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THE CONSEQUENCES OF THE DECLINE IN PUBLIC SECTOR PAY IN BRITAIN: A LITTLE BIT OF EVIDENCE*

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Following the fall in overall net public investment, the relative pay of most public sector workers in the United Kingdom declined sharply after the mid-1970s. For example, the relative pay of male teachers fell by over 10 percentage points from the late 1970s to the late 1980s. So has this generated a fall in quality? Using age 10/11 test score percentile positions as an indicator, we find that men entering non-manual public sector occupations in the early 1990s had a significantly lower test score position than those entering in the late 1970s. No such falls were exhibited by women.

A casual glance at the newspapers reveals that it is becoming increasingly difficult to recruit certain types of public sector workers. For example, shortages of teachers and nurses are currently receiving a great deal of press attention. One of the reasons for this is the significant decline in the relative pay of most occupational groups in the public sector which we document in what follows. We also present a small piece of evidence on a further and more contentious question, namely have these significant reductions in relative pay in the public sector generated similar significant reductions in relative quality? The evidence we have is consistent with an affirmative answer to this question for men but not for women.

1. The Decline of the Public Sector

In the mid-1970s, Net Public Investment in the United Kingdom began falling dramatically as a proportion of GDP. As we can see from Table 1, in the period 1963–76, it was no less than 5.9% of GDP, on average. By 1980–85, Net Public Investment had fallen to 1.7% of GDP and it has remained at a very low level ever since. It is, however, planned to rise from 2001. These figures are reflected in the significant decline of relative pay in most areas of the public sector which began in the late 1970s. While there is, of course, no causal relationship between public investment and public sector pay, the movements in both reflect the priorities of those in charge of the public finances.

To obtain a picture of what has happened we divide the public sector into three broad groups. The first consists of most of the non-manual sectors (eg civil servants, doctors, teachers, nurses etc.) but excludes the police, fire service, prison service and judges who are included in the second group. The third group includes manual sectors (eg post, railways etc). The division of non-manual workers into two groups reflects their different treatment in the 1980s. Each of these broad

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Table 1

UK Net Public Investment as a Percentage of GDP

1963–76	5.9
1976–80	3.2
1980–85	1.7
1985–90	0.9
1990–95	1.7
1995–2000	0.6

Source: HM Treasury (2000), Statistical Annex A, Table A9.
Notes: The figures are based on April to March financial years.
After 1985, the numbers would fall naturally as the utilities moved out of the public sector via privatisation.

groups we divide into men and women and those aged 31–40 and 41–50. For every cell (eg young, women, manual) we compute for each year the average percentile position in the overall earnings distribution of the same age, sex grouping. So an outcome such as 54 in the young female manual group in 1977 means that female manual workers aged 31–40 in the public sector in 1977 were ranked, on average, in the 54th percentile position in the class of all female workers aged 31–40 in 1977 (ie on average, 54% of this latter group earned less than the average public sector manual woman). In practice we also correct for composition in this process by holding constant over time the proportions in each SOC unit group in our broad public sector grouping (ie we hold constant the proportion of postal workers, railway guards etc. See notes to Table 2 and the Appendix for details).

The outcome of this process is presented in Table 2. Consider the first column for women. What we see is that for non-manual public sector younger women (excluding the police and related groups), their percentile position in the young women's earnings distribution was 68.8 in the late 1970s and had declined to 60.0 in the late 1990s. This fall of over 8 percentage points is reflected by a very similar decline for older women in the same occupational group. Declines of this magnitude are substantial and make a real difference to the attractiveness of jobs in the relevant category. (In 1999, a rise from 60 to 68.8% in the earnings distribution for younger women corresponds to a pay increase of around 12%). Overall, the picture is one of general public sector decline with the exception of the second group which consists of the police and related groups. Here, we see a relative improvement in the 1980s, particularly for men, although this has been gradually fading through the 1990s.

In order to look at these shifts in greater detail, we divide these groups into a series of sub-groups in Tables 3 and 4. We include only those sub-groups for which the sample size is big enough to obtain reasonably precise results. For women, we see that the second and third groups (police, customs and excise, social workers) have done relatively well in the last twenty five years, having more than held their own in the female earnings distribution. This is in contrast to the other groups. Here there are two distinct sub-sets. Civil servants, local authority workers and nurses have seen a gradual relative decline of between 7 and 8 percentage points whereas teachers and manual workers have seen more substantial relative falls of 11 percentage points or more. All these declines have continued right up to the last available year, 1999. For men, we again see some stark contrasts. The

Table 2

Mean Percentile Position of Major Public Sector Groups in the Overall Pay Structure

	Group 1 Non-Manual (exc. Police etc.)			Group 2 Police etc.			Group 3 Manual		
Women									
Age	31–40	41–50	% Old	31–40	41–50	% Old	31–40	41–50	% Old
1975–9	68.8(0.21)	73.0(0.19)	55	80.1(1.4)	76.6(1.3)	58	53.6(1.1)	53.1(0.65)	71
1980–4	67.0(0.17)	71.4(0.17)	53	83.9(1.3)	74.7(1.5)	51	45.8(1.0)	50.7(0.91)	61
1985–9	62.9(0.16)	68.5(0.17)	53	82.8(1.3)	75.5(1.8)	41	42.0(1.0)	47.2(0.96)	60
1990–4	62.3(0.16)	68.1(0.16)	55	77.8(0.84)	73.1(1.5)	34	40.9(0.86)	45.0(0.74)	60
1995–9	60.0(0.15)	64.7(0.14)	58	78.4(0.62)	72.1(1.3)	29	38.0(0.86)	39.9(0.77)	54
1999	59.8(0.35)	63.8(0.31)		76.5(1.4)	73.2(2.3)		37.8(1.5)	40.3(1.8)	
% Point Increases									
75/9–85/9	−5.9	−4.5		2.7	−1.1		−11.6	−5.9	
85/9–95/9	−2.9	−3.8		−4.4	−3.4		−4.0	−7.3	
Total	−8.8	−8.3		−1.7	−4.5		−15.6	−13.2	
Men									
Age	31–40	41–50	% Old	31–40	41–50	% Old	31–40	41–50	% Old
1975–9	62.7(0.21)	70.2(0.22)	48	60.4(0.20)	68.4(0.27)	43	40.2(0.16)	42.2(0.16)	60
1980–4	60.4(0.18)	68.5(0.19)	42	70.0(0.19)	75.4(0.29)	36	38.4(0.17)	40.1(0.16)	53
1985–9	57.1(0.18)	63.3(0.20)	43	69.3(0.18)	72.3(0.25)	39	37.2(0.21)	37.5(0.21)	49
1990–4	59.3(0.22)	63.8(0.22)	50	67.1(0.19)	68.3(0.24)	44	35.5(0.23)	35.3(0.24)	48
1995–9	57.7(0.21)	61.4(0.20)	55	66.0(0.20)	67.2(0.26)	42	38.3(0.24)	35.7(0.28)	46
1999	56.6(0.48)	60.7(0.44)		66.0(0.41)	67.4(0.57)		38.4(0.51)	36.1(0.59)	
% Point Increases									
75/9–85/9	−5.6	−6.9		8.9	3.9		−3.0	−4.9	
85/9–95/9	0.6	−1.9		−3.3	−5.1		1.1	−1.8	
Total	−5.0	−8.8		5.6	−1.2		−1.9	−6.7	

Notes: Standard deviation in parentheses.

Non-Manual excluding Police etc. includes civil servants, local government officers, doctors, teachers, nurses, social workers, probation officers, inspectors, air-traffic controllers. (SOC unit groups 100, 102, 103, 132, 191, 220, 230, 231–5, 239, 293, 330, 340–2, 348, 394, 395, 400, 401, 640).

Police etc. includes judges, police, fire service, customs and excise, prison officers, traffic wardens. (SOC unit groups 152–5, 240, 610–4).

Manual includes post, railways, hospital ward assistants and porters, ambulance staff. (SOC unit groups 631, 641, 642, 881–3, 940, 950).

A list of Public Sector SOC unit groups is in the Appendix. The Armed Forces are omitted, since they do not appear in the new Earnings Survey.

The data are taken from the New Earnings Survey (1975–99). Each group is composition corrected for the distribution across the SOC unit groups, that is the proportions in SOC unit groups in each column of data are kept constant. Within each year for each age group for each sex and each SOC unit group, we compute the average percentile ranking of individuals in this category in the complete earnings distribution for that year, age group and sex. Let this average percentile ranking be ER_{ijkt} where i = age group (31–40 or 41–50), j = sex (M or F), k = SOC unit group, t = year. Suppose we are doing the non-manual group. Then suppose λ_{ijk} is the proportion of the k^{th} SOC unit group for age group i, sex j in the non-manuals, these proportions being the averages for age group i, sex j in the non-manual group over the whole sample period 1975–99. Then, if we let the non-manual group be NM, the average ranking for age group i, sex j in year t is $\sum_{k \in NM} \lambda_{ijk} ER_{ijkt}$.

The earnings measure used in this process is weekly earnings excluding overtime earnings divided by weekly hours excluding overtime hours. We exclude those whose pay was affected by absence.

police/customs and excise group has done relatively well whereas teachers of all kinds have lost out dramatically. Doctors, by contrast, have kept reasonably in step.

Table 3

Mean Percentile Position of Women in Various Public Sector Occupations in the Overall Pay Structure

	Public Servants General Administration			Police, Customs and Excise			Social Workers		
	31–40	41–50	% Old	31–40	41–50	% Old	31–40	41–50	% Old
1975–9	55.1(0.29)	57.5(0.21)	60	82.6(1.7)	82.0(1.8)	52	64.0(1.8)	65.8(1.6)	56
1980–4	55.9(0.30)	56.1(0.21)	53	86.9(1.4)	81.7(1.7)	43	70.5(1.3)	66.0(1.6)	45
1985–9	51.5(0.27)	52.1(0.7)	52	87.1(0.78)	85.5(1.8)	30	67.8(1.1)	62.8(1.2)	50
1990–4	49.3(0.27)	51.3(0.25)	53	82.0(0.52)	84.3(1.2)	25	66.1(0.88)	71.5(0.76)	56
1995–9	47.7(0.25)	49.7(0.24)	52	83.9(0.20)	84.0(0.70)	24	64.1(0.79)	71.1(0.63)	61
1999	47.0(0.56)	48.7(0.57)		82.9(0.44)	84.3(1.3)		62.0(1.6)	72.1(1.2)	
% Point Increase									
75/9–85/9	−3.6	−5.4		4.5	3.5		3.8	−3.1	
85/9–95/9	−3.8	−2.4		−3.2	−1.5		−3.7	8.4	
Total	−7.4	−7.8		1.3	2.0		0.1	5.3	
	Nurses			Teachers			Manual		
	31–40	41–50	% Old	31–40	41–50	% Old	31–40	41–50	% Old
1975–9	64.1(0.29)	66.4(0.31)	52	86.8(0.08)	91.4(0.04)	55	54.1(0.94)	54.5(0.58)	72
1980–4	61.8(0.26)	66.0(0.28)	54	81.7(0.07)	88.2(0.04)	53	47.0(0.98)	51.9(0.81)	62
1985–9	57.7(0.26)	64.5(0.28)	55	77.6(0.06)	85.0(0.04)	52	41.4(0.98)	47.6(0.83)	62
1990–4	57.4(0.28)	62.2(0.28)	53	78.0(0.06)	85.3(0.04)	60	40.8(0.78)	45.6(0.65)	62
1995–9	55.9(0.25)	58.9(0.27)	52	74.4(0.08)	80.0(0.06)	68	38.6(0.78)	41.2(0.71)	54
1999	56.0(0.63)	57.7(0.61)		74.6(0.13)	79.4(0.12)		38.3(1.4)	41.9(1.8)	
% Point Increase									
75/9–85/9	−6.4	−1.9		−9.2	−6.4		−12.7	−6.9	
85/9–95/9	−1.8	−5.6		−3.2	−5.0		−2.8	−6.4	
Total	−8.2	−7.5		−12.4	−11.4		−15.5	−13.3	

Notes: Standard deviations in parentheses.
Public servants, general administration includes civil servants, local government officers, judges, inspectors, air traffic controllers. (SOC unit groups 100, 102–3, 132, 191, 240, 330, 348, 394–5, 400–1).
Police, customs and excise. (SOC unit groups 152, 155, 610, 613).
Social Workers includes social workers and probation officers. (SOC unit group 293).
Nurses includes nurses, midwives, medical radiographers, assistant nurses. (SOC unit groups 340–2, 640).
Teachers includes higher and further education teaching professionals, education officers and inspectors, secondary and primary and special education teaching professionals, other education teaching professionals. (SOC unit groups 231–35, 239).
Manual includes traffic wardens, railway staff, hospital ward assistants, ambulance staff, postal workers, hospital porters. (SOC unit groups 614, 631, 641, 881–3, 940, 950).
Data generated as described in Table 2, Notes.

In addition to the changes in the pay position of each occupational group in the public sector, we also report the percentage of workers in each occupation who are in the older age group (under % Old). While there have only been small changes in most occupations, it is worth noting how the rise in the number of women entering the police is reflected in rapid fall in the proportion of older women in this occupation. By contrast, the men in the teaching professions have been ageing rapidly for some time as the number of younger men entering declines.

Overall, then, we can see some substantial shifts in the relative pay of different public sector groups and it should come as no surprise that we now face well

Table 4

Mean Percentile Position of Men in Various Public Sector Occupations in the Overall Pay Structure

	Public Servants General Administration			Police, Customs and Excise			Doctors		
Age	31–40	41–50	% Old	31–40	41–50	% Old	31–40	41–50	% Old
1975–9	56.4(0.30)	61.4(0.34)	53	63.1(0.19)	70.8(0.25)	44	84.6(1.0)	92.5(1.2)	37
1980–4	55.6(0.28)	62.0(0.33)	42	73.1(0.12)	79.1(0.21)	37	89.4(0.75)	94.0(1.0)	39
1985–9	51.0(0.28)	55.3(0.36)	41	73.3(0.13)	76.1(0.21)	38	91.5(0.60)	93.1(0.90)	39
1990–4	50.2(0.37)	54.3(0.44)	41	72.8(0.13)	73.8(0.21)	42	91.8(0.50)	94.8(0.51)	42
1995–9	49.9(0.39)	53.6(0.42)	51	72.4(0.11)	73.7(0.20)	40	87.9(0.78)	89.6(1.0)	41
1999	48.2(0.88)	52.9(1.0)		72.0(0.27)	73.6(0.43)		89.3(1.5)	90.5(2.3)	
% Point Increase									
75/9–85/9	−5.4	−6.1		10.2	5.3		6.9	0.6	
85/9–95/9	−1.1	−1.7		−0.9	−2.4		−3.6	−3.5	
Total	−6.5	−7.8		9.3	2.9		3.3	−2.9	
	University Teachers			Teachers			Manual		
Age	31–40	41–50	% Old	31–40	41–50	% Old	31–40	41–50	% Old
1975–9	82.0(1.3)	83.8(1.5)	45	71.6(0.06)	79.0(0.10)	44	40.2(0.16)	42.1(0.17)	60
1980–4	79.1(1.2)	86.1(0.98)	54	64.3(0.10)	73.6(0.07)	42	38.4(0.17)	39.9(0.17)	54
1985–9	71.3(1.4)	81.3(0.95)	48	61.2(0.09)	68.6(0.08)	46	37.0(0.21)	37.3(0.21)	49
1990–4	73.7(1.4)	81.1(0.81)	61	66.9(0.07)	70.7(0.09)	57	35.4(0.25)	35.1(0.24)	48
1995–9	68.7(1.1)	78.4(0.75)	60	64.2(0.11)	67.6(0.8)	65	38.2(0.23)	35.6(0.28)	45
1999	64.4(2.7)	75.4(2.0)		63.3(0.30)	66.8(0.25)		38.4(0.50)	35.9(0.59)	
% Point Increase									
75/9–85/9	−10.7	−2.5		−10.4	−10.4		−3.2	−4.8	
85/9–95/9	−2.6	−2.9		3.0	−1.0		1.2	−1.7	
Total	−13.3	−5.4		−7.4	−11.4		−2.0	−6.5	

Notes: Standard deviations as in parentheses.
Public servants, general administration as in Table 3.
Police, customs and excise as in Table 3.
Doctors include medical practitioners. (SOC unit group 220).
University teachers include university and polytechnic teachers. (SOC unit group 230).
Teachers as in Table 3.
Manual as in Table 3.
Data generated as described in Table 2.

publicised shortages in those areas of the public sector which have suffered large relative declines in remuneration. Aside from shortages, have there been any other consequences for the public sector?

2. The Quality of the Public Sector Workforce

Back in the mid-1980s, one of the authors, having noted the draconian public sector pay policy being enforced during this period, made the following points.

> 'Aside from a small number of favoured groups such as the Police and the Fire Service, the Government has in recent years operated an explicit guidelines policy on public sector pay which is enforced via the use of

> cash-limits. This has been successful in the sense that pay rises in the public sector have been, since 1980, consistently lower on average than those in the private sector. Since the evidence suggests that private sector pay is not influenced by the level of public sector pay settlements (see Zabalza and Kong, 1984, for example), this reduction in wage pressure, as it only applies to a relatively small segment of the labour force, does not have any very powerful macroeconomic consequences. Nevertheless, it is very important for the public sector since it has meant a more or less continuous reduction in the relative earnings of this sector since 1980. Aside from the unrest this not unnaturally induces, the most important long run consequence will be an inevitable reduction in the quality of the public sector workforce' (Nickell, 1985, p.112)

This quotation leads us to ask the obvious question, has this confident prediction about the quality of the public sector workforce actually come to pass?

Measuring the quality of a segment of the workforce is very tricky. Quality is a nebulous concept and, in any event, individuals may be good at some occupations and hopeless at others. So we use the word quality here in a very restrictive sense, that is the level of a basic or raw talent which bears some measurable relationship to labour market success. On this basis, what we need is a *relative* quality measure. That is, we need some average quality measure for the segment of the workforce in which we are interested and an equivalent measure for the workforce as a whole. Unfortunately, the use of qualifications is very tricky because of the coarseness of the measure in most data sets. Thus, it is very difficult to obtain clean data on the subjects or grades of GCSEs and A levels, and for degrees we mostly do not know the subject, class or university from which it was obtained. Furthermore, even if we had all the information, developing a precise ranking based on qualifications which commands widespread agreement is a more or less impossible task. So what is required is a large random sample of the population who all take some sort of test. It has to be large, so that we have a sizeable group in the more populous public sector occupations.[1]

One pair of datasets which satisfy these criteria are the 1958 and 1970 birth cohorts, the National Child Development Survey (NCDS) and the 1970 Birth Cohort Survey (BCS70). In each of these datasets, the individuals taking part in the survey were set general and mathematics tests when they were aged 11 and 16 (NCDS) or 10 (BCS70). We propose to use the percentile positions based on the scores in these tests as an indicator of quality. Of course, an obvious objection to this procedure is that a test taken at such a young age will not bear much relationship to the quality of an individual in their role as an adult worker. Despite this, these test scores do, in fact, have considerable predictive power vis-à-vis both educational attainment and adult labour market success (see, for example, Dearden (1999); Feinstein and Symons (1999); Feinstein (2000)). Furthermore, we have some direct evidence on this question because a small (10%) sub-sample of

[1] Unfortunately, the International Adult Literacy Survey does not have a large enough sample to generate any serious results.

the NCDS birth cohort was re-tested in 1995 when its members were aged 37. We ranked this sub-sample by test scores achieved when they were aged 11, 16 and 37. The correlations of these rankings for the general tests were correl (11,16) = 0.83, correl (11,37) = 0.58, correl (16,37) = 0.65. For the maths tests, they were correl (11,16) = 0.75, correl (11,37) = 0.58, correl (16,37) = 0.63. These correlations are relatively high despite the substantial time gaps involved and they suggest that the use of the test scores at a young age is not entirely ridiculous.

Looking at these birth cohorts, suppose individuals decide to enter the public sector around age 18–21 which means in the period 1976–9 for those in the NCDS and in the period 1988–91 for members of the BCS70. One of the factors in making their decisions would have been the relative pay generated by a career in their chosen occupation which would involve those thinking of teaching, say, looking at the first row (earnings in 1975–9) under teachers in Tables 3 or 4 for NCDS and the third row (earnings in 1985–9) for BCS70. For men, career prospects in teaching would have appeared a lot worse by the late 1980s relative to the late 1970s, with their position in the male earnings league having fallen by 10 percentage points to just above the 60th percentile. For women, teaching is, relatively, a much better career than for men, so even though entrants in the late 1980s would see somewhat worse relative prospects than those entering 12 years earlier, their salary outlook would still be well in the top quarter of all women of the relevant age group.

In the light of this, we propose to compare the average test score percentile rankings for those who enter various occupation groups in the late 1970s (NCDS) and the early 1990s (BCS70). We use the 1991 sweep of the NCDS, when members of the cohort were aged 33 and the 1996 sweep of BCS70, when members were aged 26. That is, we take the reported occupations in these sweeps to classify individuals, so in both cases they have had some time to settle on their overall career choices. We cannot carry out this exercise for all the occupation groups which appear in Tables 2, 3, 4 because it is only worth doing so if we have a reasonable sample size. This restricts us for men to the first two groups in Table 2 and teachers in Table 4; for women to the first group in Table 2 with teachers and nurses in Table 3. Our results are reported in Table 5.

First, let us go through the first row in the Table to make clear what the numbers mean. The mean percentile ranking 61.8 is obtained as follows. First take all the women in the 1958 birth cohort (NCDS, 1991 sweep) who are in the public sector occupation 'Non-Manual (exc. Police etc.)'. Each of these took a general test when aged 11. Their scores in this test are ranked in percentiles against the overall female age 11 general test score distribution in NCDS. 61.8% is the average percentile ranking of those in this particular public sector occupation relative to all the women in the 1958 birth cohort. That is, the average person in this occupation scores better than 61.8% of all the women who took the test. The comparable number for women in the same public sector occupation in the 1970 birth cohort (BCS70, 1996 sweep) is 63.3.[2] The last column reveals that even though it is close

[2] In fact, for the broad non-manual groupings in Table 5, we also control for occupational composition so that the averages for both cohorts refer to the same composition of sub-occupations.

Table 5

Average Childhood Test Score Rankings for Various Public Sector Occupations Mean Percentile Positions

	Late 70s intake (Age 21 in 1979)			Early 90s intake (Age 21 in 1991)			Difference (*t* test)	
Tests	Mean	(sd)	*N*	Mean	(sd)	*N*		
Female Non-Manual (exc. Police etc.) (Table 2, Group 1)								
General	61.8	(10.8)	425	63.3	(12.8)	408	1.5	(1.9)
Maths	60.6	(11.1)	425	59.8	(11.7)	408	−0.8	(1.1)
Female Nurses (Table 3)								
General	55.5	(25.6)	177	53.6	(26.4)	115	−1.9	(0.6)
Maths	52.7	(26.5)	177	51.2	(24.3)	115	−1.5	(0.5)
Female Teachers (Table 3)								
General	74.2	(20.0)	132	75.7	(21.2)	123	1.5	(0.6)
Maths	72.8	(21.6)	132	70.2	(24.5)	123	−2.6	(0.9)
Male Non-Manual (exc. Police etc.) (Table 2, Group 1)								
General	75.2	(11.5)	124	66.6	(15.8)	109	−8.6	(4.7)
Maths	72.8	(9.8)	124	63.4	(17.1)	109	−9.4	(5.0)
Male Police etc. (Table 2, Group 2)								
General	58.4	(6.8)	51	59.0	(10.2)	51	0.6	(0.4)
Maths	55.4	(9.8)	51	55.7	(8.4)	51	0.3	(0.2)
Male Teachers (Table 4)								
General	76.6	(21.7)	44	65.9	(27.5)	34	−10.7	(1.9)
Maths	76.1	(19.8)	44	63.5	(27.6)	34	−12.6	(2.3)

Source: NCDS (1991 sweep) and BCS70 (1996 sweep).
Notes: The t test is based on the standard test of the difference of two means, namely $(\text{mean}_1 - \text{mean}_2)/(\text{var}_1/N_1 + \text{var}_2/N_2)^{1/2}$. The results for the broad non-manual groups have been corrected for the composition of sub-occupations.

to 61.8, it is significantly higher at the 10% level ($t > 1.6$). Before going further, it is worth at this point emphasising the fact that the comparison we make here between the two surveys does not require the test scores achieved by the individuals in the two different surveys to be directly comparable. We are comparing the position of individuals in the test score rankings, *not* the test scores themselves.

Overall, however, the results for women yield no clear pattern. In particular, despite the fact that all three female public sector groups in Table 5 exhibit substantial falls in their relative position in the female pay rankings over the relevant period, these shifts have not been associated with any significant declines in relative quality as measured here. By contrast, the results for men are quite decisive.

Here we again have three groups. First, we have non-manual public sector workers excluding the police and related (Table 2, Group 1). Second, we have the police and related workers (Table 2, Group 2). Third we have teachers (Table 4). Over the relevant period (late 1970s to late 1980s), the first and third of these occupations experienced large falls in their positions in the male pay ranking. The second occupation (police and related), on the other hand, found themselves moving up the male pay structure. Looking at our test score comparisons, we find that the first and third occupations saw substantial and significant declines in their test score rankings. No decline was evident in the second occupation group,

indeed it saw a small, but insignificant increase. So, broadly speaking for men this small piece of evidence on test scores is consistent with the confident prediction at the beginning of this section that relative quality would follow relative pay. For women, however, we see no such relationship. Why not? Here we can only speculate. One possibility is that for both men and women there has been a significant increase in jobs in high paying occupations in the private sector (eg accountants, finance etc.). However, for women, there has also been a corresponding increase in participation as a higher proportion of women enter the labour market. This may have attenuated the consequences of the relative public-private pay shift for women.

Before rounding up, it is perhaps worth noting the sort of picture presented by the available data on the highest educational qualification achieved by these same groups of individuals (the actual numbers are in Table 1A in the Appendix). In no group was there a significant change in the proportion with A levels and above between the 1958 and the 1970 cohorts except for female nurses, where an increase of over 9 percentage points (74.9 to 84.2) was, in fact, significant. Note here that professional nursing qualifications are included in the A level + qualification group. For men, there was a small increase for the non-manual group and a small decrease for teachers. However there was a substantial numerical rise for the police group of nearly 13 percentage points (31.3 to 44) but this remained insignificant because of the small sample size.

The proportion with degrees increased significantly in all the female groups but the changes in the male groups were small and insignificant in all cases. Overall, therefore, we do see a significant upgrading in qualifications in the female groups which is not reflected in the male groups. While this is loosely consistent with our results on test scores, it is much less clear cut because, for example, in the case of male teachers, most male teachers in both cohorts have degrees. This is not very revealing and things we need to know, such as degree class and which university, are simply not readily available.

3. Summary

Along with dramatic decline in net investment in the public sector infrastructure since the mid-1970s, there has been an equally dramatic decline in the relative pay of most, although by no means all, public sector employees. Particular losers include the bulk of manual workers, nurses, teachers and general administrators (eg civil servants, local government officers).

Notable exceptions include the police and related groups, and medical practitioners. So have these changes led to a fall in quality in the groups that have lost out? Using age 10 or 11 test score percentile positions as an indicator, we find that men who entered teaching or public sector general administration in the early 1990s had a significantly lower test score percentile rank (around 9 or 10 percentage points) than those who entered in the late 1970s. No such falls were exhibited among those men who entered the police and related groups over the same period, where relative pay had not fallen. However, for women, there were no significant changes in the test score percentile rank over the same period for any of

the public sector groups investigated (general administrator, teachers or nurses), despite the large falls in their relative pay.

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Appendix

SOC Unit Groups in the Public Sector. Armed Forces are omitted since they do not figure in the New Earnings Survey.

100 General administrators; national government (Assistant Secretary/Grade 5 & above)
102 Local government officers (administrative & executive functions)
103 General administrators; national government (HEO to Senior Principal/Grade 6)
132 Civil Service executive officers
152 Police officers (inspector & above)
153 Fire service officers (station officer & above)
154 Prison officers (principal officer 7 above)
155 Customs & excise, immigration service officers (customs: chief preventive officer & above; excise: surveyor & above)
191 Registrars & administrators of educational establishments
220 Medical practitioners
230 University & polytechnic teaching professionals
231 Higher & further education teaching professionals
232 Education officers, school inspectors
233 Secondary (& middle school deemed secondary) education teaching professionals
234 Primary (& middle school deemed primary) & nursery education teaching professionals
235 Special education teaching professionals
239 Other teaching professionals nec
240 Judges & officers of the court
293 Social workers, probation officers
330 Air traffic planners & controllers
340 Nurses
341 Midwives
342 Medical radiographers
348 Environmental health officers
394 Inspectors of factories, utilities & trading standards
395 Other statutory & similar inspectors nec
400 Civil service administrative officers & assistants
401 Local government clerical officers & assistants
610 Police officers (sergeant & below)
611 Fire service officers (leading fire officer & below)
612 Prison service officers (below principal officer)
613 Customs & excise officers, immigration officers (customs: below chief preventive officer; excise: below surveyor)
614 Traffic Wardens
631 Railway station staff
640 Assistant nurses, nursing auxiliaries
641 Hospital ward assistants

642 Ambulance staff
881 Rail transport inspectors, supervisors & guards
882 Rail engine drivers & assistants
883 Rail signal operatives & crossing keepers
940 Postal workers, mail sorters
950 Hospital porters

Table 1A

Highest Qualifications in Various Public Sector Occupations

	Late 70s intake		Early 90s intake	
	Percentage	*N*	Percentage	*N*
Female Non-Manual (exc. Police etc.) (Table 2, Group 1)				
A level +	79.8	382	76.9	407
Degree +	34.8	382	42.5	407
		(43 missing)		(1 missing)
Female Nurses (Table 3)				
A level +	74.9	167	84.2	120
Degree +	5.4	167	16.7	120
		(18 missing)		
Female Teachers (Table 3)				
A level +	98.3	120	95.1	123
Degree +	77.5	120	95.1	123
		(12 missing)		
Females (whole population)				
A level +	31.4	4,077	43.9	3,446
Degree +	9.9	4,077	19.0	3,446
Male Non-Manual (exc. Police etc.) (Table 2, Group 1)				
A level +	82.2	107	84.4	109
Degree +	58.9	107	64.2	109
		(17 missing)		
Male Police etc. (Table 2, Group 2)				
A level +	31.3	48	44	50
Degree +	8.3	48	10	50
		(3 missing)		(1 missing)
Male Teachers (Table 4)				
A level +	94.1	34	88.2	34
Degree +	88.2	34	82.4	34
		(10 missing)		
Males (whole population)				
A level +	44.0	3,954	44.3	2,777
Degree +	11.5	3,954	21.3	2,777

Notes: These are taken from the NCDS and BCS 70. The qualifications reported in the two surveys are not identical in form but can be made comparable.

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