THE FINE LINE BETWEEN SUBSISTENCE AND FAMINE: MALI'S AGRARIAN DESERT ECONOMY, THE THREAT OF DROUGHT, AND ALTERNATIVES TO BUILD MODERN PRIVATE SECTOR SKILLS

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Abstract: The West African Republic of Mali faces the specter of mass starvation on a scale not seen since the horrors of Ethiopia in the 1980s were beamed into living rooms around the world. Two-thirds of Mali's land is in the Sahara desert. The remaining land is also relatively fragile. Yet 70-80% of Malians, many of them subsistence farmers, work in the agricultural sector. A drought that undercuts the nation's already tenuous soil productivity could cause economic collapse and famine. Malians with advanced education and job skills geared toward creating and engaging in opportunities in Mali's modern private sector could enable the country to avert such calamity. Yet there are too few Malians with such skills as managers, entrepreneurs, scientists, technicians, and technology specialists. This analysis evaluates three potential plans of action that could help develop the advanced skills and education that Mali desperately needs. Potential policies evaluated include continuation of the status quo, increased privatization of state-owned enterprises and reimbursements for companies' training expenses. The analysis concludes that the policy of privatization seems best suited to fostering the development of the advanced modern skills and modern economy that Mali needs.

INTRODUCTION

In the mid 1980s, skeletal Ethiopian children with distended bellies stared from television screens. This stare penetrated the consciousness of many who would not normally have paid much attention to what was going on in Africa. It reached into homes in Europe and Japan. It wrapped itself around minds in Britain and Australia. It grabbed hold of Americans and shook them until a country that many never knew existed became a topic of daily conversation.

These images of starving children were startling, but Ethiopia quickly faded from consciousness as the crisis passed. The specter of mass starvation, however, has not departed Africa. And Ethiopia is not the only country for which the line between a subsistence lifestyle and starvation is dangerously thin. Located in Western Africa, the Republic of Mali occupies a precarious position on the line between subsistence and starvation. Unless Malians develop skills that will allow the development of their modern private sector, they face the prospect of widespread famine.

About two thirds of Mali is in the Sahara Desert. Mali's remaining land mass is Sahelian, one climatological step above desert. Yet somewhere between 70 and 80 percent of Malians are still engaged in an agricultural economy (US Department of State, 2001; Brunner, 2000, p. 329). This makes the Malian economy highly vulnerable to fluctuations in the health of the nation's relatively fragile soil (USAID, 1999a). A drought that undercut soil productivity could cause economic collapse and famine. Though other African countries have similar proportions of their populations in agriculture, relatively favorable climactic conditions, such as those found in the Ivory Coast or the Central African Republic, keep them further removed from starvation.

As long as the majority of Malians depend on agriculture to survive, the nation, like some other countries in Africa, will remain vulnerable to drought and subsequent economic collapse and famine. Certainly the Malian government, with its $3 billion of debt (USCIA, 2001), cannot expect to provide a safety net for 70 to 80 percent of its ten million people. Foreign governments and organizations may not be willing or able to help prevent the collapse of Mali's economy or even come to Mali's assistance in time to avoid mass starvation. Even if foreigners could play such a role, such intervention would leave Mali not only highly dependent on foreign aid but also beholden to and manipulated by those foreign interests. A more sustainable and promising means to avoid the twin disasters of economic collapse and famine would be for Malians to develop opportunities in their modern private sector economy.

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In order to grow and diversify their modern economy themselves, Malians need advanced skills that are suited to initiating or joining activities in their modern private sector. The Malian workforce must include managers, entrepreneurs, scientists, technicians, technology specialists, and other workers with advanced skills oriented to the private sector. This is not to say that there are not other important requirements for an expanding economy, but it seems that relatively little has been done to address the development of advanced skills needed for participation in the modern private sector. Malian leaders, the African Capacity Building Foundation, and other development organizations have recognized and attempted to address the deficit of skills in the public sector (ACBF, 2001a, 2001b; Jaycox, 1991). Many, including Kofi Annan (2001), UNIDO (1999), the United Nations (2001), the Ministry of Foreign Affairs of Japan (1998) and the World Bank (2001) have also identified the need to encourage private sector growth. However, similar attention has not been focused on developing advanced skills oriented to the modern private sector.

How might these skills be developed? This paper considers three policy alternatives: continuation of the status quo, increased privatization of state-owned enterprises and reimbursements for companies' training expenses. These alternatives would operate in combination with four existing programs that promote the development of relevant skills and constitute the status quo: (1) a vocational-technical training improvement program, (2) microfinancing of small enterprises, (3) small enterprise development, and (4) tax-based investment incentives from the Malian government. Before elaborating on the status quo, however, clarification of the kinds of skills that are being sought and factors associated with their being in short supply is necessary.

ADVANCED SKILLS SUITED TO INITIATING OR JOINING ACTIVITIES IN THE MODERN PRIVATE SECTOR

Advanced skills suited to initiating or joining activities in the modern private sector may come from formal academic education, vocational education, apprenticeship, or other on-the-job or informal training. These include craft, manufacturing, and assembly-line skills as well as entrepreneurial, managerial, accounting, or technical skills learned on the job in the modern or traditional private sector. They do not include unskilled manual labor, of which there is no shortage (Alemayehu, 2000). Relevant academic degrees include business, management, economics, accounting, manufacturing, science, engineering, and information technology (Landell-Mills et al., 1989; Alemayehu, 2000, p. 138).

The modern private sector is distinct not only from the public sector but also from the traditional private sector (Landell-Mills, et al., 1989, pp. 136-47). Alemayehu (2000) describes the traditional private sector as covering:

> *...production and service activities related to basic household and agricultural needs carried out at traditional handicraft level or by artisans (blacksmiths, potters, carpenters, weavers, etc.). It is practically based on human and animal power and uses mainly local resources, including metal scraps and waste materials (p. 115).*

By comparison, the modern private sector is composed of manufacturing, processing, mining, utilities, construction, information technology, tourism, transportation, services, and similar enterprises (Alemayehu, 2000, p. 2; Hodgkinson, 1999, pp. 681-84; US CIA, 2001).

Why the Short Supply of Relevant Advanced Skills?

With an annual gross domestic product (GDP) per capita of $850, Mali is ranked 184 of 197 countries in terms of purchasing power parity (Globastat, 2001). At birth, a Malian's life expectancy is 47 years, only 31% of Malians over the age of 15 can read and write and less than one in 1,000 has access to the Internet (US CIA, 2001). Debilitating and deadly diseases such as malaria and dysentery plague Mali. Thus the shortfall among Malians of advanced skills that are suited to initiating or joining enterprises in the modern private sector is tied to the difficulty of acquiring such skills in the larger context of Mali's underdevelopment.

While underdevelopment does make skill building difficult, a more specific and useful understanding of the shortage of advanced skills can be achieved by focusing on five factors: (1) insufficient emphasis on private sector skills; (2) the failure of technical assistance efforts to transfer skills to Malians; (3) the shortage of Malians with advanced education; (4) a large Malian public sector that draws talent, education, and skill away from the private sector; and (5) the loss of market opportunities that could build private sector skills.

First, there has been insufficient emphasis on the development of private sector skills. Malian leaders, the African Capacity Building Foundation, and other development organizations have recognized and attempted to address the deficit of skills in the public sector (ACBF, 2001a, 2001b; and Jaycox, 1991). A broad group of notable people and organizations, including Kofi Annan (2001), UNIDO (1999), the UN (2001) and the World Bank (2001) have also identified the need to encourage the growth of the private sector. But relatively little has been done to develop advanced skills oriented to the modern private sector.

Second, donors have often crafted technical assistance packages with the idea that foreign experts would provide short-term expertise to Malians who would soon learn the experts' skills and replace them. But critical skills have not been transferred, and studies have revealed expatriate reluctance to train and provide management skills to their counterparts (Edoho, 1998, pp. 242-244; Alemayehu, 2000, p.104). Moreover, Mali, like many African nations, has suffered from a brain drain in which those who do develop advanced skills are drawn to developed nations (Edoho, 1998, pp. 242-244).

Third, though the creation of Mali's first university has been a positive development for the building of advanced skills, Mali's rate of domestic enrollment is not particularly encouraging when one compares it to the rates of other nations (see Table 1). Whether Mali's low rate results from its low GDP per capita or its low GDP per capita results from its low rate of university enrollment is unclear. Regardless, Mali's relatively low rate of domestic enrollment does not bode well for the creation of a Malian workforce with advanced skills. Data for students pursuing degrees abroad were unavailable, but if that proportion of students is reasonably constant among these nations, then the implications for Mali's workforce remain.

Fourth, the lack of Malians with advanced skills who focus on private sector opportunities is also a function of a large public sector that draws indigenous talent away from the private market. In 1986, public expenditures by African governments were more than 27% of GNP, as opposed to an average of 19% in low-income countries outside of Africa (Landell-Mills, et al., 1989, p. 27). Malian public expenditures in 1996 were approximately 26% of GDP (Malian Ministry of Finance, 1999, p. 684). Furthermore, Africa has high levels of public employment relative to Asian and Latin American developing nations, which intensifies the negative effects (Landell-Mills, et al., 1989, pp. 55-56; Jaycox, 1991, p. 10).

Malian aspirations to the public sector rather than the private sector mean that skills that could be applied to growth of the private sector are not (Landell-Mills, et al., 1989, p. 47). Furthermore, entrepreneurs who end up in the public sector may be drawn to using their official positions to earn profits (Ibid, p. 135). By engaging in corruption or managing inefficient, state-sponsored industries, these public sector entrepreneurs further stifle efficiency and the growth of the private sector. (White, 2001; World Bank, 2001; Dembele & Staatz, 2000, pp. 145-161; McPherson, 2001, pp. 16-17; Landell-Mills, et al., 1989, pp. 3-18).

Fifth, the skills deficit will be more difficult to overcome to the extent that multinational corporations (MNCs) and the Malian government beat private sector Malians to the nation's best market opportunities for profit and skill building. By pursuing these opportunities themselves, private sector Malians could develop entrepreneurial, managerial, technical, and other skills that could be transferred to other modern enterprises. However, the level of foreign and government ownership of Mali's modern, export economy suggests that Malians should be aware of the potential to lose some of their best opportunities. For instance, 85% of Mali's exports center on cotton and gold (World Bank, 2001). The Malian government owns 60% of CMDT, the company that dominates cotton processing and production in Mali, while a French MNC owns the other 40% (Africa Today, 2001). While the Malian government has a 20% share in the Kodieran gold mine, South African and Canadian companies own and operate the country's other major gold mines (Hodgkinson, 1999).

Insufficient emphasis on private sector skills; the failure of technical assistance efforts to transfer skills to Malians; the shortage of Malians with advanced education; a large Malian public sector that draws talent, education, and skill away from the private sector; and the loss of market opportunities that could build private sector skills are all critical factors impeding development of

Table 1: Number of Students Enrolled Domestically at University Level per 100,000 Inhabitants

Country	2000 GDP/capita*	1980	1985	1990	1995
Mali	$850	71	86	54	96
India	$2,200	515	582	582	610
Botswana	$6,600	119	179	306	537
South Africa	$8,500	No data	No data	1,291	1,841
United States	$36,200	5,250	5,064	5,396	5,341

Source: US Agency for International Development's Global Education Online Database
* Source: Globastat. GDP/capita calculated in terms of purchasing power parity.

advanced skills among Malians. What, though, is currently being done to develop the advanced, private sector skills of Malians? Though Mali does not appear to have a coordinated policy that is explicitly designed to develop advanced skills, several programs do, in fact, effect the situation and will be referred to as the status quo.

STATUS QUO

The status quo consists of a vocational-technical training improvement program, microfinancing of small enterprises, small enterprise development, and tax-based investment incentives from the Malian government.

First, since 1996 the World Bank has operated a Vocational Educational and Training (VET) Consolidation Project in Mali (World Bank, 2002). The VET Project has invested $13.4 million in improving training for urban Malians and enhancing the responsiveness of training to market demand (Ibid). Specifically, the project is upgrading VET services, facilities, curricula, and management; establishing a Vocational Training Support Fund to "develop demand-driven, employer-financed skills upgrading and apprenticeship training"; and creating an Employment and Training Observatory to improve the analysis and dissemination of market information (Ibid).

Second, microfinance institutions allow Malians to receive small loans and other financial services that can foster small business growth (USAID, 2001, p. 7). Loans are often for just a few hundred dollars, but they can be for more (Ibid, p. 8). Microfinance enables Malians to enter private sector employment and develop entrepreneurial, managerial, accounting, and other skills.

Third, development organizations such as USAID and the US Peace Corps promote the transfer of skills that are relevant to the modern private sector by engaging in small enterprise development programs throughout Mali. Since the early 1990's, Peace Corps Volunteers have been training Malians in management, accounting, inventory control, how to access financial and technical resources, and how to conduct and use feasibility studies and marketing surveys (US Peace Corps, 2002). USAID, whose Microenterprise Initiative began in 1994, works with various organizations in Mali to provide similar skills and training (USAID, 2001, pp. 2-8).

Fourth, according to the U.S. government's Country Commercial Guide - Mali FY 1999 (CCG), the Malian government offers incentives within its investment code for vocational and technical training by companies (US & Foreign Commercial Service, 1998, A.5). The CCG does not detail how such incentives work. No mention is made of these incentives in the International Monetary Fund's "Summary of the Malian Tax System," but that summary does note payroll tax exemptions for employers hiring certain Malians (De Vrijer, Kabedi-Mbuyi, Cady, & Unteroberdoerster, 2000, pp. 61-66). Employers who hire university graduates or graduates from Malian fundamental, secondary, or technical schools qualify for a three-year exemption from a 7% payroll tax (Ibid, p. 63). Employers who hire employees who were laid off for economic reasons qualify for a two-year payroll tax exemption (Ibid).

In addition to the status quo, this paper considers two other alternatives for developing advanced skills: status quo plus increased privatization of state-owned enterprises, and status quo plus reimbursements for companies' training expenses. Hiring quotas were also briefly considered but dismissed because initial research uncovered no relevant precedents, because the Malian National Assembly has shown no inclination to institute such an alternative, and because quotas seem unresponsive, if not stifling, to the private sector. Additional background on the selection of each alternative appears as it is discussed.

STATUS QUO PLUS INCREASED PRIVATIZATION OF STATE-OWNED ENTERPRISES

Though it is not typically discussed as being specifically aimed at developing advanced skills that are suitable for initiating or joining enterprises in the modern economy, privatization can have that effect. Currently privatization is being considered by the Malian government and is garnering increased support (World Bank, 2001; Keita, 2000, pp. 2-10). Though Mali has undertaken privatization efforts in the past, the increased focus on privatization and the fact that this alternative has not yet been fully agreed to or implemented make it distinct from the status quo.

In June 1999, the Malian government adopted an action plan for privatizing state-owned enterprises (Keita, 2000, pp. 2-10). Keita (2000, p. 4) outlines the Malian government's proposal for substantial or complete privatization, which includes the following enterprises: SOTELMA (telecommunications – from 100% government ownership to less than 50%); UMPP (pharmaceuticals – from 100% to 0%); EDM (electricity and water – from 97.2% to less than 50%); and BMCD (banking – 100% to 20%). Furthermore, the World Bank's Third Structural Adjustment Credit (SAC III) program for Mali makes $70 million of credit contingent upon the Malian government's ratification and implementation of the SAC III program (World Bank, 2001). The SAC III program would privatize the primary cottonseed oil producing firm HUICOMA and portions of the main cotton-producing firm, Malian Company for the Development of Textiles (CMDT) (Ibid). Ultimately, the SAC III program calls for a "final phase of the sector liberalization" (Ibid).

Privatization is a relevant alternative in that it has the potential to improve the efficiency of enterprises and promote the competitive vitality of the market (Keita, 2000, pp. 2-4; World Bank 2001). Market growth could lead to additional private sector jobs (Cockburn, Siggel, Coulibaly, & Vezina, 1998, p. 32; Lall, 1989, p. 140-155). Moreover, jobs and training associated with privatization are tied to market demand, not public sector perceptions of need, which have often proven inaccurate (Lall, 1989, p. 142). Former public sector employees may transition effectively to opportunities related to a newly privatized enterprise (Dembele & Staatz, 2000, p. 150). And privatization would open up opportunities for Malians to raise their level of engagement with the private sector by investing in an enterprise (Keita, 2000, p. 5).

STATUS QUO PLUS REIMBURSEMENTS FOR COMPANIES' TRAINING EXPENSES

The status quo includes limited incentives for vocational and technical training. Though research for this paper identified no existing proposals to increase these incentives in Mali, such programs have been successfully (and unsuccessfully) used in other countries.

Economists for the World Bank have reviewed policies used in Asia to encourage companies to train their employees and concluded that tax incentives are generally not as effective as direct reimbursement of approved training expenses (Harrold, Jayawickrama, & Bhattasali, 1996, pp. 91-97). Tax-incentives often subsidize large, multinational firms who were providing employee training anyway while leaving small and medium sized firms, which often have little taxable income to shelter, without incentive to train (Ibid). Recognizing these findings, this alternative would maintain the status quo while having the Malian government provide direct reimbursements to companies that provide approved training to their Malian employees. To minimize the expense of subsidizing routine training that would occur anyway, MNC training would only be reimbursed when it results in the promotion of a Malian. All training by Malian companies would be eligible.

Though this alternative will not specify the source of funds for reimbursements, possibilities include funding from payroll levies as has been done in Singapore (Harrold, et al., 1996, p. 94) or from foreign aid. Regardless, the idea is to encourage companies that are not currently providing training to do so by reducing costs of providing training and education. Korean experience with discouraging training by adopting strict requirements for what is approved suggests that approval should be readily granted (Ibid). Requirements could be instituted to prevent fraudulent claims for reimbursement rather than structure some governmental vision of what a training program should be.

Before evaluating these policy alternatives for skill building, it is necessary to spell out the criteria by which these alternatives will be judged.

CRITERIA FOR EVALUATING STATUS QUO AND ALTERNATIVES

Consistent with Bardach's typology for evaluation criteria, these three policies will be evaluated in terms of their technical feasibility, political viability, and administrative operability (Patton & Sawicki, 1993, pp. 207-219). Additionally, responsiveness to market needs will be used as a fourth criterion. Definitions of these criteria follow:

Technical Feasibility:

Technical feasibility evaluates whether a policy, if it were it implemented as proposed, would meet three objectives:

- *Increase the number of Malians with advanced skills suitable for initiating or joining enterprises in Mali's modern private sector.*
- *Increase the number of Malians employed in the modern private sector.*
- *Increase the involvement of private sector Malians (in terms of the numbers of Malians involved and their level of responsibility) in modern market opportunities that are currently being developed by MNCs or the Malian public sector.*

Political Viability:

Political viability assesses whether the political climate would allow for successful implementation of a policy. An alternative that is politically viable should inspire governments and other organizations to take appropriate actions. Moreover, an alternative must not inspire opposition from other stakeholders such that it becomes unworkable. Trends toward declining international aid for development make cost and competition for development resources a major factor in political viability (Browne, 1999, pp. 32-34).

Administrative Operability:

This criterion will assess alternatives in terms of the administrative capacity of the organizations and governments on which they rely.

Responsiveness to Market Needs:

The public sector has a poor record of predicting market trends (Lall, 1989, p. 142; McPherson, 2001, pp. 16-17). Any viable alternative should lead to the attainment of skills that either are demanded by Mali's modern private sector or can be used to initiate private sector enterprises. An alternative that allows private sector employers to influence which skills are pursued

would partially meet this criterion. An alternative that also allows new entrepreneurs to pursue skills for unexploited opportunities would more fully satisfy it.

EVALUATING ALTERNATIVES

The inadequacy of data on Mali and sub-Saharan Africa in general has been widely noted (Hodgkinson, 1999, p. 682; White, et al., 2001, p. xiii; Auerhan, et al., 1985, p. iii). Further complicating evaluation of the alternatives is the fact that many of the programs discussed here are not explicitly targeted to the education deficit, and, therefore, previous evaluation of such programs has not focused in that area. Data collection and alternative evaluation is further exacerbated by three facts: (1) development and other organizations that take an interest in Mali (and their data and program evaluations) are scattered around the world; (2) the government of Mali does not have an Internet site that presents its data, evaluations, or other information; and (3) it is difficult to contact Malian officials from the United States. Given these constraints, evaluation of the status quo and alternatives in terms of comparisons of similar data is often not feasible. Where data or other empirical evidence is unavailable, logic and common sense will be the basis for evaluation.

STATUS QUO

Technical Feasibility:

Though the education and skills deficit still exists, nothing in the status quo seems likely to further exacerbate that deficit. On the contrary, status quo programs should generally work toward meeting the three objectives: increasing the number of Malians with advanced skills tailored to the private sector; increasing the number of Malians in the private sector; and increasing the participation of private sector Malians in public sector and MNC enterprises. However, no part of the status quo specifically addresses advanced education, which could provide relevant advanced skills. Though the data suggest there may be some increase in the number of students enrolled at the University of Mali, enrollment figures are not available for years after 1995 (Table 1).

A comparison of Malian economic activity in the traditional versus modern sectors provides inconclusive evidence as to whether or not the status quo has been associated with an increase in the number of Malians in the modern sector. Simplistically, one might assume that agriculture represents the traditional sector and that industry and services represent the modern sector. On that basis, there was no change in the proportion of the Malian workforce that engaged in agriculture from 1981 (80%) to 1998 (80%) (US CIA, 1996, 2001). Some evidence of a shift toward the modern sector may be seen in the fact that agriculture accounted for 50% of GDP in 1992 but only 46% in 1998 (Ibid). A four percent shift in GDP away from agriculture is not particularly conclusive, and those figures do not give much of an indication of relative shifts within the private sector since the Malian government has owned all or portions of many agricultural, industrial, and service enterprises during this period (Keita, 2001, pp. 2-10).

Turning to individual components of the status quo, the UK's Department for International Development (DFID) notes that the World Bank has generally criticized the effectiveness of VET projects that are not closely linked to labor market needs (DFID, 1999, 1.2). In its program goals, the Malian VET project embraced the tailoring of training to market demand (World Bank, 2002), but DFID's analysis of relatively successful VET projects in Tanzania and unsuccessful projects in Zimbabwe suggests that implementation can fall far short of intent (Ibid, 7.1). Logically, it makes sense that the VET project would increase the number of Malians with advanced skills that are tailored to the modern private sector. These Malians may be able to use their skills to choose careers in the private sector as opposed to the public sector or to get positions within MNC or public sector enterprises.

Though it is not clear how many microfinance loans were in the traditional sector as opposed to the modern sector, USAID's microfinance program allowed 36,000 Malians to borrow money in 1999 (USAID, 1999b, pp. 1-2). USAID has been active in Malian microfinance since at least 1991 (USAID, 1997a, Annex G). Though a breakdown of how borrowers used money is not available, USAID suggests that some of these borrowers used the money to initiate microenterprises or small businesses (USAID, 2001, pp. 1-3). Similarly, though neither the US Peace Corps nor USAID has made available details on the number of Malians assisted through small business development programs, both report that these programs do provide the kinds of skill-building services outlined above (US Peace Corps, 2002; USAID, 2001, pp. 1-3). USAID targeted $2,265,000 in microfinance and microenterprise programs toward Mali, and these activities seem likely to have encouraged increases in the number of Malians with advanced skills (e.g. entrepreneurial, accounting, management, etc.) targeted to the private sector (USAID, 2001, p. 39). Even if such skills or finances were used to enter the traditional, as opposed to modern, private sector, the cultivation and development of entrepreneurial and other advanced skills could ultimately be used to initiate a modern enterprise or to work within a modern enterprise.

Finally, this research has not been able to find data on the number of companies that took advantage of incentives from the Malian government to hire Malians or provide them with training. Not knowing the nature of the incentive program for training (tax exemption,

reimbursement, etc.) makes evaluation risky. Harrold, et al.'s review of East Asian case studies suggests that direct reimbursements are more effective inducements than tax incentives (1996, p. 94). In part this is because those companies whose taxable income is large enough to meaningfully take advantage of incentives are likely to make decisions for reasons that often have little or nothing to do with incentive programs (Ibid, pp. 91-97). Even if this conclusion extends to Africa, it is unlikely that these incentives discourage the hiring or training of Malians. A review of aggregate data on tax incentives and foreign direct investment suggests that, with other factors equal, tax incentives can affect investors' choices (Morisset & Pirnia, 2000, p. 22).

Political Viability:

Since research for this analysis has revealed no vocal criticism of the status quo, its continuation seems fairly likely. However, decisions depend not only on action or forbearance by the Malian government but also by the World Bank, USAID, and the US Peace Corps. This makes the status quo vulnerable to varying conditions and opinions within each of these organizations.

The US Government's Country Commercial Guide (CCG) explains that relations between Mali and the US are excellent, that the World Bank supports the country's reform policies, and that Mali supports free trade and private enterprise (US & Foreign Commercial Service, 1998, I-II). The World Bank has consistently shown support for VET projects that focus on being responsive to market forces (DFID, 1999, 1.2). If implementation has lived up to the Malian VET project's stated intent of increasing responsiveness to the private sector, World Bank funding is likely to continue (World Bank, 2002). Similarly, excellent relations between Mali and the US make continued support from USAID and the U.S. Peace Corps very likely. USAID calls Mali a "politically and economically sound partner" of the U.S. (USAID, 2002). The U.S. Peace Corps' program in Mali, present since 1971, is the third largest (number of volunteers: 126) among the 25 Peace Corps countries in Africa (U.S. Peace Corps, 2002b).

Administrative Operability:

The stakeholders identified under political viability are the same that are relevant for administrative operability. So long as they continue their support for the status quo, the administrative capacity to maintain programs should remain. However, sufficient data are not readily available with which to evaluate these programs and their administrative operability. One would like to assume that USAID, World Bank, Peace Corps, and the government of Mali are capable of and regularly assessing the results of their programs. If they are not, that suggests a potential shortcoming in terms of capacity.

Responsiveness to Market Needs:

The VET project is explicitly designed to respond to private sector employers' needs for advanced skills, but results from Tanzania and Zimbabwe suggest that design and implementation may not necessarily be in agreement (DFID, 1999, 7.1). Though the VET project makes no provisions for encouraging entrepreneurs to identify and pursue new opportunities, the microfinance and small enterprise development programs are well suited to allowing entrepreneurs to initiate new enterprises. The Peace Corps' website offers as an example a women's cooperative in the city of Segou that has set up shop to sell crafts to Malians and tourists (U.S. Peace Corps, 2002a). Last, the Malian government's incentives serve to induce the private sector to take action rather than to force it. The effectiveness with which it does so would be an indicator of responsiveness to market needs, but such data are not available.

STATUS QUO PLUS INCREASED PRIVATIZATION OF STATE-OWNED ENTERPRISES

Technical Feasibility:

Logically and empirically, there is reason to believe that increased privatization, in addition to the current programs, will be an improvement to the status quo. This action seems likely to advance all three of the objectives identified as part of technical feasibility.

The logic of how privatization could help build advanced skills has been discussed above. Privatization will mainly occur in modern sector enterprises such as telecommunications, banking, and pharmaceuticals (Keita, 2000, pp. 2-10). Empirical evidence from Benin, Ivory Coast and Mali show that privatization is generally associated with increased competitiveness and greater market vitality (World Bank, 1995). For example, in the late 1980s and early 1990s, the government of Benin cut in half the number of enterprises in its portfolio (Ibid, p. 100). For those that were sold, profits more than doubled by the end of 1993 (Ibid, pp. 100-101). Similarly, one year after the government of Ivory Coast sold its controlling share in its loss-incurring electric company, the company turned a profit, and its profits have grown steadily (Ibid, pp. 116-117).

In 1988, the Malian government began privatization under the Public Enterprises Sectoral Adjustment Program (PESAP) (Keita, 2001, p. 2). By the end of 1995, the Malian government liquidated 20 enterprises, fully privatized 14, partially privatized 10, and restructured others (Ibid). The decision to liquidate 20 of the supporting enterprises and jobs that were not competitive or sustainable and the fact that Mali's budgetary deficit decreased from 12.3% of GDP in 1991

to 9.6% of GDP in 1993 reflects the fact that government ownership was injuring the economy (Ibid).

These moves toward greater privatization can have the effect of reducing the draw of the public sector and increasing demand within the private sector as was seen under the privatization of some of the functions of Mali's official grain-marketing agency (OPAM), which was created in 1964 with a monopoly on the grain trade (Dembele & Staatz, 2000, p. 146). As OPAM's role in running the market for grain shrunk, many OPAM employees were laid off, but ultimately many of these former employees reentered the grain trade as private businessmen (Ibid, pp. 149-150). In addition, it is worth noting that these reforms ultimately led to greater investments by grain traders (Ibid, p. 159). Such investment is a spin-off effect that supports businesses and jobs in other parts of the private sector. Similar results could occur under the current privatization alternative. As noted above, a major component of SAC III is increased privatization of the cotton sector. Since cotton is the nation's largest export (Hodgkinson, 1999, p. 681) and the government's share of CMDT amounts to approximately double the value of its shares in any other enterprise (Keita, 2000, p. 4), complete privatization of CMDT could have a tremendous impact on the private sector and on the development of advanced skills.

In addition to the fact that the privatization of public sector jobs means there will be more Malians in the private sector and fewer in the public sector, the market vitality and demand for skills that are tailored to the private sector has potential to lead to increases in education and skill levels (Lall, 1989, pp. 140-155). Finally, opportunities that are currently being developed by the public sector would be opened up to private sector Malians.

Political Viability:

The major stakeholder from whom action is required under this alternative is the government of Mali, which would have to ratify the Third Structural Adjustment Credit (SAC III) to fully pursue this policy option (World Bank, 2001). The World Bank would also be involved, and its support is unquestionable since it is the major architect of SAC III. The government of Mali has demonstrated its receptivity to privatization in the past, and has in fact begun new privatization efforts (Keita 2000, pp. 2-10). SAC III's cotton sector restructuring is a key requirement for receiving approximately $500 million in debt relief from creditors and ratification will allow Mali to receive $70 million in additional credit (World Bank, 2001; IMF, 2000). Considering that the World Bank and USAID have both been proponents of privatization in Mali (Keita, 2000, p. 2), the decision to pursue this course could make them more likely to support Mali's status quo programs, which would make this alternative more politically viable than the status quo alone.

Administrative Operability:

Though each enterprise that is privatized presents unique challenges, both the World Bank and the Malian government have considerable experience with privatization efforts (Dembele & Staatz, 2000, pp. 158-160). Privatization may place some additional demands on the administrative capacity of Mali and the World Bank in the short-term, but ultimately shifting production to the modern private sector will result in less being demanded of the Malian public sector, which would mean that additional administrative capacity could become available.

Responsiveness to Market Needs:

As discussed under technical feasibility, whether demanded by employers or by opportunities that new entrepreneurs can exploit, skills fostered by this alternative should be closely tied to the market. The status quo programs by themselves seem less directly responsive to the market than privatization.

STATUS QUO PLUS REIMBURSEMENTS FOR COMPANIES' TRAINING EXPENSES

Technical Feasibility:

There is logical and empirical evidence that this alternative, in conjunction with the status quo, could advance all of the objectives under the technical feasibility criterion, although some contradictory evidence suggests that this alternative may not be a major improvement to the status quo. Though enterprises in the traditional sector could take advantage of the training reimbursement, information about the program is likely to be relatively concentrated in the more urban modern sector, which generally has greater access to information.

Direct reimbursement for approved training expenses has effectively encouraged training in Singapore, Taiwan, and China (Harrold, et al., 1996, p. 94). This has been more effective than incentives structured around taxes (deductions, credits, etc.) in Malaysia, Pakistan, and the Philippines (Ibid). Loose approval requirements may make training more likely since Korea actually created a disincentive to train by establishing strict requirements whose violations were punished with fines (Ibid). Ultimately, the reimbursement may encourage firms to locate in Mali. Morriset and Pirnia note, "when other factors...are more or less equal between potential locations, taxes [here, reimbursements] may exert a significant impact" (2000, p. 22).

Though this analysis found no empirical evidence to bolster the claim that firms that provide training may make private sector jobs more appealing and draw greater

numbers of Malians to the private sector, this seems a logical possibility. Additionally, because only the training of Malians would be eligible for reimbursement, there is incentive for firms to hire and promote Malians. Since this alternative would allow MNCs to receive reimbursements for training that results in the promotion of Malians, the alternative could also increase the level of private sector Malians' involvement in MNCs.

Political Viability:

Mali has demonstrated its willingness to use incentives to encourage employers to hire and train Malians (De Vrijer, et al., 2000, p. 63; US & Foreign Commercial Service, 1998, A.5). However, inconclusive evidence about the technical feasibility of this alternative may dampen enthusiasm. Moreover, reimbursement of training expenses could be difficult since it would require the Malian government to find a source of funding. Projections of the cost of such reimbursements in Mali would be useful in evaluating political viability, but they are not available. It is worth noting, though, that Mali is $3 billion in debt (US CIA, 2001) and that it is seeking debt forgiveness (IMF, 2000). This suggests the government is not in a position to provide whatever funding is required. Securing a grant from the World Bank, the French government, or the US government might be a possibility, but this could be difficult in light of decreases in foreign aid received by Mali relative to levels from the mid 1990s (De Vrijer, et al., 2000, p. 56).

Administrative Operability:

Even if Mali received a grant to cover the costs of reimbursement, this alternative would increase the administrative burden since, in addition to ensuring that companies are not making fraudulent claims, the government would have to process requests for reimbursement. Furthermore, payment of claims should be speedy if Mali is to encourage training by small and medium sized enterprises since many of those firms operate close to the breakeven point and cannot afford to wait a long time for reimbursement (Harrold, et al., 1996, p. 95). The government's burden would be even larger if it finances this alternative itself. Unless it cut expenditures, financing would probably come from some sort of additional tax, as Singapore has done with a payroll levy (Ibid, p. 94). Mali has the administrative capacity to collect taxes as evidenced by the collection of about $380 million in taxes in 1999, of which $7.6 million was in payroll taxes (De Vrijer, et al., 2000, p. 34). Nonetheless, this program would add a significant administrative burden to the status quo.

Responsiveness to Market Needs:

The only skills targeted under this alternative would be those identified by employers. In combination with the status quo, this alternative should be more responsive to the needs of the private sector. However, reimbursements do nothing to encourage start-up entrepreneurs to enhance their skills.

FINDINGS AND A CASE FOR ACTION

Increased privatization offers additional advantages above and beyond the status quo alone, and is superior to the status quo plus reimbursements. Successfully implemented, status quo plus privatization would meet all of the objectives considered under technical feasibility more completely than the status quo alone or status quo plus reimbursements. Political viability is very high since there are major financial incentives for the Malian government and the World Bank has already shown its support as the major architect of SAC III. Thus, privatization seems even more politically feasible than the maintenance of the status quo. The financial costs associated with training reimbursement make that program relatively unviable politically. Though privatization must be implemented carefully and with sensitivity to the unique challenges and developments in each sector, both the Malian government and the World Bank have considerable experience with privatization. In the short term privatization will increase the administrative burden, but in the long term the administrative burden will be reduced. By contrast, training reimbursement would require permanent additional administrative capacity. Last, either alternative seems more responsive to market needs than the status quo alone. However, the status quo plus privatization has the additional benefit of encouraging both the development of skills demanded by current employers as well as entrepreneurs exploiting new opportunities, where as the status quo plus training reimbursement would only respond to needs identified by current employers.

Following up on the inadequacies of data that have been discussed here and in Hodgkinson (1999, p. 682), White, et al., (2001, p. xiii) and Auerhan, et al., (1985, p. iii) additional data on the development of advanced skills would greatly improve understanding and success. Evaluations of the effectiveness of Peace Corps, World Bank, and USAID projects in addressing the education and skills deficit would be particularly useful. By collecting or making public such information, these organizations would be doing a service to the sustainable development of Mali.

The fragility of Mali's soil and Malians' heavy dependence on agriculture put Malians in a precarious position on the line between subsistence and starvation. Privatization may foster the development of advanced modern skills and a modern economy that will help distance Malians from the looming threat of economic collapse and famine.

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