

Estimating the Fiscal Costs of Implementing Ghana's Single Pay Spine Reform

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Abstract

Public sector pay policy is one of the main decisions facing a government, as it determines the ability to attract, retain, and motivate staff needed to fulfill its service delivery objectives. One option usually considered is relying on a single pay spine for all services into which jobs would be slotted, thus ensuring greater comparability of similar jobs across the public sector. This paper examines the single spine pay reform currently being considered in Ghana, highlighting the differences between the Ghanaian proposal and similarly named proposals elsewhere, and underscoring the potential cost of implementing the proposal—which is expected to be significant. There are three main findings: (i) the implementation of the single spine pay reform would

raise the base pay wage bill (salaries plus category one allowances) in Ghana to GHC2.8 billion by January 1, 2010—an almost 50 percent increase compared with an equivalent figures of GHC1.9 billion at end-2008; (ii) because these estimates focus narrowly on the base pay wage bill, they should be regarded as a lower bound estimate of the overall increase in the wage bill; and (iii) because these estimates are derived from assumptions regarding (1) the distribution of public sector employees across public sector services and institutions; (2) the minimum public sector wage; and the (3) the relativity of all other public sector wages with respect to this minimum wage, they are subject to changes any time these assumptions also change.

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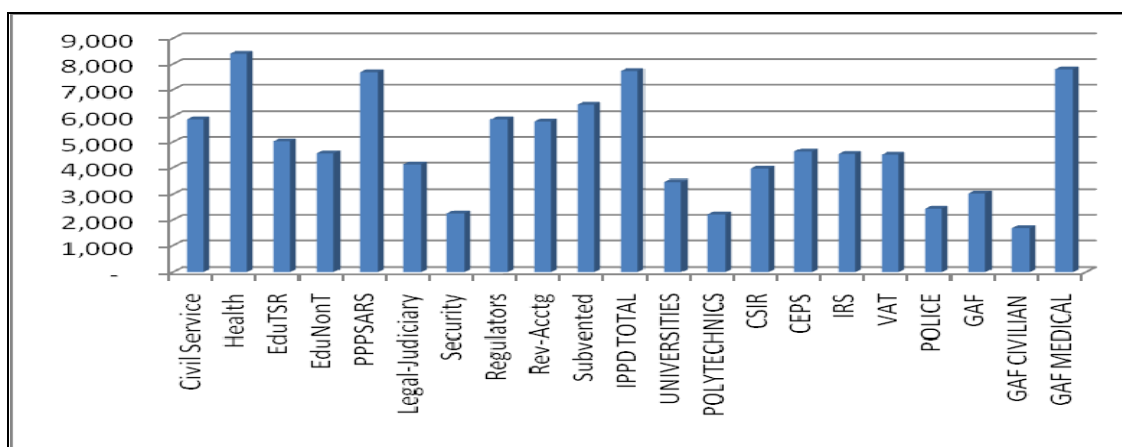
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1. Issues and Challenges

The single spine pay reform in Ghana aims at addressing three issues:¹

- *Reducing the number of public sector pay negotiations.* At present, there are 17 to 18 separate pay determination instances (depending on the year), in a fragmented, sequential process in which the government negotiates new pay levels with the different trade unions representing around 20 services in which the Ghanaian public service is divided. The current process is vulnerable to competitive leapfrogging, as each trade union benchmarks their demands for wage increases against the increases already agreed between government and trade unions representing other services. Under the single spine pay reform the number of public sector pay negotiations would be reduced, with the public sector ‘base’ pay determined centrally in negotiations between the government and the trade unions representing public services and institutions,² with the ‘other’ elements of public sector pay subject to service-based negotiations. This would result in ten separate wage negotiations conducted in each pay round: nine service-level negotiations and one central.
- *Reducing the pay disparities within the public sector.* The single spine pay proposal has been developed to reduce actual and perceived wage differences within the public sector by paying more to middle ranged staff benchmarked below median pay for the public service as a whole. Staff working in sectors whose median pay is already well above the median for the public service are expected to gain very little from what is being proposed, which explains their opposition to the proposal. Figure 1 presents the distribution of the average remuneration across the services and institutions that constitute the Ghanaian public sector.³ What one sees is that public sector employees in some sectors earn well above the average remuneration and might see their wages and salaries rising at a slower pace with the implementation of the single spine pay proposal.

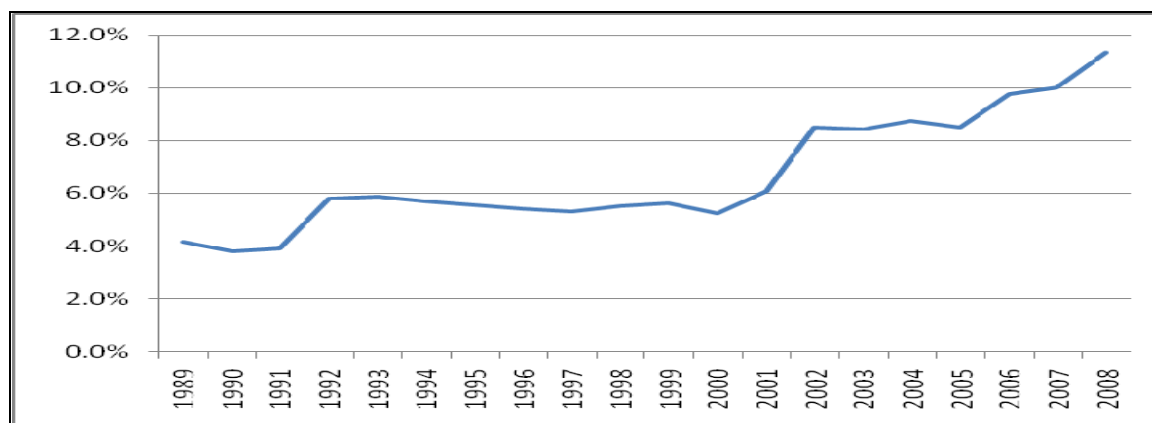
Figure 1: Average ‘Base’ Salary across Different Public Sector Services and Institutions, 2008 (GHZ Thousand)



Source: Ghanaian authorities

- *Containing the rising cost of the public sector wage bill.* At end-2008, the wage bill-to-GDP ratio reached 11.3 percent in Ghana, accounting for around one quarter of overall expenditures, over 40 percent of recurrent expenditures, and 46 percent of all tax revenues. These end-2008 figures are the result of the steady rise of the public sector wage bill-to-GDP ratio over the last 20 years, with particularly sharp increases during the last three years. Figure 2 pinpoints three distinct stepwise increases in the wage bill-to-GDP ratio over the last twenty years (1989 to 2008), indicating that these usually happen around the time of political transitions. The first increase in the wage bill-to-GDP ratio happened around the time of the separation of the public delivery services from the civil service in the run up to the completion of the 1992 constitution. At that time, the wage bill-to-GDP rose from just over 4 percent to around 6 percent in 1993. The next increase in the wage bill-to-GDP ratio happened following the 2000 election, when the ratio leaped from 6.1 percent in 2001 to 8.5 percent in 2002. The third jump was after 2006, when the ratio rose to 9.7 percent in 2007 and then continued rising until reaching 11.3 percent last year.

Figure 2: Ghana-Wage bill to GDP ratio, 1989 to 2008 (%)



Source: Ghanaian authorities.

This third stepwise increase in the wage bill-to-GDP ratio is usually associated with the completion of the second of two rounds of debt relief (HIPC and MDRI) and the beginning of the 2008 presidential campaign. The period of moderation in the wage bill-to-GDP ratio between 2002 and 2005 reflected, in turn, reforms in payroll management and control systems, including the computerization of employee records, as well as the establishment of a ceiling on the wage bill in 2005. These reforms were reversed in 2006, however, on the wake of new salary agreements in the education and the health sector.

It is against this backdrop that the single spine pay reform aims at bringing more order to the pay setting process by ensuring greater comparability of similar jobs across public sector services and institutions. The proposal is to partially centralize pay negotiations, replacing the current process in which the government negotiates sequentially new pay levels for the about twenty services in which the Ghanaian public service is divided. The current process is vulnerable to competitive leapfrogging amongst the trade unions and the emergence of pay anomalies between services that appear to be behind the current ratcheting up of the wage bill.

The challenge this note addresses is developing a better understanding of the fiscal costs of implementing the single spine pay reform in Ghana, spelling out the main assumptions used for estimating these costs and walking the reader through the steps needed in the framework used for this purpose.⁴ The note's main finding is that three exogenous variables drive the size of the overall wage bill: (i) the minimum public sector wage; (ii) the relativity of all public sector wages with respect to the minimum wage and amongst each other; and (iii) the distribution of public sector employees across public sector services and institutions.

The main difficulty in deriving these estimates of the cost of implementing the single spine pay reform is the limited information available on the public sector payroll. This policy note relies therefore on a set of reasonable assumptions, as spelled out in Section 4 below, to provide the best possible estimates of these costs. For this reason, the other value of the estimates presented in this note is the internal consistency of the calculations and not only the numerical results. This observation is important because those who are inside the negotiation process understand that the values assigned to the exogenous variable of this framework are subject to intense negotiations between the trade unions representing public sector employees and government.

The other difficulty is that any estimates of the fiscal costs of the proposal necessarily focus on the 'base' pay (basic salary plus the category one allowances), which relate to the normal duties, responsibilities and requirements of a job. The single spine pay structure does not include all other sources of remunerations, such as market premia paid over and above the common 'base' pay, as well as commissions and other allowances specific to each staff classification. Also excluded from these calculations of the costs of implementing the single spine pay reform are the costs of increases in pension obligations that would result from a larger payroll. As a result, these valuations of the fiscal cost of implementing the single spine pay reform should be regarded as a lower bound estimate of the costs of the total wage bill once the proposal is implemented.

The remainder of this note is organized as follows. Section 2 discusses what is included, and what is not included, in the single pay spine being proposed, highlighting the main differences between the Ghanaian single spine pay reform and the standard single pay spine. Section 3 outlines the modeling procedure used to calculate the fiscal costs of implementing the single spine pay reform. Section 4 applies this procedure to the Ghanaian case, examining the principal exogenous variables used in making projections of the costs to the wage bill, walking the reader through the steps leading to the estimate of the overall wage bill, and assessing who gains and who loses from the proposal as it currently stands.

2. The Single Spine Pay Proposal: What It Is and What It Is Not

Is the Ghanaian proposal a standard single pay spine?

The Ghanaian single spine pay proposal is better defined as a single spine pay structure that attempts to place all jobs onto a common structure with 25 grades (levels) that include, in turn, 7 to 15 steps. While this structure broadly corresponds to the existing Ghana Universal Salary Scale (GUSS), which is widely recognized and understood, the proposed structure does not fully conform to the standard definition of a single pay spine. In other countries a single pay spine serves as a common pay reference for several grade scales, while allowing those separate grade scales to exist to meet the different career requirements of different occupational groups. In the standard single spine pay model, after fixing the relative worth of all jobs in all grades, money values can be assigned to the single pay spine to determine pay for everyone.⁵

How does the Ghanaian single spine pay proposal differ from the standard single spine?

While the Ghanaian single pay spine places all jobs onto a common structure, the standard single spine has different grade structures for different occupational groups, such as teachers, clinicians, or police officers. This happens because such groups have very different career structures from, for instance, administrative staff. Staffs in careers such as teachers, clinicians, and police officers, often perform the same job for many years. Thus, most administrations consider it important to provide different grade structures for such staff to permit salary progression without changing jobs. This can be accomplished within a typical single grade structure, whereby the single spine provides a reference for different categorical structures without actually having to place all staff on the single spine. This standard practice in single spine pay structures is not found in the Ghanaian proposal.

Why does the Ghanaian single spine pay proposal differ from the standard single spine?

The Ghanaian single spine pay proposal was developed with the objective of reducing pay disparities within the public sector, so it attempts to place all jobs onto a common structure. However, since a common structure would make public sector pay too rigid, the single spine focuses only on the so-called 'base' pay. Other remunerations not included in the 'base' pay include market premia pay to workers over and above the common 'base' pay, as well as commissions and other allowances specific to each staff classification and not incorporated into the base component. These other sources of public sector remunerations not included in the 'base' pay are likely to be very large for certain categories, raising concerns of (i) whether the fiscal costs of the single spine pay proposal are only the tip of a much larger wage bill 'iceberg,' and (ii) whether the fiscal costs of attempting to reduce pay disparities within the public sector through the adoption of a single pay spine will be too large, resulting in a fiscally unsustainable arrangement.

What are the main limitations that should be addressed to increase the sustainability of the Ghanaian single spine pay reform?

The first limitation of the reform, as discussed above, is that a large component of public sector pay for some categories will remain outside of the base pay (e.g., market premia paid to workers over and above the common ‘base’ pay, and commissions and other allowances specific to each staff classification). This is especially true for certain categories, such as health sector workers. The concern is therefore that the public sector pay disparities that the single spine pay reform seeks to reduce are likely to either never disappear or to reemerge after the first round of pay negotiations under the single spine. The second, and related, limitation of the reform is that the values in the single spine pay reform have not been calibrated by reference to actual rates of pay found in the relevant Ghanaian local and international labor markets. There is no way to judge whether the values currently assigned to the single spine reflect competitive and sustainable levels.

3. Modeling the Costs of Pay Reform

This policy note develops a simple framework used to estimate the fiscal costs of introducing the single spine pay reform. This framework follows one of two modeling approaches considered in our work, namely a top-down approach that derives its results from aggregate assumptions about numbers of staff in different grades and their proposed wages at these grades,⁶ and bottom up approach in which the current payroll is placed into a database and then manipulated to create alternative scenarios of pay and grading. The results of this paper are derived from the first approach, although the framework developed in this policy note still attempts to bridge between these two approaches by developing a sensitivity analysis that presents the results derived from the chosen framework under different scenarios (the results of the sensitivity analysis are reported in Table 3).

The results derived from either of these approaches are contingent on the quality of the data inputted into the frameworks and the realism of the assumptions. The data requirement for these models include: (i) the total number of public sector employees and their distribution across public sector services and institutions; and (ii) a complete and updated payroll database from which one can estimate the minimum public sector wage and calculate the weight of public sector allowances in the overall wage bill. Since the payroll database available for the estimates presented in this policy note is still being fully developed, the note bridges the gaps with reasonable assumptions, as spelled out in Section 4.

The framework begins by defining an individual’s wage with respect to the minimum wage and its relativity with respect to all other public sector wages. With these parameters, an individual’s wage can be summarized in the following identity:

$$W_y = MW \cdot (1 + CR)^{(PPY)} \quad (1)$$

which equates the wage of employee at pay point y (W_y) to the product of the public sector minimum wage (MW) and the coefficient of relativity (CR) raised to the power of the y pay-point on the single

spine (PPy). For instance, the maximum salary in the proposed single spine is the product of the public sector’s minimum wage of GHC900 and one plus the coefficient of relativity (2%) elevated to the power of the maximum pay-point (160).

Next, the framework draws on estimates of the distribution of public sector employees across services and institutions according to the proposed re-grading to calculate the cost of the wage bill under the single spine pay reform. These calculations reflect the results of the following identity:

$$WB = \sum_{n=1}^{160} \left(Wy. \left[\sum_{i=1}^{20} (Ni) \cdot \sum_{j=1}^{25} (Nj) \right] \right) \tag{2}$$

where the total wage bill (WB) equals the sum of the product of the all public sector wages at each separate pay point, as defined in identity 1, and all of the employees in sector i and in grade j (N_{ij}).⁷

It is important to realize that the framework provides aggregate results that inevitably overlook some of the wage differences between grades and across public sector services and institutions. As a result, estimates of the fiscal costs of implementing the single spine pay reform are limited to the so-called ‘base pay,’ which under the single spine pay reform is comprised of the basic salary plus the category one allowances. These category one allowances relate to the normal duties, responsibilities and requirements of a job. All the other sources of remunerations are excluded from the single spine pay reform.⁸ Also excluded from these estimates are the costs related to the increase in pension benefits. Given that substantial pay differentials already exist between service categories, and given that ‘other’ pay will be everything that is not included in the common ‘base’ pay, ‘other’ pay can account for over one-third of public sector pay for some service categories.

4. The Fiscal Costs of Implementing the Single Spine Pay Reform

The Ghanaian single spine pay reform envisions that all public sector jobs will be allocated to a common grade structure comprising of 25 grades, with each grade having between 7 to 15 incremental steps (levels). Each grade and each level within the grades will have a fixed salary, called the ‘base’ salary. The proposal incorporates category one allowances, which relate to the normal duties, responsibilities and requirements of a job, into the ‘base’ salary. It does not include all other sources of remunerations, such as market premia paid over and above the common ‘base’ pay, as well as commissions and other allowances specific to each staff classification. Since the estimates presented here focus on the ‘base’ salary component of public sector pay, they should be seen as a lower bound estimate of the overall cost of the wage bill under the single spine pay reform.

There are three steps in the estimation of the fiscal cost of implementing the single spine pay reform. Each step is linked to the three exogenous parameters that drive the calculation of the public sector

wage bill: (i) the minimum public sector wage; (ii) the relativity of all public sector wages with respect to the minimum wage and amongst each other; and (iii) the distribution of public sector employees across public sector services and institutions. The following paragraphs present the manner in which each of these parameters were estimated and how they fit together in the framework to yield the resulting fiscal cost of implementing the single spine pay reform.

The first step in estimating the fiscal cost of implementing the single spine pay reform is to present the assumption made in setting the minimum public sector wage. The information received from the Controller and Accountant General Department (CAGD) at the Ministry of Finance provides the opportunity to rank all public sector employees from the highest paid to the lowest paid worker, along with the job description and the MDA to which the employee is assigned. As in the case of the distribution of public sector workers across different public services, this ranking excludes the salaries of the President, the Vice-President, Ministers, Parliamentarians, other public servants under Article 71 of the constitution, members of commissions, political appointees, and members of the Ghanaian Foreign Service. The resulting data places the minimum wage in January 2008 at GHC557, which is the salary of a cleaner employed by the non-formal education division of the Ministry of Education. Once this minimum basic salary is adjusted according to pay increase announced in June 2008 (20 percent) and in July 2009 (17 percent) but implemented retroactively for the entire year, and adds the category one allowance, which under the single spine pay reform is expected to be added into the basic salary, the value of the minimum wage for the purpose of estimating the wage bill under the single spine pay reform becomes GHC900 on January 1, 2010.

The next step is to build the salary scale based on the minimum wage in the public sector defined above and assume 2 percent difference between pay points (or in the single spine pay parlance a 'relativity' of 2 percent). While this distribution of pay points along the single spine, with a difference of 2 percent between each level, ensures that the grades are arranged in a uniform manner, the main reason for this design appears to be the claim by the trade unions representing public sector employees that there needs to be some recognition for seniority in setting the pay points onto the single pay spine. What this exercise of placing the different pay points onto the single pay spine requires, however, is a careful job evaluation, aimed at distinguishing between different types of jobs.

Table 1 provides the resulting estimate of wages on the single pay spine, with the minimum, the maximum and the median wage for each pay point.⁹ The single spine pay point ranking is then combined with the information on the distribution of the number of public sector employees across services and grades to yield the 'base' wage bill estimate. The assumption is that workers in any given grade earn the median wage for that grade. The only exception made in these estimates was for the military staffs at the Ghana Armed Forces (GAF), who were assumed to earn the maximum salary at their grade. Civilian staff in the GAF and GAF medical staffs earn, as all other public sector workers, the median salary for their grade, according to the distribution across services.

The last step in estimating the total cost of the wage bill is determining the distribution of public sector employees on the salary scale. The framework takes as given the current distribution of the number of public sector employees on the salary grid and assumes that in the first year of implementation of the

single spine pay reform there would be no changes in this distribution. Also, to make the estimates in this framework workable, the distribution used in this framework excludes the salaries of the President, the Vice-President, Ministers, Parliamentarians, other public servants under Article 71 of the constitution, members of commissions, political appointees, and members of the Ghanaian Foreign Service. This still leaves 477 thousand public sector employees on the public sector’s salary scale, spread across around 20 public sector services and institutions.

Table 1: Estimated Single Spine Pay Scale (GHC)

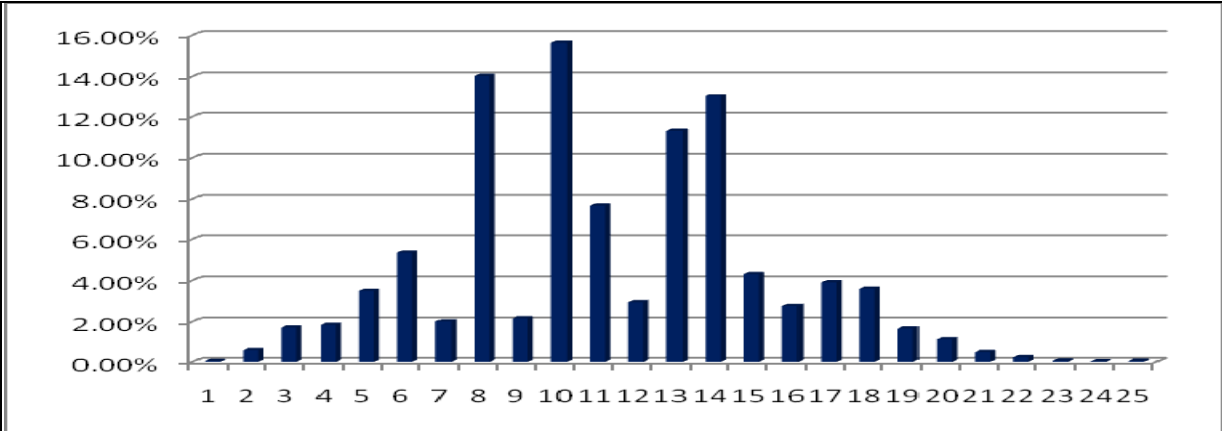
Pay point	Steps	Minimum Pay	Median Pay	Maximum Pay
160	7	19,000	20,200	21,400
157	7	17,905	19,035	20,165
154	7	16,875	17,937	19,000
151	7	15,900	16,902	17,905
148	7	14,980	15,925	16,870
146	9	13,570	14,735	15,900
141	9	12,290	13,345	14,400
136	9	11,131	12,085	13,040
131	9	10,081	10,946	11,810
126	11	8,775	9,737	10,700
119	11	7,639	8,474	9,310
112	11	6,650	7,378	8,105
105	11	5,790	6,425	7,060
98	11	5,040	5,592	6,145
91	11	4,387	4,868	5,350
84	11	3,820	4,237	4,655
77	11	3,325	3,690	4,055
70	11	2,895	3,212	3,530
63	11	2,521	2,798	3,075
56	11	2,194	2,435	2,675
51	15	1,836	2,130	2,425
42	15	1,536	1,783	2,030
33	15	1,285	1,490	1,695
24	15	1,075	1,248	1,420
15	15	900	1,045	1,190

Source: Author’s calculations.

The distribution of public sector employees on different grades and across major public services is presented in Figure 3 and in Table 2. Figure 3 shows that over 50 percent of all employees are assigned to only 4 different grades of the 25 grades available: grades 8, 10, 14 and 15. Table 2 shows that over 80 percent of public sector employees are mapped to only 5 public services (civil service, health services,

non-tertiary education, the police and the Ghana Armed Forces). Moreover, most of the public sector employees are assigned to non-tertiary education services, which alone accounts for over 50 percent of all public sector workers. The note assumes that the current distribution of employees across different grades and within public services remains unchanged when estimating the overall costs of the wage bill. This assumption about the distribution of public sector employees across different grades is important because one of the most contentious issues in completing the work on the single spine pay reform is where individual public service categories will end-up placed on the single spine. For now, however, this note avoids this controversy and proceeds with the information that is available.

Figure 3: Distribution of the Number of Employees along the Single Spine (%)



Source: Author’s calculations.

The most striking results reported in Figure 3 and in Table 2 are the concentration of public sector staff in relatively few grades, reflecting the fact that there is no clear match between the proposed 25 grade structure and the different grades that currently exist across the public sector services and institutions. This uneven distribution of staff along the single spine underscores the difficulty of assigning staff to a single spine, rather than have the single pay spine serve as a common pay reference for several grade scales, allowing separate grade scales to exist and meet the different career requirements of different occupational groups. Most administrations that adopt the single pay spine prefer the latter arrangement since different occupational groups have different career requirements. Teachers are an obvious example, since they are likely to remain in a single teaching grade for much of their career, but need to be provided with the opportunity for salary progression without changing jobs.

Table 2: Public Sector Employee Distribution across Selected Services and Grades, 2008 (%)

Grade/Service	Civil Service	Health Service	Non-Tertiary Education	Police	Ghana Armed Forces	Total
1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2	0.0%	0.0%	0.1%	0.0%	0.2%	0.6%
3	0.0%	0.2%	0.9%	0.0%	0.1%	1.7%
4	0.0%	0.6%	0.5%	0.0%	0.2%	1.8%
5	0.2%	0.5%	1.4%	0.0%	0.2%	3.5%
6	0.1%	0.2%	3.9%	0.1%	0.3%	5.3%
7	0.1%	0.3%	0.5%	0.3%	0.1%	2.0%
8	0.2%	3.9%	8.7%	0.1%	0.0%	14.0%
9	0.3%	0.4%	0.4%	0.1%	0.3%	2.2%
10	0.3%	0.3%	10.5%	0.1%	0.1%	15.6%
11	0.5%	1.0%	5.3%	0.0%	0.0%	7.7%
12	0.1%	1.1%	0.7%	0.0%	0.5%	2.9%
13	0.4%	0.5%	9.0%	0.0%	0.5%	11.3%
14	0.6%	1.3%	7.9%	1.5%	0.6%	13.0%
15	0.2%	1.2%	0.2%	1.2%	0.6%	4.3%
16	0.1%	0.3%	0.3%	0.4%	0.5%	2.8%
17	0.2%	0.5%	1.1%	1.1%	0.0%	3.9%
18	0.1%	0.5%	2.3%	0.3%	0.1%	3.6%
19	0.1%	0.5%	0.3%	0.1%	0.1%	1.7%
20	0.2%	0.1%	0.0%	0.0%	0.1%	1.1%
21	0.0%	0.1%	0.0%	0.0%	0.0%	0.5%
22	0.0%	0.1%	0.0%	0.0%	0.0%	0.2%
23	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
24	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
25	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
Total	3.8%	13.5%	54.0%	5.5%	4.7%	100.0%

Source: Author's calculations.

The last step in estimating the wage bill is combining the information outlined above into the framework. Each grade is mapped on the single spine pay scale, with the median wage then multiplied by the number of staff in each public service or institution. (Table 1 above provides a representative sample of the distribution of public sector employees across selected public services and grades in 2008.) This information provides the estimate of the total wage bill for each public service and institution, which when added up comes to GHC 2.8 billion in January 2010, up from an equivalent figure of GHC1.9 billion at end-2008 – a 47 percent increase in the 'base' salary wage bill. The other important

factor leading to the increase in the wage bill is the 2 percent relativity imposed on the single spine pay distribution.

What factors drive the estimated costs of the public sector wage bill? Table 3 provides estimates of the effect of changes in key variable on the overall wage bill. The results in Table 3 compare the base case with four key changes: (i) an increase in the number of steps in each grade on the spine (25 additional steps altogether); (ii) changes in the difference between grade on the single pay spine – either a 0.02 percent decrease or a 0.02 percent increase (iii) an increase in the minimum wage; and (iv) an across-the-board increase in the number of staff. The results indicate that the changes in the differences between grades (‘the relativity’) have the greatest impact on the wage bill, followed by changes in the minimum wages and increases in the number of staff. For instance, an increase in the difference between the grades on the single pay spine to 2.2 percent would lead to a wage increase of just under one-third when compared to the base case estimate of GHC2.8 billion. Meanwhile, an increase in the number of steps on the single pay spine would have a relatively small effect.

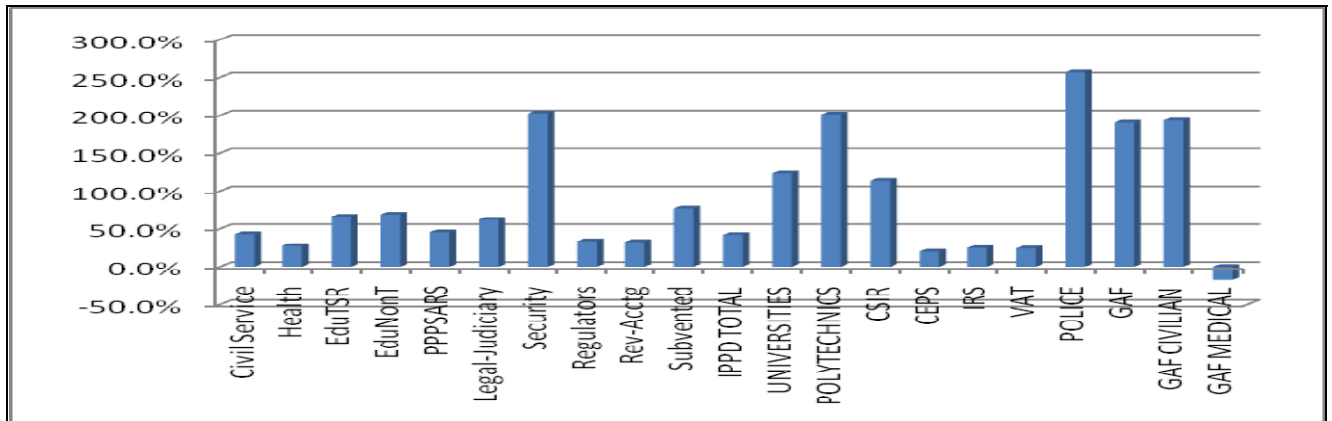
Table 3: Changes in key parameters for the simulations - sensitivity results

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
	Base case	Base case plus one additional level	Base case + reduce relativity to 1.8%	Base case + increase relativity to 2.2	Base case +GHC1,100 minimum wage	Base case +10% increase in staff
Wage Bill (GHC million)	2.8	2.9	2.5	3.7	3.0	3.0
Change (GHC Million)		0.1	-0.3	0.9	0.2	0.2
Change (%)		3.6%	-10.7%	32.1%	7.1%	7.1%

Source: Author’s calculations.

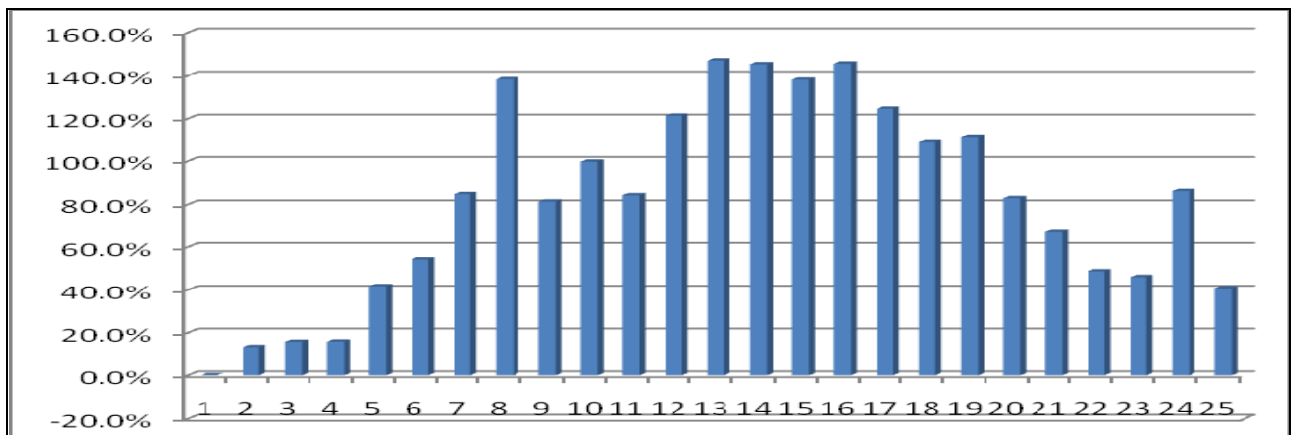
How are the benefits of the single spine pay reform distributed? The resulting estimation provide an approximation of the expected changes in average remuneration for each category due to either the introduction of the single spine pay reform or to changes in remuneration for each grade level (Figures 4 and 5). Figure 4 shows that certain categories within the health sector (especially medical staff assigned to the Ghana Armed Forces) we see their salaries increase at a slower pace with the implementation of the single spine pay reform.¹⁰ Meanwhile, all the other categories are expected to see a faster increase in their salaries, although the exact distribution of gains among the different grades is far from uniform. Most of the gains are concentrated between grades five and twenty-four, with more pronounced increases for grades twelve to nineteen. Other grades, especially the lowest grades, will see a much slower rise in their salaries as a result of these reforms.

Figure 4: Changes in average remuneration for each category with the introduction of the single spine pay reform (%)



Source: Author's calculations.

Figure 5: Changes in remuneration in each grade with the introduction of the single spine pay reform (%)



Source: Author's calculations.

There is no question that there is a considerable degree of uncertainty surrounding these estimates, not least because of the assumption made regarding the values assigned to the exogenous variables in this public sector pay framework. The value of this framework is however to link these exogenous variables in the calculation of the overall wage bill and, in doing so, ensure that changes in the exogenous variables lead to different scenarios for these calculations in a manner that guarantees that these calculations are consistent. With different/new information it should be possible to revise the value of these exogenous variables and, in the process, obtain new estimates for the wage bill.

If there is one lesson to be derived from these estimates of the fiscal cost of implementing the single spine pay reform, it is that the entire work is highly dependent on the quality of the data available. To effectively manage public sector pay, priority should be given therefore to the collection and the continuous maintenance of a database with information on individual wages and allowances and on the

distribution of public sector workers across individual public services and institutions. Information on arrears on payments of salaries and allowances are also important. In 2008 payments of arrears on salaries and allowances amounted to over 10 percent of the overall wage bill. Lastly, to properly implement the single spine pay reform, time is required to collect information on job content, which will then be analyzed and evaluated. This is a complex and time consuming process that requires the participation of all stakeholders, particularly organized labor, as the results must be acceptable to all. If not, there would be no acceptable basis for differentiating pay.¹¹

Given the uncertainties surrounding the implementation of the single spine pay reform, are there points that need further tightening the analytical underpinning of the proposal?

The results from the analysis presented above suggest that there are several reasons for considering measures to tighten the analytical underpinnings of the reform proposal. It would be useful to strengthen the analysis of the fiscal cost associated with a pay policy reform. Also, as noted above, there is the need to fully develop a complete database with information on individual wages and allowances and the distribution of public sector workers across public services and institutions. Lastly, there is the challenge of evaluating and re-grading 477,000 jobs, calculating new pay arrangements, and communicating all this to public sector employees. The Government of Ghana will find these tasks challenging given some of the weaknesses that still exist in its payroll management system and delays in the establishment of an integrated financial management and information system.

Are there other potential implications from the estimated increase in the public sector payroll that would result from the implementation of the single spine pay reform, beyond the fiscal implications already identified?

The implementation of the single spine pay reform should be expected to have important labor market implications. To better understand these labor market implications, consider the comparison between public sector wages and wages earned in other sectors of the economy (Table 4). What the data suggest is an increased duality in the labor market, with a persistent and widening gap between public sector wages and wages earned elsewhere in the economy. Public sector wages increased by just under 90 percent during the 1991-2005 period, while formal private sector wages increased by slightly over half of that amount during that same period. The only worker category that experienced a percentage increase in wages of similar magnitude as public sector workers were self employed agricultural workers. These workers are primarily hired workers in cocoa production, however, so their wage increase was from a much lower base and concentrated (if not limited) to the recent period when the country saw a sustained increase in cocoa production and earnings.

**Table 4: Annual Real Earnings across Employment Status in Age group 25-64
1991 to 2006 (in '000 cedis)**

	1991/92	1998/99	2005/06	Change
Wage Public sector	7,470	8,992	14,120	89.0
Wage Private sector Formal	6,480	8,054	9,574	47.7
Wage Private sector Informal	4,205	3,915	6,025	43.3
Self-employed Agro	1,597	1,385	3,064	91.9
Self-employed Non Agro	3,455	3,733	5,180	49.9
All employees	1,442	1,293	2,551	76.9

Source: Based on Coulombe and Wodon (2007), using data from the GLSS surveys. Changes are expressed in percentage points. Note: Median annual earnings expressed in local currency in 1991 prices. Some divergences in trends observed with the 1998/99 data may be due to sampling issues and/or lower level of comparability.

What are the dynamic implications of the 25 percent average difference between public sector and private formal sector wages during the 1991-2005 period?

Note that this 25 percent difference reflects a 10 percent union premium plus a remaining 15 percent “real” average public sector wage premium during this period.¹² The first implication one would expect from this difference would be that it might place a barrier to the expansion of employment in the private formal sector, since higher public sector wages bid up private formal sector wages, which in turn squeeze private sector profits, leading as a result to lower levels of investments. Lower investments imply in turn lower increases in labor productivity and lower job creation.¹³ The second, and related, implication one would expect from the slow growth in private formal sector employment would be to consign most of employment to the private informal sector.¹⁴

These expectations are confirmed by the data available from the Ghana Living Standards Survey. The total of formal and informal employment increased more slowly than the labor force, rising by 45 percent between 1991 and 2005 (from 5.5 to 8 million people), while the labor force expanded by 55 percent, rising from 7.3 to 11.3 million people. This constraint to the growth in overall employment is likely the explanation for the very slow shift away from employment in agriculture, with the agriculture sector still employing 54 percent of the labor force in 2005, down from 56 percent in 1991.¹⁵

If public sector wages were to rise more closely in line with productivity improvements in the rest of the economy, there would be more space for the private formal sector to increase employment. Increased employment in private sector urban activities would create a pull effect for rural workers into urban activities. The migration of rural workers into urban activities would lead in turn to wages for the remaining rural workers to increase in relative terms, which would have a positive impact on poverty reduction. While a full discussion of the impact of these distortions in the labor market on investment, growth, job creation and poverty reduction is beyond the scope of this paper, this brief analysis provides a glimpse of the economy-wide impact of this persistent and widening gap between public and private formal sector wages.

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Endnotes

¹ A single-spine pay structure simply means having a single pay plan whereby employees in the same pay scale are paid equal amounts. The experience across the world is that there is a continuum ranging from highly integrated to relatively fragmented system of pay structures in the public sector. In Ireland and the UK, for instance, the public sector stand out as having relatively fragmented pay systems, while Italy and the Netherlands come half way between the fragmented systems in Ireland and the UK and a fully integrated system, such as the single spine pay structure. For the majority of countries, however, pay structures are highly integrated, which in some cases involves a single pay spine covering all public service staff (see www.warick.ac.uk/fac/soc/complabstuds/confsem/grimshaw/htm).

² The institutional service would be classified as follows: (i) Public Policy, Planning, Services, Administration and Related Services (including Local Government Service); (ii) Health Services; (iii) Education (Non-Tertiary); (iv) Higher Education (Tertiary, Scientific and Research); (v) Revenue and Accounting Services; (vi) Security Services; (vii) Legal and Judicial Services; (viii) Sub-vented Agencies (Commercial & Non-Commercial); and (ix) Regulators.

³ Figure 1 excludes the President, the Vice President, Cabinet Members, Parliamentarians, members of commissions, and other political appointees from the calculations of the average 'base' salary, so as to make the comparison meaningful.

⁴ The framework consists of a series of interlinked spreadsheets, which, when provided with key inputs, yield the overall wage bill estimate.

⁵ This applies to every salary structure that form the basis and standard for pay in every organization. The salary structure is a grid of standard pay levels that interrelate vertically by grades, zones, bands or steps, and horizontally by incremental jumps or indices that are usually expressed in percentile increments.

⁶ The latter is, in turn, a function of the minimum public sector wage and the coefficient of relativity between wages in each grade.

⁷ The survey of public sector employees conducted by the consulting firm CoEn in 2008 estimates the total sum of employees, distributed along public services and institutions, adds to 477,736.

⁸ These other sources of remuneration consist of any market premia over and above the common 'base' pay, as well as commissions and other allowances specific to each staff classification and not incorporated into the base component. The latter includes allowances that are the result of special conditions and/or circumstances that arise from time to time which require some compensation (eg. overtime, acting), allowances and/or benefits that are staff welfare or job related, staff welfare benefits would be those that the employer considers would enhance the well being of the employee and their family (e.g., medical benefits), and job related allowances are those associated with the performance of the job and for which the staff would not be expected to pay (e.g., night subsistence, transfers). Lastly, there are those allowances associated with providing accommodation and/or a standard of living for particular positions, such as payments for housing, domestics, and utilities.

⁹ The values for the minimum and maximum were rounded for presentational purposes.

¹⁰ The Single Spine Pay proposal contains a specific, one-time, 'conversion allowance' aimed at moving staff up within their new levels on the basis of their length of service. The cost of these conversion allowances are not included in the estimates provided in this note.

¹¹ Specifically, the process requires: (i) obtaining human resource information from public sector institutions on their jobs and the entity, including job descriptions; (ii) the design of a detailed job content questionnaire to gather general information on specific job requirements, such as (i) knowledge & skill; (ii) responsibility; (iii) effort; and (iv) work conditions.

¹² To calculate the “real” public sector wage premium one needs to first calculate the union wage premium, as measured by the percentage difference between wages in the private formal sector and wages in the private informal sector, and then subtract this union wage premium from the percentage difference between wages in the public sector and wages in the private formal sector. This remaining 15 percent is the “real” public sector wage premium during the period 1991-2005.

¹³ Other factors that are likely to account for the slow expansion of the private formal sector in Ghana and, therefore, its sluggish job creation include: real estate market rigidities and infrastructure bottlenecks (energy and water in particular).

¹⁴ The high prevalence of informality in Ghana remains an important obstacle to improvements in labor productivity. Some 87 percent of the Ghanaian workforce is employed informally as farmers (52 percent) or in self employment (35 percent). The informal sector is less able to invest in business, gain access to credit, establish standards or participate in industry bodies. These constraints are reflected in Ghana’s ranking in the Doing Business survey for ease of starting a business (137th).

¹⁵ Employment in services and industry accounted, respectively, for the remaining 30 and 15 percent of overall employment.