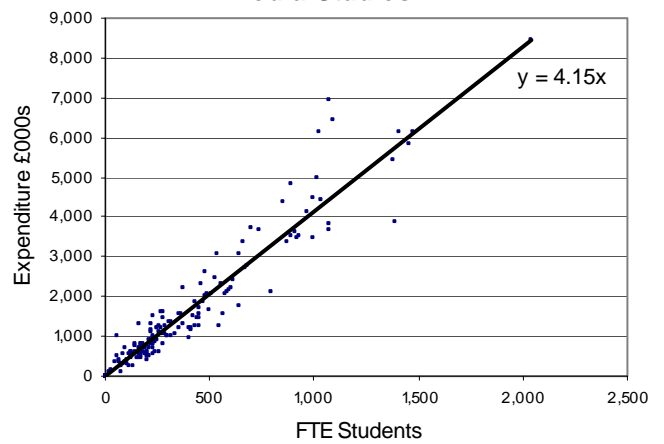
mean = 4.55 median = 4.64 stdv = 1.55

29 Social Studies

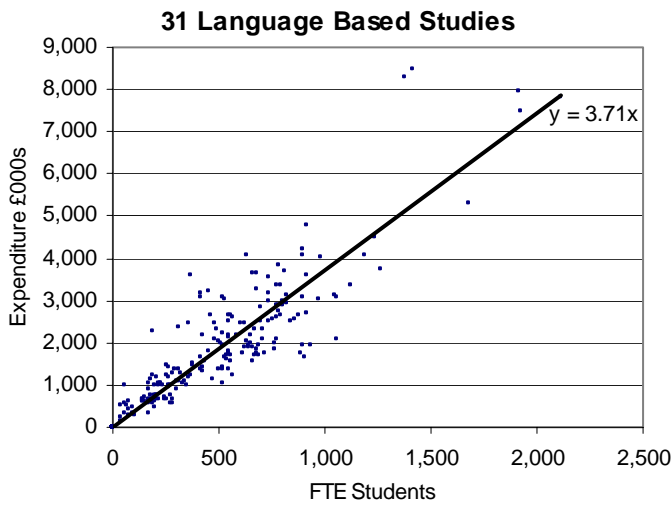


mean = 3.98 median = 3.83 stdv = 0.92

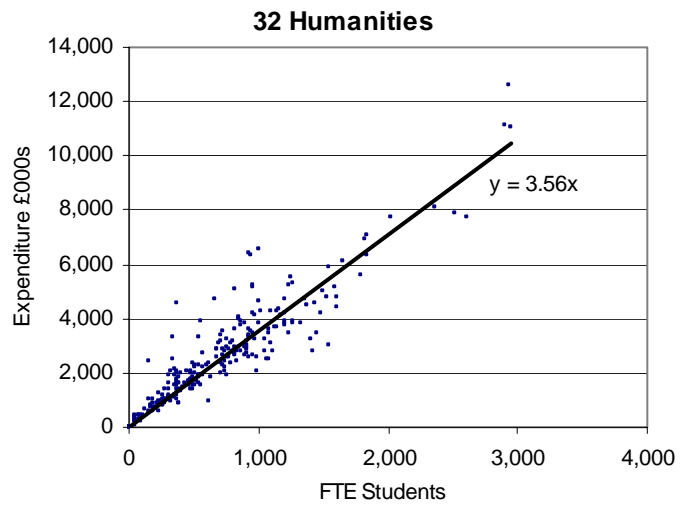
30 Librarianship, Communication and Media Studies



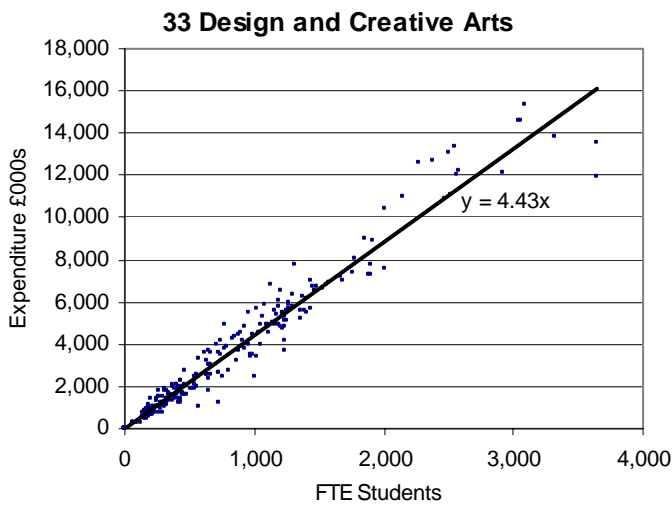
mean = 4.08 median = 3.94 stdv = 1.53



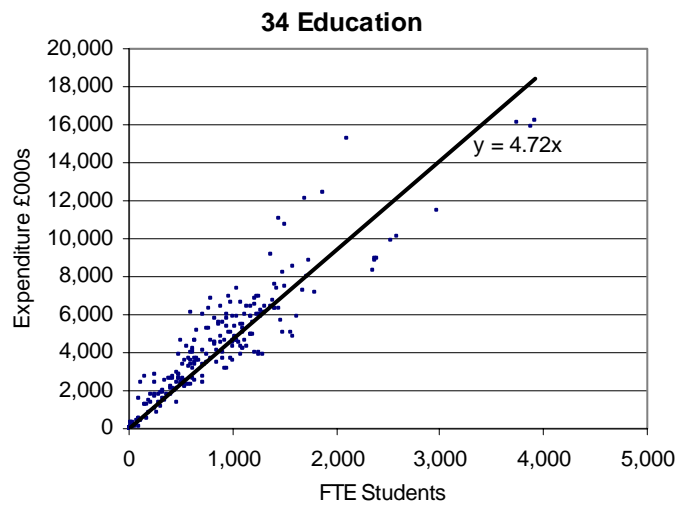
mean = 3.77 median = 3.64 stdv = 1.90



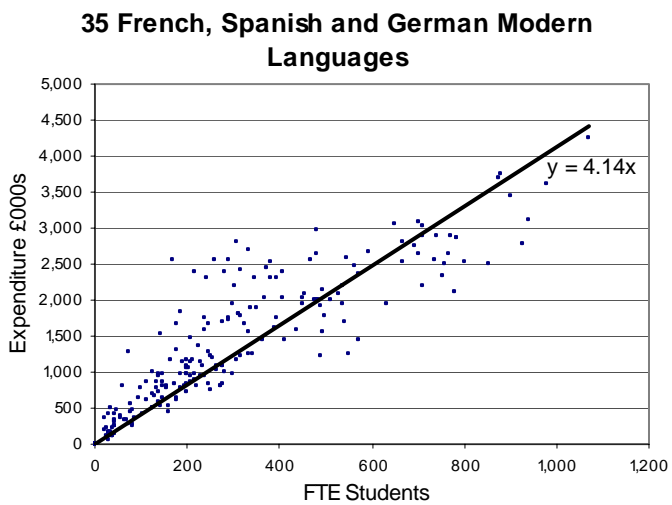
mean = 3.69 median = 3.68 stdv = 1.48



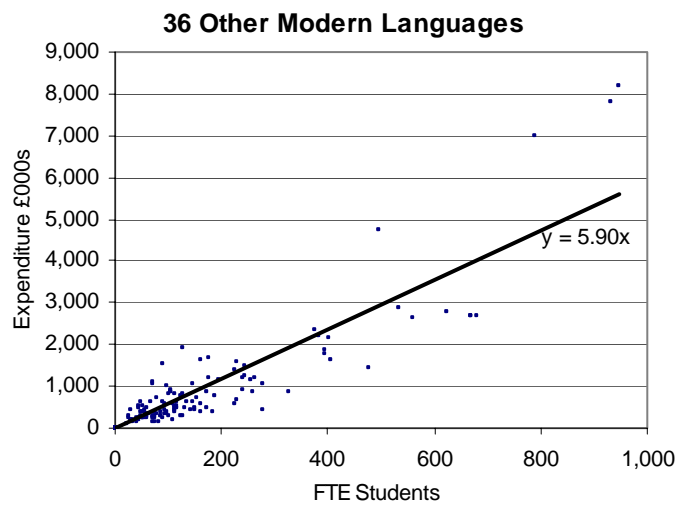
mean = 4.41 median = 4.32 stdv = 0.84



mean = 5.02 median = 5.04 stdv = 2.19

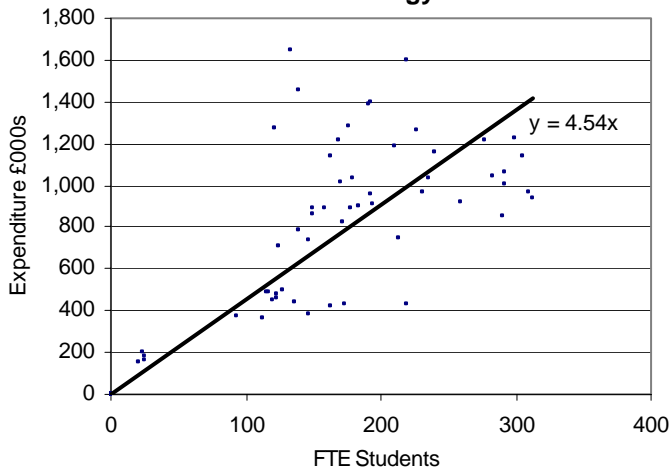


mean = 4.58 median = 4.60 stdv = 2.39



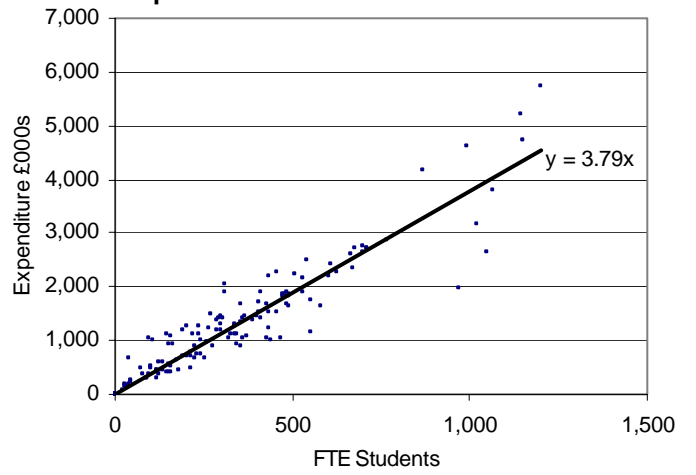
mean = 5.46 median = 4.65 stdv = 3.00

37 Archaeology



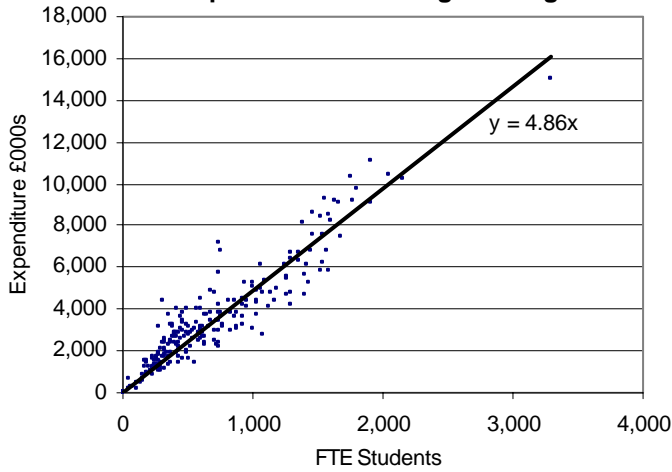
mean = 4.80 median = 4.80 stdv = 2.11

38 Sports Science and Leisure Studies



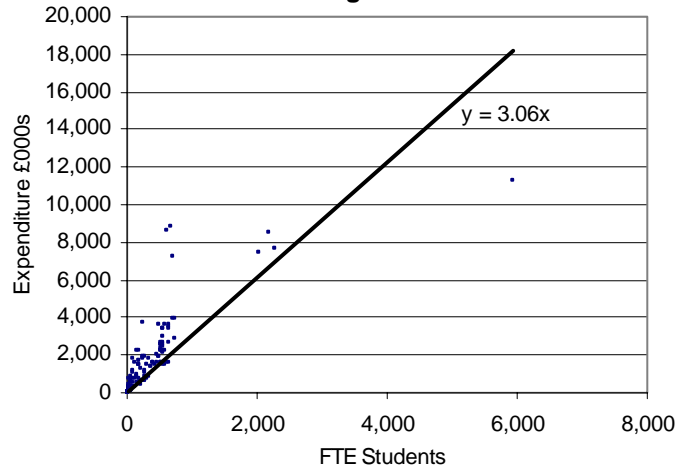
mean = 3.87 median = 3.82 stdv = 1.73

39 Computer Software Engineering



mean = 5.06 median = 5.08 stdv = 1.78

41 Continuing Education



mean = 4.64 median = 4.57 stdv = 3.73

Annex B

Results of the study with cost centres classified by the current price group assignments

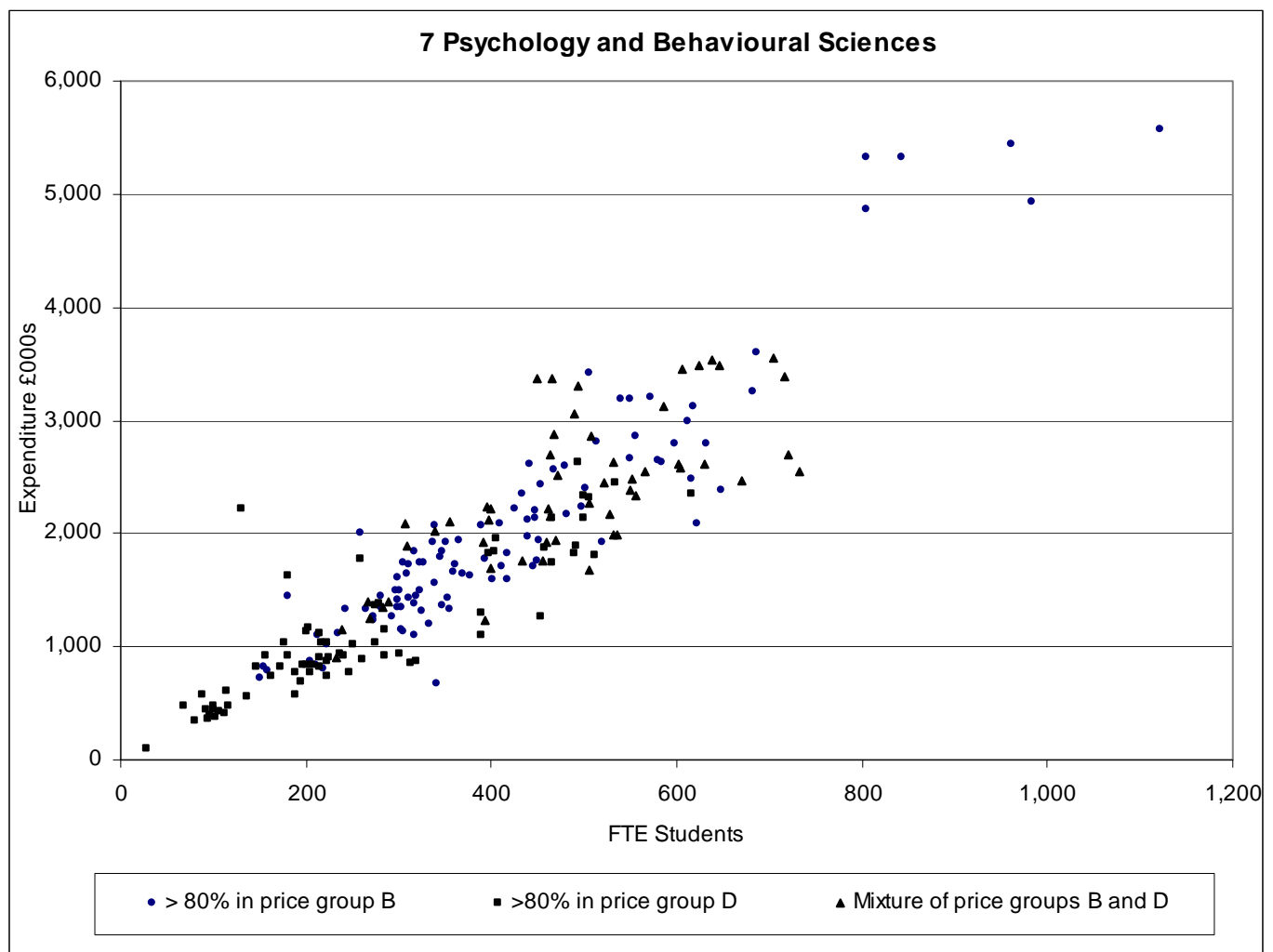
Price group	Cost centre	FTE	Median rate	Total expenditure	Normalised rate
A	1 Clinical Medicine	63,606	17.15	1,090,832	4.57
	2 Clinical Dentistry	9,809	12.96	127,135	3.45
	3 Veterinary Science	3,647	11.84	43,172	3.15
A Total		77,062	16.37	1,261,139	4.36
B	17 Chemical Engineering	9,969	8.28	82,540	2.21
	18 Mineral, Metallurgy and Materials Engineering	13,527	8.25	111,631	2.20
	12 Physics	34,388	7.09	243,698	1.89
	11 Chemistry	48,156	6.93	333,761	1.85
	16 General Engineering	64,557	6.14	396,216	1.63
	19 Civil Engineering	32,725	6.10	199,775	1.63
	4 Anatomy and Physiology	20,958	6.05	126,784	1.61
	14 Earth, Marine and Environmental Sciences	52,388	5.93	310,900	1.58
	13 Agriculture and Forestry	20,256	5.90	119,600	1.57
	10 Biosciences	143,322	5.87	841,532	1.56
	20 Electrical, Electronic and Computer Engineering	80,778	5.76	465,642	1.54
	21 Mechanical, Aero and Production Engineering	68,918	5.72	393,873	1.52
	9 Pharmacology	4,892	5.71	27,927	1.52
	8 Pharmacy	20,029	5.25	105,213	1.40
	39 Computer Software Engineering	154,069	5.08	782,779	1.35
B Total		768,933	5.91	4,541,872	1.57
C	23 Architecture, Built Environment and Planning	74,071	4.88	361,462	1.30
	37 Archaeology	9,785	4.80	46,924	1.28
	6 Health and Community Studies	89,819	4.72	423,635	1.26
	36 Other Modern Languages	22,168	4.65	103,168	1.24
	28 Geography	45,842	4.64	212,700	1.24
	35 French, Spanish and German Modern Languages	63,393	4.60	291,861	1.23
	24 Mathematics	71,303	4.42	315,238	1.18
	33 Design and Creative Arts	199,348	4.32	860,965	1.15
	26 Catering and Hospitality Management	29,130	4.27	124,366	1.14
25 Information Technology and Systems Sciences	71,018	3.81	270,409	1.01	
C Total		675,876	4.45	3,010,728	1.19
D	29 Social Studies	347,268	3.83	1,328,530	1.02
	32 Humanities	176,122	3.68	648,147	0.98
	31 Language Based Studies	103,287	3.64	375,967	0.97
D Total		626,677	3.75	2,352,644	1.00
Media	30 Librarianship, Communication	64,295	3.94	253,006	1.05
Psychology	7 Psychology and Behavioural Sciences	87,550	4.63	405,274	1.23
C	5 Nursing and Paramedical Studies	266,006	5.21	1,386,245	1.39
C/D	34 Education	195,633	5.04	986,514	1.34
D	41 Continuing Education	44,539	4.57	203,339	1.22
D	27 Business and Management Studies	404,482	4.21	1,704,695	1.12
C/D	38 Sports Science and Leisure Studies	47,146	3.82	179,977	1.02
	25 & 39 IT & Computer Software Engineering combined	176,237	5.03	885,946	1.34

Annex C

More detailed plots for the Psychology and Behavioural Sciences and Librarianship, Communication and Media Studies cost centres

Each mark on the plots represents an institution's expenditure in a single year. The institutions have been divided into categories depending on whether their price group splits contain more than 80 per cent in B, C or D, or are a mixture (not more than 80 per cent in any one price group).

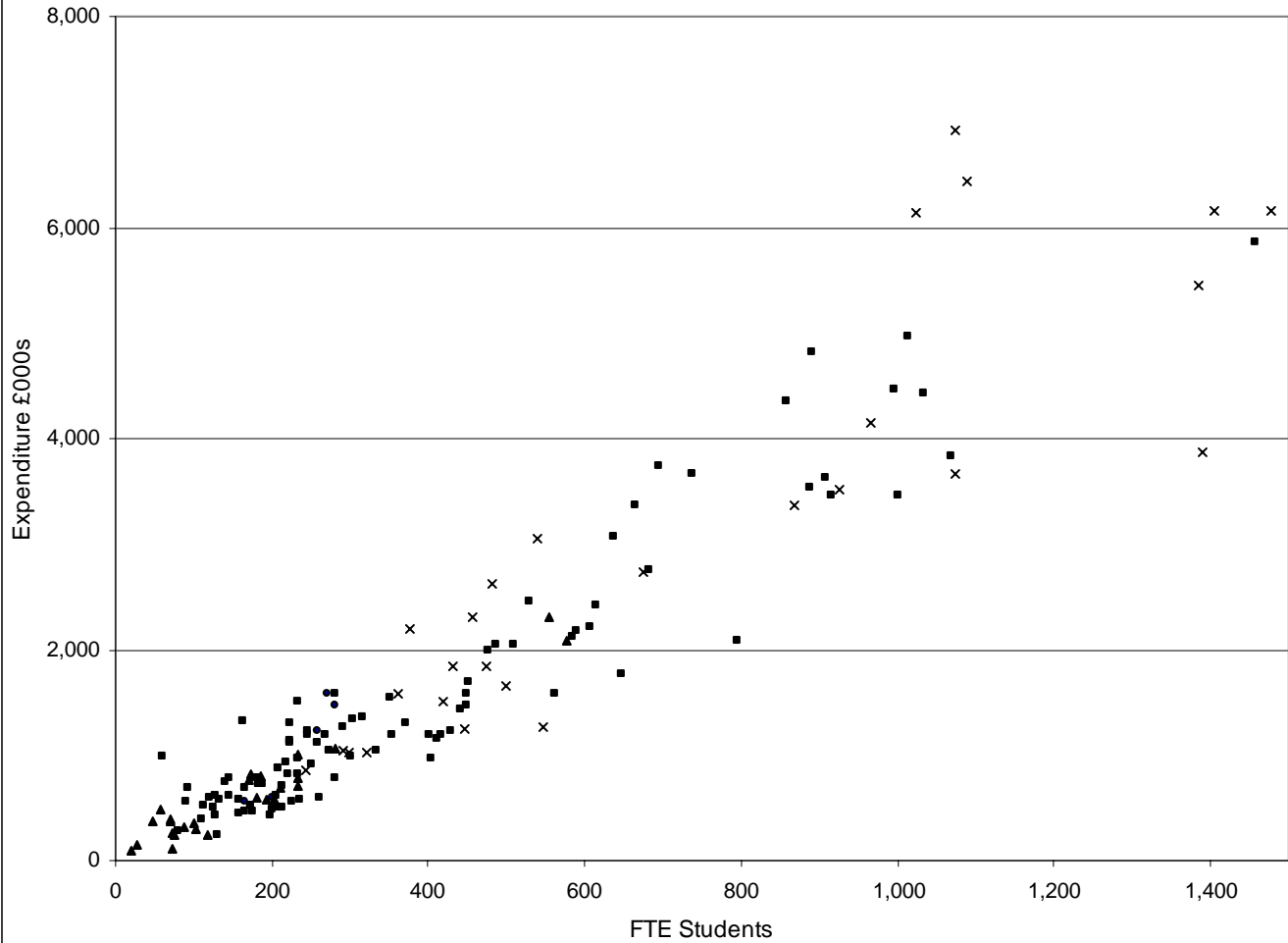
It is clear that for both cost centres, there are no distinct groupings of the different categories. There are some cases where institutions getting D rates for their provision are spending more than those getting B or C rates. The median rates for each category for Psychology and Behavioural Sciences is closest to overall price group C, and those for Librarianship, Communication and Media Studies are closest to overall price group D.



More than 80% in price group B	median = 4.79
More than 80% in price group D	median = 4.14
Mixture of price groups B and D	median = 4.78
All institutions	median = 4.63

Overall old price group B	median = 5.91
Overall old price group C	median = 4.45

30 Librarianship, Communication and Media Studies



• >80% in price group B ■ >80% in price group C ▲ >80% in price group D × Mixture of B, C and D

More than 80% in price group B	median = 4.06
More than 80% in price group C	median = 3.96
More than 80% in price group D	median = 3.68
Mixture of price groups B and D	median = 4.00
All institutions	median = 3.94
Overall old price group C	median = 4.45
Overall old price group D	median = 3.75

Annex D

Results of the study with cost centres classified by the proposed new price group assignments - the proposed price group weightings are also shown

Price group	Cost centre	FTE	Median rate	Total expenditure	Normalised rate	Proposed weighting
A	1 Clinical Medicine	63,606	17.15	1,090,832	4.54	
	2 Clinical Dentistry	9,809	12.96	127,135	3.43	
	3 Veterinary Science	3,647	11.84	43,172	3.14	
A Total		77,062	16.37	1,261,139	4.34	4.0
B1	17 Chemical Engineering	9,969	8.28	82,540	2.19	
	18 Mineral, Metallurgy and Materials Engineering	13,527	8.25	111,631	2.19	
	12 Physics	34,388	7.09	243,698	1.88	
	11 Chemistry	48,156	6.93	333,761	1.84	
B1 Total		106,041	7.28	771,630	1.93	2.0
B2	16 General Engineering	64,557	6.14	396,216	1.63	
	19 Civil Engineering	32,725	6.10	199,775	1.62	
	4 Anatomy and Physiology	20,958	6.05	126,784	1.60	
	14 Earth, Marine and Environmental Sciences	52,388	5.93	310,900	1.57	
	13 Agriculture and Forestry	20,256	5.90	119,600	1.56	
	10 Biosciences	143,322	5.87	841,532	1.56	
	20 Electrical, Electronic and Computer Engineering	80,778	5.76	465,642	1.53	
	21 Mechanical, Aero and Production Engineering	68,918	5.72	393,873	1.51	
	9 Pharmacology	4,892	5.71	27,927	1.51	
	8 Pharmacy	20,029	5.25	105,213	1.39	
B2 Total		508,824	5.87	2,987,463	1.56	1.6
C	39 Computer Software Engineering	154,069	5.08	782,779	1.35	
	23 Architecture, Built Environment and Planning	74,071	4.88	361,462	1.29	
	37 Archaeology	9,785	4.80	46,924	1.27	
	6 Health and Community Studies	89,819	4.72	423,635	1.25	
	36 Other Modern Languages	22,168	4.65	103,168	1.23	
	28 Geography	45,842	4.64	212,700	1.23	
	7 Psychology and Behavioural Sciences	87,550	4.63	405,274	1.23	
	35 French, Spanish and German Modern Languages	63,393	4.60	291,861	1.22	
	24 Mathematics	71,303	4.42	315,238	1.17	
	33 Design and Creative Arts	199,348	4.32	860,965	1.14	
	26 Catering and Hospitality Management	29,130	4.27	124,366	1.13	
	25 Information Technology and Systems Sciences	71,018	3.81	270,409	1.01	
	C Total		917,496	4.58	4,198,781	1.21
D	30 Librarianship, Communication	64,295	3.94	253,006	1.04	
	29 Social Studies	347,268	3.83	1,328,530	1.01	
	38 Sports Science and Leisure Studies	47,146	3.82	179,977	1.01	
	32 Humanities	176,122	3.68	648,147	0.98	
	31 Language Based Studies	103,287	3.64	375,967	0.96	
D Total		738,117	3.77	2,785,627	1.00	1.0
C	5 Nursing and Paramedical Studies	266,006	5.21	1,386,245	1.38	1.3
C/D	34 Education	195,633	5.04	986,514	1.34	
D	41 Continuing Education	44,539	4.57	203,339	1.21	1.0
D	27 Business and Management Studies	404,482	4.21	1,704,695	1.12	1.0

Annex E

Modelling the effects of the new assignments and weightings

This annex shows how the changes in assignments and weightings will affect the distribution of weighted FTE across cost centres and price groups. The unweighted FTEs are from HESES02 and have been distributed over cost centres according to proportions derived from HESA 2001-02 data. The weighted FTEs have been calculated by old and new price group, and the FTE weighted by new price group then up-rated to take account of the decrease in the sector total weighted FTE. The increase in weighted FTE has been computed and expressed as a percentage to show the effect on each cost centre and price group.

Cost centre	FTE	Old price group	New price group	FTE weighted by old price group	FTE weighted by new price group	Up-rated FTE weighted by new price group	Percentage increase in weighted FTE
1 Clinical Medicine	12,403	A	A	55,815	49,613	57,401	2.8%
	6,664	B	B2	13,328	10,662	12,336	-7.4%
	19,067	Overall		69,143	60,275	69,738	0.9%
2 Clinical Dentistry	2,090	A	A	9,405	8,360	9,672	2.8%
	766	B	B2	1,533	1,226	1,419	-7.4%
	2,856	Overall		10,938	9,586	11,091	1.4%
3 Veterinary Science	2,174	A	A	9,783	8,696	10,061	2.8%
4 Anatomy and Physiology	5,734	B	B2	11,467	9,174	10,614	-7.4%
5 Nursing and Paramedical Studies	12,937	C	C	19,405	16,818	19,458	0.3%
6 Health and Community Studies	28,213	C	C	42,319	36,676	42,434	0.3%
7 Psychology and Behavioural Sciences	17,313	B	C	34,626	22,507	26,040	-24.8%
	13,093	D	C	13,093	17,021	19,693	50.4%
	30,406	Overall		47,719	39,528	45,733	-4.2%
8 Pharmacy	6,307	B	B2	12,614	10,091	11,675	-7.4%
9 Pharmacology	1,425	B	B2	2,850	2,280	2,638	-7.4%
10 Biosciences	40,370	B	B2	80,739	64,591	74,731	-7.4%
11 Chemistry	13,213	B	B1	26,426	26,426	30,575	15.7%
12 Physics	9,459	B	B1	18,918	18,918	21,888	15.7%
13 Agriculture and Forestry	6,922	B	B2	13,845	11,076	12,814	-7.4%
14 Earth, Marine and Environmental Sciences	17,952	B	B2	35,903	28,722	33,231	-7.4%
16 General Engineering	19,144	B	B2	38,288	30,630	35,439	-7.4%
17 Chemical Engineering	1,976	B	B1	3,953	3,953	4,573	15.7%
18 Mineral, Metallurgy and Materials Engineering	3,201	B	B1	6,402	6,402	7,407	15.7%
19 Civil Engineering	8,543	B	B2	17,086	13,668	15,814	-7.4%
20 Electrical, Electronic and Computer Engineering	22,064	B	B2	44,127	35,302	40,843	-7.4%
21 Mechanical, Aero and Production Engineering	18,972	B	B2	37,944	30,355	35,120	-7.4%
23 Architecture, Built Environment and Planning	21,515	C	C	32,273	27,970	32,360	0.3%
24 Mathematics	22,705	C	C	34,057	29,516	34,150	0.3%
25 Information Technology and Systems Sciences	21,366	C	C	32,049	27,776	32,136	0.3%

Cost centre	FTE	Old price group	New price group	FTE weighted by old price group	FTE weighted by new price group	Up-rated FTE weighted by new price group	Percentage increase in weighted FTE
26 Catering and Hospitality Management	8,988	C	C	13,482	11,685	13,519	0.3%
27 Business and Management Studies	114,983	D	D	114,983	114,983	133,033	15.7%
28 Geography	15,151	C	C	22,727	19,697	22,788	0.3%
29 Social Studies	109,272	D	D	109,272	109,272	126,426	15.7%
30 Librarianship, Communication and Media Studies	5,061	B	D	10,123	5,061	5,856	-42.2%
	19,240	C	D	28,860	19,240	22,260	-22.9%
	5,672	D	D	5,672	5,672	6,562	15.7%
	29,973	Overall		44,655	29,973	34,679	-22.3%
31 Language Based Studies	27,951	D	D	27,951	27,951	32,339	15.7%
32 Humanities	60,396	D	D	60,396	60,396	69,877	15.7%
33 Design and Creative Arts	77,114	C	C	115,672	100,249	115,986	0.3%
34 Education	7,655	C	C	11,483	9,952	11,514	0.3%
	19,119	D	D	19,119	19,119	22,121	15.7%
	26,774	Overall		30,602	29,071	33,634	9.9%
35 French, Spanish and German Modern Languages	21,903	C	C	32,855	28,474	32,944	0.3%
36 Other Modern Languages	7,432	C	C	11,148	9,662	11,178	0.3%
37 Archaeology	3,108	C	C	4,662	4,041	4,675	0.3%
38 Sports Science and Leisure Studies	15,746	C	D	23,619	15,746	18,218	-22.9%
	1,152	D	D	1,152	1,152	1,332	15.7%
	16,897	Overall		24,770	16,897	19,550	-21.1%
39 Computer Software Engineering	51,167	B	C	102,335	66,518	76,959	-24.8%
41 Continuing Education	10,480	D	D	10,480	10,480	12,125	15.7%
Totals	918,112			1,374,237	1,187,778	1,374,237	0.0%
Summary by old price group	A	16,667		75,002	66,669	77,134	2.8%
	B	233,879		467,757	369,996	428,078	-8.5%
	C	263,833		395,750	338,260	391,360	-1.1%
	D	343,354		343,354	343,354	397,253	15.7%
	Media	29,973		44,655	29,973	34,679	-22.3%
	Psychology	30,406		47,719	39,528	45,733	-4.2%
Totals	918,112		1,374,237	1,187,778	1,374,237	0	
Summary by new price group	A	16,667		75,002	66,669	77,134	2.8%
	B1	27,850		55,700	55,700	64,443	15.7%
	B2	154,861		309,723	247,778	286,675	-7.4%
	C	329,661		522,185	428,559	495,834	-5.0%
	D	389,073		411,627	389,073	450,150	9.4%
	Totals	918,112		1,374,237	1,187,778	1,374,237	0