GOVERNMENT WAGE AND EMPLOYMENT POLICY:
AN ANALYTICAL TREATMENT WITH SPECIAL REFERENCE TO AFRICA

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by

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Abstract

Throughout Africa the wage and employment practices of the public sector are often cited as a major source of distortion in the formal economy. While this view is maintained, little direct analysis, either theoretical or empirical, has been advanced to establish the mechanisms by which these government policies contribute to economic inefficiencies. This paper attempts to clarify the impact of alternative government wage and employment actions on the structure of modern sector relative wages and employment.

The paper develops an analytical framework for evaluating government wage and employment policies. Government pay policies designed to match, exceed or fall below the reservation wages of marginal workers are examined. The use of government wage "fixing" in the private sector is also considered. Throughout the paper country evidence is presented to illustrate specific cases.

Two basic areas of concern arise from the cases which are examined. First, what spill-over effects on wages and employment in the private sector can be anticipated from alternative government wage and employment policies? Second, what impact might such policies have on the performance of the public sector itself?
The reasons for the existence of wage levels, especially for unskilled labor, which are too "high" are mainly institutional. In some countries, and at certain periods, trade unions play some role. But the major factor is government policy, and the ideological or political ideas which guide it. Government is a major influence on wage levels and structure in most LDCs, by its wage decision with respect to government employees, and in its role as regulator through minimum wage policies, wage boards, Industrial Courts, etc.¹

- Elliot Berg (1970)

African wages are high compared with those of Asia... Higher African wages reflect both government wage policy, which in many countries sets industrial wages above the level they would otherwise be, and better opportunities for agricultural employment.²

- World Bank (1981)

Price adjustments and market deregulation can go only part of the way to correct the urban bias [in African economies]. Personnel policies in the public sector must also change: they influence urban earnings because the government and public enterprises are the largest employers in most countries. Public sector hiring and wage policies have inflated wages and in many cases left them out of line with productivity and labor costs in other developing countries....[I]ndicators for selected African and Asian countries reveal that government and urban wages in low-income Africa are relatively high.³

- World Bank (1986)

The quotations above span 15 years and repeat a basic theme about impediments to economic development in the modern sector of developing economies, especially in Africa. Government wage and employment policies are described as contributing to a "high" wage
environment. However, it is not altogether clear what is meant by "high" wages. Are wages "high" relative to the domestic reservation wage of labor, to an international comparison, or to some other standard? Presumably, the "high" wage environment does not support economic growth because distorted factor prices reduce output, limit employment expansion, exacerbate rural-urban migration, decrease export competitiveness, and/or worsen the distribution of national income. In other words, existing government labor market interventions which generate "high" wages are detrimental to the development process.

In the African context the wage and employment practices of the public sector are often cited as a major source of distortion in the formal economy. While this view is maintained, little direct analysis, either theoretical or empirical, has been advanced to establish the mechanisms by which these government policies contribute to economic inefficiencies. As a result the nature of distortions induced by wage and employment policy are poorly understood and policy advice is not well formulated. This paper attempts to clarify the impact of alternative government wage and employment actions on the structure of modern sector relative wages and employment. The proposed framework is useful in identifying both the potential nature of "high" wages and the inefficiencies resulting from alternative policies.
Government wage and employment policies cover a broad range of potential interventions. Minimum wage laws, rules governing pensions and severance pay, and dispute resolution by industrial courts are examples of government actions which influence wage determination, especially in the private wage sector. In Africa, because the share of public wage employment out of the total is large, often exceeding 60%, attention is frequently called to another set of policies, namely those that determine the level of government pay and employment. With such a "large" public sector, government pay and employment policies have significant spill-over effects on the private sector and also influence the performance of the government, an especially critical sector given the ratio of public to private production. Both these effects are considered in the analysis below.

The paper proceeds as follows. In Section II an analytical framework for evaluating government wage and employment policies is developed. Government pay policies designed to match, exceed or fall below the reservation wages of marginal workers are examined. The use of government wage "fixing" in the private sector is also considered. Section III summarizes the key issues relating government wage and employment policies to economic performance. Throughout the paper country evidence is presented to illustrate specific cases.

II.1 An Analytical Framework

The literature on public sector pay determination in both developed and developing nations has generally taken one of three
directions: institutional descriptions of government wage-setting practices; econometric estimation of public/private sector wage differences; or theoretical models based on some type of politically responsive pay mechanism. This literature draws special attention to payment of "prevailing wages" and, hence, to pay parity between private and public employers. The absence of such parity, especially when the wage advantage rests with the government worker, forms the basis for much criticism of government pay policies. While pay comparisons are important in assessing government wage and employment decisions, what is absent in most previous studies is an explicit treatment of the interaction between public and private sectors. An understanding of these interactions is critical both for evaluating relative wages, and for identifying inefficiencies which may arise from alternative government actions.

A two-sector treatment of public and private employers can be developed as follows. Assume some homogeneous category of both labor skills and job type in order to eliminate any compensating differentials between sectors which could be explained by productivity or skill differences, or by any non-pecuniary job attribute that was sector specific (e.g. different degrees of job security.) Under these assumptions private labor demand, $D_L^V$, is a derived demand determined by value of marginal product criteria. $D_L^V$ appears on the left-hand side of Figure 1, where wages, $w$, are a measure of total compensation, and labor time, $N$, is measured in hours.
If government could be assumed to behave as a private firm, government and private sector labor demand would be analogous. However, DL\textsuperscript{V} requires assumptions of technically efficient production and of profit maximizing behavior. Such assumptions appear unwarranted in modeling government behavior where cost minimization, but not profit maximization, may be but one argument in the complex objective function conditioning government actions.

One approach for trying to derive a government labor demand relationship is to posit an objective function for government. Instead of profit maximization, notions of vote-maximizing behavior can be employed. Or, models of bureaucratic behavior based on the income or utility maximizing strategies of top administrators can be adopted. However, given the difficulty of adequately portraying government behavior in an easily formulated objective function, a more limited technique is employed in this paper. Instead of relying on a maximization procedure to generate a locus of optimum combinations of wages and employment, the labor supply and fiscal constraints facing government are developed.

Turning first to the supply side, labor available to the government can be depicted as follows. Total labor supply, $\bar{S}_L$, is available for employment in the wage sector. Since the private sector hires according to DL\textsuperscript{V}, public sector labor supply, $S_L^b$, can be defined as $S_L^b = \bar{S}_L - D_L^V$. This does not mean that the government is a residual employer of labor. All that is suggested is that the government faces some competition for
workers from the private sector. If in making pay and employment decisions the government ignores this constraint, some response, including vacancies or rapid job turnover, can be anticipated.

The labor supply constraints facing government are captured in $S_{Lb}$. Government pay and employment policy is also constrained by revenue considerations. To portray this constraint, first assume that the government chooses to employ a given number of workers, $N_{i}^{b}$. This choice may be consistent with government output objectives, $Q_{i}^{b}$, which requires a minimum of $N_{i}^{b}$ workers and a stock of capital, $\bar{K}$, according to some production function, $Q_{i}^{b} = f(N_{i}^{b}, \bar{K})$. Knowing that $N_{i}^{b}$ workers are desired, alternative budgetary constraints can be depicted as iso-elastic expenditure functions with elasticities of employment to wages equal to one. For example, $WB_{1}$, in Figure 1, presents the cost-minimizing wage bill required to secure $N_{i}^{b}$ workers under prevailing labor supply conditions (i.e. $S_{L}^{b}$). $WB_{2}$ represents a more expensive allocation which could also obtain $N_{i}^{b}$.

The wage bill constraint, which, in general, can be written as, $N^{b} = \bar{WB}_{i}/w^{b}$, for $i=1,...,n$ levels of wage bill expenditures, should not be thought of as a government labor demand function. After all, the wage bill is not an exogenous parameter. Pay and employment levels, and budgetary allocations are instead part of a joint decision-making process undertaken by government authorities. While not a labor demand schedule, the wage bill serves as a convenient analytical device for incorporating the fiscal
constraints facing government. As a further simplifying assumption, budgetary allocations for labor are considered exogenous to private labor demand. Although government must obtain real resources from somewhere in the economy, resource mobilization itself is not explicitly incorporated in this framework.

The two-sector analysis of Figure 1 is completed by recognizing that private sector labor supply is dependent on the public sector's employment decision, therefore, no unique labor supply schedule facing the private sector can be depicted. Instead, it is assumed that, given government employment levels, the private sector acts to maximize profits. Such behavior generates private wage offers which clear the labor market of all remaining labor. (N.B. In Figure 1 at every wage the horizontal distance between private labor demand, $D_L^V$, and the supply curve facing government, $S_L^b$, exhausts the total supply of available labor, $S_L$.)

With this two-sector framework in place it is possible to evaluate some of the effects of alternative government wage policies on wage and employment outcomes within the formal economy. Whether or not government wage and employment policies are responsible for the distortionary effects suggested by the quotations which introduced this paper depends on which policies are actually pursued. The cases examined below consider whether government pay matches, exceeds or falls below the reservation wages of marginal workers. The final case introduces the use of government wage "fixing" in the private wage sector.
II.2 Government Pay Matching Reservation Wages

In Figure 1, assume that the government wishes to produce output level, $Q_1^b$, requiring a minimum of $N_1^b$ workers. If a government pay policy is chosen which is cost minimizing, that is, one that matches the reservation wages of the final $N_1^b$ worker, a wage of $w_1$ and a wage bill of $WB_1$ are required to secure the desired labor. Competition among remaining workers drives the private wage to $w_1$, with private employment settling at $N_1^v=(\bar{N}_1-N_1^b)$, $\bar{N}_1$ equaling total labor supplied at $w_1$. Pay parity between sectors is achieved and no wage labor remains openly unemployed.

It would appear that this depiction of government pay and employment policy does not produce one of the "high" wage outcomes frequently alleged. There is no excess supply of labor confronting wage paying employers. However, there are other possible interpretations of "high" wages. For purposes of illustration consider an expansion of government output goals, now requiring $N_2^b$ workers. Owing to the positively sloped labor supply curve facing government, the additional workers can only be secured at a wage of at least $w_2$. Such a wage increase draws labor into the public sector and equilibrium is restored when pay parity between sectors is again achieved, but now at the higher wage, $w_2$. The expansion of public employment has led to a rise in private sector wages.
This account of government employment policy driving up private sector wages may, for example, help to explain some modern sector wage and employment trends observed in African economies in the early post-Independence period. Expansion of government employment in Kenya, especially of professionals, experienced administrators and other skilled labor, may have been a determinant of increasing private sector real earnings for these labor skills in the 1960s. 11

If the case depicted in Figure 1 portrays the mechanism behind the "high" government wages previous authors have been concerned with, attention should be drawn, not to government pay policy per se, but to government employment determination. Pay policy is at issue only insofar as it is a requirement for achieving desired government employment. Furthermore, given government employment objectives, these "high" wages are the result of market forces, not restrictive wage-setting institutions.

In the case above, as well as those below, government employment decisions lead to a misallocation of labor resources if the government "crowds out" private wage employment and if this effect is viewed as socially inefficient. The argument would have to be made that at the margin the private sector could make more productive use of scarce labor resources than could the government. Resolution of this critical issue lies beyond the scope of this framework since the absence of a derived labor demand schedule for government workers precludes valuation of the relative marginal benefits of public versus private employment.
II.3 Government Pay Exceeding Reservation Wages

Given a level of desired public employment, government pay policy may or may not be cost minimizing as in the previous example. Governments may choose levels of pay which exceed the supply price of marginal workers, especially for specific groups or occupations.\footnote{12}

Continuing to abstract from efficiency wage/productivity explanations for cross-employer wage differentials, pay premia for government workers may be a reflection of political considerations. For example, since government officials determine their own salaries, political or even personal objectives, as opposed to social ones, may account for benefits surpassing those received by comparable workers in the private sector. The doubling of salaries for most civil servants in Liberia in 1980, shortly after the Doe regime took power, may be a case in point.

Beyond motives that are political or even corrupt, governments may select pay levels in an attempt to set reference wages elsewhere in the economy. The setting of compensation for unskilled government employees can reflect a government's concern over paying wages sufficient to meet some notion of basic needs. Such wages may exceed the prevailing urban wage floor resulting in public pay greater than reservation wages. These policies may be outright attempts to redistribute income, or they may be intended as implicit guidelines for wage setting elsewhere in the modern sector.

Such motives have been articulated in both Tanzania and Zambia. A commitment to "living wages" in Zambia has maintained real earnings
for unskilled government workers relative to other civil servants. Between 1975-1983, government servants with university training witnessed a decline in real starting salaries of over 50% while unskilled laborers experienced only a 13% decline. As a result, government laborers enjoyed an approximately 20% wage premium over their private sector counterparts in the early 1980s.

Whatever the motivation, government pay policies which mandate public sector pay premia can generate a number of outcomes throughout the formal economy. In Figure 2 assume that the government still wishes to hire $N_1^b$ workers but now compensates them in excess of reservation wage requirements, $w_3 > w_1$. Where private wages and employment settle will depend on worker response to alternative pay offers. At a wage of $w_3$, $N_3$ workers seek wage employment. However, only $N_3^v$ private sector jobs would be forthcoming at $w_3$, leaving $(N_3-(N_3^v+N_1^b))$ workers openly unemployed. Private employers, according to $D_3^v$, would be willing to hire more labor at a lower wage, however, workers might choose to remain unemployed while queueing for scarce "high" wage jobs. Such worker behavior is consistent with Harris-Todaro (1970) notions of urban unemployment and, generally, with job search models of unemployment. Assuming such behavior, pay parity between public and private sectors will be realized at $w_3$ while open unemployment characterizes the wage sector. A clear misallocation of labor resources results and can be traced to the combination of government pay policy and labor's response to prevailing pay offers.
FIGURE 2

potential wage unemployment
Workers may, however, not behave in the manner just described. The costs of voluntary unemployment are likely to be high and queueing for government jobs may be successfully undertaken while maintaining alternative employment. If, in fact, no worker chooses to remain voluntarily unemployed, private wages will not remain at \( w_3 \), but will be bid down to \( w_1 \). In this situation the private sector's wage and employment outcome is unaffected by the government's pay offer. Private employment continues to settle at \( N_{1V} \) at a wage of \( w_1 \) but unlike the previous case, government pay exceeds private pay.

The economic costs of a government pay policy which grants economic rents to workers who obtain public jobs can now be evaluated. They include the opportunity cost of government revenues in excess of those required to bring forth the desired number of workers. (In Figure 2, this excess equals \( WB_2 - WB_1 \).)

Non-cost-minimizing public production may also generate factor inefficiencies which result from the mechanisms governments employ to finance government pay in excess of reservation wages. In Zambia a combination of fiscal austerity and a deliberate policy of "narrowing-the-gap" in the government wage structure may have resulted in pay premia to unskilled workers which have constrained wage offers to skilled labor to fall below reservation wages. Such policies can result in vacancies in skilled positions which produce an inefficient mix of labor skills within the government sector. Similarly, if government wage advantages are financed by lowering
expenditures on non-labor inputs, production inefficiencies again arise from an input mix imbalance. In Liberia, for example, there is evidence that the ratio of government wage costs to total revenues jumped from 36% to 66% between 1977-1981. A commensurate decrease in non-labor inputs and, hence, a deterioration in the provision of public goods and services is likely to have followed.

A further cost of government pay premia may result from rent-seeking behavior. For example, workers may respond to existing pay differences by bidding for scarce well-paying government jobs. Since no market mechanism exists to erode government's pay premium and, hence, the excess supply of labor facing the government, there will be a return for individual workers to devote resources to securing government positions. At the same time, rationing devices will have to be adopted by government to allocate the desirable public jobs. Such a setting may encourage nepotism and corrupt hiring practices which can reduce the role of qualifications in employment decisions and lower the quality of the government workforce. As in other contexts, the inefficiencies stemming from rent-seeking behavior may be non-trivial. 14

In evaluating the cases of "high" government pay in Figure 2 it is important to emphasize that given government employment targets, there need not be spill-over effects which distort private sector wage determination. Private wages need not follow any government wage "demonstration effect," unless labor's response is to choose unemployment over lower wage offers by the private sector.
II.4 Government Pay Falling Below Reservation Wages

Government pay offers that fall below reservation wages are illustrated in Figure 3. This case is likely to be more than hypothetical. Fiscal constraints throughout much of Africa have resulted in precipitously falling real earnings for public sector workers. In extreme cases, including Ghana, Sudan and Uganda, starting salaries for government officials have fallen, in real terms, by as much as 70%-90% from the mid 1970s to the early 1980s. For some labor skills, given government employment targets, the resulting wage offers probably fall below prevailing reservation wages.

Returning to Figure 3, assume, as in the previous cases, that the government desires to employ $N^b_1$ workers and that private firms continue to maximize profits. Further assume that government offers public employees a wage $w_4$ lower than $w_1$, the reservation wage for the $N^b_1$ worker. Such a policy can be motivated in the following way. A sudden decrease in resources available to the government translates into lower wage bill allocations, $WB_3 < WB_1$. Prior to the decrease, $N^b_1$ workers received $w_1$. Institutional rigidities may make it difficult to terminate public workers. If the government feels constrained to both maintain existing workers, $N^b_1$, and to expend fewer resources, $WB_3$, a wage offer of $w_4$ will be forthcoming.

Clearly there exists an inconsistency between the government's
pay and employment policies. As portrayed in Figure 3, a wage offer of $w_4$ would attract only $N_4^b$ not $N_1^b$ hours into the public sector. The costs of the government's "low" pay policy can be understood by considering how the inconsistency between government pay and employment policy is resolved.

One possibility is that competition between public and private employers leads to the formal withdrawal of $(N_1^b - N_4^b)$ hours of labor in the public sector. In this situation, which is nothing other than the "crowding-out" model working in reverse, initially higher private wages at $w_1$ would attract public sector workers. Private wages would be bid down and private employment would expand until pay parity is achieved at a wage $w_4$, with the level of private employment indicated by $N_4^V$. Formal withdrawal implies that the government only expends $WB_4$, the cost-minimizing wage bill for $N_4^b$ workers. Public savings of $(WB_3 - WB_4)$ are realized even though public employment and output targets are not. Government expenditures on labor are consistent with hours of labor supplied.

Alternatively, government may expend $WB_3$ but realize less than $N_1^b$ hours of labor time. For this to occur requires further assumptions about the management of government workers, systems of worker compensation, and the nature of the labor supply facing government. If government continues to extend $N_1^b$ job offers, even though pay has fallen to $w_4$, workers may maintain government employment but adjust their total hours worked (or effort supplied) commensurate with the now lower wage offer. Total labor supplied
can fall as low as $N_4$. Some of the lost hours will be shifted to the private wage sector through increased absenteeism on government jobs or outright on-the-job moonlighting, that is, performing non-government work during normal government working hours. Other lost hours will be spent on non-wage sector activities. While real compensation per hour for government workers falls and so do hours worked, hours of paid compensation in the government sector remain the same. The government, in essence, pays for more hours than it receives.

As long as firing civil servants is difficult, work rules are lax, and public servants are salaried and not wage workers, this model of on-the-job quantity adjustments not only appears as plausible but, based on impressionistic evidence, seems endemic to the Sub-Saharan region. This case portrays a situation in which government pay and employment policies appear especially costly in terms of their impact on the use of public resources and, hence, on public sector performance. In addition, this case again illustrates that pay parity between public and private sectors, by itself, is insufficient as an indicator of the appropriateness of a given government pay policy.
II.5 Wage "Fixing" in the Private Sector

In addition to pay and employment practices, government wage policy includes actions directed at the private wage sector. As noted earlier, such actions might include minimum wage laws, dispute resolution by industrial courts, or statutes concerning firing practices, severance pay or mandatory pensions. These policies, more often analyzed in Latin America than in Africa 16, share in common public imposition of specific wage costs on private firms. The impact of such policies on wages and employment in the private and public sectors is considered below.

Government wage policies directed at private employers can create a wage floor above what would prevail under competitive conditions. Such wage "fixing" can be pursued independently of a government's choice of its own pay and employment practices. The general case of policies which "fix" private wages is depicted on the left-hand side of Figure 4. A set of government wage policies constrains private wages to be no less than $w_3$. 17 If private employers profit maximize they will employ $N_3^V$ workers.

Government use of such wage "fixing" policies conditions the constraints facing government pay and employment policy decisions. The supply of labor to the public sector can no longer be portrayed as the total supply of labor less private labor demand at each wage. For wages greater than the "fixed" wage, $w_3$, $S_L^B$ still holds. But below $w_3$ the supply of labor facing the government can be
considered the difference, $\tilde{S}_L^b$, between the total supply of labor at each wage minus the actual number of workers employed in the private sector, that is, $\tilde{S}_L^b = \tilde{S}_L - N_{w_1}^V$, where $w_1$ is the private sector wage mandated by government policy. (In Figure 4, $w_1 = w_3$.) Faced with this supply constraint, the government can choose between a number of pay and employment alternatives.

One possibility is for the government to pursue "high" wages throughout the modern sector. An example of such a policy is *de facto* wage parity between public and private wage sectors at a wage such as $w_3$ in Figure 4. 18 This wage indicates both wage "fixing" in the private sector and pay above reservation wages in the public sector. (Note also that the assumption of government employment objectives, $N_{1b}$, continues to be maintained.) Such policies generate open wage unemployment, $(\bar{N}_3 - (N_{1b}^b + N_3^V))$, which persists as long as government policies maintain wages at $w_3$.

If institutional arrangements constrain private wage setting to match government pay as in Figure 4, market signals of such an outcome will include pay parity between the public and private sectors in the face of persistent openly unemployed wage labor. It should be emphasized that in this case the absence of a public/private wage differential is clearly not a sign of an efficient market solution.

The inefficiencies generated by Figure 4's model of public and private sector wage determination include a misallocation of labor
resources and, hence, lower public and private wage sector output. The private sector in particular can be expected to exhibit a capital-intensive bias in production. Problems associated with non-cost-minimizing government pay will again appear as will those inefficiencies stemming from rent-seeking behavior by workers toward any modern sector job.

The economic costs of government wage policies appear especially severe under the scenario just described. Not only may government workers be over-compensated, but wage "fixing" in the non-government sector creates additional welfare losses. What should be noted is that if such a situation prevails, policy action may be required on two fronts. First, government pay should be brought into line with existing reservation wages. Second, the mechanisms which encourage or require private enterprises to follow government wages must be identified. If such mechanisms are the result of direct policy actions or if they are amenable to government intervention, suitable policies must be pursued which break this tendency.

It is important to emphasize that the case of government pay in excess of reservation wages coupled with wage "fixing" in the private sector is a special case. More generally, wage "fixing" can occur concurrently with any choice of government pay and employment policy. One alternative is for the government to respond to the open wage unemployment generated by the "high" wages imposed on the private sector. The government might choose to expend more on the wage bill, that is, more government jobs at \( w_3 \), or offer more public
employment at a wage lower than \( w_3 \). The latter situation would be consistent with modern sector pay advantages accruing to private not public workers. Of course, wage "fixing" in the private wage sector continues to impose costs on the economy regardless of the choice of government pay policy.

III. Evaluating Government Wage and Employment Policies

This paper examines the impact of government wage and employment policies on labor market outcomes in the modern sector. Two basic areas of concern arise from the cases which have been examined. First, what spill-over effects on wages and employment in the private sector can be anticipated from alternative government wage and employment policies? Second, what impact might such policies have on the performance of the public sector itself?

Concern over spill-over effects appears to be well established in the literature. The belief that government pay practices are responsible for "high" wages in the formal economy reflects this concern. What this paper suggests is that government pay policies by themselves need not have any direct effect on wage determination in a fully competitive private sector. In contrast, government employment certainly will affect private sector wages since the level of public employment conditions the supply of labor facing the private sector. The spill-over effects of government pay policies are, therefore,
important insofar as they permit government employment objectives to be realized. This is a different interpretation of the influence of government pay levels on private sector wages from one which views government compensation as setting wage standards which private employers feel constrained to follow.

By placing an emphasis on government employment policy, the potential for public sector "crowding-out" of private sector employment is realized. This may be especially apparent for specific labor skills. While such "crowding-out" may generate "high" wages for these labor skills, attention, again, should not be focused on government pay policy alone but on government employment objectives. At issue is the appropriate division between public versus private employment.

"High" private wages may also be mistakenly attributed to government pay policy when governments actively engage in wage "fixing" in the private sector. After all, distortions in private wages may result from policies designed to "fix" private wages regardless of the level of government pay. While governments may pay in excess of the reservation wages of marginal workers, any tendency for private wages to follow government pay should be traced to labor supply behavior or to the institutions which constrain private wage determination.

Beyond policy induced wage and employment distortions in the private wage sector, attention needs to be focused on government pay
and employment practices and their effect on the efficient use of public resources. Growing concern over public sector performance in Africa, coupled with empirical evidence on rapidly declining real pay for government workers, sharp compression in government pay structures, and continued growth in public employment even during periods of macroeconomic contraction, highlights the significance of these issues. The position that governments simply employ too many and overpay them all is not a useful starting point. The internal wage and employment structures of the government require further examination. In cases where pay either exceeds or falls below the reservation wages of marginal workers, pay adjustments may contribute to improvements in government performance.

The intra-public sector problems of government pay and employment determination do not appear to have received as much attention in the literature as have potential spill-over effects. Yet, the efficiency losses associated with the misallocation of public wage expenditures may be of considerable quantitative significance. Informed policy advice on government pay and employment practices clearly requires a better understanding of the internal wage and employment structures in the public sector and of the relationship between pay and performance in government service. These should be fruitful areas for further research.
Notes

* The views expressed are those of the author and should not be interpreted as representing those of the World Bank. The author would like to thank Mark Leiserson, Robert Goldfarb, Oey Meesook and Len Nichols for their comments.
2. World Bank(1981), p.92. (N.B. The principal author of this report was Elliot Berg.)
6. Among the institutional works are Segal's(1971) review of civil service pay determination in Ceylon, and Fogel's and Lewin's(1974) discussion of government compensation in the U.S. Smith(1977a,1977b) and Venti(1985) offer econometric treatments of U.S. public/private pay differentials. Similar approaches are employed by Johnson(1971) for Kenya and by Lindauer and Sabot(1983) for Tanzania. An example of a theoretical model based on political considerations is one which employs vote-maximizing behavior on the part of government officials. This approach is described by Reder(1975).
7. For the sake of simplicity, the public sector is considered a homogeneous unit. However, intra-public sector differences in wage administration, especially between government and public enterprises, may warrant a multi-sector framework.
8. This paper, therefore, abstracts from efficiency wage hypotheses according to which labor productivity depends on the real wages paid by firms. See Stiglitz(1974,1981) for applications to developing nations and Yellen(1984) for a general survey.

9. A review of this literature which focuses on the supply of government output rather than on government demand for inputs can be found in Mueller(1979), Chapter 8.

10. The product market analogy is the case of price leadership in oligopoly theory where a dominant firm is portrayed as facing a demand curve equal to the difference between market demand and the sum of the supply schedules of all smaller firms. See, for example, Scherer(1980), Chapter 8.


12. In the U.S., Smith(1977a,1977b) and Venti(1985) find that government wages often fail to match "prevailing wages." Given the difficulties encountered in measuring "prevailing wages" for specific occupational groups, ceteris paribus, some observed differentials may result from information problems. If such problems were purely random the "prevailing wage" model would be expected to hold on average; however, both authors find systematic differentials for specific worker groups suggesting that government pay policies in the U.S. maintain other objectives. Johnson(1971) and Lindauer and Sabot(1983) report similar results for Kenya and Tanzania, respectively. See also Lindauer et al.(1986) for recent estimates of gross public/private earnings differentials in Africa.
13. That is, still assuming the level of government wage expenditure does not change the private sector's derived demand for labor.

14. For an analogous context see Krueger (1974).

15. Anecdotal evidence on this point is abundant. See Lindauer et al. (1986) for a fuller discussion. One of their examples follows:

   In Uganda in 1982, the Public Salaries Review Commission found that [as a result of precipitous real wage declines] the civil servant had either to survive by lowering his standards of ethics, performance and dutifulness or remain upright and perish. He chose to survive.' It has been observed that government employees in Uganda spend only one-third to one-half of normal working hours on government work; the rest of the time is devoted to other jobs ... such as farming or trading."

16. See, for example, Gregory (1986) on Mexico.

17. Wage "fixing" in the private sector may also result from the strength of labor's bargaining position. If wage labor has some monopoly power in the labor market, due to unions or the backing of a pro-labor government, then firms again may be compelled to pay wages above market clearing levels. This may help account for wage determination in enclave sectors, for example, the traditionally high earnings of copper workers in Zambia, relative to most other wage earners of comparable labor skills.

18. A more general case can be specified where private firms pay a wage equal to some positive fraction, $k$, with $0 < k < 1$, such that private wages always exceed the market clearing wage.

19. Recent empirical trends are presented in Lindauer et al. (1986).
Sources


Smith, S. (1977a), Equal Pay in the Public Sector: Fact or Fantasy, Industrial Relations Section, Princeton University, Princeton.


