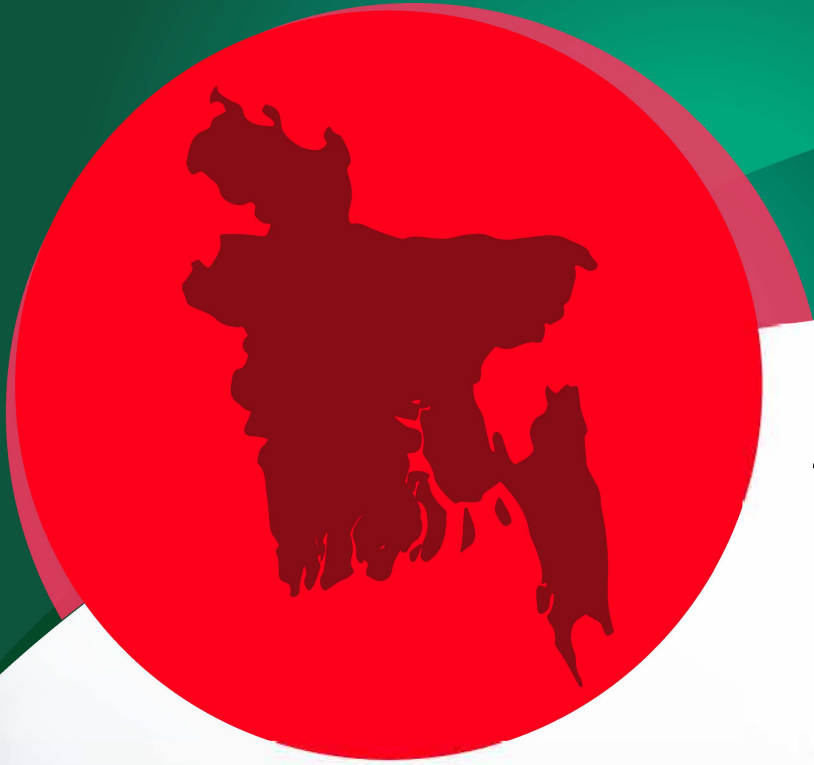


Volume 21  
Number 1  
Year 2019  
ISSN 1529-0905



Journal of  
**BANGLADESH  
STUDIES**



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# Why is the Relative Preference for Government Jobs on the Rise in Bangladesh? Evidence from Labor Force Surveys

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## Abstract

By using the quantile counterfactual wage decomposition method, this article examines why public sector jobs are becoming more attractive in Bangladesh. The article quantifies wage differentials between the public and the private sectors, and examines the changes in earning inequalities between groups (public versus private) and within groups (across the various wage deciles), in response to the pay scale revisions introduced for public sector employees in Bangladesh. The analysis reveals that following successive revisions, and more particularly in view of the revision introduced in 2015, public sector jobs in Bangladesh have become more attractive for job seekers looking for salaried employment. Whilst there has been a shift along the entire range of wage distribution spectrum, this trend is becoming more evident for job seekers with tertiary education, which is clearly revealed by the quantitative exercise carried out for this study. It is also interesting to note that, while the higher-paid private sector employees appear to have been able to adjust their salaries in response to government pay scale revisions, this is not the case for the relatively low-paid employees. Additionally, public sector jobs have the added advantage of non-wage benefits that are not available in equal measure for most private sector jobs. All these factors have combined to produce the recent shift in preference in favor of public sector jobs in Bangladesh. The article argues that the recent “quota movement” in Bangladesh, with the demand to revise the existing quota system for public sector jobs, reflects this shifting preference on the part of new job market entrants in Bangladesh.

## 1 Introduction

The state of relative preference among salaried job seekers in Bangladesh, between public (government) and private sector jobs, has varied significantly over the past years. At independence, with an underdeveloped private sector, it was the public sector which provided most opportunities for salaried employment in Bangladesh. With the economy starting to open up in the early 1990s, in the backdrop of policies of trade liberalization, privatization and deregulation, and consequent emergence of a vibrant private sector, more job opportunities increasingly started to be created in the private sector. Since the early 1990s, for young educated people, private sector jobs have become more attractive relative to public sector jobs mainly because of better compensation packages. Due to the increasingly large number of educated young people coming out of the education system (at bachelors/masters level), demand for both the public and the private sector jobs has been on the rise in Bangladesh. As is evident from the available information, the first choice of jobs for the majority of educated young people in the country has traditionally been private sector jobs. However, this situation has

begun to gradually change in recent years, particularly following the last two pay scale revisions for public employees in 2009 and 2015. While salary revisions in public sector also induces some adjustments in the private sector, a relative shift in attractiveness in favor of the former is becoming increasingly discernible in recent times. The recent “quota movement” in Bangladesh, spearheaded by students demanding a revision of the current quota system for government jobs, reflects this line of thinking.<sup>2</sup>

A number of studies has addressed various issues concerning the relative attractiveness of jobs in private and public sectors.<sup>3</sup> Studies have focused on a range of issues including demand side analysis, determinants of entry into particular jobs, earning differentials between public- private sectors, cash and in-kind benefits, job satisfaction, efficiency, and productivity. However, studies on these issues in the Bangladeshi context are scarce. Indeed, there is hardly any study that has examined changes in relative attractiveness between public and private sector jobs in Bangladesh in response to government policy changes, such as introduction of new pay scale for public sector employees.

The remainder of this paper is organized as follows: Section 2 presents a review of the literature on public and private sector wages, and wage differentials, Section 3 describes the estimation methodology used in this study, Section 4 presents an overview of the data, Section 5 presents the estimated results, and Section 6 concludes the paper.

## 2 Literature Review

A number of studies has examined the relative preference between public and private sector jobs, some with particular focus on its determinants (Ehrenbergh and Schwarz, 1986; Blackaby et al., 1999; Birch, 2006; Elliott et al., 2007; Campos and Centeno, 2012; Christopoulou and Monastiriotes, 2013; Lausev, 2014; Nikolic, 2014; Hospido and Moral-Benito, 2016).

Becker (1957) argues that public-sector wage is primarily determined by political motive, and not by profit maximization motive, as compared against the private sector, which has a different set of objectives including profit maximization. Fogel and Lewin (1974) mentions the absence of profit maximization motive for government jobs, while in the competitive labor market, private sector wages are determined by the marginal revenue product of labor. However, governments also tend to offer higher wages to attract better quality cadres (Melly, 2005b).

The more recent studies have used quantile regression (Koenker and Bassett, 1978) and quantile decomposition (Chernozhukov et al., 2013) techniques to study group differences in terms of wages. Quantile decomposition is similar to Oaxaca-Blinder decomposition (Oaxaca, 1973 and Blinder, 1973), but conditional at different quantiles. This method divides the total differential into coefficient effects and characteristics effects at conditional quantile. Public-private wage differentials have been studied by a number of studies using this technique.

Poterba and Rueben (1995) use quantile regression on data from Employer Cost Index 1993 and Population Survey 1992 and find that, in the lower tail of the wage distribution, U.S. state and local government employees enjoy a wage premium, whereas in the upper tail of the wage distribution, they incur a wage penalty. Mueller (1998) studies wage differential between public and private sectors using Canadian data and finds wage premium for public sector male employees in the lower tail of the wage distribution (9.9% wage premium at the 10th percentile and 1.4% wage penalty at the 90th percentile). Melly (2005b) finds that in Germany public sector female employees enjoy 26.9% wage premium at the 10th percentile, with wage premium decreasing to 6.9% at the 90th percentile. In contrast, public sector male employees suffer a wage penalty of 17.4% at the 90th percentile and enjoy a 5.0% wage premium at the 10th

percentile. In France, the raw differential for a public sector male employee is found to be 14.0% in the 10th percentile and 7.2% in the 90th percentile. Mahuteau et al., (2017) uses a quantile panel data regression approach and finds that in Australia average employees in the public sector earned a wage premium of about 13.6% at 10th percentile, but suffer from a wage penalty of 0.9% at 90th percentile. Review of the literature reveals the followings: (a) wage premiums and penalties vary across the gender divide and also across the public and private sectors; (b) wage distribution in the public sector is more compressed; (c) public sector employees tend to enjoy a higher wage premium at the lower end of the wage distribution.

## 3 Estimation Methodology

This paper applies the Oaxaca-Blinder decomposition and quantile decomposition method to examine the presence of wage differentials between public and private sector jobs in Bangladesh, in relation to policy interventions, i.e. salary scale revisions for public sector employees.

### 3.1 Oaxaca-Blinder Decomposition

The Oaxaca Blinder decomposition method is widely used to examine the wage gap by specific groups (e.g. public vs private sector jobs) (Oaxaca, 1973; Blinder, 1973). This method divides the wage differential into two parts - the “explained” part that can be accounted for by the group difference in productivity characteristics, such as education and work experience, and the “unexplained” part that measures the wage premium which cannot be accounted for by the wage determinants.

The model consists of two groups - private sector employees (1) and public sector employees (0), an outcome variable wage ( $W$ ), and a set of predictors. The wage differential can be written as follows:  $Difference = E(W_0) - E(W_1)$ , where  $E(W)$  denotes the expected value of the outcome variable and is explained by the grouped difference in the predictors. For a linear model, we can write the wage function for both public and private sector employees as:  $W_l = X^T \beta_l + \epsilon_l$ ,  $E(\epsilon_l) = 0$ ,  $l \in X$ ,  $W$  where  $X$  is a vector containing predictors and a constant,  $\beta$  denotes the slope parameters and intercept, and  $\epsilon$  is the error term. Based on this equation, the regression equation can be written as a two-fold decomposition of the labor market differential (Jann 2008):

$$Difference = [E(X_0) - E(X_1)]^T \beta^* + [E(X_0)^T (\beta_0 - \beta^*) + E(X_1)^T (\beta^* - \beta_1)] \quad (1)$$

The first part,  $[E(X) - E(X)]^T \beta^*$ , is the outcome difference that is explained by productivity characteristics, and the second part,  $[E(X_0)^T (\beta_0 -$

$\beta^*)+E(X_i)T(\beta^*-\beta_1)]$ , is attributed to sectoral wage premium, which also captures the potential effects of differences in unobserved variables.

### 3.2 Wage Decomposition in Quantile Counterfactual Distribution

The Oaxaca-Blinder decomposition only provides average differences in wages. However, statistical measures of public-private sector wage gap based on average effects could mask important differences along the distribution chain of wages. Since the seminal work by Koenker and Bassett (1978), quantile regression approach has emerged as a rigorous method to study the effects of a covariate ( $X$ ) on the entire spectrum of conditional distribution of the dependent variable ( $Y$ ). Quantile regression estimator of  $\beta\tau$  estimates the effect of the covariates on the  $\tau$  th quantile of the dependent variable.

For example, let log of wages be denoted by  $Y_y$  be a specific value of log wages,  $p$  represent public sector employees,  $r$  represent private sector employees, and  $X$  be a vector of characteristics affecting wages. Then,

$$F_{Y_{[p,p]}}(y) = F_{Y_{p|Xp}}(y|x) dF_{Xp}(x) \tag{2}$$

$$F_{Y_{[r,r]}}(y) = F_{Y_{r|Xr}}(y|x) dF_{Xr}(x) \tag{3}$$

$$F_{Y_{[p,r]}}(y) = F_{Y_{p|Xp}}(y|x) dF_{Xr}(x) \tag{4}$$

where  $F_{Y_{[p,p]}}(y)$  and  $F_{Y_{[r,r]}}(y)$  refer to the unconditional distribution of log wages for public sector and private sector workers wage function and their characteristics;  $F_{Y_{[p,r]}}(y)$  is the hypothetical wage distribution for private sector workers if they were rewarded according to the public sector workers wage function; and  $F_{Xp}$  and  $F_{Xr}$  respectively refer to the distribution of public and private sector workers characteristics.

To decompose the differences between the unconditional public sector workers and private sector workers wage distributions, we note the following:

$$F_{Y_{[p,p]}}(y) - F_{Y_{[r,r]}}(y) = \frac{F_{Y_{[p,p]}}(y) - F_{Y_{[p,r]}}(y)}{i} + \frac{F_{Y_{[p,r]}}(y) - F_{Y_{[r,r]}}(y)}{ii} \tag{5}$$

To study the wage differential across the distribution, we use the method developed by Chernozhukov et al. (2013), which decomposes unconditional intergroup gaps (in our case, public-private wage gaps) at a given percentile and apportions this on account of distribution of characteristics and different wage functions conditional on characteristics.

The first term in the brackets above shows the effect of differing distributions of personal characteristics, while the second term shows the wage function effect. To

implement the decomposition, as suggested by Chernozhukov et al. (2013), we compute the standard errors using boot-strapping with one hundred repetitions.

## 4 Data Source and Variables

This study uses the Labor Force Survey (LFS) 2010, 2013, 2015-2016, and 2016-17 data from the Bangladesh Bureau of Statistics (BBS). This is a cross-section dataset. It should be noted that the sample size has been expanded gradually between 2010 and 2016-17 to make this more representative. For the purpose of the present study, we have selected a sub-sample of employed individuals in the age range of 25 and 59 years who have earned wages/salaries during the reference period of the survey. Thus, this sub-sample group includes salaried employees from both public and private sectors. Many public-sector jobs require four years bachelor degree which means  $(12 + 4) = 16$  years of formal education. If 6 years is taken as the average age of starting primary education, this will put a prospective job-seeker at 22 years of age. If an additional 2-3 years of effective employment is added to this (as advocated by Melly, 2005b), 25 years of age could be taken as the minimum age. Maximum age is taken to be 59 years which is the retirement age in Bangladesh. In addition, the research considers only *full-time paid individuals*. Sample size extracted from the various LFSs are given in Table 1.<sup>4</sup>

To estimate the wage differentials, we use the log of hourly wage as the dependent variable in calculating the sectoral wage gap. However, the hourly wage is not available in LFSs. BBS reported weekly wage for 2011 and 2013, and monthly wage for 2015-16 and 2016-17. We convert the monthly wage into weekly wage by a factor of 12/52; weekly wage then is converted to hourly wage by dividing it by working hours per week as reported in the LFSs. The logarithmic form allows us to calculate the percentage difference in wage between the public and private sectors. It should be noted that, in contrast to the hourly wage, monthly wage tends to underestimate the wage differentials because working hours tends to be higher for private sector employees compared to their peers in the public sector (see, Ahmed and McGillivray, 2015)

For the wage equation regression model, we use age, age squared, education, education squared, occupation dummy, rural dummy, regional dummy, marital status dummy, and gender dummy. These variables are widely used in the literature for estimating wage equations (for example, see Blinder, 1973; Melly, 2005a; Oaxaca, 1973; and Ahmed and McGillivray, 2015). Summary statistics of some key variables for public employees and private employees are given in Table 2 and Table 3, respectively. 2016-17)

**Table 1:** Sample Selection

Employees	Year			
	2010	2013	2015–16	2016–17
Public employees	1,575	2,808	4,960	5,368
Private employees	1,792	5,119	10,979	8,985

Source: Authors' calculation; data source: LFS (2010, 2013, 2015-16, and 2016-17)

**Table 2:** Summary Statistics for Public Employees.

Variable	Year							
	2010		2013		2015–16		2016–17	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Log (hourly wage)	3.9	0.5	4.4	0.42	4.6	0.46	7.8	0.51
Education <sup>5</sup>	5.5	1.8	11.9	2.9	11.1	3.0	11.4	2.72
Age	41.2	9.2	40.5	9.4	41.2	9.5	41.1	9.48
Female <sup>6</sup>	0.16	0.37	0.26	0.44	0.21	0.41	0.23	0.42
Rural <sup>6</sup>	0.55	0.49	0.20	0.40	0.27	0.44	0.24	0.43
Ever married <sup>6</sup>	0.94	0.23	0.94	0.24	0.94	0.24	0.94	0.24

**Notes:**

<sup>5</sup>In 2010, classification of education used broad categories: 1. did not pass any class, 2. I-V class, 3. VI-VIII class, 4. IX-X class, 5. SSC/equivalent, 6. HSC/equivalent, 7. Degree/equivalent, 8. Post graduate/equivalent, and 9. M.B.B.S./Engineering. However, from 2013 onwards education was classified for each year of education, which explains the significant jump in average education in 2013.

<sup>6</sup>Female = 1 if individual is a female; 0 otherwise; Rural = 1 if individual lives in rural area; 0 otherwise; Ever married = 1 if individual is ever married; 0 otherwise.

Source: Authors calculation; data source: LFS (2010, 2013, 2015-16, and 2016-17)

**Table 3:** Summary Statistics for Private Employees

Variable	Year							
	2010		2013		2015–16		2016–17	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Log (hourly wage)	3.7	0.6	4.1	0.5	4.2	0.58	4.3	0.67
Education	3.5	2.3	9.8	3.7	9.3	4.4	9.5	4.17
Age	36.8	8.9	35.7	8.7	36.6	8.8	36.5	8.63
Female	0.15	0.36	0.25	0.43	0.25	0.43	0.23	0.42
Rural	0.58	0.49	0.29	0.45	0.25	0.43	0.29	0.46
Ever married	0.91	0.28	0.90	0.29	0.90	0.29	0.89	0.30

Source: Authors calculation; data source: LFS (2010, 2013, 2015-16, and 2016-17)

In calculating wage from LFS data, authors have considered wages from both primary and secondary occupations, and also the monetary value of earnings in other forms since a large part of wage/benefit in the public sector comes in various forms of job-related transfers.

## 5 Results and Discussion

This section starts with a discussion of raw wage differentials and density functions of wages for successive years. In this connection, Oaxaca-Blinder

decomposition and quantile decomposition of wages are presented in Table 4, job facilities in Table 8, and working hours in Table 9. Finally, sub-section 5.2 offers insights from the salary scale revision for public sector employees.

### 5.1 Wage Differentials between Public and Private Sector Jobs

In 2013, the average monthly wage in the private sector and the public sector in Bangladesh was BDT 14,376 and BDT 15,904, respectively (raw wage differential was 10.6 percent). In 2015-16, the average wage in the private

sector and public sector was BDT 17,969 and BDT 22,040, respectively (raw wage differential increased to 22.7 percent). However, average wage differences do not fully reflect the wage premium due to different attributes of public and private sector jobs. Additionally, these average differentials only capture differences at the mean, but do not capture the differences at the tails of the wage distribution.

We display the density of wages in Figure 1 where the dashed line is for public sector employees and the solid line is for private sector employees. For all the four time points (2010, 2013, 2015-16, and 2016-17), we observe different levels of compression and depression for public and private sector employees - wages are more compressed for public sector employees and dispersed for private sector employee. We find a lower ceiling for public sector wages, which is due to the presence of grading system for the public-sector employees and the salary scale ensures a minimum wage for employees in the lowest grade, which is not the case in the private

sector. This constraint is also true for the high wage earners in the public sector.

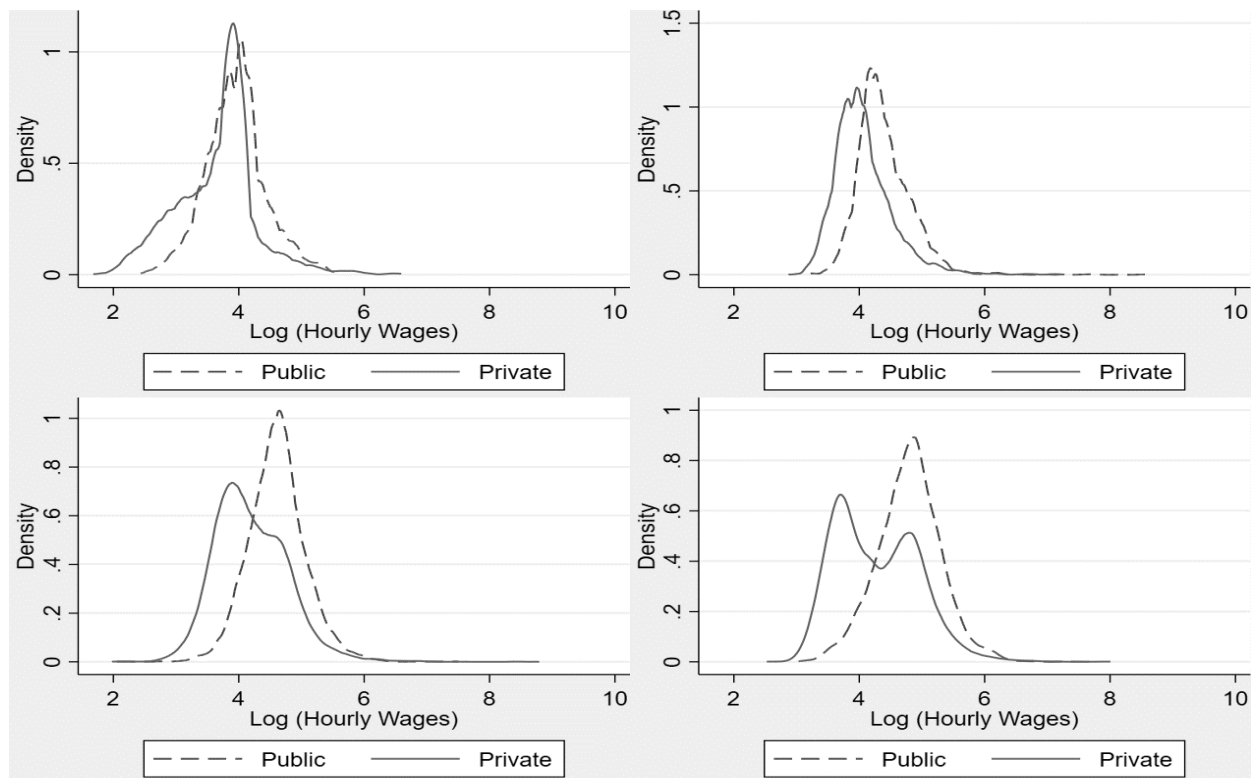
In 2010, the average hourly wage differential between public and private sector employees was 29.5 percent. As stated in section 3, quantile regression reveals the dispersion in the public-sector wage premium which cannot be captured by the Oaxaca-Blinder decomposition. Poterba and Rueben (1995) first applied the quantile regression method and found that wage premium tend to decrease as quantiles rise for both males and females. Quantile decomposition shows that at the 10th percentile (bottom of the wage distribution) there is 60 percent wage differential in 2010. At the 50th percentile, the entry point for university graduates, the wage differential was 13.8 percent in 2010 and increased to 61.0 percent in 2016-17. This wage differential tends to narrow down, and is the lowest at the median (about 13.8 percent). This shows that wage differentials are relatively low for mid-level wage earners. The wage differentials are 33.6 percent and 31.6 percent at 8th and 9th deciles, respectively (Table 4).

**Table 4:** Oaxaca-Blinder and Quantile Decomposition of Public-Private Wage Differentials; Dependent Variable: Log Hourly Wages.

Quantile	2010			2013			2015-16			2016-17		
	Total Effect	Char. Effect	Coeff. Effect	Total Effect	Char. Effect	Coeff. Effect	Total Effect	Char. Effect	Coeff. Effect	Total Effect	Char. Effect	Coeff. Effect
τ(10)	0.600	0.228	0.372	0.361	0.118	0.118	0.521	0.182	0.339	0.665	0.319	0.345
	0.053	0.071	0.085	0.025	0.019	0.019	0.009	0.021	0.022	0.016	0.016	0.022
τ(20)	0.470	0.288	0.182	0.336	0.049	0.049	0.539	0.212	0.327	0.747	0.342	0.405
	0.046	0.060	0.075	0.000	0.022	0.022	0.015	0.019	0.019	0.012	0.017	0.015
τ(30)	0.318	0.223	0.095	0.374	0.133	0.133	0.551	0.229	0.322	0.773	0.322	0.451
	0.038	0.066	0.073	0.019	0.017	0.017	0.009	0.016	0.018	0.012	0.014	0.014
τ(40)	0.219	0.219	0.000	0.336	0.049	0.049	0.544	0.208	0.336	0.722	0.300	0.422
	0.038	0.044	0.035	0.003	0.015	0.015	0.010	0.011	0.012	0.014	0.016	0.017
τ(50)	0.138	0.154	-0.016	0.311	0.080	0.080	0.479	0.161	0.319	0.610	0.271	0.338
	0.014	0.037	0.037	0.009	0.006	0.006	0.011	0.012	0.011	0.016	0.014	0.017
τ(60)	0.189	0.189	0.000	0.389	0.127	0.127	0.405	0.142	0.264	0.437	0.226	0.211
	0.029	0.047	0.049	0.029	0.021	0.021	0.013	0.009	0.012	0.015	0.012	0.015
τ(70)	0.187	0.154	0.032	0.336	0.080	0.080	0.323	0.134	0.189	0.330	0.191	0.139
	0.009	0.054	0.055	0.019	0.025	0.025	0.015	0.010	0.013	0.011	0.009	0.010
τ(80)	0.336	0.174	0.162	0.360	0.163	0.163	0.274	0.141	0.134	0.309	0.188	0.121
	0.032	0.029	0.033	0.021	0.024	0.024	0.013	0.012	0.010	0.012	0.009	0.010
τ(90)	0.316	0.133	0.182	0.269	0.081	0.081	0.260	0.134	0.127	0.274	0.141	0.132
	0.051	0.172	0.174	0.030	0.032	0.032	0.017	0.014	0.016	0.017	0.015	0.015
Oaxaca-Blinder	0.295	0.155	0.139	0.331	0.125	0.125	0.419	0.188	0.231	0.520	0.262	0.259
	0.019	0.015	0.023	0.010	0.006	0.006	0.009	0.006	0.008	0.009	0.007	0.008

Note: Probit distribution model has been applied for purposes of estimation. Bootstrap standard errors with 100 repetitions are given in parentheses.

Source: Authors calculation; data source: LFS (2010, 2013, 2015-16, and 2016-17)



**Figure 1:** Distribution of Wage Density by Public-Private

Source: Authors' calculation; data source: LFS (2010, 2013, 2015-16, and 2016-17)

The wage gap could be divided into two parts that originate from: (a) characteristics effect and (b) coefficient effect. For 2010 data, the Oaxaca-Blinder decomposition shows that out of the 29.5 percent wage gap, 15.5 percentage point was due to differences in characteristics of public sector employees and 13.9 percentage point was on account of wage premium in public sector employment. These two effects are also present throughout the range of wage distribution. For example, at the first decile (for 2010), there is a 37.2 percent wage premium and the rest is due to characteristic effect.

In 2013, the average wage differentials rose to 33.1 percent with the wage differentials rising for the mid-level wage earners. Table 4 shows that in 2010, at median (50th percentile), wage differential was 13.8 percent, which rose to 31.1 percent in 2013.

In 2015, the Bangladesh government revised the salary scale for public sector employees upward. The last two quarters of the LFS was conducted after this revision came into effect in January 2016. Thus, it was expected that the wage differentials would be higher for 2015-16 than for 2010 and 2013. The average wage differentials in 2015-16 was 41.9 percent (of which 18.8 percent was due to characteristics effect and 23.1 percent was due to wage premium in the public sector). The highest wage

differential was at the 30th percentile of wage distribution (55.1 percent) and the lowest differential was at the top of the distribution (26.0 percent at 90th percentile).

It is important to recall here that one of the key objectives of the new salary scale introduced in 2015 was to attract more qualified employees to the public sector. In 2016-17, the average wage differential, accounting for the annual 5 percent salary rise, was 52.0 percent (10 percent more than 2015-16). As can be seen from Table 4, the wage premium for public sector employees increased by about 12 percentage points between 2010 and 2016-17, while the wage gap due to the characteristics effect increased by 11 percentage points.

Table 4 presents relative differential in wages in 2010 (following salary revision in 2009) and 2015-16 (following salary revision in 2015). The data show that, following the introduction of the new salary scale in 2015, with the added 5 percent annual increment, the differentials between public and private sector have widened for almost all wage distribution. The average differential has increased from 29.5 percent in 2010 to 52.0 percent in 2016-17, a change of 22.5 percentage points. It also appears from the table that the private sector employees belonging to the higher percentile of wage distribution were able to adjust to the changed scenario in response to salary revision when compared to the private



sector employees in the lower percentile of wage distribution.

Graphical presentation of wage differentials between the public and private sectors for 2010, 2013, 2015-16 and 2016-17 is given in Figure 2. For all four periods, the findings are generally consistent with findings cited in the literature (for example, see Ehrenbergh and Schwarz, 1986; Blackaby et al., 1999; Melly, 2005b; Birch, 2006; Elliott et al., 2007; Campos and Centeno, 2012; Christopoulou and Monastirirotis, 2013; Lausev, 2014; Nikolic, 2014; Hospido and Moral-Benito, 2016). We find a similar trend of decreasing wage premium in the public sector (shown by “effect of coefficients” in the figure) in the higher quantile of earnings distribution.

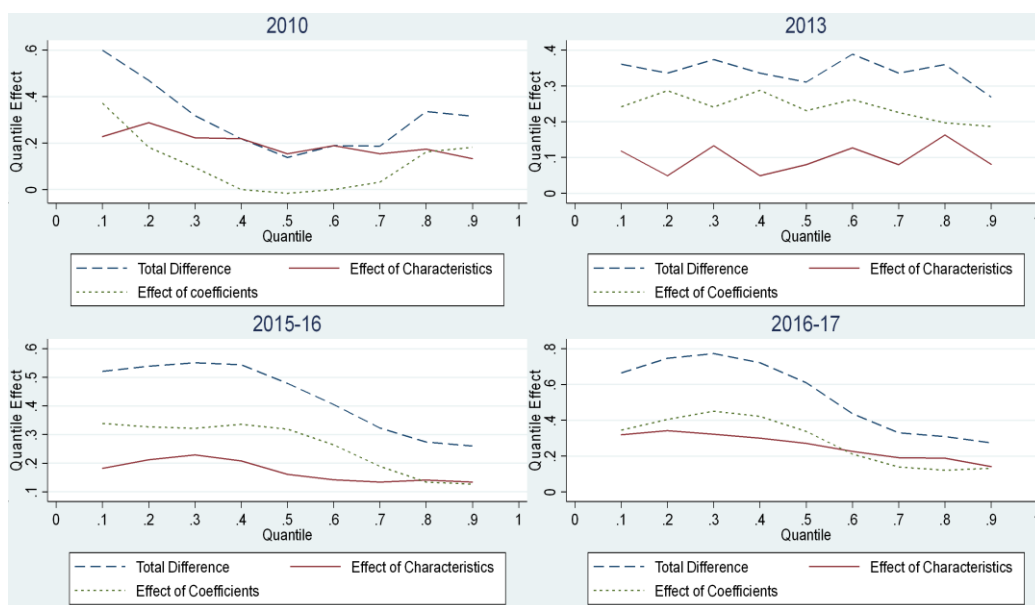
We find from the bootstrap inference on quantile counterfactual decomposition of public-private wage differentials that the functional form of regression model that we specified for the above analysis is correct. The findings<sup>5</sup> suggest that the null hypothesis of “no effect of observable distributions” should be rejected. As a result, we arrive at the conclusion about the strong presence and stochastic dominance of wage gap in each decile of the wage distribution in Bangladesh. In addition, the findings reject the null hypothesis of “no effects of characteristics” and “no effect of coefficients”. We can, thus, conclude that the public-private wage gap in Bangladesh is a combination of both coefficient effect and characteristics effect. Whilst public-sector salary scale revisions are resulting in wage inequality between the public and private sector employees, there is a concurrent increase in wage inequality between the high and low-end employees in the private sector. The next section analyzes how

government intervention in the labor market has changed the wage dynamics in Bangladesh.

### 5.2 Government Induced Inequality

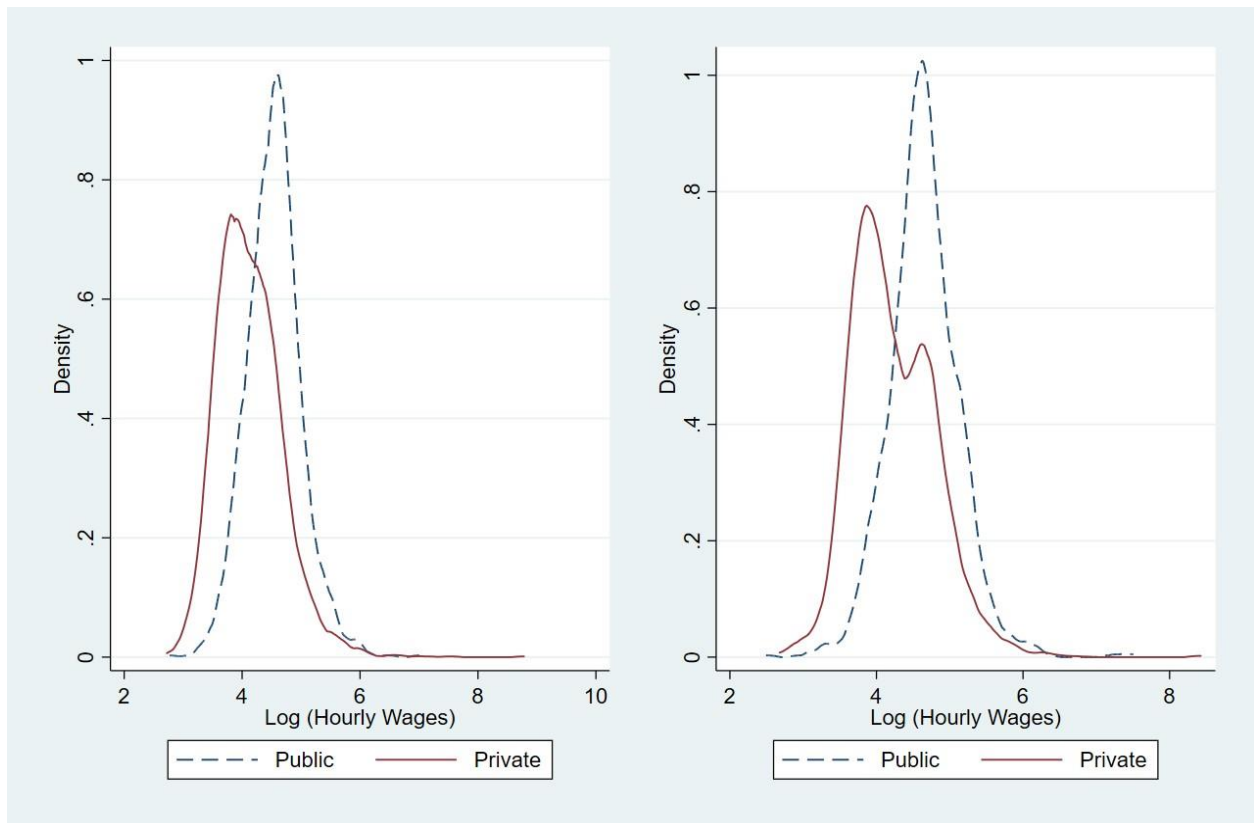
This sub-section quantifies the effect of the public-sector salary scale revisions on the wage differentials between the private and public sectors. Due to the 2015 salary scale revision, salaries of all government employees have almost doubled across all salary ranges (scales). We have used data from the third quarter of 2015 (before the salary scale revision) and first quarter of 2016 (after the salary scale revision) to show the density of earnings of public and private sector employees in Figure 3.

The left panel shows the wage density before the salary scale was revised, and the right panel displays the same following the salary scale revision. The density in the left panel shows that the minimum wages are almost the same for both groups, but private sector employees have the highest wage, and the average wage is higher for the public sector employees. The right panel shows a proportional rightward shift in density function for both low- paid and high-paid employees after the salary scale revision. Also, the density for private sector employees shows a double peak, which indicates a shift in wages for higher paid employees but not for the lower paid ones. This suggests that the highly paid employees in the private sector were able to raise their wages in response to the upward change in the salary scale for government employees, but the low-paid private sector employees were unable to do so, perhaps because of lack of adequate bargaining power.



**Figure 2:** Public and Private Sector Wage Differentials by Years.

Source: Authors’ calculation; data source: LFS (2010, 2013, 2015-16, and 2016-17)



**Figure 3:** Distribution of Log Monthly Wages.

*Source:* Authors' calculation using QLFS 2015-16

The Oaxaca-Blinder decomposition shows that even before the salary scale was revised in 2015, there was a 41.7 percent wage differential between the public and private sectors, of which 20.6 percentage points was due to the wage premium in the public sector. The quantile decomposition shows that the wage differential is the highest in the 20th percentile (53.8 percent, of which 36.3 percent is wage premium), and the lowest in the 90th percentile (28.5 percent, of which 21.3 percent is wage premium). The insignificant characteristics effect at the top of the distribution indicates that public sector employees do not have any significant wage advantage from their various productivity characteristics. It can be seen from Table 5 that the wage differential is higher at the bottom of the wage distribution and tends to be narrower at the top of the distribution.

As it was discussed earlier, the salary scale revision in the public sector had shifted the entire wage distribution spectrum for the public sector, but only partially for the private sector (only at the top of the wage distribution). Accordingly, we expect that the change in the wage gap will be higher at the bottom of the wage distribution, but relatively lower at the top. Table 6 shows that the change in the wage premium is the highest in the 30th percentile (compared to the pre-revision scenario).

Table 7 shows the changes in wage differentials due to the salary scale revision. The salary revision increased the wage differentials between the public and private sectors by 13.8 percent for the third decile. This increased wage gap tends to decline in the higher deciles of the wage distribution. For instance, wage differentials increased by less than 1 percent at the eighth decile, and barely at the ninth decile. As we had hypothesized earlier, greater bargaining power of relatively highly paid employees in the private sector may have enabled them to negotiate with their employers and make salary adjustments accordingly. However, this may not have been the case for the low-paid private sector employees. As a result, the public sector salary revision may have contributed to higher wage inequality among the private sector employees.

### 5.3 Assessment of Non-Wage Benefits in Public vs Private Sector Jobs

Table 8 shows that coverage of public sector employees under pension/retirement funds is very high and stable (at about 96.0 percent or more), but the coverage is significantly lower in the private sector and also not stable (reaching a maximum of only 25.0 percent in 2015-16).

Public sector employees also have greater coverage under maternity leave, paid sick leave, and food subsidy. In 2016-17, the maternity leave coverage in the public sector was 90.0 percent and in the private sector only 47.9 percent; more than 94 percent of public sector employees and only 70% of private sector employees were covered under paid sick leave; and coverage of food subsidy was rather low for both sectors (only 30.2 percent in public sector and 16.7 percent in the private sector).

Table 9 shows that the weekly average working hours in the public sector is consistently lower than in the private sector. For example, in 2016-17 the weekly average working hours in the public and private sector was 48.6 hours and 54.8 hours, respectively. Thus, the weekly working hours for private-sector employees was in general 12.7 percent higher than the public-sector employees.

**Table 5:** Public-Private Wage Differentials in Third Quarter, 2015 Dependent Variable: Log of Hourly Wage

Quantile	$\tau(10)$	$\tau(20)$	$\tau(30)$	$\tau(40)$	$\tau(50)$	$\tau(60)$	$\tau(70)$	$\tau(80)$	$\tau(90)$	Oaxaca-Blinder
Total	0.481	0.538	0.486	0.507	0.482	0.401	0.345	0.312	0.285	0.417
effect	0.039	0.027	0.301	0.017	0.019	0.025	0.021	0.027	0.042	0.014
Char.	0.122	0.174	0.182	0.223	0.256	0.241	0.163	0.139	0.071	0.212
effect	0.097	0.045	0.048	0.034	0.033	0.055	0.051	0.064	0.085	0.016
Coeff.	0.359	0.363	0.303	0.284	0.226	0.159	0.182	0.172	0.213	0.206
effect	0.101	0.046	0.043	0.036	0.035	0.054	0.048	0.069	0.091	0.019

**Note:** Results presented in Table 5 above and Table 6 below are estimated with the Probit distribution model. Bootstrap standard errors with 100 repetitions are given in parenthesis. For the Oaxaca-Blinder decomposition, robust standard errors are presented in parentheses. The following explanatory variables are included in each group: age, age squared, education, education squared, occupation dummy, rural dummy, regional dummy, marital status dummy, and gender dummy.

*Source:* Authors' calculation using QLFS 2015-16.

**Table 6:** Public-Private Wage Differentials in First Quarter, 2016 Dependent Variable: Log of Hourly Wage

Quantile	$\tau(10)$	$\tau(20)$	$\tau(30)$	$\tau(40)$	$\tau(50)$	$\tau(60)$	$\tau(70)$	$\tau(80)$	$\tau(90)$	Oaxaca-Blinder
Total	0.557	0.588	0.624	0.579	0.501	0.428	0.321	0.319	0.287	0.453
effect	0.025	0.021	0.022	0.019	0.023	0.029	0.025	0.028	0.028	0.018
Char.	0.454	0.416	0.467	0.182	0.061	0.057	-0.015	-0.079	0.000	0.349
effect	0.081	0.079	0.073	0.087	0.058	0.056	0.063	0.127	0.142	0.017
Coeff.	0.104	0.172	0.157	0.397	0.440	0.372	0.336	0.399	0.287	0.103
effect	0.084	0.075	0.071	0.083	0.058	0.061	0.067	0.132	0.144	0.017

*Source:* Authors calculation using QLFS 2015-16

**Table 7:** Summary Effects of Salary Scale Revision on Wage Differentials

Quantile	$\tau(10)$	$\tau(20)$	$\tau(30)$	$\tau(40)$	$\tau(50)$	$\tau(60)$	$\tau(70)$	$\tau(80)$	$\tau(90)$	O-B
After	0.557	0.588	0.624	0.579	0.501	0.428	0.321	0.319	0.287	0.453
Before	0.481	0.538	0.486	0.507	0.482	0.401	0.345	0.312	0.285	0.417
Change	0.076	0.050	0.138	0.072	0.019	0.027	-0.024	0.007	0.002	0.036

*Source:* Authors calculation

**Table 8:** Comparison of Non-Wage Benefits in Public vs Private Jobs (% Covered)

Indicator	Year					
	2013		2015-16		2016-17	
	Public	Private	Public	Private	Public	Private
Pension/Retirement funds <sup>8</sup>	99.9	14.4	96.3	25.0	95.9	21.8
Maternity Leave	64.5	28.3	95.8	46.6	90.0	47.9
Paid Sick Leave	98.6	40.6	97.0	65.3	94.1	69.8
Food Subsidy <sup>9</sup>	35.5	18.4	29.1	13.1	30.2	16.7

**Note:** <sup>8</sup>Public sector employees are entitled to compulsory pension/retirement benefits, but for the private sector pension/retirement benefits are not mandatory as per the Labor Law 2013 (amended). It is rather surprising that coverage of public sector pension/retirement fund has somewhat decreased since 2013 (from 99.9%).

<sup>9</sup>Includes free transportation in 2015-16 and 2016-17.

*Source:* Authors calculation; data source: LFS (2013, 2015-16, and 2016-17)

**Table 9:** Weekly Average Working Hours by Sector

	2010	2015–16	2016–17
Public Sector	46.5	47.1	48.6
Private Sector	53.6	54.6	54.8

Source: Authors calculation; data source: LFS (2010, 2015-16, and 2016-17)

## 6 Concluding Remarks

This paper has examined the possible underlying factors contributing to the relative attractiveness of public sector jobs in Bangladesh in recent times. The quantitative analysis reveals that following the successive salary scale revisions, particularly the one in 2015, public sector jobs have become relatively more lucrative in Bangladesh compared to private sector jobs. While there has been a marked shift in relative attractiveness of public sector jobs across the entire range of wage/salary distribution spectrum, it is more evident at the entry level jobs. Although higher-paid private sector employees appear to have been able to adjust their salaries in response to the 2015 salary scale revision, this is not the case for the relatively low-paid private sector employees. This has led to a rise in earnings inequalities within the private sector. Additionally, public sector jobs have the added advantage of greater coverage of non-wage benefits (pension/retirement funds, sick/maternity leave, etc.) compared to the private sector jobs. This is also likely to have contributed to the shift in preference.

This study used the Oaxaca-Blinder decomposition method to assess the attractiveness of public sector employment in Bangladesh. However, further in-depth analysis can be undertaken to assess the change in relative preference between public and private sector jobs in Bangladesh. For this purpose, future research may be undertaken by deploying such tools as choice experiment and frame experiment. A non-linear decomposition of determinants of public-sector employment may provide additional insights into the shift in public sector job preference in Bangladesh in recent years. Analyzing other factors that may have contributed to this shifting trend in preference also remains an area of further research. Rigorous analysis is needed to capture how public sector salaries impact the salary structure in the private sector in Bangladesh.

The findings of this paper have significant policy relevance. It shows that public sector jobs are becoming increasingly lucrative to jobseekers in Bangladesh. The shift in job preference has important implications and significance from the perspective of policymaking. Policymakers should take advantage of this change in preference favoring public sector jobs and take initiatives to recruit talented young cadres for public service. Indeed, this could be an opportunity to raise human resource endowment in the public sector in Bangladesh towards better and more efficient public service delivery.<sup>6</sup> The

results also show that private-sector workers in the lower deciles of wage distribution have not been able to adjust their wages to the rising wages of public-sector workers, which has resulted in rising inequality both within and across wage groups. Policymakers should look into this emerging trend more closely. Perhaps, the option of introducing a minimum wage could be considered to address this disquieting scenario.

## Endnotes

1. The authors are grateful to the two anonymous referees for their very insightful comments on an earlier draft of the paper. The authors would also like to express their deep appreciation for the very helpful comments provided by discussants at the Bangladesh Development Initiative (BDI) Conference held on March 22nd -24th, 2019 at Yale University, USA. Authors are responsible for all remaining shortcomings.
2. 56 percent of government jobs in Bangladesh are covered by quotas of various types (for children and grandchildren of freedom fighters, women, marginalised groups, backward regions, etc.). Under pressure from the students, the government has now decided to do away with the quota system in government jobs altogether.
3. Some of these studies are Fogel and Lewin (1974); Ehrenbergh and Schwarz (1986); Poterba and Rueben (1995); Blackaby et al. (1999); Melly (2005b); Birch (2006); Lucifora and Meurs (2006); Elliott et al. (2007); Campos and Centeno (2012); Christopoulou and Monastiriotis (2013); Lausev (2014); Nikolic (2014); Hospido and Moral-Benito (2016); Mahuteau et al. (2017); Smith (1976, 1977).
4. Ahmed and McGillivray (2015) provide justification for selecting full-time paid individuals for estimating wage equations.
5. The detailed econometric results are not reported in this paper, but are available upon request.
6. The Public Service Act, an important reform initiative of the Bangladesh government, has been lying at the draft stage for several years now. The shifting preference for public sector jobs should incentivize policymakers to finalize the Act with a view to raising quality of public service in Bangladesh.

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