

ACADEMIC\$
On the salaries of UK
Vice-chancellors and Principals.

Tom Coupé

ECARES

ULB

VERY PRELIMINARY VERSION

DO NOT QUOTE

Comments Welcome

tcoupe@ulb.ac.be

* This research was mainly done while visiting University College London. I thank the European Commission (Marie Curie scholarship) and the Belgian federal government for financial support (PAI 4/28). Of course, any errors are mine.

Introduction

In a recent article on the salaries of the Vice Chancellor and Principals of the UK universities in *The Times Higher Education Supplement* (THES/28/01/2000), a person is quoted saying “Vice Chancellors are paid much more than the rest of the staff. Who decides what they are paid and what it is based on are kept secret. Staff have the right to know the criteria... In general, there does not seem to be rhyme or reason to these pay rises.” In this article, we’ll try to reveal those factors that determine both the wages and the changes in the wages of the Vice Chancellors and the Principals¹.

The standard reaction to this criticism goes then as follows: “Vice-chancellors’ salaries are negotiated individually. They remain considerably below those for chief executives of other multimillion pound corporations, public or private (CVCP-Chief Executive in *Thes*, p.1, 07/02/1997).” Therefore, we will also try to compare the salaries the VC’s earn in the UK with the earnings of the CEO’s of private UK firms.

Finally, we will compare the wages of the presidents of American Universities with those of their UK counterparts. Recent literature has shown that there is a substantial difference between the wages of UK and US CEO’s, even after controlling for differences in the characteristics of these firms (Conyon and Murphy (2000)). Several recent studies have tried to determine the factors that influence the wages of US university presidents (Ehrenberg et al (2000), Tang et al. (2000), Pfeffer and Ross (1988)). Combining the UK and the US data will make it possible to determine whether the findings for private firms are also valid for the academic ‘firms’.

¹ For sake of brevity, from here abbreviated to VC.

The wages of VC's versus the wages of staff.

High wages tend to shock people: when a multimillion transfer fee is paid for this or that football player or when the stock-option gains of is this or that manager are made public, voices are heard that claim that no one is worth such amounts of money². Each time the list with the salaries of VC's is published in the THES something similar happens.

“Median pay rises for vice chancellors in what they tell us is a dreadful year are twice what they awarded their staff (assistant general secretary of Association of University Teachers in Thesis, p.1, 07/02/1997)”

“We are outraged at increases which are so flagrantly ahead of increases ordinary staff have received over the last two years (assistant general secretary of Association of University Teachers in Thes, p.8, 06/02/1998)”

“We don't begrudge vice-chancellors their pay increase but yet again they are paying themselves a far greater increase than they do their staff (assistant general secretary of Association of University Teachers in Thes, p.1, 09/02/1999)”

“These new figures reveal a shameless attempt by vice-chancellor's to reward themselves for the hard work and effort of university academics and teaching staff. The fat cat mentality smacks of hypocrisy of the highest order as vice-chancellors and principals award themselves double the increase offered to other staff (general secretary of the Association of University Teachers on AUT website, 26/01/2001³).”

Note that the wage increases of university staff receives is annually determined through collective bargaining between the AUT (Association of University Teachers) and the UCEA (University and College Employers association).

² Throughout the eighties and the beginning of the nineties, the compensation of UK CEO's has been heavily criticized (see Conyon et al (1995)).

³ <http://www.aut.org.uk/news/index.html>

The response of the CVCP, the Committee of Vice Chancellors and Principals, is standard too:

“Vice-chancellors’ salaries are negotiated individually. They remain considerably below those for chief executives of other multimillion pound corporations, public or private (CVCP-Chief Executive in *Thes*, p.1, 07/02/1997).”

“What v-c’s earn is entirely up to their own governing bodies. These sort of levels of pay are generally in line with what you would expect a chief executive to receive for running something in the private sector (CVCP-spokesman in *Thes*, p.8, 06/02/1998).”

The above statements do raise the following questions:

- 1) What determines the (changes in) wages of the Vice chancellors and why do they earn more (get higher raises) than the ordinary faculty.
- 2) Do the CEO’s of ‘comparable’ firms indeed earn more.

What determines pay? Results from the literature on CEO’s

There are several reasons why university CEOs are paid more than ordinary faculty members. A first reason comes from ‘tournament theory’ (Lazear and Rosen (1981)). This theory sees the wage increase that goes together with a promotion as a ‘prize’ in a competition among the employees. This prize makes sure that people will work hard in their attempts to win the prize. However, as one moves up on the job ladder, the number of (possible) future promotions will decline, and hence the option value of future prizes will decline. To keep the same effort level, the prizes at higher levels will have to increase with the level. Note that using data for UK CEOs, Conyon et al (2001) indeed find evidence for such a convex structure.

Alternatively, one can claim that the positions at higher level have a much higher influence on the performance of the organization, and hence that the marginal productivity increases with the level. A competitive labor market will then promote the most talented people to the highest levels in the biggest organizations (see Rosen

(1990)). This then implies a positive correlation between firm size and compensation. And indeed, “The best-documented empirical finding in the executive compensation literature is the consistency of the relation between CEO pay and company size typically measured as the elasticity of cash compensation to company revenues (Conyon and Murphy, 2000)”.

Finally, individual characteristics of the VC, like age, education, experience and tenure, also should have a positive effect of the salary of the VCs.

Of course, the above theories can explain why VCs earn more than ordinary faculty or why some VCs earn more than other VCs. They do not, however, give a reason for changes in the salaries of VCs. One explanation could be performance-related pay: VCs that did a good job could be rewarded by an increase in their salary. Conyon et al (1995) give an overview of some recent empirical studies that use data on UK CEO’s. They conclude: ‘The evidence is very consistent and points to the existence of very small pay–performance sensitivities’.

Performance related pay might also explain why the wages of VCs and the wages of ordinary staff do not evolve differently. If the performance of a VC is easy to measure, in contrast to the performance of ordinary staff, than one would expect only for the former a performance related pay. Note that the difference in bargaining structure, individual bargaining versus collective bargaining, might be another explanation. However, studies on collective bargaining at the US universities tend to find a small positive effects of unions on wages/wage rises(see...)

What determines pay? Results from the literature on US university presidents.

Pfeffer and Ross (1988) found that in a cross-sectional regression, salary of university presidents was related positively to a measure of size and resources and to the private status of the university. Being women or being promoted from inside decreased wages. Their dynamic specification highlighted the importance of the lagged wage-level, of size and of being private. Tang et al (1999) show that pay is correlated most strongly with the amount of expenditures of the university. Ehrenberg et al (2000) is most similar to our study. They use data published by an educational newspaper (the Chronicle of Higher Education) for some 400 US university presidents. Their cross-

sectional analysis shows a positive effect of tenure and of experience. Institutional characteristics that are important are the enrollment, the size of the endowment, the average salary of the faculty and the SAT-scores of the students. Changes in salaries, however, appeared to be much more difficult to explain. They find some support for the importance of enrollment growth and changes in average faculty salaries.

Finally, Baimbridge and Simpson (1996) run a regression on UK data for the year 1993-1994 (A limited number of universities disclosed these data on a voluntary basis in 1993-1994). However, running a regression with 35 variables when having only 64 observations makes their results highly questionable.

Data

Starting with the academic year 1994-1995, universities have been required to disclose “details of the pay of vice chancellors and principals (THES 24/03/1995).” Since then THES has annually published a ‘league table’ of these salaries, based on the data the universities publish in the annual financial statement. The THES wages include ‘pay and other benefits but excluding employers’ pension contributions’.

Data on income (both total and divided over different categories such as research, endowment, student fees etc) and expenditures (total, staff costs), number of students and number of staff are from several publications of the Higher Education Statistical Agency. Data on the number of applications are available from UCAS. Personal characteristics (age, degree, tenure etc) of the VC’s are from two different sources: The “Who’s Who’s of Executive Heads” of the Association of Commonwealth Universities and the “Who’s Who’s 2000”.

Data on pay for the UK Ceo’s of about 400 firms (names beginning with letters A-C) are from the ‘Corporate Register’(PriceWaterhouseCooper, 2001). From this publication, we get info on the annual turnover, the number of employees, the wage bill of the firm. Also available are the average remuneration of the board members and the pay of the ‘highest paid director’. While the highest paid director is not necessarily the CEO, we think that it is reasonable to assume that in most cases it is the CEO. For the highest paid director (HPD), we have the ‘normal remuneration excluding pensions and severance pay’. Note that shares or options that are given to

CEOs are not included. Data are from the first quarter 2001 edition, which means that the data are from the annual report 2000, which covers the year 1999.

Descriptive stats for wages (1999-2000), VC's characteristics and university characteristics (1998-1999) .

1999-2000	Wage(£)	Beginning of VC at current Uni	Date of birth
Mean	111700	1993	1942
Median	111000	1994	1942
Std	27293		
Min	41515	1982	1932
Max	266000	1999	1957

The THES-table for 1999-2000 includes data for 163 universities⁴. Column 2 of table 1 gives some descriptive statistics for these salaries. The average academic CEO earned about 111000 £ with a low of 41515 £ and a high of 266000 £. For 122 of them we found biographical info.

- the average academic CEO was 57 years old in 1999 and had about 6 years experience in his current job.
- 8 of them are women
- 102 had previous administrative experience in a university (on average they had 9.5 years of such experience before beginning at their current job)
- 11 had been VC at other universities
- only 16 had administrative experience in the same university
- 18 came straight from the private sector or from government jobs (some of them had previous experience in administrative jobs in academia).
- 20 were engineers, 70 had an education in social sciences (20 economists, see Ehrenberg), 8 medicine and 24 had a science degree.

We have information on university characteristics for the academic year 1998-1999 for 166 universities (for 158 of them we have wage data).

1998-1999	Income	Expenditure	Inc/exp
Mean	72596	71454	1.0130
Median	59716	58761	1.0138
Std	72336	70799	0.0421

⁴ see http://www.thes.co.uk/statistics/academic_pay/main.asp

Min	840	947	0.8425
Max	360827	355346	1.2491

N=166, Income and Expenditure in 1000£

In 1998, the median university received about 60 million £ in revenues and spent about 59 million, leaving most of the universities with a small 'profit'. However, there's a large variation in both income and expenditure, from less than a million to more than 350 million, and in 'profit', from spending 16% more than the income to spending 24% less than the income.

1998-1999	Funding Councils	Academic Fees and Support Grants	Research Income	Endowment Income
Mean	29510	16347	11002	1748
Median	25085	14604	2318	650
Std	25673	14069	22239	3782
Min	661	116	0	0
Max	133570	92369	127049	34628

N=166, All in 1000£

The income comes from various sources, from students, from research and from endowment. At the expenditure size we have information on staff costs. We have both information on the expenditures for staff as on the number of staff. Finally, note the wide range in the number of students (the maximum of 148675 is the Open U) and in the number of applications.

1998-1999	Staff Costs	#Staff (ft+pt)	#Stud (ft+pt)	#applic
Mean	23413	788	11377	12910
Median	18638	620	10351	10724
Std	25015	812	13278	9717
Min	200	8	175	530
Max	155949	4194	148675	42338

N=166 except for applications, N=147. Amounts in 1000£

Determinants of the wages of UK VC's

We start with some institutional characteristics and regress the log of the VCs salary on different sorts of income and a London-dummy.

	Wages	Wages
Constant	10.05 (0.11)	10.4 (0.13)
Funding councils	0.027 (0.036)	0.0005 (0.04)
Student fees	0.105 (0.028)	0.092 (0.032)
Endowment income	0.0129 (0.007)	0.003 (0.007)
Research income	0.0127 (0.004)	0.025 (0.005)
Other income	-0.007 (0.01)	-0.005 (0.014)
London dummy	0.089 (0.017)	0.057 (0.016)
Adj R ²	0.63	0.48
N	813	598

Heteroskedasticity consistent standard errors between brackets. All variables in logs, those universities with zero research income or zero endowment income have been assigned 1000 £).

The most important variable in column (2) is the income received from student fees, a doubling of this kind of income increases the VC's wage by slightly more than 10%. A similar increase in endowment income increases the wage by only 1.3%, as does a similar increase in research income. Other income or income from funding councils does not have any effect. This can be seen as good news for those who think that research might crowd out teaching: a one percent increase in fees money is more 'profitable' for the VC than a similar increase in research money. Of course, there are two caveats: first, this might be an incentive for VCs to increase the fees rather than increase the number of students. Second, it might be easier to increase the research money than to increase the fee-money.

Next, we take those university-years for which we have information on the personal characteristics of the VC. Note that when re-estimate the above relationship for the

598 remaining observations, we get a lower R-squared and the effect of endowment income is not longer significant⁵.

	Wages	Wages
Constant	9.69* (0.098)	9.97* (0.17)
Total Income	0.139* (0.0068)	-
Funding councils	-	0.0048 (0.0044)
Fees	-	0.106* (0.034)
Endowment Income	-	-0.004 (0.0071)
Research Income		0.0136* (0.0047)
Other Income	-	0.0052 (0.0119)
#years administrative experience in same university	-0.0075* (0.0026)	-0.0072* (0.0022)
Worked in government or in firm before	-0.02 (0.02)	-0.03 (0.022)
# years as VC at other institution	0.016* (0.0037)	0.014* (0.0044)
# years administrative experience other than above	0.0020* (0.0013)	0.0015 (0.0013)
Age	0.0038* (0.0016)	0.0049* (0.0015)
Tenure in present job	0.0001 (0.001)	0.0001 (0.0015)
Education as engineer	0.018 (0.016)	0.0158 (0.017)
Education in science	0.0107 (0.013)	0.0085 (0.014)
Education as doctor	0.153* (0.026)	0.185* (0.03)
Female	-0.078* (0.021)	-0.075* (0.018)
London	0.042* (0.016)	0.047* (0.0145)
AdjR ²	0.56	0.57
N	598	598

Adding the personal characteristics to the income variables gives some nice results. Having administrative experience (being head, dean, director or vice/pro principal) at

⁵ If we look at the first regression, the coefficient is 0.14 with Adj R² being 0.47.

the same university decreases wage by 0.75 % per year, so mobility seems to pay-off. Having worked outside academia before becoming a VC changes little, in contrast to having been VC before (each year adds 1.6%). Other administrative experience at other institutions adds 0.2% per year. Tenure at the present job in contrast has no effect at all while older VCs earn 0.4% per year more. Having a medical degree (+15%), being man (+8%) or being located in London (+4%) also increases the wage.

Splitting the total income into its different components confirms our previous results. The VC's wage is again much more sensitive to fee-income than to research income. And the personal characteristics are qualitatively like before with the exception of the other previous administrative experience that is no longer significant.

Next, we take all university-vc combinations for which we have two subsequent years of observations so as to study the changes in the wages. Takings such changes eliminates the effect of the personal characteristics thus leaving us with the university variables.

	Wages –year to year changes	Wages-five year changes
Constant	Time-dummies	0.22 (0.026)
Funding councils	-0.045 (0.078)	0.05 (0.12)
Student fees	-0.02 (0.037)	0.035 (0.045)
Endowment income	-0.19 (0.15)	0.03 (0.02)
Research income	0.004 (0.01)	-0.007 (0.017)
Other income	0.19 (0.24)	-0.026 (0.029)
London dummy	0.011 (0.076)	0.06 (0.035)
Adj R ²	0.016	0.02
N	415	75

However, the results are disappointing. The only variable that somewhat approaches significance is the London dummy. Next, we selected those universities that had the same VC in both 1996 and 2000 and looked at the five year changes. In addition to

the London dummy, changes in endowment income approached significance. “In general, there does not seem to be rhyme or reason to these pay rises”⁶.

Here check rises when change in VC.,

And take all unis irrespective whether ceo remains same because in uk studies often did not know whether it was same person

UK CEO’s versus UK VCS

Of course, it’s not easy to compare universities and firms, and CEOs and VCs. Some might claim that it is impossible to compare them or even that it doesn’t make sense to compare them. However, when defending their pay packages, the VCs always point to the private sector wages, which makes trying to operationalize their claims interesting.

First, we compare some descriptive statistics.

1999-2000	Wage VCs(£)	Wage HPD
Mean	111700	321000
Median	111000	212500
Std	27293	371200
Min	41515	9100
Max	266000	3805000
#	163	392

If one compares the median or mean earnings of a CEO, the claims of the CVCP are, not surprisingly, indeed confirmed: firm CEOs earn on average 3 times more than university CEOs. And John Quelche’s (LBS) salary of 266000£ is negligible compared to the 3805000£ earned by the top earner in business (the HPD of AMVESCAP an asset management company). At the other side, the worst paid VC gets paid more than the worst paid firm CEO.

Of course, one question to what extent our sample of firms is comparable with our sample of universities. To get an idea about this, we look at three statistics, the number of employees, the turnover and the wage bill. As the turnover of universities, we take the total income minus the endowment income (check about VAT). For the employees, we have the number of academic staff, and for the wage bill we have the total staff expenditures.

⁶ Taking only those universities that had the same VC also in 1996 doesn’t change this.

	1998-1999 Income	1999 Turnover
Mean	73930	726600
Median	60480	57600
Std	70070	3262600
Min	840	20
Max	354060	51466000
#	158	369

Income is income- endowment income

Note that the median firm has a turnover that is quite similar to the turnover of the universities. This together with the finding that the median salary is double seems to confirm the CVCP statement even more firmly. Of course, options and shares might even increase the gap further.

Above we noted that the firm literature has found that size as proxied by sales/turnover is one of the best predictors of the CEO wage. We therefore regress the CEO wage on the firm turnover and similarly, the VCs wage on the university income⁷.

	VCwage – 1999	CEOwage – 1999	CEOwage – 1999	wage
Constant	9.92 (0.157)	9.58 (0.19)	9.46 (0.24)	9.46 (0.24)
Turnover	0.157 (0.014)	0.246 (0.016)	0.255 (0.022)	0.255 (0.022)
Uni dummy	-	-	-	0.46 (0.29)
Turnover*uni dummy	-	-	-	-0.098 (0.03)
Adj R ²	0.56	0.54	0.34	0.47
N	158	369	276	434

Heteroskedasticity consistent standard errors between brackets

Doubling the size of the university only increases the VC's wage by about 16% extra. Compared to firms this is rather low: Our sample of firms gives an increase of about 25%, both for the total sample (column3) and a sample that has the same size limits as the university sample (a turnover of more than 800000 £ and less than 360000 £⁸). This seems to suggest that in the UK academia is indeed compressing wages.

⁷ University income is lagged because data for the academic year 1999-2000 were not yet available.

⁸ Conyon and Murphy (2000) find a coefficient of about 0.2 for UK CEOs.

Moreover, the part of the variance in wages explained by size-differences is much higher for universities than for firms (adjusted R^2 is 55% against 35% for firm).

Taking the wage bill (for the universities, we take the sum of the academic staff expenditures and the other staff expenditures, for firms we use the wage expenditures from The Corporate Register) we get very similar results.

Check with 1998 vcs wage and uni income

The UK vs The US

Maybe say something about the characteristics of us presidents

“The best-documented empirical finding in the executive compensation literature is the consistency of the relation between CEO pay and company size typically measured as the elasticity of cash compensation to company revenues... Interestingly, the estimated paye-size elasticities for UK firms, while positive and significant for all industries, are uniformly and significantly smaller for UK firms than for US firms. For example, an elasticity of cash pay to sales of 0.316 in the United States and 0.197 in the United Kingdom ... (Conyon and Murphy, 2000)”.

Using data from the Chronicle of Higher Education, we run a regression like in table 1 for the wages of US university/college presidents⁹.

	VCwage – 1999 cross section	Vc wage – pooled cross section	Vc wage –1999 cross section	Vc wage – pooled cross section
Constant	9.92 (0.157)		10.96 (0.052)	
B	0.156 (0.014)	0.163 (0.005)	0.27 (0.012)	0.26 (0.005)
Time dummies	-	Yes	-	Yes
Adj R^2	0.55	0.62	0.52	0.53
N	158	813	441	1313

Heteroskedasticity consistent standard errors between brackets

⁹ The determinants of wages of US university presidents has been studied by Ehrenberg et al (2000), Tang et al. (2000), Pfeffer and Ross (1988).

Doubling the size of the university only increases the UK VC's wage by about 16% extra, while the same would increase the US presidents wage by about 26%. Hence, like for firms the size-wage elasticity for universities is smaller in the UK.

Conclusions

In this paper, we studied the determinants of the wages of the vice chancellors of British universities. We found that differences in university characteristics and differences in personal characteristics can explain more than half of the variation in salaries. Changes in wages, however, did not seem to be correlated with changes in any of the university characteristics. We also compared the wages of the British vice-chancellors with the wages of the CEO of British firms. CEOs of universities earn considerably less than the CEO of comparable firms because they are much less rewarded for differences in size. We also found support for the finding that differences in size are more important (for explaining wage differentiation) in the US than in the UK.

References

Conyon, M., Peck, S. and Sadler, G. (2001), 'Corporate Tournaments and Executive Compensation', *Strategic Management Journal*...

Conyon, M. and Murphy, K. (2000), 'The Prince and the Pauper? CEO pay in the United States and United Kingdom', *Economic Journal*, vol. 110, p. F640-F671.

Pfeffer, J. and Ross, J. (1988), 'The Compensation of College and University Presidents', *Research in Higher Education*, vol. 29, nr. 1, p. 91.

Tang, T., Tang, D. and Tang, C. (2000), 'Factors Related to University Presidents' Pay: An Examination of Private Colleges and Universities', *Higher Education*, vol 39, p. 393-415.

Ehrenberg, R., Cheslock, J. and Epifantseva, J. (2000), 'Paying our Presidents: What Do Trustees Value?', NBER WP 7886.

Baimbridge, M. and Simpson, C. (1996), 'Rewards to Academia: the remuneration of vice Chancellors and Principals', *Applied Economics*, vol. 28., p. 631-639.

Lazear, E. and Rosen, S. (1981), 'Rank Order Tournaments as Optimum Labor Contracts', *Journal of Political Economy*, vol. 89, nr. 5., p. 841- 864.

Rosen, S. (1990), 'Contracts and the Market for Executives', NBER working paper 3542.

Some links to comments on managers earning too much:

See <http://www.aflcio.org/paywatch/ceopay.htm> or

www.eurofound.ie/2000/09/Features/nl0009106f.html