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**The Quality of Governance:  
“Second-Generation” Civil Service Reform in Africa**

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**Abstract**

This paper argues that the development of human capital in the public sector should be an important ingredient in any proposed set of “second-generation” reforms for Africa. In the post-colonial era the quality of governance has seriously declined, and the stock of human capital in the public sector has been eroded by a flight of human capital from many countries in response to compression of wages. The paper develops a simple theoretical framework to discuss these issues and the continent’s experience with foreign technical assistance in supplementing the low level of domestic human capital.

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## SUMMARY

The empirical literature on growth in Africa identifies four factors that explain a large part of the poor economic performance of the African countries: a lack of openness in product markets, a lack of social capital, high investor risk, and poor public services. It argues that Africa has stagnated because its governments have been weak and inefficient, and often times made up of narrow rent-seeking elites who have undermined markets and considered the public sector to be a vehicle for delivering employment patronage. This role of the public sector reduced returns to investments in Africa as well as increased the already high risk in private investments. The natural response on the part of private agents was to engage in capital flight and develop their "social capital into risk-reduction and risk-bearing mechanisms at the expense of social learning." For the future, it is therefore argued that emphasis has to be placed on openness as well as structural reform to make the government more efficient.

This paper argues that critical in any deep reform of the public sector is the need to put in place incentives for the proper utilization and nurturing of human capital, which the continent has lost in the past three decades through poor wage policies that have prompted migration of talent. It further argues that the growing trend in recent years to use foreign technical assistance to cope with this loss in human capital is not preferable to a policy that seeks to retain local talent. Brain-drain repatriation is likely to be a more efficient policy than technical assistance so long as living in the country of origin is preferable to all. Consequently, what the situation calls for are reforms in the public sector's employment policies that seek to reduce the incentive to migrate.

## I. INTRODUCTION

Collier and Gunning (1997) in a survey of the empirical African growth literature concluded that "there is reasonable agreement between what the growth regressions find to be important and the variables suggested by the other literature". They identify four factors that seem to explain a large part of why Africa, especially Sub-Saharan African has not grown a lack of openness in product markets, extremely low social capital, high investor risk and poor public services. Surprisingly, the lack of formal finance is found to have a minor effect at both the aggregate level and the firm level. Their main argument that Africa stagnated because its governments were weak and inefficient, and oftentimes comprised of narrow rentseeking elites who undermined markets and considered the public sector to be a vehicle for delivering patronage. This role of the public sector reduced returns to investments in Africa as well as increased the already high risk in private investments. The natural response on the part of agents was to engage in capital flight and develop their "social capital into risk-reduction and risk-bearing mechanisms at the expense of social learning." For the future, they argue that openness can not only directly improve conditions, but indirectly help better the state of the other three variables—lack of social capital, high risk and poor public services.

While openness can deliver increased competitiveness in the private sector, greater opportunities for risk diversification, and exposure to international social capital and networks, it is not clear that it will force the leadership to change and the government to become more efficient. And it is the inefficiency of the public sector that lies at the core of their analysis. Other analysts of the Sub-Saharan African (SSA) economies also agree with this assessment of the critical role of inefficiencies in the public sector.<sup>2</sup>

Without a more efficient public sector, there will remain a substantial risk that the misalignment of incentives of the government with those of the international environment will result in crises related to cut-offs of foreign aid, or the possibility that there will be a reversion to the earlier closed economies. Collier and Gunning note in passing that even with openness, "public services may be fairly impervious to improvement: poor transport may keep markets fragmented and unreliable courts may require social networks to remain focused on enforcement." Furthermore, they note that "increased openness may be a temporary phenomenon as the forces of the initial political equilibrium reassert themselves." The reform of government to realign its incentives with the needs of development may therefore be as important as opening up for the initiation and sustenance of growth in Africa.

This paper argues that while openness may be a necessary condition for the generation of growth as argued by Collier and Gunning (1997), a deep reform of the public sector that

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<sup>2</sup>For example, Dia (1994) notes that "in many SSA countries, development efforts are threatened by the ineffectiveness of the civil service." The role of the state and the failure of institutions are at the heart of the analyses of other African writers like Ake (1996) and Dia (1996).

emphasizes incentives for the proper utilization of human capital may be an important sufficient condition.

Much of the writings on developing countries, including those on Africa, emphasize the importance of capital flows, noting that capital flight may have even been a “socially useful preservation” of African wealth during a phase in which its retention within the continent would have irreversibly depleted its value. Thus if good things now begin to happen in Africa, rapid capital accumulation may be possible as repatriation of African capital flight takes place. The other main factor of production human capital is measured solely in terms of years of education. As is widely recognized, the quality of education or the attainment of certain measurable educational standards is not possible with the available measures. The main result of the growth regressions using this imprecise measure of education or human capital is that secondary and higher levels of education are positively correlated with growth while primary education is often not significant and is of the wrong sign (Barro (1997)). Beyond this, the growth literature has very little to say about the use of human capital or the flow of such capital.<sup>3</sup>

This lack of analysis or questioning of the role of human capital in explaining the growth performance of Africa or other low-income developing countries is indeed very surprising, especially as we are now becoming increasingly aware of the importance of public administration and of newly rediscovered concepts such as “social capital” and “civil society.” These concepts should in some sense be related to the development and use of quality human capital domestically. In doing so, perhaps moving beyond the summary measure of human capital, such as years of schooling, to the utilization of talent, which relates to more ordered measures of the distribution of human capital in society, may allow us to answer some of the more interesting questions that we are now asking. For example, is Africa’s ability to retain and productively deploy its managers in key public institutions likely to be important for the development of civil society, and for the development and preservation of the rule of law and contract enforcement? Can the lack of domestic policy-making skills weaken the capacity for indigenously developing policy ideas and the ownership of reforms? Does a low-quality university system that does not retain the best of local talent generate an environment of poor-quality education and a lack of respect for meritocracy, thus vitiating the development of social capital?

Most of us in the economics profession regard physical and financial capital as being critical in the development process of a country. We tend to promote policies without using excessive capital controls that encourage the accumulation of capital and retain it within the boundaries of the domestic economy. As a profession we also mostly abhor “hot” money for being too temperamental and extol the virtues of more permanent forms of capital inflows such as direct investment. Although, there is a striking parallel between human capital and physical capital (and, in fact, in most of neoclassical economics, the two are almost indistinguishable), the policies that we generally preserve for financial and physical capital have not been extended to

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<sup>3</sup>Pritchett (1997) finds no evidence to support the hypothesis that rapid rates of growth of education capital produce greater growth.

human capital. Human capital flight, sudden reversals of technical assistance and knowledge, the lack of any systematic and more permanent transfer of skill analogous to direct private investment, etc., have caused far less concern among policymakers than when such problems have surfaced in the case of physical and financial capital. One argument that has been used to justify this is that labor is less mobile than capital. While this is true in many cases, the extent and suddenness of human capital flight is quite significant as discussed in the later part of this paper. In that case, it argues that just as capital is an asset we wish to preserve domestically (prevent capital flight) and attract more of from overseas, quality human capital should be developed and retained at home. Hence the flight of human capital may be an important variable that policymakers should be sensitive to and ensure that appropriate incentives are set so that it is stemmed. As will be emphasized later, the argument here should not be confused with earlier naive arguments of somehow preventing migration through administrative means or “indiginizing” key positions with locals whatever their expertise. Since arguments in favor of capital controls or self-reliance for investment are strongly resisted by the profession, similar arguments for human capital should be rejected outright also. In this sense, the parallel with physical capital should be maintained, with the focus being on the need to attract the best human capital through price competition rather than through distortive interventions.

## II. HUMAN CAPITAL, THE PUBLIC SECTOR, AND GROWTH

Economic models often regard the role of government as one of defining tax and spending policies in a context in which exhaustive government spending makes no direct contribution to the production process. The standard prescription that emerges from this approach is one of finding appropriately non-distortionary tax policies and setting overall tax and spending levels to achieve aggregate demand objectives. From the public finance perspective, however, the public sector is typically assumed to produce public goods that enhance welfare. This occurs not only through government provision of goods such as parks and museums, for example, but also through the provision of public goods that enhance the productivity of factors in the private sector (such as an improved legal and regulatory framework to reduce transactions costs and promote increased market efficiency.<sup>4</sup>)

We will focus here on an important determinant of the government's contribution to private sector productivity—the level of human capital employed in the public sector. If government produces a crucial public input for the private sector—which we might call ‘governance’—using human capital, it must compete for these resources with the private sector. It raises revenues by means of taxation and purchases labor services from the market on the same terms as the private sector. Because these resources are indirectly productive in the private sector, the efficiency of their allocation between the private and public sectors has important implications for the aggregate productivity of domestic resources.

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<sup>4</sup>An example of the latter approach is Barro (1990), who assumes that government produces a public good which the private sector uses as an input into its production process.

A variety of sources, many in impressionistic form, suggests that in the specific context of developing countries, the allocation of human capital to the public sector may often be inadequate. This has been considered an important cause of administrative bottlenecks in such countries.<sup>5</sup> We will focus on one alleged reason for the emergence of such inefficiency—the value placed by policy makers on the scale of public sector employment.

We draw upon a model of entrepreneurship and growth that was developed by Lucas (1978) and has been extended by Murphy Schleifer and Vishny (1991). In the model, people sort themselves into firms in which high-ability people become entrepreneurs or manager and owners of firms and hire low-ability people to work for them. Following Murphy Schleifer and Vishny, we set up the rate of technological progress and of income growth as being determined by the ability of the ablest person engaged in entrepreneurship. The underlying notion is that entrepreneurs help improve productive techniques which, when imitated, improve overall productivity. The model therefore emphasizes the importance of allocating the ablest people to productive entrepreneurship.

Human capital is assumed to be distributed over the population in the interval  $[1, a]$  with a density function  $v(A)$ . The population and the distribution of talent is considered to remain constant over time and each individual lives for one period. There is one good in the economy which is produced by many firms, each organized by an entrepreneur with ability  $A$ . To allow us to focus on the governance issue, we introduce a governance good that, like technology, affects all firms equally. The profits which are the return to the entrepreneur with ability  $A$  are given by

$$y = sAGf(H) - wH \quad (1)$$

where  $s$  is the common state of technology,  $f$  is standard concave production function that stays constant over time,  $H$  is the human capital employed by this entrepreneur,  $w$  is the workers wage,  $G$  is the governance good that like technology impacts all workers equally, and the price of the good is normalized to 1.  $G$  is considered the net of taxes of a non-distorting nature and hence these can be subsumed in  $G$ . In this formulation, the productivity of the firm is measured by the term  $sAG$ , where  $s$  is the publicly available technology,  $G$  the available governance in society, and  $A$  is the contribution of the entrepreneur.

The profit function (1) suggests that the abler entrepreneurs can earn more than the less able as they have a larger span of control over resources and therefore earn an increasing return to ability. Consequently, the most able are attracted to operating firms. For a fixed firm size, ability allows a more able person to earn a higher profit than the less able. Consequently, the most able people end up owning larger firms. The concavity of the production function  $f$  determines

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<sup>5</sup>See Haque and Sahay (1996) and Lindauer and Nunberg (1994) among others for some evidence and discussion of this issue.

how strongly the returns diminish with scale, and therefore measures the benefit from higher ability.<sup>6</sup>

The first order condition with respect to the human capital  $H$  required, for a firm that is being operated by an entrepreneur of ability  $A$ :

$$sAGf'(H)=w \quad (2)$$

Which can be solved for the size of firm,  $H(A,G)$ , determined by the amount of human capital that person of talent  $A$  demand. Since  $H_1 > 0$ , the more able clearly run bigger firms and since  $H_2 > 0$  the higher the governance input, the larger the firm size that can be run by an entrepreneur of a given ability.

Each person has to decide according to her ability to become a worker or an entrepreneur, where the former earns  $wA$  and the latter runs a firm of size  $H(A)$ .<sup>7</sup> Consequently, a person becomes an entrepreneur if,

$$sAGf(H(A,G)) - wH(A,G) > wA \quad (3)$$

otherwise chooses to become a worker. In the aggregate the demand and supply of workers will determine a cutoff point  $A^*$  above which households become entrepreneurs and below which they become workers.

$$\int_1^{A^*} Av(a)da = \int_{A^*}^a H(A,G)v(A)dA \quad (4)$$

Basically, if there are too many workers and too few entrepreneurs—excess supply of labor—the low wage results in workers leaving to become entrepreneurs. On the other hand, if there is an excess demand for workers, the high wage attracts entrepreneurs away from their firms.

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<sup>6</sup>In the extreme case of constant returns to scale the number of entrepreneurs will not matter. In the case of diminishing returns, considered here, ability to expand is technologically limited.

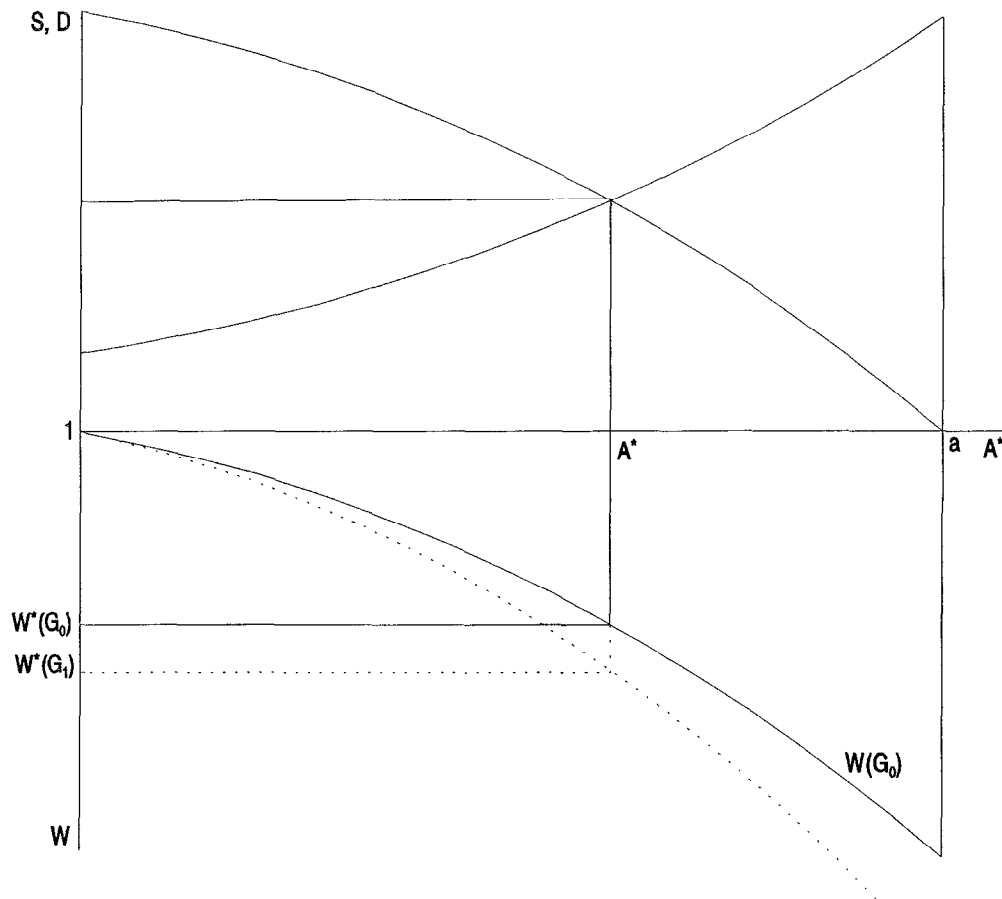
<sup>7</sup>Increasing returns to ability in entrepreneurship implies that a person with double the ability earns double the income as a worker, but more than double the income as an entrepreneur for a fixed firm size.



The equilibrium  $\{w, A^*\}$  that equation (3) and (4) determine can be illustrated graphically as in figure (1). On the horizontal axis, the cutoff point of the talent distribution,  $A^*$  is measured, while the upper vertical axis measures the number of workers of talent  $A$  that are supplied or demanded. The left-hand side of equation (4) is the supply curve of workers that is positively sloped in  $A^*$  while the left hand side of (4) is the demand curve that is negatively sloped in  $A^*$ . As is obvious, equilibrium  $A^*$  is determined by the intersection of the supply and demand curve. From equation (3), we see that  $w$  is positively related to equilibrium  $A^*$ . This is shown in the lower half of figure (1). The labor market equilibrium simultaneously determines the allocation of talent and the wage rate per unit of human capital.

Growth is introduced in this model through the evolution of technology: (we maintain the Murphy Schleifer and Vishny (1991) assumption) that the state of technology today is the technological state last period times the ability of the ablest entrepreneur in the last period:

Figure 1. Labor Market Equilibrium



$$s(t)=s(t-1).(\text{maximum ability of entrepreneur at } t-1) \quad (5)$$

Last period's best technology becomes common knowledge to all in the current period. This assumption introduces growth in a model of virtually static occupational choice. In equilibrium, each period, all agents with ability above  $A^*$  become entrepreneurs while those with ability less than  $A^*$  become workers. The profit function and the incomes of workers are homogeneous in  $s$ ,  $G$  and  $w$ , which means that  $A^*$  is constant over time. Technology, wages, profits and incomes per capita all grow at the constant rate  $(a-1)$ , which is the rate of growth of this economy.

### A. Producing Better Governance

The importance of the governance good,  $G$ , is almost trivially obvious in this or any other growth model that views it as an important intermediate good. Since  $G$  increases private sector productivity, increased provision of this good leads to higher output and income. Growth remains unaffected since it depends only on the highest available entrepreneurial ability. Two countries that differ on the basis of  $G$  will, therefore, have differing levels of incomes and welfare, with the country with the higher level of  $G$  being better off. If ability endowments are the same, then growth will be the same but convergence of incomes will never be achieved.

Perhaps it is in recognition of this the influence of better governance that many industrial countries in recent history have focused on the reform of government. The Thatcher reforms in the UK (see Box 1), and public sector reform in the New Zealand are well known in this regard. More recently, the "Reinventing Government" movement in the US has been blessed by the Clinton administration. All these efforts have been made to enhance the productivity of government. This is done in several ways: through the re-orientation of the role of government to core governance areas, through improvements in systems of work and operations, and through inducing quality human capital into government.

All three areas of reform are very important to the improvement of public sector productivity, and should be a part of the comprehensive reform in low income countries including Africa. However, we focus here on the last of these—human capital in the production of governance good for two reasons. First, a review of the evidence on the utilization of human capital in government in the poor countries issue suggests why this may be a critical first step in the direction of public sector reform.<sup>8</sup> Second, the improvement of systems within government, such as the setting up of performance-based organizations, will also require skills and talent.

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<sup>8</sup> Some of this evidence is presented in section III below.

### **Box 1. Performance-Based Civil Service in the UK**

Margaret Thatcher's Government adopted the following principles for running the British government in 1988:

- Separation of service delivery and regulatory functions into discrete chunks, each one called an Executive Agency.
- Agencies to have control over their budgets, personnel systems and management practices.
- Agency chief executive to be paid adequately to attract talent needed. Performance bonuses of up to 20 percent of their salaries could be paid but they must be forced to reapply for their jobs every three years.
- Agency CEOs to negotiate a three-year performance contract with their department, specifying the results they would achieve and the management freedoms they would be given.
- Setting of annual performance targets for each agency.
- All agencies on trial for their lives every five years.

Results:

- 126 Executive Agencies, which employ almost 75 percent of all civil servants;
- CEOs now have the freedom they need to manage effectively; but both their pay and job security depend on their agency's performance against quantifiable standards.
- If his agency doesn't perform, it may be abolished, privatized or restructured at its five-year review.
- Overall, the British have shrunk their civil service by 15 percent and performance has steadily improved. Operating efficiency has increased by at least 2 percent a year. On average, agencies got by on 4.7 percent less operating money in 1994-95 than they had the year before.

Based on available technology, the government must choose its input of human capital to maximize the governance good in the economy. If we assume government technology requires only workers and no managers and can be expressed in a neoclassical production function,  $G(H)$ , the optimal policy would be to base government employment on the available wage in the private sector. Government attempt to use alternative wage rules such as an absolute egalitarian rule where total earnings  $E < w A^*$  is offered to all workers who take up employment with the public sector. This will result in all workers with  $A < AG = E/w$  working for the government. In this case  $G$  will be less than that which would be obtained under the optimal policy of offering a wage that is competitive with the private sector and one that rewards ability.<sup>9</sup> The “egalitarian” policy will then result in lower incomes and profits for the economy when compared to the alternative of a productive price-competitive public sector.

We can also examine the case of the governance good being produced by a technology that is similar to that of the private sector in that it needs both supervisors and workers to produce output. If government behaves as if it were the private sector, allowing entrepreneurs to develop their own firms that correspond to their ability levels, an optimal level of government and private sector output will obtain. Murphy Schleifer and Vishny (1991) show that the more able entrepreneurs, say from  $[A_i, a]$ , will be drawn to the sector that has the more elastic production function while those from  $[A^*, A_i]$  become entrepreneurs in the sector with the less elastic production, and the least productive individuals become workers. It would be fair to assume that output elasticity is higher in the private sector, implying that the most able entrepreneurs will go to the private sector. It seems that small and effective governments run according to market lines is the most effective and efficient means to improving economic welfare in the country.

Any wage policy that departs from this market solution will result in less than optimal output in the economy. If the government’s wage policy consists of two kinds of wages  $[w^*, w]$ , where  $w$  is the market wage rate given to public sector workers and  $w^*$  is the wage rate given to government supervisors. If  $w^* < \pi^m$  where  $\pi^m$  is the highest wage that would be paid to managers if the government adopted the optimal wage policy described above, it will attract only those types whose alternative source of income is less  $w^*$ . Skills higher than the cut-off point deciding to become either managers in the public sector or entrepreneurs in the private sector. It can easily be shown that this will result in a lower level of  $G$  and hence output of the economy.

**Proposition 1.** *On the basis of existing technology, there exists an optimal government wage policy that maximizes government output  $G$ , as well as private sector output  $Y$ . The compression of the government wage structure beyond this optimal level is associated with welfare losses.*

More generally, Proposition 1 implies that there is an optimal level of governance given budget or financing constraints that can be achieved by a particular level of wage compression.

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<sup>9</sup>This captures in a very simple way an attempt at a government wage structure that is motivated by considerations other than those related to the market.

Simply increasing the size of  $G$ , without taking into account the impact it has on the resources it uses up can be detrimental to social well being. If the government uses up more resources than what is dictated by the optimal configuration of  $G$ , welfare suffers. For the government sector to be efficient, it must be able to attract certain skill levels failing which government output will either be too low or too high or using up more resources than it should. Both these situations lead to loss of social welfare.

### III. PUBLIC SECTORS IN DEVELOPING COUNTRIES: SOME EMPIRICAL FACTS

The simple model presented above illustrates the critical role that the quality of governance plays in determining income and growth in an economy. Unfortunately, there is little data available to test this relationship in a regression. Because the public sector has traditionally been viewed merely as a transfer mechanism, there is little systematic evidence available on input utilization in the government or on the quality of its output. Reliable data on the structure of public sector wages and employment are not available for most developing countries.<sup>10</sup> The studies that do provide information on some limited aspects of public sector management are only meant to provide a snapshot of the public sector at a point in time.<sup>11</sup> It is not possible, therefore, to derive from them panel data of sufficient length to allow a formal empirical investigation.<sup>12</sup> The available evidence on wage, employment and human capital policies in the public sector wages suggests the following stylized facts:

**Public wages have declined in real terms over time:** Evidence from a number of countries suggests that real wage levels for public sector employees have been declining over long periods in many developing countries.<sup>13</sup> Table 1 presents the trend growth in real wage levels in the general government. Our estimates include all the countries for which data were available and for as many years as the data permitted. The trend regressions indicate that, since the mid-1970s, real wage levels in the general government declined in 19 of the 29 countries. In the remaining five countries which registered positive growth rates, the highest was Ghana at four percent per annum. In transition economies, large-scale liberalization of prices accompanied by wage controls

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<sup>10</sup>Snapshots on the basis of sparse and disjointed data series are obtained from some individual efforts which demonstrate the nature of problem. It is surprising that there is no systematic effort to collect more information on this issue which is considered to be at the heart of economic development.

<sup>11</sup> See Lindauer and Nunberg (1994), Chaudhry *et al.* (1994) and Van Ginneken (1991).

<sup>12</sup>The information that is available is itself affected by public sector inefficiencies. For example, increasing public sector inefficiency leads to the problems of ghost workers that makes it difficult accurately to record public sector employment (see Lindauer and Nunberg (1994)).

<sup>13</sup>For example, as far back as 1983, Gould and Amaro-Reyes noted that in Africa and Latin America, salary levels at middle and low level were at times so low that officials could not even have a balanced diet.

Table 1. Selected Developing Countries:  
Trends in Real Wages in General Government  
(Annual percent change)

	Time period	Real wage trend in general government
Argentina	1976-89	-3.1
Armenia	1992-95	-45.0
Belarus	1992-95	-14.0
Bolivia	1985-91	2.3
Bulgaria	1989-92	-17.7
Congo	1980-83	-3.8
Costa Rica	1974-93	1.7
Czechoslovakia	1989-92	-11.7
Estonia	1992-95	6.0
Fiji	1985-93	-1.7
Gabon	1985-91	3.4
Ghana	1986-90	4.4
Hungary	1989-92	-0.8
India	1979-84	3.8
Kenya	1982-92	-2.2
Kyrgyz Republic	1992-95	-20.0
Latvia	1992-95	7.0
Lithuania	1992-95	-10.0
Mauritius	1974-92	1.3
Morocco	1980-89	-1.6
Myanmar	1987-92	-0.5
Panama	1973-91	0.6
Poland	1989-92	-10.3
Romania	1989-92	-8.9
Russia	1992-95	-11.0
Rwanda	1985-89	-2.0
Solomon Islands	1988-91	1.6
Suriname	1984-86	-8.3
Ukraine	1992-95	-20.0
Average*		-9.0

Source: National authorities.

\* Estimated from a fixed-effects pooled regression of the countries listed. The coefficient is significant at the 5 percent level.

led to a decline in real wages in the public sector, particularly during the initial stages. For the sample as a whole, real wages declined by about 9 percent per annum.

**Declines were larger in poorer countries:** The decline in government wage relative to per capita incomes is not uniform across countries. The poorer countries experienced a larger decline during the 1970s. During the 1980s the decline was reversed, but not enough to correct the declining trend over the entire period.

**Public-private wage differential has increased:** Some evidence of trends in the ratio of public to private wage for countries for which data was available is presented in Table 2. Once again we see that this ratio declined for most countries.<sup>14</sup> On average, it shows a decline of about 6 percent per annum. Flanagan (1995) finds that full-time employees in the private sector earn considerably more than their counterparts in the state sector in the Czech Republic.<sup>15</sup>

Table 2. Selected Developing Countries:  
Trends in the Ratio of Government to Private Sector Average Wages  
(Annual percent change)

	Time period	Trend
Bolivia	1985-91	4.0
Costa Rica	1974-93	-0.8
Fiji	1985-93	-27.0
Ghana	1986-90	-8.0
Kenya	1982-92	-3.0
Mauritius	1974-92	-0.4
Panama	1973-91	2.0
Peru	1985-92	-25.0
Poland	1989-92	-0.4
Suriname	1985-92	-1.0
Average*		-6.0

Source: National authorities

\* Estimated from a fixed-effects pooled regression of the countries listed. The coefficient is significant at the 5 percent level.

<sup>14</sup>Through a fairly comprehensive cross-country study of government wages relative to the private sector, Heller and Tait (1984) showed that during the late 1970s and the early 1980s the ratio of public wages to private wages was lower in developing countries than in industrial countries. This evidence is somewhat surprising since one would expect that in developing countries, on average, the quality of human capital would be higher in the government relative to the underdeveloped private sector (Heller and Tait, 1984).

<sup>15</sup>After controlling for schooling and potential experience, survey results show that workers in new private firms earn 18 percent more than those in current or former state enterprises.

**Fiscal stabilization has occurred at the expense of public-sector efficiency:** Some recent studies on stabilization programs suggest that fiscal adjustments often involve a decline in real wages in the public sector. The data show that short-term stabilization programs have a significant negative impact on real wages (Kraay and van Rijckeghem (1995)) while they protect overall wage expenditures of the government (Hewitt and Van Rijckeghem (1995)). It would seem that such programs protect employment at the cost of real wages.

**Public sector wage structure has become more compressed:** Wages at upper levels of public administration have often been reduced by more than those at the at lower levels. Figure 2 illustrates this phenomenon for several countries. With a base year of 1975=100, the figure shows the 1985 wage level at the lowest (solid) and highest (hatched) wage levels in the public sector. Note that with one exception, real wage declines were experienced at both the highest and lowest wage levels in the public sector in this sample.<sup>16</sup> The numbers at the end of each country's bar group present the ratio of the wage indices given in the figure for each country, expressing the relative 1985 real wage index for those at the lowest end of the wage scale as a multiple of the relative 1985 wage index for those at the highest end, converted to an index number. Since 1975 is the base year, a ratio in excess of 100 indicates an increase in wage compression. The countries are ranked in decreasing order of wage compression during the 1975-85 period. Note that wage compression is observed for all the countries in the sample except Morocco and Benin.<sup>17</sup>

**The political imperative of protecting employment:** During this period of compression and decline in real public sector wage levels, the share of the labor force employed in the sector remained relatively constant or may even have increased somewhat. The situation is illustrated in the left-hand portion of Figure 3, which shows the percentage of the population employed in the public sector in a group of developing countries drawn from the previous sample<sup>18</sup> from 1975 through 1985, a period corresponding to that for which we have relative wage data. This steady share of employment has occurred despite the fall in wages in the public sector relative to other sectors. In more recent years, the right-hand portion of Figure 3 suggests that there may have been actual increases in the share of labor employed in the public sector.

**Hierarchical, unified, and non-meritocratic structures:** Perhaps because of the paternalistic nature of the state, the civil services in most poor countries tend to be fairly rigid, often prevent entry and reward seniority rather than performance. Public expenditure management is our only measure of bureaucratic performance and it measures only budgetary allocations, without really concerning itself with the service that each budgetary unit is supposed to provide (Premchand (1993)).

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<sup>16</sup>See van Ginnekin (1991), Lindauer and Nunberg (1994), Chaudhry *et al.* (1994), and Haque and Sahay (1996).

<sup>17</sup>The data show that public sector wages are, in most cases, lower than private sector wages at both grade levels, particularly at the highest grade levels (see Haque and Sahay (1996)).

<sup>18</sup>The number of countries varies across years according to the availability of data.



Figure 2. Real public sector wages and wage compression: 1975-85

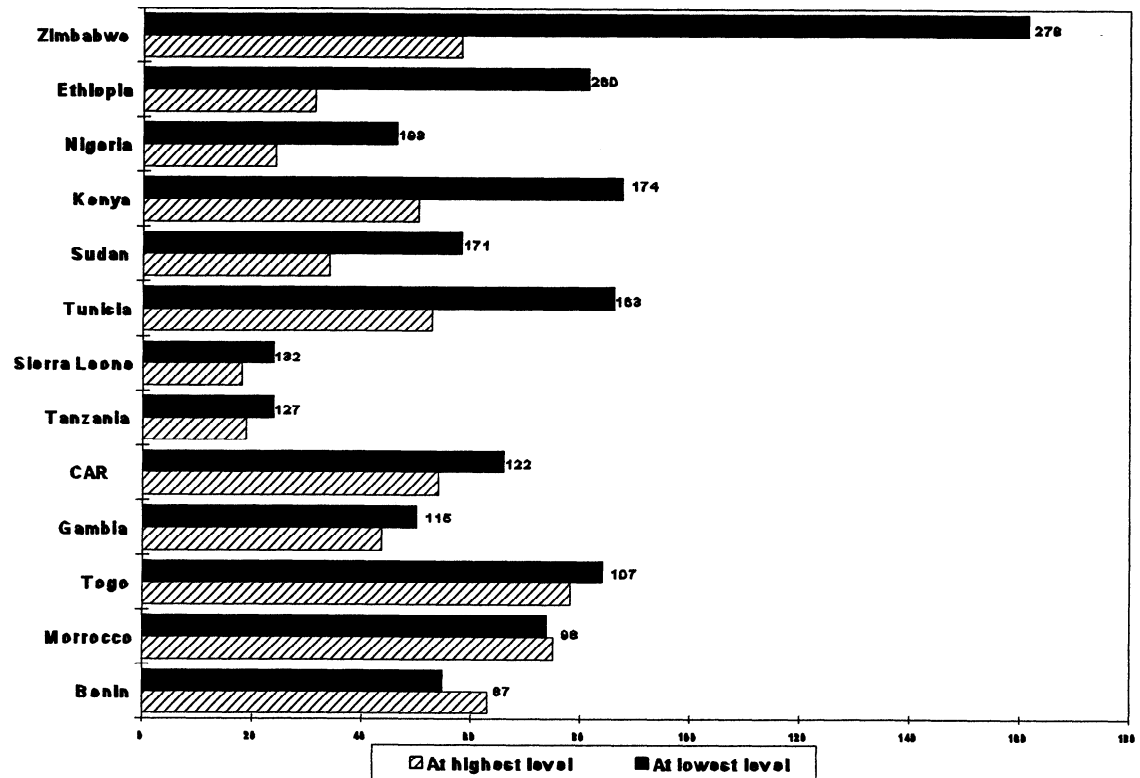
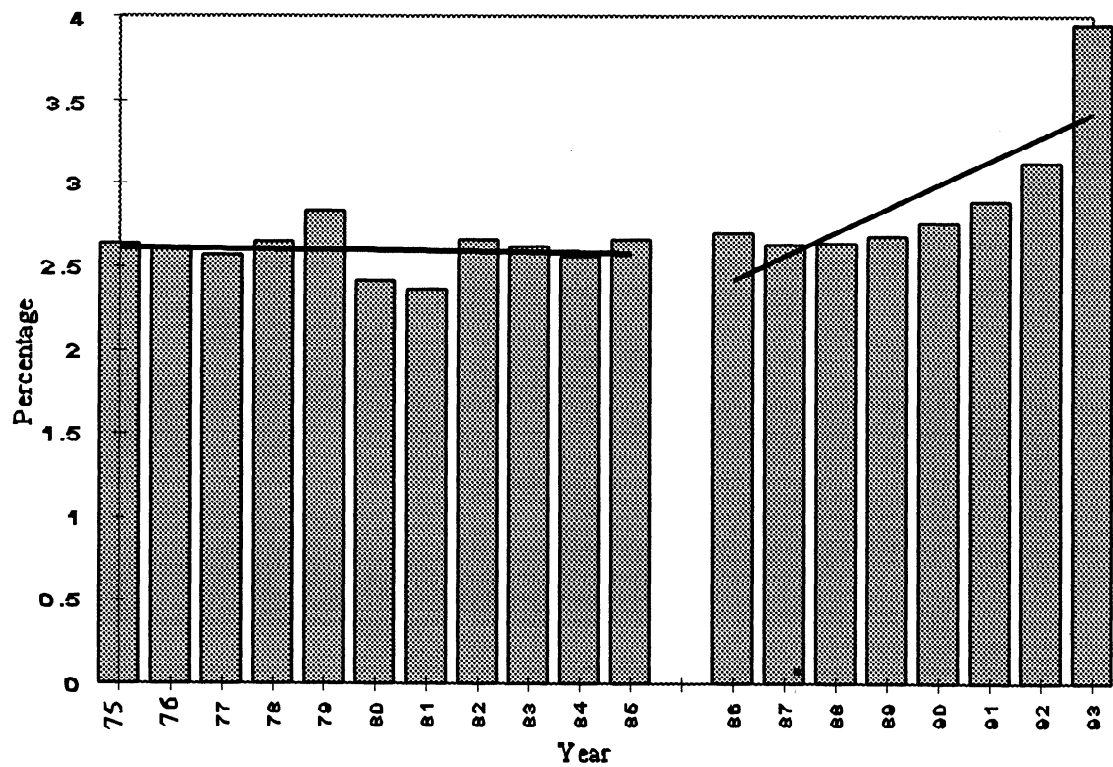


Figure 3. Employment indicators in some developing countries



### **A. First-Generation Civil Service Reform**

In the 1980s, donors recognized the importance of an effective civil service, especially when the civil service was required by them to play a central role in managing and implementing the prescribed structural adjustment programs. In the period 1981-91, there was a total of 90 programs that had civil service reform as an important component.<sup>19</sup> Because the intensity and magnitude of the problem were greatest in Africa, this region had most (57) World Bank-supported operations. However, civil service reform effort to date, has concentrated almost entirely on cost-cutting measures as part of attempts to deal with fiscal problems. This has involved primarily retrenchment to reduce the wage bill, especially through the elimination of ghost and non-essential positions. To a lesser extent, they have also involved privatization of services better handled by the private sector, reform of policy on pay and employment to increase incentives to greater efficiency and productivity in the civil services and, through training and technical advice, building institutional capacity and physical implementation of projects/reform programs. The conclusion in the Bank's own analyses is that "overall, the results are, at best, mixed," (Dia (1993)) or "this record suggests that reforms to date have been insufficiently ambitious in scope to bring about the degree of change that is needed. Meaningful change is going to require more forceful reforms," (Nunberg and Nellis (1995)).<sup>20</sup> While retrenchment has taken place to varying degrees in many of the countries, both fiscal and efficiency impacts, especially at the qualitative level, were substantially less than expected (Table 3 summarizes some of the available information).

In a sample of 29 SSA countries, 18 recorded a reduction in wage bills as a percent of expenditures (e.g. Guinea-Bissau and Ghana) (see table 3). However, as Lienert and Modi (1997) note, the wage bill adjustment in the SSA countries was not as significant as that which middle income countries have undertaken in the context of their adjustment programs.<sup>21</sup>

- The impact of civil service reform on wages is again mixed. The assessment seems to be that on balance real wages have fallen in the CFA countries largely because there has been no compensation for devaluation. In non-CFA countries there has been largely an increase in real wages since 1990, but the measure is dominated by a huge increase in Uganda, and real wage increases in Kenya and Ghana, while other countries have actually seen a decline.

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<sup>19</sup>See Nunberg and Nellis (1995) and Dia (1993) for reviews of these programs. Lienert and Modi (1997) also provide a more recent survey of the civil service reform efforts.

<sup>20</sup>Dia (1993).

<sup>21</sup>Lienert and Modi (1997) also show that much of the reduction in the wage bill occurred owing to the CFA franc devaluation.

Table 3. Indicators of Civil Service Adjustment in Low-Income Countries

Adjustment from one year precedent a SAF/ESAF program to 1996					
Indicator	Number of Countries	Sizeable decline	Moderate decline	Moderate increase	Sizeable increase
Wage bill as percent of GDP	29	10	8	10	1
Wage bill as a share of current expenditures	29	5	12	5	5
Wage bill as a percent of operations and maintenance expenditures	29	8	9	6	6
Wage bill as a percent of revenue (excluding grants)	29	11	7	4	7
Wage bill per employee relative to GDP per capita	17	3	3	3	8
Real wages	14	7	1	2	4
Employment	22	8	4	5	5
Employment per population	22	12	9	1	0

Source: Lienert and Modi

Note: The definitions of "sizeable" and "moderate" are necessarily arbitrary. For the various indicators, these have been defined as follows:

For wage bill/GDP: "sizeable" = reduction (increase) of more than 2 percentage points of GDP; "moderate" = reduction (increase) of 0-2 percentage points of GDP;

For wage bill/current expenditures, wage bill/operations and maintenance, wage bill/revenue:

"sizeable" = reduction (increase) of more than 10 percentage points; "moderate" = reduction (increase) of 0-10 percentage points;

For wage bill per employee relative to GDP per capital and employment per population: "sizeable" = reduction (increase) of more than 20 percent in the ratio; "moderate" = reduction (increase) of 0-20 percent;

For real wages and for employment: "sizeable" = reduction (increase) of more than 10 percent in the index; "moderate" = reduction (increase) of 0-10 percent.

- On decompression, there is very little information. However, observers conclude that in countries with the sharpest decline in real wages, further compression occurred, while in some countries the monetization of perks allowed for some decompression. However, on balance, substantial progress on decompression has not yet been made.

Uganda, the star of the adjusters in recent years, appears to have made the deepest changes in the civil service, including the most decompression in the wage structure.<sup>22</sup>

- In comparing wages in the public sector to the private sector, it appears from the anecdotal and scarce existing data that wages at the lower end of the salary scale are higher in the government, especially when benefits, required effort and time, and security of tenure are included. However, at the upper end it seems that despite regional variation, a gap still persists and may even widen with required fiscal adjustment.
- Employment declines have been accelerating in 1990s. Much of the decline has come through elimination of “ghost” positions. More recently, donor-financed retrenchment packages—voluntary retirements with generous severance—have also been initiated. Given the rapid increase in population, the percent of population employed by the government has declined markedly. However, not only are these schemes not considered to be very effective employment-reduction mechanisms, there is a concern that they may have given an incentive to the more productive to leave the government (Nunberg and Nellis (1995)).
- While many countries have considered strategies for a more limited role of the government through elimination of functions and privatization, only a few have actually reduced the number of ministries significantly.

The conclusion of a recent survey of the most recent decade of civil service reform in SSA is that the *first-generation* reform of the *quantitative adjustments* has been completed to the detriment of the *quality* of the civil service.<sup>23</sup> All the reviews of the almost two decades of reform suggest that the preoccupation of civil service reform has really been the containment of fiscal pressures and that deeper management issues of ensuring a more responsive public administration based on quality performance clearly remain. What is most interesting is that given the concentration of the reform on the broad expenditure-cutting macro requirement, there was not even a systematic effort made to collect information on key variables such as wage structure or quality of public sector management, let alone issues such as performance of government. However, these are the issues that the *second-generation* reforms will need to examine. In so doing, they will require a search for appropriate management skills.

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<sup>22</sup>Compensation policies may be an important determinant of performance: Korea in Heller and Tait's study is clearly an exception in that the relative wage in the government sector was not only higher compared to other developing countries but also in comparison with the OECD countries; Singapore has used the principle of using private sector wage rates to compensate public servants for a long time (See Lee (1959)). An important determinant in the state-centered development approach followed by the East Asian countries may have been the government's ability to attract and retain high-quality staff.

<sup>23</sup>See Lienert and Modi (1997).

#### IV. THE CONSEQUENCES OF SKILL MIGRATION

While public sectors have been oriented towards wage compression, and economies have not been growing at a rapid pace, the optimal response of those that had skills, and were able to migrate, was to leave the country. We have a fair amount of anecdotal evidence on the subject of brain drain that suggests that there may be a talent pool that Africa can draw upon, should the second generation reform be put in place (see Tables 4 and 5).

Table 4. Estimates of Brain Drain from Sub-Saharan Africa

Period	Total emigration of highly skilled migrants from Africa	Average per year
1960-75	27,000	1,800
1975-84	40,000	4,400
1974-87	70,000	23,000
UNCTAD (1985)		
1986-90	50,000-60,000 middle and high level managers emigrated from the continent.	
1960-87	100,000 trained and qualified Africans abroad. 30 percent of its highly skilled manpower	
World Bank (1990)		
1960's	More than half of the Africans who went overseas to study physics and chemistry in the 1960s never went back home. ECA	

Brain drain may be defined as the international transfer of resources in the form of human capital that is not recorded in the BOP.<sup>24</sup> Whereas measures of migration do not in any way distinguish between individuals, the concept of brain drain relates to the loss of skills or human capital to society or to the country from which migration takes place. It is meaningful only in an environment of scarce skills and relates only to those professional skills that require considerable investment and, therefore not easy to replace. Typically, the term is used to describe the loss of professional and technical skills such as scientists, academics, doctors, engineers and others with university training.

<sup>24</sup>The analogy with capital flight is made in Haque and Kim (1995). Perhaps because of its ease of measurement, the flight of financial capital has received more attention, though in many countries anecdotal evidence suggests that human capital may also be a major impediment to progress.

Table 5. Estimates of Brain Drain from Selected Countries in Sub-Saharan Africa

Country	Evidence
Ghana	60 percent of Ghanaian doctors trained locally in the early 80's were working abroad—creating critical manpower shortages in the country's health service. Human Development Report (1992)
Nigeria	Nigeria experienced migration of highly skilled manpower. Particularly hard hit medicine, universities, and airlines. 21,000 Nigerian doctors overseas. World Bank (1990) Davies (1994) Ricca (1989)
Sudan	In 1978 alone, 17 percent of Sudanese doctors and dentists, 20 percent of university lecturers, 30 percent of engineers and 45 percent of surveyors went abroad. By 1985 2/3 of Sudan's professionals and technical workers had left the country. ILO (1985)
Zimbabwe	Produces 60 doctors a year—has lost almost 90 percent of these doctors to foreign countries Davies (1994)
Zambia	Ministry of health has a shortage of doctors estimated at 549 doctors Chiposa (1988)

Emigration of professional skills occurs for three broad reasons. First among these is the incentive of a higher rate of return, often at a lower risk, to human capital in the host country. The host countries are often able to offer market-determined salaries at lower taxes, unlike the countries of origin where public sector dominates the professions and has an ethos of non-competitive wages. Furthermore, the host countries have a stable macroeconomic and socio-political environment that provides security as well as substantial creature comforts, both of which often are in question in the home country. Second, for professional survival and growth, it might be important to be in the professional centers that are mainly in the advanced industrial countries. Without participation in such centers, the risk of professional marginalization and obsolescence is great. Third, and related to the second is that poor countries, because of resource shortages or mismanagements, are frequently unable to provide complementary inputs for the practice of the concerned profession. For example, research scientists in universities may not have laboratory facilities, doctors may not have hospital equipment, etc. (See Danso (1995) and Davies (1994)).

We generalize the model developed in section II for a two country case to see how differing returns that are at the core of all three reasons cited above will reallocate human capital and result in sustained effects. To focus on the governance aspect of the problem, we assume that both countries have the same endowment of talent as well as access to similar technologies. The only difference stems from the developing country producing a lower level of  $G$  produced than the industrial country i.e.,  $G_p < G_i$ , where  $G_p$  is the level of governance

production in the poor country while  $G_i$  is the corresponding level in the industrial country. As we have seen, this difference in  $G$  will mean higher incomes in the industrial country.

Given that profits and wages in the richer country are strictly higher than those in the poorer country, to prevent an uninteresting corner solution, where everybody migrates, we assume a constant moving cost  $c$ , and an assimilation cost  $q/A$  that declines with ability.<sup>25</sup> The person will migrate from the poor country only if she can, taking the costs of migration into account, earn more in the richer country:

$$d_1 w_R + d_2 i_R < d_1 w_U + d_2 i_U - c - q/A \quad (6)$$

where  $d_1$  is 1 if the person is a worker; 0 otherwise;  $d_2$  is 1 if the person is an entrepreneur; 0 otherwise;  $w_R$  and  $w_U$  are wage rates in the poor and the richer country respectively; and  $i_R$  and  $i_U$  are profits in the poor and the richer country respectively.

Without going into further technical detail (for which the reader is referred to Haque and Kim (1995)), the following results emerge as graphed in Figure 4. Here we can summarize the migration decision by examining the earnings for each level of ability across the two countries. The left hand side of the inequality 6 is the wage/profit profile in the poor country. The right hand side is the wage/profit profile for the richer country with the cost of migration excluded. Below the point  $A^M$ , the wage/profit profile of the poor country lies below the cost-adjusted opportunities in the richer country; no one below this ability level will migrate. Above  $A^M$ , the opportunities in the richer country are better, even when adjusted for costs of migrations; all those above this ability level will migrate.

**Proposition 2.** *In a two-country world, where both countries are identical except in the level of production of  $G$ , there exists a cut-off point  $A^M$  in the ability distribution of the country with the lower level of  $G$ , such that all agents from this country whose ability levels are higher than  $A^M$  migrate to the country with higher  $G$ . Agents with ability less than  $A^M$  remain.*

Recall that in general skill types belonging to the segment  $[m^*, a]$  are entrepreneurs in the private sector, those in the region  $[m^*, A^*]$  are managers in the public sector while those in the category  $[A^*, I]$  are workers. Consider the following situations. First, if wage compression is high in Ruralia, it is likely that the migration cut-off point  $A^M$  is above  $m^*$ . In this case, entrepreneurs from the private sector will migrate, managers from the public sector

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<sup>25</sup>For a fuller discussion of the issue of brain drain or the human capital flight problem in the context of an intertemporal optimizing model, see Haque and Kim (1995). In that paper they show that the loss of talent from a developing country can lead to a permanently lower income level as well as a growth rate in that country.

will not. Consequently, the market wage rate will fall along with private sector output, the public sector wage compression will improve and the size of government will expand compensating part of the private sector output loss through the resulting efficiency gains. Second consider  $A^M < m^*$ , both private sector entrepreneurs and public sector managers migrate, leading to a fall in wages and a greater wage decompression although, as before, output and income levels fall and this time around so does the amount of the governance good produced.

The important point to note is that there is an output and income loss in both cases. Moreover, in both cases, the result of this migration is that the highest skill level in Ruralia is now  $A_M < a$ . Since growth is dependent on the highest ability level in the country, it would be reduced as a result of migration. Growth now is  $(a_M - 1)$  which is less than  $(a - 1)$ , the rate that prevails in The richer country and that prevailed before migration. Output and per capita income too are lower. The loss of skills is a loss to the poorer country in terms of permanent reduction in incomes, as well as in the growth of output of the economy.

**Proposition 3.** *Migration of skills can result in permanently lower output, profits and income levels in the poor country. Additionally growth may also be slowed down permanently relative to the richer country.*

Brain drain, or human capital flight, has been dismissed as the manifestation of mere nationalism and indeed some nationalistic leaders have even used the brain drain rhetoric to argue for control on migration or demand payments for the migration.<sup>26</sup> The former group argues that the brain drain reflects the need in international markets for specialized human capital: human capital tends to move to regions and occupations where its productivity is high. Nationalists regard a minimum level of professional skills as required for the functioning of the nation state and hold that these skills are the property of the nation state. The debate is then often obscured by into the age-old question of “should governments curb individual freedom of movement?”

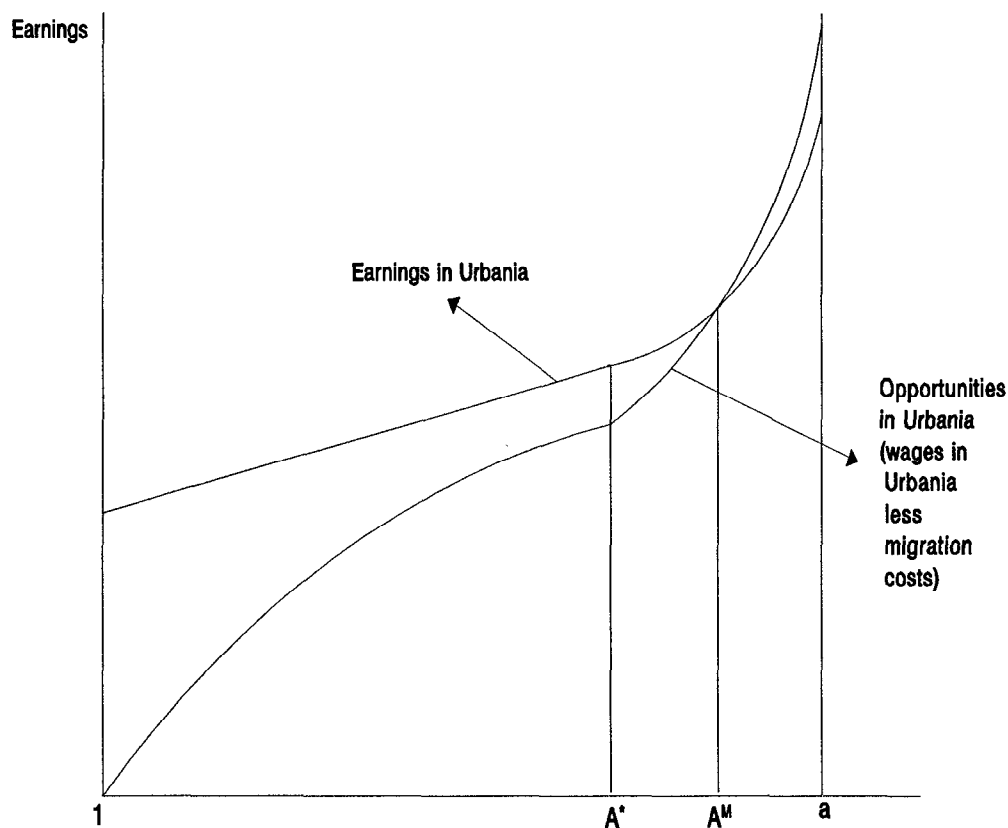
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<sup>26</sup>See Haque and Kim (1995) and Danso (1995) for a fuller discussion of some of aspects of this literature.



As a result, the profession and development agencies have been somewhat ambivalent on this subject. At an aggregate level, human capital has been shown to be theoretically and empirically the more important variables for determining economic growth, with upper levels of education being strongly correlated with growth. Barro (1997) shows that upper levels of male education are strongly correlated with growth, with an extra year adding 1.2 percent to growth, while primary education is often significant and of the wrong sign. This is with the education variable being merely years of school attendance, without taking into consideration quality, certification and professional or technical attainment. Perhaps it is this inability to measure the scarce professional skills that is the concern of the subject of 'brain drain', that the subject has not received adequate attention. Despite numerous consultant and technical assistance reports for capacity building and civil service reform citing the lack of scarce skills

Figure 4. Migration of talent



as an important constraint to development, to date no systematic attempts at developing an assessment of needed skills in the poor countries has been undertaken.<sup>27</sup>

The scant anecdotal evidence that is available is summarized in Tables 4 and 5. It seems to suggest that the problem may not be as trivial as thought to be. Given the relatively short supply of skills in these countries, even non-spectacular numbers appear to have consequences for institutional capacity.

The causes of brain drain and the measures required to stem it are often confused primarily because both proponents and opponents become preoccupied with the curbs on migration. The analogy with capital is perhaps appropriate here. Just as capital controls are considered as undesirable for the prevention of capital flight, it should be taken as given that curbs on migration, no matter how cleverly designed, are an inappropriate response. The prescriptions for retaining domestic human capital are also similar to those normally suggested for attracting and retaining foreign investment: policies that foster market determined domestic returns to factors of production as well as friendly and stable socio-political environments.

The design of an appropriate policy response must recognize the need for the retention of the professional human capital must first be fully established. It is immediately obvious to those involved in technical assistance and training, that for the maintenance of systems for supervision and regulation, provision of social development (including health and education), development and maintenance of infrastructure and governance in general, key skills such as academic, accounting, engineering, managerial, and medical are required at various levels of quality. At a more general level, the continuous loss of the educated will retard the modernization process as well as the development of domestic policy formulation. Brain drain can also reinforce the limited ability to generate needed skills in poorer countries. As the Human Development Report (1992) notes, "emigration also reduces Africa's capacity to train a new generation of professionals."<sup>28</sup>

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<sup>27</sup>Considerable sums are being spent to collect data on corruption, political and institutional arrangements, living standards etc. but hardly any on the assessment of whether universities have teachers of adequate quality. Such assessment may be important if domestic institution-building is a concern given that ghost workers and unqualified appointments in professional positions can create the impression of adequate staffing.

<sup>28</sup>Surprisingly, little has been done to evaluate and understand the problem. The International Organization for Migration has had since 1983 a program for "Return and Reintegration of Qualified African Nationals." Since the beginning of the program about 1200 nationals have been assisted in returning to 6 targeted countries. The IOM is targeting another 1000 by the end of 1998 (Davies (1994)).

## V. CAN TECHNICAL ASSISTANCE REPLACE LOST SKILLS?

A standard approach to dealing with the issue of loss, or lack of, scarce skills is the provision of technical assistance. International agencies and bilateral donors such as United States Agency for International Development use this approach extensively. Skills that are scarce in a developing economy provided by short-term, expatriate advisers, typically, at compensation levels higher those prevailing in international markets.<sup>29</sup> This is to compensate for undertaking the hardship of moving from metropolitan centers. The high cost of the technical assistance is justified since it is expected that institutional development will be encouraged as the human capital input of technical assistance can galvanize a modern system in a short span of time. Once the system has been set in motion, the local human capital can maintain it at the low salary structure prevalent domestically.

There is no theoretical study of this model of technical assistance even though the amount of money allocated to such assistance is not trivial. To place things in perspective, Figure 5 presents data of technical assistance flows as a percentage of some key economic variables.<sup>30</sup> In sub-Saharan Africa, it has averaged annually about 35 percent of total aid and about 32 percent of the total exports for the period 1991-95 (see figure 5). Even for Asia where aid and technical assistance have been operating for a long time, it constitutes a substantial part of total aid.

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<sup>29</sup>Typically, technical assistance is made available in areas of public sector responsibility such as institutional weaknesses. In such areas, the public sector rigidly maintains an uncompetitive wage structure (see Haque and Sahay (1995) and Haque and Kim (1995)). Frequently, policy intervention of donors, especially for short term stabilization, results in a reduction of public sector wages (See Kraay and Van Rijckeghem (1995)).

<sup>30</sup>According to the *World Debt Tables* of the World Bank, "grants" are defined as legally binding commitments that obligate a specific value of funds available for disbursement for which there is no repayment requirements. "Technical cooperation grants" include free-standing technical cooperation grants which are intended to finance the transfer of technical and managerial skills or of technology for the purpose of building up general national capacity without reference to any specific investment projects; and investment-related technical cooperation grants, which are provided to strengthen the capacity to execute specific investment projects.

Figure 5: Technical Assistance Flows

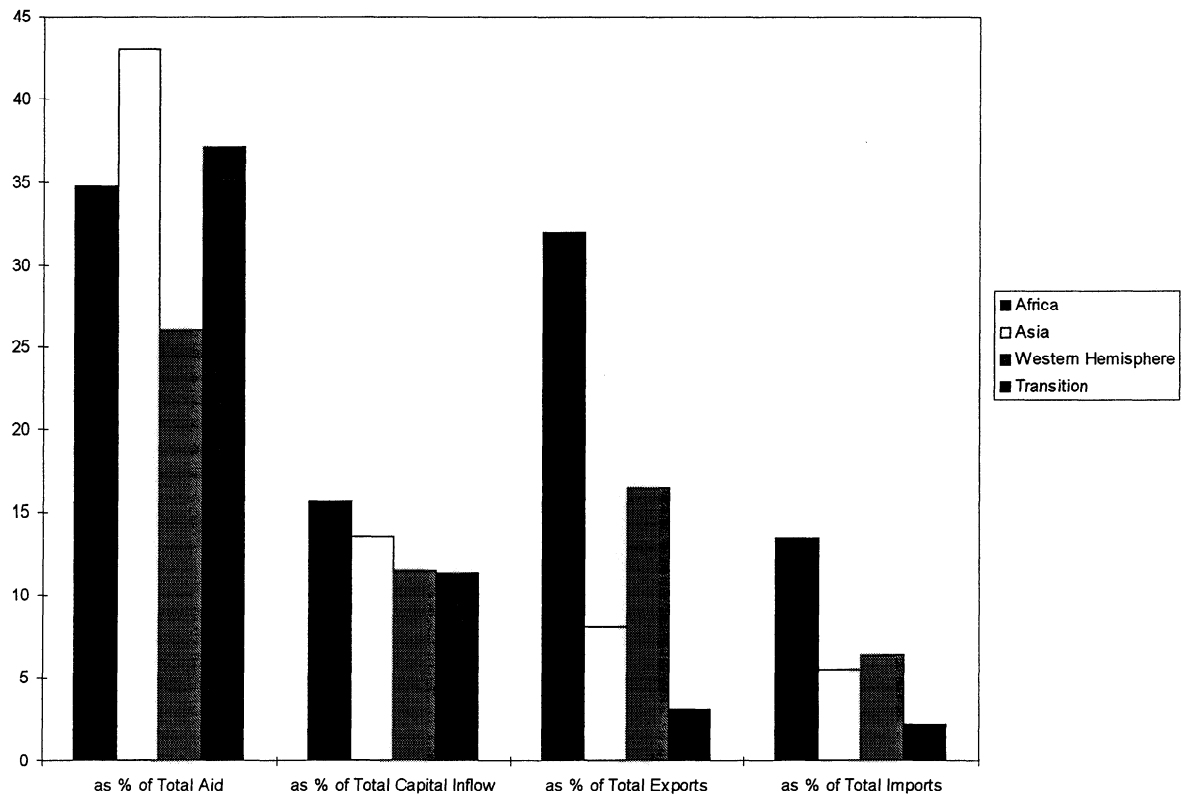


Table 6. Recommended Highest Salary Payable to Nationals as  
Percent of Entry Level World Bank Salary (mid point of grade WB22)

Country	Year	Percent
<b>Low Income Countries</b>		
Burkina Faso	1995	35
Burundi	1996	30
Central African Republic	1990	75
Chad	1996	52
Ethiopia	1996	29
Ghana	1996	37
Haiti	1995	56
India	1996	60
Kenya	1995	61
Madagascar	1995	16
Malawi	1996	48
Niger	1995	47
Pakistan	1996	74
Rwanda	1995	38
Zambia	1996	52
Zimbabwe	1996	48
<b>Countries in Transition</b>		
Armenia	1996	17
Belarus	1996	19
Bosnia	1995	29
Bulgaria	1996	21
Czech Republic	1996	47
Estonia	1996	29
Hungary	1996	29
Kyrgyz Republic	1995	14
Latvia	1996	40
Lithuania	1996	24
Macedonia	1995	42
Moldova	1995	17
Poland	1996	34
Romania	1995	26
Russia	1996	72
Ukraine	1996	32
Uzbekistan	1996	19
<b>Other Countries</b>		
Bolivia	1996	99
Brazil	1996	158
Ecuador	1996	11
Honduras	1995	56
Indonesia	1995	96
Israel	1995	52
Jamaica	1996	81
Mexico	1995	139
Morocco	1996	97
Nigeria	1995	135
Peru	1996	135
Philippines	1995	80
Saudi Arabia	1995	124
South Africa	1996	80
Turkey	1996	123
Venezuela	1996	68

Most countries that utilize technical assistance experience a substantial amount of brain drain. The anomaly of talent outflow from Africa and the inflow of technical assistance advisors to replace the talent has also been noted by analysts. Danso (1995) notes that “ironically there are 100,000 expatriates at work in Africa. Technical assistance in Sub-Saharan Africa increased by 50 percent between 1984 and 1987 and current estimates put the total cost at \$ 4 billion annually,” a number confirmed by the World Bank.

For equity and other considerations, the technical assistance model prevents the migrants from a country to return as part of technical assistance.<sup>31</sup> Any person who has been a part of the brain drain can only return home at the low domestic salary and not at the technical assistance level of emoluments. The UN has actually mandated a salary structure in their offices that are situated in developing countries. The highest salary attainable by a resident in this salary structure is presented in Table 6 as a percentage of the midpoint of the entry level salary for an economist at the World Bank headquarters. Bear in mind that the UN local office jobs in many of these countries are among the more coveted. The structure of the professional policymaking/social science labor market ins as follows: the lowest paid jobs are in the public sector; locally the UN jobs are preferred; and should the person be willing to move, headquarters jobs are desirable. It is not surprising then that the public sector lacks skills. What is surprising is that the question of the costs and benefits of the alternative channels of brain drain repatriation and technical assistance for institutional development in developing countries, which should be of obvious interest, are seldom studied.

We use the set up in the previous section to first address the question whether it is cheaper for a government to retain human capital at home or to import it from outside. Consider any skill type  $A$ . Let  $w_U(A)$  be the income levels for that type available in the higher income country. In order to prevent skill type  $A$  from migrating to the richer country compensation of at least  $w_U(A) - c - q/A$  has to be provided in the poor country. On the other hand for a person of the same skill type to move from The richer country and work in Ruralia, even temporarily so that assimilation costs are not considered is  $w_U(A) + c$ . Since,  $w_U(A) + c > w_U(A) - c - q/A$ , it follows that it is cheaper to retain a skill type than import it.

**Proposition 4.** *If migration is costly, then it is cheaper to retain any skill type than import it from a higher income country.*

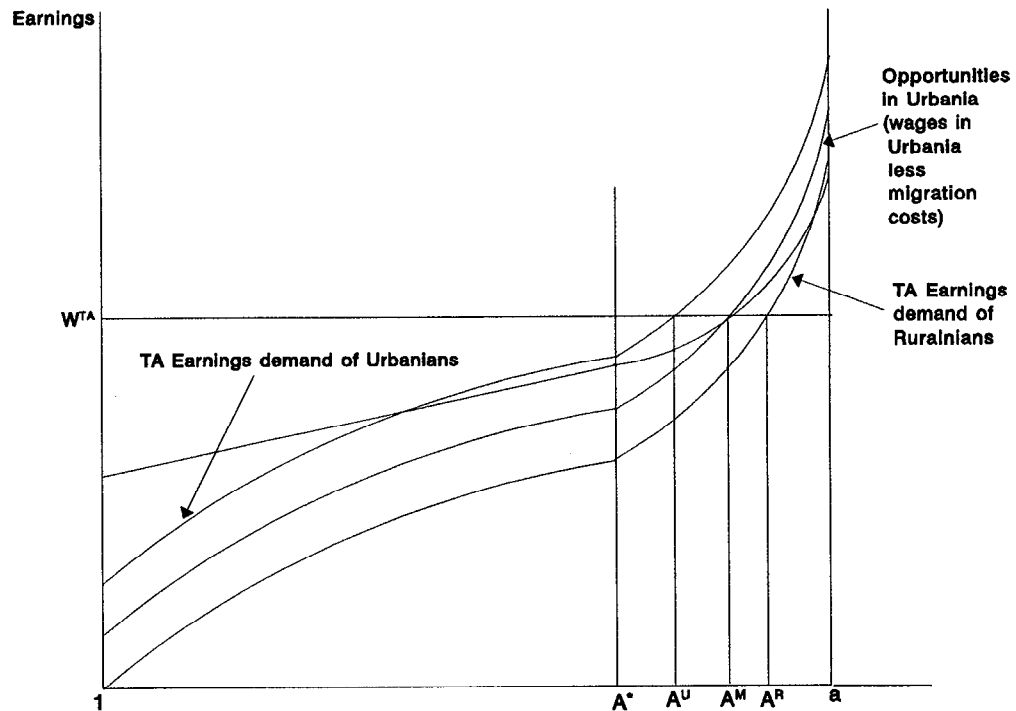
Suppose, as is usually the case, that skilled workers have already migrated. In this case, the comparison needs to be made between attracting an expatriate and a resident of the higher income country. To consider this aspect of technical assistance, we use the approach of Haque and Khan (1997) and assume that there is some discount factor  $k < 1$ , such that the migrant from the poor country, if paid  $kw$ , would be indifferent to working in rich country for wage  $w$

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<sup>31</sup>The TA approach, therefore always places foreign experts in a country. By design, therefore, these experts have to spend the initial period of their stay in a country settling in and learning about the country.

or returning home. Analogously we assume that there is a factor  $m > 1$  such that a resident of the rich country if paid  $mw$ , would be indifferent to working in either of the two countries.<sup>32</sup> Now for a given wage  $w^{TA}$ , figure 6 shows that a higher skill level will obtain if poor country workers are encouraged to return than if the technical assistance program relies only on rich country workers. If the technical assistance program relies only on skills from the rich country, the highest skill level that returns will be  $A^*$ , while if migrants from poor countries are also

Figure 6. Technical assistance vs. Return of skilled migrants



included  $A^R > A^*$  will also be induced to participate. The wedge  $(m-k)$  which arises from different preferences of the concerned individuals for living in Ruralia results in these differing levels of talent supply<sup>33</sup>.

<sup>32</sup>The value of  $m$ , can be justified on grounds of hardship and moving to a new environment. It is empirically verifiable given the relatively generous expatriate packages that are given to those participating in the programs.

<sup>33</sup>The result is fairly robust across different wage/ability profiles. See Haque and Khan (1997) for a further discussion.

**Proposition 5.** *For the same compensation, technical assistance programs will attract higher skilled migrants than residents of a higher income country.*

Surprisingly, current technical assistance arrangements prohibit the inclusion of Ruralian citizens. It is widely believed, even by the UN, that the difference of  $m$  and  $k$  ( $m - k$ ), is very large (often a number approaching double digits in percentage terms). Given the human capital flight accumulations from poor countries and the limited skill agglomeration in them, this differential is clearly unrealistic.

Technical assistance is generally considered to be successful in solving short-term physical implementation and technical problems. "The resulting over-reliance on substitute technical assistance (long-term expatriate advisors) was rather ineffective in building long-lasting and self-sustaining institutional capacity."<sup>34</sup> Dia (1995) and Ake (1996) appropriately point to the major cause of this failure: that such civil service reform programs do not take into account the macro institutional/governance environment and its impact on civil service efficiency. The additional point that this paper makes is that such efforts are quite divorced from the need to develop the necessary talent and leadership in the civil service reform program.

Technical assistance cannot be a substitute for the approach being proposed here—a comprehensive reform of the civil service that fully utilizes domestic talent. A piecemeal approach to reform based on technical assistance can, in certain cases, lead to unbalanced development and less than durable solutions. For example, the "enclave" approach has been used for quick results.<sup>35</sup> These take the form of donor-financed projects, management contracts with expatriate experts (e.g. DGTEX in Cote d'Ivoire, French management of Air Afrique), or the separation and sometimes control of certain key government economic/financial functions by bilateral donors in exchange for their assistance (e.g. customs). Enclave entities are basically donor-driven, donor-dependent and unsustainable and often not in keeping with the drive for improved governance and better public expenditure management (Premchand (1996)). They often result in dyarchical systems of accounting and governance that may not lend themselves well to control and management.<sup>36</sup>

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<sup>34</sup>Dia (1995).

<sup>35</sup>Revenue generation is often considered an "enclave" activity. The generation of additional revenues without first addressing the weaknesses in expenditures, could easily lead to a further waste of resources.

<sup>36</sup>Nunberg and Nellis (1995) note that interim solutions to pay and employment problems through specialized incentive schemes for topping up executive-level salaries for key government posts, or, more broadly, by widely supplementing civil service salaries through donor-financed activities are not enduring answers to the fundamental problems of civil service incentives; "indeed, they ultimately undermine the likelihood of devising a durable solution."



## VI. CONCLUSION: DOMESTIC TALENT AS AN AGENCY OF RESTRAINT

The literature on reform and growth emphasizes concepts of downsizing and re-orienting the public sector as well as community participation and the development of civil society.<sup>37</sup> The general view is that development of rules and institutions is enough for achieving the necessary governance and civil society objectives required for growth. The agents who will make this happen are often not taken into account. This paper argues that the allocation of talent especially its use in the public sector is likely to be important to the successful implementation of development plans. How the incentives are structured for the technocrats, the managers, and the professionals will determine the talent that offers itself to run key institutions and organizations, and could determine the efficiency of policy implementation and design. One explanation for the weak performance of the public sector in Africa may be the lack of attention to African talent in the design of reform. While many reforms were being planned and implemented badly, African talent, not being able to find a place at home, was migrating abroad. Many of the expatriate thinkers on reform were unable to see the implications of this, since in more developed economies skills are abundant. In Africa, the skill shortage has been significant, prompting donors to attempt to fill the ever-widening gaps through out-migration of skills through expatriate experts financed by technical assistance.

Civil service reforms have primarily been concerned with cost-cutting and containment. The issue of productivity and the need for appropriate human capital for it have largely been secondary. The paucity of human capital has been recognized, but only to talk about a slower pace of modernization and an increased reliance on external technical assistance. The migration of skills and the possibility of correcting the prices such that domestic skills resident overseas may return is seldom considered seriously. However, it is asserted that the lack of domestic skills may not make it possible to operate a level of efficiency that is obtained in the advanced industrial countries. For example, the New Public Management approach which relies on autonomous performance-based agencies for the management of the public sector is considered to be inappropriate primarily because of the shortage of technical skills (see Box 2).

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<sup>37</sup>For more recent discussions of the importance of rules in the development process see Douglas C North (1993), Dhonte and Kapur (1996).

### **Box 2. The Pakistan Banking Experiment**

The Nawaz Sharif Government that took office in February 1997 appointed expatriate nationals with considerable banking experience in premier banks overseas to the positions of chief executives of the three major nationalized banks. These banks are the largest in Pakistan holding over 65 percent of all deposits. As with most nationalized banks in a period of financial repression, the banks were virtually insolvent as a sizable portion of their portfolios were non-performing - reportedly as much as 45 percent. Privatization attempts had failed as credible buyers were unwilling to bid for them.

The government hired the expatriate nationals and charged them specifically with the task of rehabilitating the banks with a view to privatization. The Pakistani professionals had over 20 years of banking experience in numerous countries. Three year contracts were negotiated with the bankers strictly on international market terms.

The appointments were very well received in the market, winning the government's financial sector reform considerable credibility. The new initiative has already in 6 months already yielded dividends. For example, the results of the second largest bank, Habib Bank are:

- 25 percent of the staff including all of the senior managers have already been terminated;
- the process of dismantling 25 percent of the branches that are considered unprofitable has been initiated;
- distance from the government is achieved with a board from the private sector having been appointed to run the bank;
- senior managers from among the Pakistanis trained in premier international banks have been hired again at market terms;
- the bank is expecting to show a profit next year for the first time in recent years;
- the total cost of the restructuring has been about \$250 million which the bank thinks is recoverable in three years;
- the new management expects that they can recover about half of the bank's bad debts.

In conclusion, two points are worth noting:

- Years of financial sector analyses by various agencies as well as numerous forms of technical assistance had achieved nothing. Some of these achievements such as changing the staff and the management were considered very difficult if not impossible.
- Foreign banks like Citibank and Bank of America have been extremely profitable pursuing the strategy that the government has finally adopted of hiring the best Pakistani professionals at international salaries.

Second-generation reforms must therefore take into careful consideration the organization of the public sector as well as the skill retention at home, aspects which were ignored in the past. It is only through such reform that the intermediate good of governance will be efficiently produced. And it is the governance good that has been increasingly found to be an important cornerstone of a country's institutional foundation. In developing the public sector, it is important to consider the human capital that the public sector is able to attract as that will determine the quality of its output. Consequently, as we have shown the next generation of civil service reform must bear in mind the incentives to human capital in the public sector. The structure of wages in the public sector is, therefore, an important policy tool for maintaining public sector efficiency.

The issue of public sector management and wage policy also has implications for the control of corruption. Many developing countries have found corruption to be an important impediment to the development process (see Mauro (1996)). Haque and Sahay (1996) and Murphy, Schleifer and Vishny (1991) have shown that an appropriate response for dealing with corruption and rentseeking may be the retention of appropriate incentives for skills and honest productive behavior in the public sectors in developing countries.

African scholars argue that one of the main factors in the backwardness of the state may be the *neopatrimonial* and a strong autocratic nature of the state (Dia (1996), Lewis (1996)). Collier (1996) has made an important argument that, given the history of policy mistakes and failures along with the arbitrary nature of the state, there should be some *agencies of restraint* that should be visibly serving as a check on bad policy and arbitrariness. Among all the restraints that this recent literature has generated, again there is little mention of how domestic skills may be necessary. The autonomous, professionally-run and performance based public sector agencies along with performance auditing does serve as a restraint on arbitrary patrimonialism that characterizes the strong autocratic state we have traditionally considered to be the ally of development.

Domestic professions and the technical skills have proven to be extremely necessary to the development of civil society and better public administrations here in the US (see Box 2 for an recent illustration of this idea in Pakistan). Not only is the agglomeration of such skills important for the design of policy and reform, but also necessary for analyses and critiques that help foster domestic debate and ownership of such reform. Without this dissemination and debate, which can only be done by domestic groups, it is hard to see the development of civil society. Moreover, authoritative patrimonial states will remain unchecked, except through the international agency of restraint whose interests may or may not converge with those of the people.

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