PN-AAT-122

USAID/BOTSWANA

STRATEGY ASSESSMENT AND EVALUATION

JULY 1987

Conducted by

Edgar O. Edwards

Carl Liedholm

Robert E. B. Lucas

Cameron L. Smith

In conjunction with Patrick Fleuret, AID/REDSO, Nairobi

USAID/BOTSWANA

STRATEGY ASSESSMENT AND EVALUATION

TABLE OF CONTENTS

USAID/BOTSWANA

STRATEGY ASSESSMENT AND EVALUATION

EXECUTIVE SUMMARY

The following summarizes major findings and recommendations under the headings Overall Policies, USAID Strategy, Manpower and Skills Development and Employment Generation. A more detailed summary of conclusions and recommendations, keyed to the chapters which support them, appears in Chapter IX. A description of this study, including summary terms of reference, is found in Chapter I.

A. OVERALL POLICIES

- While there has been spectacular overall GDP growth since independence, a disaggregation of the Botswana economy shows stagnation in economic sectors upon which future employment growth depends. The rapid overall 1981/82-85/6 average annual Gross Domestic Product real growth of 15.3% and a major increase in foreign exchange reserves mask the fact of limited growth, outside mining and quarries, of 4.0% per annum. Manufacturing actually declined by .04% per annum. Rather than sparkling growth, what emerges is a picture of a sluggish economy, one in which a policy environment that promotes both development and diversification is essential. Not surprisingly, non-government formal-sector employment grew by only 2.5% per annum, vs. population growth of 3.4-3.7% per annum. There is clear evidence of a serious unemployment problem; the present unemployment rate is

24.5%. The precarious state of indigenous agriculture and the uncertainty over future employment in South African mines lend additional urgency to further addressing the employment-generation problem.

- <u>These are key policy concerns in a generally satisfactory policy environment</u>. Monetary, fiscal and commodity-pricing policies are generally sound and are an excellent example for developing countries. Major policy concerns include the comparatively high value of the pula and a relatively high formal sector wage rate, both of which may inhibit employment growth. A major government program to subsidize labor costs, the Financial Assistance Policy (FAP), may not be fully effective.

- <u>Government's high foreign exchange reserves policy is a needed protection against growing risks</u>. Reserves have grown over the last two years primarily because of an improved market for and supply of diamonds and the strength of the dollar (in which most exports are priced) vs. the rand (in which most imports are priced). But these factors could easily reverse. Political and economic uncertainties in Southern Africa are rising, increasing the risks on seaport access and employment in RSA mines. The GOB is also determined to follow prudent development policy, avoiding non-economic programs. Drought continues at the same time as the need to continue importing 90% of food and to increase strategic

food reserves. A parallel finding is that, because of this need for high reserves, consistent concessionary donor support is justified.

- At the same time, there is insufficient use of private-sector institutions to stimulate economic growth and employment. The private sector's lack of growth in spite of easy credit and access to foreign exchange is a disquieting feature of the economy. In several key areas blocks appear between abundant resources and the ability of private-sector elements to use them. For example, despite high bank and Government liquidity, small and informal-sector firms report difficulties in obtaining working-capital credit for business expansion. Government must also focus on the question of incentives, e.g., reducing company taxes. The question of privatization of parastatals should be looked at in the follow-on private sector study, e.g., the Botswana Housing Corporation.

B. USAID STRATEGY

- The present strategy focusing on skills development and employment generation is soundly conceived and well executed. The strategy is important in basic education, which in turn is a necessary although not sufficient condition of an employable work force. The strategy also has had a significant impact on skills levels and future employment generation through training and operational experts (OPEX).

- Suggestions for modifying the strategy are intended primarily to redirect it even more toward employment generation and the revitalization of the private sector The means for doing so are mainly already in place and the modified package proposed should not require much if any increase in funding.
- The education projects are excellent; however, there should be greater emphasis on curriculum development in both PEIP and JSEIP, particularly in the latter. The PEIP project is rapidly becoming institutionalized and assistance for primary education can be reduced. On the other hand, support to curriculum planning at the higher secondary level might be considered.
- There is a need to strengthen linkages among research, extension and the farmers in ATIP. The Agricultural Technology Improvement Project has an important role because of the key position of agriculture within Botswana and the relationship of agriculture to, and as a part of, rural employment. ATIP has things to say in approaches and technology affecting dry-land agriculture and these should be disseminated in better fashion.
- The BWAST project is impressive and has the benefit of flexibility. It can be used in several areas to promote private sector and employment generation.
- USAID has carried out successful drought relief support. Although not the focus of this report, USAID has done an excellent job, working with the GOB, to support drought relief through Food for Peace and Disaster Assistance.

- Additional Considerations.

- Stronger emphasis should be given to support for family planning.

- USAID should consider working with the University in the establishment of an MBA program. This might be carried out under BWAST auspices.

- There is a weakness in the linkages between those needing and those supplying credit, investment funds, technology and vocational training opportunities. There might be a possible direct role for USAID in rural employment generation to improve credit linkages between lending institutions and smaller enterprises.

- The Peace Corps should be used wherever appropriate and possible in support of and complementary to USAID projects.

C. MANPOWER AND SKILLS DEVELOPMENT

- There is a critical shortage of high- and middle-level manpower. One indication of this shortage is the large number of non-citizens in employment and self employment, about 7500, the great majority in the private sector. The need to upgrade the skill content of the Batswana labor force is unquestioned. The timing of the likely crossover from a shortage to a surplus of high and middle level manpower requires further careful study, as does the question of skills and labor demand projections. Uncertainty about future private sector manpower requirements suggest that at each level of education, the formal educational system should focus on those basic

skills that are common to all or most of the future opportunities open to school leavers.

- Generally strong primary and junior secondary education programs pose some concerns: Under the concept that such education is a basic right for all Batswana, enrollment levels have risen dramatically and a major expansion is planned in junior secondary. This means a need for more, and more intensively-used teacher-training facilities. As school leavers at this level form the bulk of the labor force, there is also need for curriculum reform stressing more general familiarity with private-sector opportunities and simple bookkeeping skills, as well as agriculture (already incorporated). At the same time, the formal education system should focus on instilling general rather than specific skills. The private sector should be encouraged to undertake specific skills training.

- Higher education must be viewed as an investment good. Consideration must be given on how rapidly to expand senior secondary and university levels, given the economic cost. The eventual crossover from overall deficit to surplus of high and middle level manpower will exacerbate the problems of inflation of job requirements and place severe pressure on the higher education system. Moreover, the bonding system will tend to make the government the employer of last resort, bonding the government to the student rather than the other way around.

- Technical and vocational training must be more flexible and accessible. Encouraging such training in the private sector (including formal- and informal-sector apprenticeship), subjecting public-sector training institutions to market forces, facilitating access through private-sector efforts and attempting to assure that training institutions deliver their products at stated and consistent quality levels but at the same time avoid rigid content standards - are all recommended measures.

D. EMPLOYMENT GENERATION

- Slow non-mining private sector growth and employment are the result of several basic constraints. Among these are the precarious arable agriculture situation, the maturity of the cattle industry, competition from South African industries, a small domestic market and the lack of effective access to foreign ones, high formal sector wages, the lack of skilled manpower and the high cost of expatriates, blocks between high bank liquidity and small firms' access to working capital finance, and generally well-conceived but overly-restrictive and complicated Government support policies.
- Various activities are likely to enhance private-sector employment expansion. USAID is sponsoring a special private-sector follow-on study which should result in more detailed conclusions and recommendations. USAID's

ATIP, Rural Sector Grant and BWAST have all played constructive if limited roles in stimulating rural employment and helping in overall employment generation. Most importantly, there are several GOB programs in place to encourage investment and provide employment. But more, and sometimes less, should be considered. There should be simplification of certain GOB policy procedures (e.g., in investment and subsidy areas), greater access of primary and secondary students to knowledge of opportunities and requirements of private-sector work, establishment of brokering efforts to make present assets (e.g., working-capital credit, international venture partners and skills-training opportunities) more available to those who can use them to build employment, and consideration of basic factors important in developing rural enterprises (e.g., access to credit). Means to increase production in dryland agriculture also are fundamental; agriculture is a major employer and source of income; it is important to help slow a premature drift from rural to urban areas.

July 23, 1987

I. INTRODUCTION

Botswana has grown rapidly since Independence and this growth has continued into recent years. According to data in the Statistical Bulletin (March 1987), between 1981/82 and 1985/86, rural GDP has grown at an average annual rate of 15.3 percent. Mining alone has grown at an average annual rate of 31.9 percent and foreign exchange reserves have risen from P223.0 million in December 1981 to P2211.1 million in November 1986.

These are the bright spots. In their shadow lie more disturbing elements. Excluding mining, GDP grew by a modest 5.4 percent per annum over the recent four years and excluding Government as well, by 4.0 percent; manufacturing actually declined by .04 percent per year. Formal sector employment grew by 4.7 percent per annum, but excluding Government, employment grew by only 2.5 percent per year. These data suggest a sharply skewed income distribution and a shortage of identified productive investment opportunities outside of mining (and Government) to which mining surpluses might be directly or indirectly transferred.

Another cause for concern is the heavy dependence of Botswana on the Southern African Customs Union (SACU), and particularly South Africa, for both trade and employment opportunities. Imports from SACU amounted to 74.4 percent of total imports in 1985, but this represents a significant reduction from 87.6 percent in 1981. Exports to SACU, on the other hand, accounted for only 5.6 percent of total exports in

1985, down from 16.6 percent in 1981, the reduction reflecting largely the rise in diamond, and hence total, exports.

About 21,000 Batswana were employed in mines in South Africa in 1986, according to data from recruiting agencies reported in the Statistical Review. This represents little change from 1981. Perhaps another four or five thousand were employed in other SACU countries or outside of mining in South Africa. These 25,000 employees represent over six percent of Botswana's labor force and remittances from miners alone amount to over one percent of the nation's total wages and salaries. Should those job opportunities disappear by the year 2000, as projections of de jure and de facto populations in the Statistical Survey would suggest, the urgency of creating job opportunities in Botswana would be considerably magnified. On the other hand, if workers return with deferred pay and useful skills and experience, the impact of their return could be softened.

If employment opportunities in SACU countries diminish, the rate of growth of the labor force in Botswana will increase as workers return home. That rate of growth is already high being influenced primarily by the rapid growth of population, currently running about 3.7 percent per year.* Except for some moderating effect as students stay longer in school, the growth of the labor force over the next 15 years is already

*Recent evidence presented at the "Conference on Population and Development for Senior Public Officers" (Francistown, June 3-5, 1987) indicates that the fertility rate may be declining, and thus the population growth rate is estimated to be at 3.4 percent, lower than the 3.7 percent figure used in this report, but still very high.

established, because those who will enter it then are already born.

In 1984/85, according to the Labor Force Survey, 1984-85, the labor force measured 367,900 people of which 93,100, or 25.3 percent, were unemployed. Of those employed, 117,100 were in the formal sector (Statistical Survey, March 1987). If the growth of the labor force and formal sector employment are projected to be 3.7 and 6.0 percent per annum respectively, it will take over 50 years for the unemployed to be absorbed in formal sector employment. If, on the other hand, the rate of population growth could be reduced so that after 15 years the rate of growth of the labor force would average 2.7 percent, it would take only 40 years to reach that crossover point.

The planning of smaller families should also improve the quality of the labor force. Given limited medical resources, smaller families should make better prenatal care available to mothers and, in sharing family income with fewer children, parents can improve infant and child nutrition. Studies have shown that these factors can enhance the learning capability of children as they enter and pass through the schools. Indeed, if requested, USAID should consider favorably opportunities to assist in limited ways with family planning, prenatal care and infant nutrition.

Migration to the urban areas is another major concern. The Labor Force Survey 1984-85 discloses that the urban unemployment rate is 31.2 percent while the rural rate is 23.5 percent. The urban rate can be, and clearly should be, addressed directly in the cities and towns, but successful urban programs to create employment will attract additional migrants from the rural areas unless at the same time employment

opportunities and standards of living are being improved in the rural areas. This is a challenging task in Botswana where rural development is seriously hampered by continuing and recurring droughts. Opportunities to increase non-farm rural activities are limited by this weakness of income generation on farms. Clearly, efforts must be made, and Government is doing so in many ways, to sustain rural incomes even in the face of severe constraints. Because many non-farm rural activities are dependent on agricultural incomes, it is particularly important to sustain incomes and employment opportunities for the large number of limited resource farmers.

Standards of living in the rural areas do not depend solely on employment opportunities. They also depend on the availability of housing, medical care, education and other amenities. Narrowing the differential in the quantity and quality of these amenities in rural areas as compared with urban areas should help to reduce migration to the cities. In addition to physical facilities (the infrastructure), the task may require salary differentials for personnel to make service in rural areas more attractive.

The seriousness of the unemployment problem is not contradicted by the simultaneous existence of critical shortages of high and middle level manpower. One indication of these shortages is the large number of non-citizens in employment (about 5300) and self employment (about 2200) in Botswana; the great majority of these are in the private sector. While they amount to only about five percent of formal sector employment, they are, for the most part, well trained and educated manpower and would be a rather large percentage of

that group. The need to upgrade the skill content of the Batswana labor force is unquestioned.

The GOB has many appropriate policies in place to cope with these problems and these are outlined in the Sixth National Development Plan (1985-91), NDP6, the latest national development plan. Existing policies are constantly being reshaped and new policies are being formulated as analysis is improved and new issues arise. A midterm review of the current development plan was recently initiated to address issues and opportunities that have arisen since NDP6 was written.

It is in this context that USAID has undertaken this review of its basic Program Strategy, which has the stated objectives of Skills Development/Training and Employment Generation. This strategy is manifested mainly through the Mission's principal bilateral projects in education [Primary Education Improvement Project (PEIP) and Junior Secondary Education Project (JSEIP)], manpower development [Botswana Workforce and Skills Training Project (BWAST)], and rural development [Agricultural Technology Improvement Project (ATIP) and Rural Sector Grant (RSG)]. The program also includes a Housing Guaranty program and considerable food assistance in support of drought relief. These latter elements are not directly included in this study (see, however, the USAID's recently completed Food Assistance Strategy on this subject.) To undertake this review, the USAID office in Gaborone assembled a team of four people who worked closely in Botswana with USAID personnel and a Reference Group established by the Government of Botswana. Team members worked in Botswana for between three and five weeks.

A follow-on private sector study will also be carried out by USAID to identify specific recommendations for action in that area.

The team had the following members:

Edgar O. Edwards	Economist, Team Leader
Carl Liedholm	Professor of Economics, Michigan State University
Robert E.B. Lucas	Professor of Economics, Boston University
Cameron L. Smith	Vice President, Trade & Development International Corp.

Patrick Fleuret, an anthropologist with USAID's Regional Economic Development Services Office for Eastern and Southern Africa, assisted the team.

The GOB Reference Group was composed of the following members:

Nelson Mokgethi	Chairman, Ministry of Finance & Development Planning (MFDP)
Ted Valentine	MFDP
Richard Dempsey	MFDP
Eric Odotei	Ministry of Education
Babe Botana	Ministry of Labour & Home Affairs
Howard Sigwele	Ministry of Agriculture
Reuben Boiyane	Ministry of Commerce & Industry
Mike Douse	Directorate of Public Service Management

Clark Leith of the MFDP attended most of the meetings of the Reference Group.

The team wishes to express its deep appreciation to the many Government of Botswana officials, who gave so freely of

their time to assist in our efforts, and, in particular, to the Reference Group chaired by Nelson Mokgethi. Their insights were invaluable in our achieving a much better understanding of the total economic situation in Botswana and of individual sectors. We should also like to thank members of the private sector and representatives of the donor community. Special thanks are also due to the professional staff who are associated with the various AID-supported projects. The team also wishes to express its deep appreciation for the outstanding support provided by John Hummon and the rest of the Mission, particularly Will Elliott, who had the primary responsibility for organizing and coordinating our activities. All went beyond the call of duty in providing not only logistical support, but also invaluable, rapid feedback on our earlier drafts. The Mission's support staff responded to our needs not only during normal working hours, but also during weekends. Without their support, this report would not have been assembled in the limited time available. While the report reflects the team's own observations and assessments and is an internal USAID document, the contribution of others has clearly been invaluable.

The team was asked to review and evaluate existing USAID projects in Botswana in the light of the Government's increased emphasis on employment creation as a major national objective. The team was also expected to make recommendations with respect to employment creation and manpower development which might be considered by Government during the course of its midterm review of NDP6, the nation's most recent development plan. Finally, the team was requested to make recommendations specific to USAID about modifications in the pattern of USAID assistance to Botswana which would enhance its relevance for

employment generation and manpower development, within the levels of funding currently available to the USAID office in Botswana.

In particular, the team was asked to address four questions specific to USAID in the context of relevant Government policies.

"1. Are USAID Botswana's education projects and training programs helping give Batswana the skills they will need to hold and effectively perform the jobs of the future? (What is the job market of the future to look like?)

2. What are USAID's projects and programs doing to help create jobs, particularly in rural areas? As part of this second issue, on-farm/off-farm enterprises and rural employment will be addressed in light of lessons learned and being learned from the Rural Sector Grant, the Agricultural Technology Improvement grant and other programs of the GOB.

3. What modifications, if any, in our manpower programs are needed to better meet our basic skills development strategy?

4. In what ways could the AID program act in a catalytic or more direct basis to help in the actual creation of jobs, particularly in rural areas?

These questions, while specific to USAID programs, only have relevance in the context of assisting and

supporting the policies and programs of the Government of Botswana as they relate to the generation of employment opportunities and the enhancement of needed skills in the labor force. These policies and programs must also be addressed by the team in order to ensure that the recommendations which emerge are consistent with and supportive of the objectives of Government."

The complete terms of reference for the work of the team are included in Appendix A.

The team has not addressed the questions posed in the order in which they are arranged but believes that all of the issues raised have been treated comprehensively, though limited by the professional qualifications of team members and the brevity of their exposure to economic conditions in Botswana.

The report has taken the following form:

I. Introduction

II. The Economic and Policy Setting

III. Basic Education

IV. Employment Generation in Rural Areas

V. Employment Generation in the Formal and Urban Informal Sectors

VI. The Role of Manpower Planning

VII. Higher Education

VIII. Technical and Vocational Training

IX. Conclusions and Recommendations for the Government and USAID

The intent is that, following this introduction, a review of Government's broad policy approach to employment

creation would provide a suitable background for the assessment of more specific manpower development and employment generation policies and programs.

Basic education through Form 2, which is regarded as a human right to which all children are entitled, is then addressed in Chapter III. While the content of basic education must provide a sound basis for employment, Senior Secondary education, and vocational training, the options open to those completing education through Form 2 is essentially a consumer good. The quantity supplied, as opposed to the content, is not conditioned at all on the manpower requirements of the nation. That is not true of education and training beyond Form 2.

More advanced education and training assumes the character of an investment good, being intended largely to prepare people for income-earning opportunities in both rural and urban settings. The options offered in education and training beyond Form 2 and the numbers of students enrolled in each option are conditioned to a substantial degree by the number and types of employment opportunities expected to be available when students have completed their more advanced studies. Hence, before considering how, and how well, more advanced education and training institutions are serving the needs of the nation for high and middle level manpower, some assessment of the employment potential in both rural and urban areas and the means available for projecting manpower requirements by occupation and related types of training is essential. That assessment, the task addressed in Chapters IV, V and VI, is followed by discussions of higher education and vocational training in Chapters VII and VIII.

Chapter IX attempts to pull together the many recommendations made in the various other chapters, to identify themes that may assist Government in its efforts to define a strategy for employment creation and manpower development in Botswana, and to formulate a modified strategy for USAID to pursue in its desire to support Government in this monumental task. A justification for continuing USAID concessional assistance for development in Botswana despite rising foreign exchange reserves is also offered.

II. THE ECONOMIC AND POLICY SETTING

A. THE ECONOMIC SETTING

GDP growth in Botswana has clearly been spectacular since Independence. From 1966 through 1975-6 real GDP grew 13.2 percent per year; from 1975-6 through 1980-1 11.7 percent; and from 1980-1 through 1985-6 some 11.2 percent.* Thus, although population growth has also been very high indeed, (at approximately 3.7 percent), the sustained net growth in GDP per capita would, in most economies, have resulted in a tight labour market. But this has not been true for Botswana.

For example, "formal" sector employment within Botswana (as measured by total number of paid employees in the Employment Survey) grew by some 7.0 percent per year from 1980 through 1985, to reach only 117,100 persons in the latter year, compared to an estimated total labor force of approximately 368,000.** Another indicator is provided by the Labour Force Survey, 1984-5, which reports an overall unemployment rate of 25.3 percent with a further 16.0 percent underemployed, and an open unemployment rate even among urban males of 20.7 percent. Though such measures are obviously very dependent upon the precise definitions adopted, there seems clear evidence of a serious unemployment problem in Botswana.

Obviously, the ultimate cause of high growth in GDP without commensurate employment generation is the very capital and resource intensive nature of Botswana's growth. The result

---

* Sources : National Development Plan, 1985-91; World Bank Economic Memorandum, 1985; and IMF estimates. Growth is measured at compound rates on end-point data.

** Sources : Employment Survey, 1985; Labour Force Survey, 1984-5.

has not only been an underutilization of Botswana's human resources but a high degree of concentration of the benefits from growth. Those who possess formal sector jobs have done well. So have their families, though often it is not recognized that urban wages normally benefit rural members of the same (extended) family; standard concepts of distinct rural and urban populations make little sense in Botswana.

Much of the formal sector employment which has been created lies in the public sector. By 1985, of total paid employment, 38.9 percent was in Central and Local Government and a total of 46.5 percent in the public sector including the parastatals. Why have more jobs not been created in labor intensive, production activities?

Much of Botswana's recent growth has been led by diamond exports, but mining is an inherently very capital-intensive process, providing only 6 percent of paid jobs by 1985 despite massive investments. Diamond exports have been the major factor in maintaining a balance of payments surplus and hence in maintaining a comparatively high value of the Pula. At the prevailing exchange rate, a number of more labor intensive, potential, production activities are not financially viable in Botswana either as import substitutes or as export activities.

Mining and quarrying alone, which accounted for over 50 percent of real GDP in 1985/86, grew at an annual rate of 21.4 percent over the last six years while the rest of the economy grew at only 4.6 percent, only a little better than the rate of population growth.

The contrast is even sharper when one examines the most recent four years in this period, i.e., the experience since the opening of the Jwaneng diamond mine and the onset of

prolonged drought. In this period, real GDP has grown by 15.3 percent per annum, mining and quarrying by 31.9 percent, and the rest of the economy by 5.4 percent. The share of mining and quarrying in real GDP has increased from 29.9 percent to 51.2 percent.

If one could eliminate the indirect effects of the rapid growth of mining and quarrying on the other sectors, the performance of the rest of the economy would surely be even poorer. Much of the value added in mining and quarrying has generated rapid rates of growth in the government sector (9.8 percent) and wholesale and retail trade (10.3 percent). Excluding these three sectors, real GDP has actually fallen over the four year period.

Rather than sparkling growth, what emerges is a picture of a sluggish economy, one in which a policy environment that promotes both development and diversification is essential. A considerable part of the apparent stagnation reflects the prolonged drought. Value added in agriculture has declined over the four years at an average rate of 9.6 percent, and this has certainly had a depressing effect on sectors other than mining. Manufacturing and construction have not shown the rapid growth usually associated with a dynamic economy. Value added in these sectors actually declined over the four years at annual average rates of .04 percent* and 5.0 percent

*Value added figures are not available in real terms for sub-sectors in manufacturing for 1985/86, but it does not appear that meat and meat products, the dominant sub-sector, grew more slowly than the other sub-sectors. This merits examination together with the behavior of other sub-sectors. Also, care should be taken in drawing conclusions from the value added data since they are preliminary and subject to revision.

respectively.

The drought combined with the already high levels of open and concealed rural unemployment mean that, at best, only minimal increases can be expected from agriculture in the near future. Indeed, even maintaining the existing levels of employment will not be easy. Given the large numbers employed in traditional agriculture, (152,600 or 55.6 percent of total employment in Botswana according to the Labour Force Survey, 1985), extraordinary pressure is thus placed on the rest of the economy to generate productive employment opportunities.

The following example graphically illustrates the magnitude of the problem. Assuming that the numbers engaged in traditional agriculture remain unchanged, employment in the rest of the economy will have to grow over 6.6 percent per year just to absorb the new entrants into the potential labor force projected through 1991. "Formal" sector employment did grow by approximately 7.0 percent per year from 1980 through 1985 and thus kept pace with the new entrants, but made no dent on the currently unemployed. Moreover, if informal employment opportunities fail to grow rapidly and traditional agriculture employment falls, the problems are greatly exacerbated. If disruptions or a change of scenario force or necessitate the return of those Batswana employed in the South African mines and elsewhere in South Africa, the employment situation could become catastrophic. Consequently, careful attention must be focused on agriculture and the informal sector as sources of employment generation, as well as on the formal private sector.

Diamonds aside, Botswana has many of the signs of a sluggish economy in need of constructive programs for development, and donor support for Government efforts to

devise, plan and implement such programs.

B. LABOR COSTS AND FAP

It should be emphasized, that a key factor in the employment generation problem is the inability of wages to adjust to clear the labor market. Lower wages could make labor intensive activities financially competitive with foreign goods. In this sense, the comparatively high formal sector wages in Botswana, sustained by wage policies, are certainly an important factor in explaining the failure to create jobs.*

Serious downward adjustments in real wages are presumably politically unacceptable, but a gradual decline through inflation would improve the competitiveness of the private sector and support efforts to create employment opportunities. Without such a decline, and if projects are judged on a strict financial basis, then employment will necessarily remain limited in scope. FAP, introduced by the GOB, is an important step toward recognizing this difficulty. In essence, such a policy recognizes that the true (shadow) cost of labor in Botswana is considerably below the formal sector wage and hence that some form of assistance is essential. A simple financial viability criterion cannot be applied. But the FAP appears to be a fairly conservative step in this direction and is particularly limited in restricting assistance to a five year period. In deciding whether to commence production in an activity and whether to opt for a

*Wages are high relative to labor productivity in potential manufacturing activities, but not especially high relative to food costs (the main component in the cost-of-living). Indeed, any policy action which raised food costs would probably translate into increased wage pressures quite rapidly.

particularly labor intensive process, a businessman is likely to be influenced only to a limited extent by a five year subsidy to labor cost. Indeed, the argument for such subsidies is not an argument for temporary assistance. This is not an infant industry problem. There is, therefore, a serious question as to whether something like FAP ought not to be offered on a more permanent basis (at least as long as wages and the Pula remain high) and increased in magnitude, if the employment situation is to be addressed seriously.

Consider, for example, the Automatic Financial Assistance for medium scale firms (with investments of P20,000 to P900,000), under FAP. The chief subsidy element in this is the Unskilled Labour Grant (ULG), the tax holiday component being a reduced tax rather than a subsidy as such. The ULG pays 80 percent of the unskilled labor wage bill in the first two years, then 60, 40 and 20 percent in the next three years respectively. Evaluated at a 10 percent discount rate, this declining subsidy is equivalent to a permanent subsidy of 25 percent. In other words, even though the initial subsidies sound very high, a businessman with even modest concern about the future would see this as roughly equivalent to being quoted a permanent subsidy of 25 percent on unskilled labor use. At present, the minimum wage for manufacturing is P0.64 per hour, whereas an agricultural worker's wage is approximately P0.38 per hour. In other words, the gap between the free market wage for unskilled labor and that set for manufacturing is at least 40 percent. Given that unemployment obviously prevails, even at the agricultural laborer wage, a realistic social cost of labor would imply an even greater gap, and FAP does not begin to cover such a gap.

There are, of course, distinct dangers in contemplating any assistance program of this kind.

1. FAP represents assistance which is less readily accessible in rural areas. In part, this is because the FAP terms and application procedures are fairly complex. Moreover, the RIO's who are meant to help with the FAP applications, number only 15 for the entire country. Unless combined with assistance to agriculture and the rural informal sector, FAP will prove distortionary as between resources in the formal and informal sectors and contribute to more rapid migration to urban areas.

2. Any assistance program is a drain on fiscal resources. At present, it seems the GOB is well placed to afford an expansion in spending. In particular, the intended development strategy of Botswana has been to use the rents obtained from mineral extraction to stimulate production and employment in the rest of the economy. To a large extent this has not happened, except through spending on Government sector jobs. An assistance program for more labor intensive industries is clearly one mechanism to follow through on such an intent. But rents from minerals may not remain as high as at present and in this sense there is a risk in making commitments to long term subsidies.

3. Effective administration of such programs can be difficult. This is often especially true of employment subsidy programs, where it may be relatively simple to fake information on the number of employees. Apparently a few instances of this have indeed been found with respect to the FAP.

An alternative to an FAP-style production subsidy would be a dual exchange rate regime, with a premium rate for non-traditional exports and imports of labor intensive manufactured goods. A dual exchange rate offers greater flexibility than a pre-announced, permanent labor subsidy. In this sense, the dual exchange rate may be preferable. But a dual exchange rate has its own, major administrative difficulties, and is neutral with respect to encouraging more labor-intensive techniques. Typically, imported technologies embody predetermined levels of labor intensity in most countries. Thus, FAP is relatively unlikely to encourage more labor intensive techniques by given foreign investors in Botswana. On the other hand, FAP does provide greater incentive for those foreign companies who already possess more labor intensive processes to contemplate investments in Botswana. Moreover, it should be emphasized that by restricting subsidies to unskilled labor, FAP does not subsidize the use of expatriate labor either by transnational or local companies.

Some degree of flexibility in FAP might be introduced by indexing the ULG to the gap between the minimum wage and an index of free market wages (which would also discourage Government from raising the minimum wage). Indeed, it should be emphasized that the primary need for any FAP style policy stems from wage policies. In strict efficiency terms, allowing erosion of the real minimum wage is certainly preferable to attempts to correct this by offsetting subsidies. But we recognize that on political grounds it is normally difficult to allow reduction in the real minimum wage even at the cost of sustaining unemployment.

These difficulties notwithstanding, if wage policies are not adjusted, then an employment oriented subsidy program, such as FAP on an expanded and extended basis or a dual exchange rate, seems essential for employment creation outside of the public sector. The maintenance of a positive real rate of interest will also be essential and some consideration should also be given to a system of export subsidies. But will a package of such policies be sufficient?

C. OTHER CONSTRAINTS ON EMPLOYMENT CREATION

A number of constraints may be identified which might limit employment expansion even under an assistance policy. First, the size of the domestic market in Botswana is clearly very limited. Any industries where scale factors are at all important are unlikely to be attracted to Botswana unless they are also able to export. At present, Botswana does have relatively easy access to the entire SACU market. In addition, transportation does not have to be a prohibitive barrier to exports beyond SACU, provided production costs are sufficiently low, though Botswana will probably always have a comparative advantage in light weight exports. Thus, size of market need not ultimately be a constraint, provided that exports are made competitive.

Neither foreign exchange nor availability of funds is a constraint at the moment. Apparently, the commercial banks are currently even refusing deposits because they are not lending out much of their existing funds and have excessive liquidity. Naturally, for the commercial banks, it is strict financial returns on projects which matter and few projects are viable in

this sense without an expansion of FAP. Credit availability is not a constraint, but moving credit is. Increasing financial viability through FAP is part of the answer, but mechanisms for intermediation in the credit market and surrogate forms of collateral also need to be explored.

Is the availability of skilled labor a constraint on private sector employment, preventing expansion even given assistance? The experience of the Ciskei would suggest not: given sufficient financial incentives, foreign investors will be attracted into undertaking any necessary training for themselves. But costs of training a less well educated labor force are generally higher. To the extent that the educational system is expanded in Botswana, it provides a labor force with minimum education needed by industry (although wage costs would probably also escalate with extra education). Tax breaks and other incentives thus become the key elements to attract foreign investors.

Whether education is the more cost effective way of attracting investors is moot up to a point, since GOB has decided to promote universal, nine year education essentially as a basic right and without regard to employment issues. Moreover, a certain amount of general education is clearly essential for successful specific training. But to promote specific vocational training as a root to attracting investors is surely not cost effective. Considerable waste must be involved in anticipating required specific skills, and money would be better spent attracting investors to undertake their own training.

With regard to domestic entrepreneurial skills, there does appear to be a current shortage, in part because of the

tiny extent and short history of an organized private sector in Botswana. To the extent GOB elects to rely on local rather than foreign initiative, this will prove problematic. A strong case can then be made for appropriate training in business leadership to remove a constraint on employment of semiskilled and unskilled labor.

We have not examined monetary, fiscal and commodity pricing policies in great detail because these seem to be well conceived and well executed. The need to find means of reconciling the liquidity of financial institutions with the credit needs of small enterprises through a better and more timely assessment of credit risk and collateral has already been noted. Government's fiscal policy is conservative for understandable reasons and could serve as a model for most developing countries and for many more advanced nations as well.

Agricultural prices are based on border prices which we think appropriate. Import prices are used for those major agricultural products that are produced in Botswana primarily for domestic consumption. Much agricultural production is, however, subsidized in varying degrees around the world, and world prices, as well as import prices paid by Botswana, are affected by those subsidies. Botswana also subsidizes in various ways the production of agricultural crops both to reduce its reliance on imported food grains and to improve economic-earning opportunities for farmers and, through higher farm incomes, for non-farm rural enterprises and workers. It is important in this context that domestic subsidies to farmers per unit of production should be approximately equal to the subsidies to farmers elsewhere who produce the cereals being

imported. They probably are, but a careful analysis of relative subsidies to agricultural production, which is beyond the scope of this report, might contribute to an improved rationalization of subsidies in Botswana.

D. SUMMING UP

The argument may then be summarized: a labor force with sufficient education to undertake more specific training is a necessary but not sufficient condition for attracting investments in the private sector and hence generating employment. A large part of specific training, at least for the organized sector, is probably better left for on-the-job training once directions of the private sector are revealed. But programs to support general education, such as BWAST, JSEIP and PEIP, though necessary, will not prove sufficient to promote serious levels of employment generation in the organized private sector, without reforms in financial incentives for this sector also. Despite certain difficulties with any financial assistance program, (or indeed a dual exchange rate), such assistance must complement educational efforts, if Botswana is to break with its extreme reliance on public sector employment.

III. BASIC EDUCATION

In 1985-6, GOB expenditures amounted to nearly 34 percent of GDP, and education represented about 14 percent of Government expenditures overall. Education comprised 18 percent of recurrent budget expenditures and 6 percent of development expenditures. But this will expand under NDP6, for the Ministry of Education (MOE) is allocated 20 percent of development expenditures over the five years of the plan. Education is thus a major public sector activity and projected to have an increasing role. In this chapter, we examine some issues with respect to performance and expansion of the primary and junior secondary school systems in particular, the role of USAID projects, and the connection with employment creation.

A. PRIMARY SCHOOL

The enrollment rate in primary schools in Botswana is approximately 85 percent. Moreover, the retention rate of pupils through Standard 7 is very high. This represents a truly laudable transition since Independence. The two chief, outstanding issues with respect to primary school are: (a) enrollment of the 15 percent not yet in school, whose composition is not well-documented and is the subject of an on-going study; (b) improvement in quality of primary schooling.

The latter is particularly serious. By 1985, some 26 percent of primary school teachers remained "untrained", the

incidence being particularly high in rural areas. Partly as a result of this, scholastic achievement measures reveal low numerical and literacy abilities among primary school leavers in Botswana compared to many other countries. To address this, a curriculum reform is now being introduced, an in-service training program for existing teachers is in place, and training of new teachers has been expanded.

There seems little question that it is appropriate to award high priority to a goal of upgrading primary school quality. This is true, not only as a basis for improving labor force productivity, but also as a basic human right and an important component of a democratic, decision making process. USAID's involvement in the process of improving primary school quality has taken the form of PEIP (Phase I 1981-1986 and Phase II 1986-1992). The project focuses on teacher training, though the team has also participated in primary curriculum reform. Although PEIP II has curriculum revision as part of its mandate, the omission of a curriculum expert from the PEIP II team may have been particularly unfortunate.

PEIP acts in two ways to train teachers: through in-service training of existing teachers; and through provision of educators and facilities to train teachers. The former is clearly a short run approach, the latter somewhat longer run. It is not possible to identify the fraction of total resources dedicated to these two portions under PEIP, but time of the team was divided almost evenly under PEIP I with slightly less emphasis on workshops now under PEIP II.

Current projections, prepared by the MOE Planning Unit, on the number of trained school teachers in relation to demand at the primary level show a continuing shortfall. The reason is clear; with exponential growth in school age population and linear projections on output of trained teachers, the latter can never catch up. This simple scenario is compounded by a fairly high "wastage" rate of primary teachers. The results must be some combination of a growing number of unqualified teachers, more crowded classrooms, and children not receiving schooling at all. Resources may be allocated in several ways to address this problem :

By in-service training of untrained teachers;

By planning for further growth in output from primary teacher training;

By investing in methods of reducing the wastage rate of teachers; and

Through family-planning programs, reducing population pressures on the schooling system.

The question ultimately is how limited resources may best be spent in these various directions to produce children with skills appropriate to make them productive, subject to a fairly even treatment of all children. To answer this is not possible within the scope of this report, but some thoughts on pertinent aspects might be offered.

1. Workshops

In-service training under PEIP takes the form of short workshops. Unlike such training in the US, these workshops seem to be popular and successful in Botswana. Three issues might be worth closer investigation with respect to these workshops. First, success has apparently been measured by retention of information by teacher-trainees shortly after the workshops. It would seem natural to ask how much difference this training makes to net gain in abilities of pupils, taught by workshop-trained teachers, perhaps a year later. We recognize that such efforts are planned and should be commended. Second, continuing attention should be given to selection of teachers for in-service training. As of 1985, 1791 primary school teachers were "untrained' and 1025 of these had completed only Standard 7. Under PEIP I, in-service training workshops reached about 1200 teachers. Initially the participants were the least trained; later teachers judged as most effective were selected for training. The latter process continues. Groups trained are then to teach other teachers. The general point is that the cost-effectiveness of workshops is presumably related to the selection of teachers for workshops. Third, teachers receive no financial returns for participating in the workshops. For instance, an unqualified teacher cannot become "qualified" through part-time training in workshops or otherwise. This might, however, offer a socially useful route, since it could even allow up-grading without withdrawing teachers from the classroom. At present,

unqualified teachers can only become qualified by passing through the Teacher Training College (TTC), and apparently such upgrading represents about half the intake of the TTC. Under PEIP II, the workshops are to focus on the Primary School Head Teachers, who will be withdrawn from their schools for this purpose.

2. Primary Teacher Training Colleges

The reason for the linear projection of newly trained teachers is the constraint on capacity of the Primary Teacher Training Colleges (PTTCs). Under PEIP I, the number of PTTCs has been increased to four, but no further growth is planned. While construction of new centers is expensive, no increase in PTTCs may not be wise. But no matter whether more intensive use of existing centers (perhaps using vacation periods and/or evening classes*) is considered or building of new centers contemplated, additional lecturers for the PTTCs would be required to expand capacity. PEIP aims at considerable depth in this direction : Ph.D.s are being financed in the US to lecture in the University of Botswana, to train lecturers for the PTTCs, who will train teachers up to the Diploma level. Presumably this considerable depth in localization of the training pyramid will, in the long run, keep down costs, given the high costs of foreign training of lecturers for the PTTCs or use of expatriates. But in the short-run, there is a trade-off, and presumably a greater expansion of PTTC lecturers could be achieved for a given expenditure, if less depth were sought in the pyramid.

---

* The chief constraint on more intensive use of the PTTC has been residential space. The MOE is now exploring plans to encourage non-resident trainees, which seems a very desirable step.

3. Wastage

The issue which seems to have been somewhat neglected is the reduction in "wastage" rates of teachers. If a rise in salaries or fringe benefits could significantly reduce wastage, if incentives and perhaps refresher training could be provided for women to return to teaching after child-bearing, this may prove far more cost-effective than training new teachers from scratch. Perhaps a closer investigation of the factors involved in wastage and what could be done to lower this could be very worthwhile. Indeed, we understand that no good estimates of the wastage rate exist, or whether departing teachers are taking other important and productive activities.

4. Training vs. Facilities

Given the serious shortage of trained primary school teachers, and the resultant low pupil achievement scores, some doubts might be raised about the wisdom of spending on new school buildings rather than spending more on teacher training. Classes "under the trees" are not ideal, but nor are classes in classrooms with ineffective teachers. On the other hand, the two components may be complementary, in the sense that it is particularly difficult to attract qualified teachers without appropriate facilities. USAID is not assisting in the construction of primary schools, but nonetheless the general policy issue may well be raised.

B. JUNIOR SECONDARY SCHOOL

The remaining difficulties with primary schooling notwithstanding, a major expansion of the Junior Secondary (JS) School system is now under way. The objective is to move toward a near universal nine years of schooling by the mid-1990s. This expansion will place substantial pressures on

the entire educational system and have profound implications for the labor market. In this transition, USAID is offering assistance through JSEIP, in conjunction with the GOB.

The expansion requires both substantial extra facilities and teachers. Some existing JS school facilities are to be turned over to senior school use, so that a substantial number of new JS school buildings will be required. Six educational centers are planned for in-service education purposes. A new teacher training college is to be constructed, doubling the existing capacity. And a curriculum development center, under construction, will be completed in early September. USAID is helping with both the education and curriculum development centers.

In the provision of these facilities, the location of the new JS schools will be an important issue. The plan is to assign pupils to a Community Junior Secondary School (CJSS) depending upon the primary school attended, so that each CJSS will have its own catchment area. It is hoped that this will increase the concerns of the community with respect to performance of their own CJSS, as opposed to a system of permitting entry into any CJSS where a place can be obtained (though no doubt some families will place children at primary schools in catchment areas of better CJSS schools, and some of the elite attend Maru-a-Pula). But even dispersing the CJSS facilities according to catchment areas of primary schools will require substantial amounts of travel for day students and hostel accommodation for a few. In fact, this will not be a

trivial problem as universal JS schooling is approached, given limitations on transport and roads available.

The MOE Planning Unit projects that the number of teachers required at the CJSS level will rise from 1288 in 1987 to 4650 by 1997. Even with the new teacher training college, this is projected to mean some 1478 unqualified CJSS teachers by 1997. In other words, the fraction of unqualified teachers is projected to double from 16 percent in 1987 to 32 percent by 1997. Clearly, this raises some serious questions about alternative strategies, and hence the assumptions upon which the projections are predicated, if the objective of universal CJSS schooling is to be pursued without major declines in quality. These issues are:

1. A very high annual wastage rate is assumed (8 percent) and again some consideration needs to be given to methods of reducing this.

2. The absolute number of expatriate teachers is targeted to decline, from 412 in 1986 to 242 in 1987. It is worth noting that, if the 1986 fraction of expatriate teachers were maintained, then almost the entire shortfall of qualified teachers would be filled in 1997. Obviously, reduced dependency on expatriates is desirable, but there are serious tradeoffs in terms of numbers of qualified teachers.

3. The projections are based on a class size of 24, as compared to 32 for primary school. Is it better to have somewhat larger classes with qualified teachers or smaller classes with unqualified teachers ?

4. An alternative is to increase the output of the teacher training colleges, either through more intensive use of the two facilities or creation of a third college (which ultimately will be essential).

Again the major question is which of these routes will prove most cost-effective in raising the quality of CJSS education. But even if resources are invested in reducing the wastage rate, in in-service training, or in expanded pre-service training, declines in average student output quality of the CJSS system seem inevitable, at least in the short-run. To the extent that screening of students for entry into CJSS school is successful today, expansion must of necessity mean a lowering of standards. Indeed, this may well involve at least an initial lowering of education quality even for the better level of students now proceeding to JS schools. In the longer run, this initial decline may be off-set by improvements in facilities, teachers and curriculum. But some initial frustrations seem very likely.

The curriculum for the CJSS schools is proceeding more slowly than originally hoped, and the curriculum contains very little vocational preparation as such, with the exception of compulsory classes in agriculture. This latter requirement, plus obligatory training in Setswana, place special demands on teacher training which are certainly not met at the moment. The MOE Planning Unit may wish to project, not merely the numbers of CJSS teachers required, but also to project by field, since some appropriate planning by the teacher training

colleges along these lines would seem essential. More generally, it may prove important to coordinate the curriculum reform with additional teacher training, rather than training a large number of teachers before reform is introduced.

With regard to the form of an appropriate curriculum there exists some debate in Botswana, both at the primary and JS levels. At neither level does much vocational teaching exist. On the other hand, a major objective of JSEIP is the development, field testing and dissemination of a curriculum that incorporates workforce needs as well as basic education, making it more appropriate to the economic and social-cultural needs of Botswana's youth. The aims, derived from an ongoing needs assessment, include such topics as home and financial management, food production, rural technology, and self-assessment in relation to employment and training opportunities. The development process is now underway, and is expected to be completed for the two year JS program by 1991.

Thus, although specific vocational courses and streams are not planned in the CJSS, development of attitudes and experiences relevant to the work force are to be incorporated within the mainstream curriculum itself. The schools are not to be "vocationalized" but will be "vocationally" oriented.

The product of the vastly expanded CJSS system will be students with nine years of general education, perhaps initially with lower average preparation than those now emerging from Form 2. What consequences will this have for employment?

Two consequences are clear. First, the size of the labor force will be reduced by tying up students in school for longer, though perhaps labor force participation after Form 2 completion may be higher. Second, the proposed expansion will generate major additional employment of teachers. The estimate is for nearly 15,000 teachers in the primary and JS schools by 1995, as compared to approximately 8,000 teachers in 1985, and a total number of paid employees of 117,000 in the entire economy in 1985.

But the more important issue is the employment prospects for the Form 2 leavers. There is certain to be a substantial rise in credentials required for jobs. The Junior Certificate will no longer be sufficient to enter occupations now requiring the JC. But expectations about job prospects will have been raised. The experience of many other developing nations suggests that this is a potentially explosive combination unless jobs are indeed generated. The extra general education, if of sufficiently high quality, will make post-school training for employment easier and less costly. But the expansion in schooling will not, by itself, be sufficient to expand employment on a serious scale other than for teachers. The teachers' jobs themselves will only materialize given expansion of government spending on a sufficient scale to train, attract and keep teachers. Given current wage constraints and the strength of the Pula, financial assistance for industry will also be essential if jobs for CJSS graduates are to be found in the 1990s.

Establishment of the basic educational system in Botswana is now well under way. Problems of generating sufficient qualified teachers, given the very rapid population growth and system expansion, will continue. But at least for the primary school level, many of the institutional mechanisms are now essentially in place for this process. The junior secondary system is undergoing major reform. JSEIP is playing a major role in this, and will be needed in the transition for some years to come. Botswana is committed to universal basic education, and JSEIP can help to ensure that such education provides an appropriate base for entering the labor market.

(Note: Statistics cited in this chapter were extracted from NDP6, Employment Survey, 1985, USAID project records and Education Statistics, 1985 and provided by the MOE Planning Unit.)

IV. EMPLOYMENT GENERATION IN RURAL AREAS

A. INTRODUCTION

Rural households in Botswana are decision units whose activities are typically very diversified rather than being sharply focused. The average rural household receives income from as many as five or six different sources, arising not only from crop cultivation and animal husbandry, but also from rural manufacturing, trading, construction/services, hunting, gathering as well as wage employment and remittances. Members of those households may be widely scattered - some working in South Africa or urban areas in Botswana (and repatriating funds to the households) and others looking for work in towns or pursuing higher education (and requiring funds from the households). An understanding of the complex interaction of these activities - the degree to which, for example, there is competition for labor between the various farm and non-farm activities and the flow of funds from one activity to another - is important for the design and implementation of projects and policies in this area. (See, for example, Sigwele, An Analysis of Research and Extension Strategies to Improve Cropping Systems for Small Farms in Botswana).

B. CHARACTERISTICS OF RURAL NON-FARM EMPLOYMENT AND ENTERPRISES

Rural non-farm enterprises are worthy targets of attention. Not only do they tend to generate more employment per unit of capital than their larger scale urban counterparts, they also can provide a source of critical income to the rural

household and thus can play an important role in a country's food security strategy.

Unfortunately, data on rural non-farm activities in Botswana are rather sparse. The recently prepared International Labor Organization (ILO) background papers highlight the lack of comprehensive data on rural non-farm activities, the informal sector, and small scale enterprises in the country. In this regard, Botswana is not alone. Relatively little is known about the composition and characteristics of the elusive and difficult to count small scale enterprises in many countries of the world.

The fragmentary evidence indicates, however, that the magnitude of this rural non-farm activity in Botswana is extremely small. The total number engaged in the rural non-farm "informal" sector in 1985, for example, was 30,731, which amounted to only 16.7 per cent of those employed in the rural area. (GOB, Labor Force Survey, 1984/85). Moreover, only 14 per cent of household income came from these sources in Botswana, (GOB, Rural Income Distribution Survey, RIDS, 1974), compared with the range of 28 to 43 per cent found in other developing countries (Kilby and Liedholm, "The Role of Nonfarm Activities in the Rural Economy" 1986). Gathering (5.2 per cent of household income) was the most dominant activity, followed by manufacturing (3.5%), services/construction (2.4 percent), and trading (1.2 percent). Within manufacturing, over 5400 rural firms have been identified by the RIO's of the Ministry of Commerce and Industry in a 1986 survey. This

figure can, at best, be considered as only roughly indicative of the number of such firms. Indeed, Haggblade ("The Shabeen Queen in Botswana," 1984,) has estimated that 42,000 rural individuals (primarily female) were engaged in the brewing, production, and retailing of sorghum beer in 1981. Beer brewing, which is undertaken almost entirely by women, clearly dominates. What is particularly surprising are the relatively small numbers engaged in clothing, furniture, and particularly blacksmithing (1 percent), activities that abound in virtually every other country.

C. PRIMARY CONSTRAINTS TO RURAL NON-FARM EMPLOYMENT AND INCOME GENERATION

What are the constraints operating to limit the expansion of rural non-farm enterprises? Experience from other countries indicates that these key constraints vary from country to country and even from industry group to industry group. The key constraints operating in Botswana must now be examined.

1. Markets/Demand

One of the most "pressing problems" "perceived" by small rural entrepreneurs in Botswana is the lack of demand for their product. This problem looms large in virtually all of the Botswana informal sector surveys and frequently exceeds in importance the "perceived" credit problem, which typically is the most cited constraint in surveys conducted in other countries.

One of the primary reasons for this deficiency is low level of purchasing power of the poorer "traditional" agricultural households, which typically provide through the usually powerful "income linkage" the main source of demand for the products of these rural enterprises. The six year drought in Botswana has exacerbated the problem; thus there has been little chance for increases in household income to translate into increases in the demand for locally produced consumer goods.

For the same reasons, the demand stemming from the backward and forward production linkage with traditional agriculture also have been somewhat limited. These production linkages typically tend to be much smaller than the previously mentioned income linkages. In Botswana, the local manufacturing and repair of agricultural tools and equipment as well as the opportunities for agricultural processors, transport and marketing are activities that are stimulated by these agricultural linkages.

Moreover, most rural enterprises face extremely strong competition from goods produced in South Africa. SACU, together with Botswana's transport and post-office infra-structure (e.g. clothes can easily be delivered by mail to many rural areas), means that many rural enterprises do not enjoy the same degree of "protection" that is afforded to their counterparts in many other countries. On the other hand, some small rural firms are able to export to urban areas and abroad, but their ability to penetrate these markets is frequently limited.

2. Capital

Lack of capital is another "constraint" faced by rural entrepreneurs and indeed is frequently mentioned by entrepreneurs as their most "pressing problem." The bulk of the "perceived" demand, however, is for working capital (particularly cash for raw materials, labor, and tools) rather than fixed capital. Yet the true need for such capital may be lower than that perceived by the entrepreneur, because working capital shortages are often merely the symptom of some other more basic problem, such as a raw material bottleneck or a management problem.

Nevertheless, the working capital constraint in Botswana would appear to be of some significance. Even though the "formal" financial system appears flush with liquidity, relatively little appears to reach the majority of small rural firms. As in most other countries, the majority of small rural firms in Botswana obtain their funds from friends and relatives; a relatively small percentage of the firms have received capital funds from "formal" financial or governmental institutions.

3. Management

Managerial problems are rarely mentioned in the Botswana informal sector surveys as a perceived constraint by small rural enterprises. Such a finding should not be surprising, since small entrepreneurs in most countries are typically unaware of their need for such management assistance or may be

reluctant to admit they are poor managers. Yet, one must be somewhat cautious in arguing that it is necessarily a crucial constraint in Botswana for all rural enterprises. Even simple bookkeeping skills, for example, are not always necessary to ensure success for many types of the small rural firms; indeed, studies in other developing countries, for example, usually find little significant relationship between record-keeping and business success for the very smallest firms. (See, for example, Liedholm and Mead, "Small Scale Industries in Developing Countries," 1986). The importance of these skills, however, does loom much larger as the firms grow in size.

4. Technical Skills

Inadequate technical skills on the other hand is a somewhat more frequently "perceived" constraint on the part of small entrepreneurs in Botswana. Lack of technical skills serves as a particularly important barrier to entry in several types of manufacturing activities, such as baking, clothing, tanning, metal and woodworking. Most skills in Botswana initially appear to be picked up informally, either in the village or indirectly through other jobs. This usually occurs through the family rather than through an organized indigenous apprenticeship system, such as is found in West Africa.

5. Other Constraints

Other constraints such as difficulties in obtaining raw materials in a timely fashion and in lower cost bulk quantities as well as lack of electricity or water are also sometimes mentioned by entrepreneurs as problems. One relative advantage faced by smaller enterprises, however, is that they are frequently less dependent on such things as electricity and water than the larger firms. As smaller firms grow and move into larger rural localities, however, these infrastructure constraints often loom larger.

6. Government Policies

Numerous laws and regulations apply to small rural enterprises in Botswana. These include minimum wage laws, labor laws concerning conditions of employment, the factory act (which sets out minimum physical working conditions required on work premises), health regulations, mineral use regulations, as well as income and local government taxes. Unlike many other countries, these apply technically to even the smallest one person rural firm (except for the factory act which does not apply if no persons are employed). Such regulations, while laudatory on their own grounds, do fall more heavily per unit of output on the smaller than the larger firms. It is possible, however, that many small rural firms, in fact, elude some or all of these regulations. They also may not benefit, from some of the government's assistance programs, such as the FAP, given the difficulty of reaching them.

D. ASSESSMENT OF MAJOR PROJECTS AND PROGRAMS DESIGNED TO OVERCOME THESE CONSTRAINTS

A wide array of governmental, quasi-governmental, and private organizations in Botswana have been developed to provide services designed to overcome the constraints faced by small rural enterprises. In this section, the major activities will be briefly examined and assessed.

1. Batswana Enterprise Development Unit (BEDU)

BEDU, which is now the Integrated Field Service Unit of the Ministry of Commerce and Industry, was established in 1975 to provide assistance to small and medium scale citizen enterprises. The primary means for assisting such enterprises was through the establishment of industrial estates and the provision of a wide array of services to enterprises located in them. Financial assistance was also provided. Most of the estates and the firms assisted were located in urban areas and thus relatively few rural firms were assisted by BEDU. Like industrial estate schemes throughout the world, the number of jobs created was relatively small (915 by 1984) and the cost per job created were relatively high (over P11,000 per worker). BEDU has now wisely changed its focus from industrial estates to an industrial extension service unit providing technical management assistance to all Botswana entrepreneurs. The technical assistance is specialized by sub-sectors, which has proven to be an effective strategy elsewhere.

2. Rural Industrial Officers

The RIO's, who are also now part of the Integrated Field Service Unit, were established in 1979/80 to provide extension advice for small industrial entrepreneurs located in rural areas. Their primary responsibility is to identify existing and potential entrepreneurs and link them with the necessary technical, management, financial and other relevant services. They also serve as focal points for assisting firms in receiving support from the Financial Assistance Policy. Currently, RIO's are found in all districts and 15 stations have been established. This innovative organization, which is not found widely elsewhere in Africa, has assisted over 3000 entrepreneurs and generated over 2500 new jobs in rural areas.

3. Financial Assistance Policy

FAP, the program developed by the Government of Botswana in 1982 to generate new activities or expand productive employment within manufacturing and non-cattle agriculture, appears to have had some positive effect on generating rural non-farm employment. The incentives provided for the small scale grants are greater for projects that generate more jobs and are located in more rural areas. There is some evidence to indicate that the program was indeed successful in directing the bulk of the funds to rural rather than urban firms, although as noted earlier in this report much more could be done in the rural areas.

As of 1986, approximately 1300 small scale rural jobs were "estimated" to have been generated at an investment cost of approximately P2,000 per job. The actual number of jobs created, however, may have been lower and many firms may have died, so a final judgment must await a follow-up appraisal of the program.

A possible program criticism, which was also raised by the 1984 FAP evaluation, centers around the complexity of procedure for application and administration. Although the rules and procedures for the small scale applicant were supposed to be "very simple", they were probably too complex and too restrictive (e.g. collateral requirements) for the smallest of the rural firms. Although the RIO's were to promote help with the applications, their numbers were probably too limited to assist the vast bulk of potential entrepreneurs. - Problem of overload - A 1987 survey sample (Cownie, 1987) of the 400 rural artisans who had attended the Village Artisan Training (VAT) program at the Rural Industries Innovation Center, for example, revealed that less than 15 percent had ever received support from FAP. Another possible criticism is the previously mentioned five year assistance restriction.

4. Factory Shell Program

The Botswana Government factory shell program, which was launched in 1976, was to promote rural entrepreneurs with serviced industrial workshops (shells) in fourteen major villages. Six shells were ultimately constructed at an average cost of P18,000 per single unit. The building costs were high,

the number of assisted rural entrepreneurs as well as the overall benefits to the economy were relatively low. An economic analysis of the project undertaken by Haggblade (Rural Industrial Officers' Handbook, 1982) determined that the benefit-cost ratios for these shells ranging from .06 to 0.34. Assistance of this type to small rural enterprises is seldom cost-effective not only in Botswana, but elsewhere in the world.

5. Brigades

The Brigade movement, which was designed to provide vocational training to standard seven and JS school leavers combined with production, was introduced in 1965 and has grown rapidly; currently 23 Brigade centers exist. The Brigades are specialized by types of training activity (such as auto repairing or carpentry), although they are usually clustered together in these Brigade centers. It was originally envisaged that "graduates" of the Brigade would set themselves in self-employment primarily in rural areas. Tracer studies of graduates, however, indicated that the majority were employed in the private sector but less than three percent were self-employed. The total number trained in 1985 was 700, many of whom were supported by government grants to the Brigades. The intention is to spin off successful Brigade units to the private sector, but this has yet to occur. An illuminating illustration of the success of one Brigade training program is provided in Haggblade's review (1982) of the Palapye Brigade's

Water Catchment Tank training activity. A group of existing builders and masons were taught to construct the tanks that the Ministry of Agriculture through Arable Lands Development Program (ALDEP) was recommending to local farmers. An economic analysis of the training activities revealed a high benefit-cost ratio of 2.4.

6. Botswanacraft

Botswanacraft Marketing Co., a subsidiary of the Botswana Development Co., provides an example of a successful activity directed at rural entrepreneurs. In the early 1970's, Botswanacraft developed the crucial marketing link that enabled rural basket makers to expand their commercial production. In 1981, Botswanacraft paid out roughly P200,000 to rural basket makers.

7. Rural Industries Promotion

The Rural Industrial Promotion (RIP) is a nongovernmental organization that works very closely with the GOB in the implementation of its rural development activities. One of its primary activities is the operation of the Rural Industries Innovation Center (RIIC), where research and development is conducted on "appropriate" technologies suitable for commercial exploitation by small scale rural producers. This "appropriate technology" activity appears to have been somewhat more successful than is typically the case elsewhere in the world. This success is, in part, due to the careful consideration of the market, production conditions, and the

need for continued iteration with the potential users. Conspicuous examples of success are its sorghum de-huller, which is one of the few Botswana products exported to South Africa, and its "appropriate" tannery process, which makes use of local resources.

Another activity of this organization is its village artisan training program. Since 1981, 400 rural artisans have attended training in one of four specialized fields - bakery, carpentry, tannery, and blacksmithing. A recent review by Cownie ("An Evaluation of the Village Artisan Training Program" 1987) of ex-trainees reveals that over half were still in production and the majority of these were full-time. Carpenters and bakers appeared to be the most successful groups.

In many cases, the training provided the crucial missing constraint. Carpenters, for example, were taught joinery skills to enable them to enter into the production of coffins for the local market. The programs designed for existing producers proved to be more successful than those designed for "novice" producers. In the bakery training program, an economic analysis by Haggblade (1982) revealed that the benefit-cost ratio of the program designed to teach existing bakers to make bread was 1.6, while that designed to teach those with no previous bakery experience was zero.

8. National Development Bank

The National Development Bank (NDB), a parastatal organization owned by the GOB was created in 1963 to provide credit for agricultural, commercial ventures. Although it now has twelve district offices in addition to its six original offices as well as a Small Business Fund, under which businesses can get loans at 10 percent for loans below P10,000, the Bank made only 16 small manufacturing loans in rural areas in 1984/85.

9. Commercial Banks

The three commercial banks do not appear to be actively involved at present in lending to small rural enterprises. No statistics are available, however, to determine accurately the level of their activity. Barclays Bank, however, did institute in 1976 an innovative Development Lending Scheme with 50 percent of the loan guaranteed by Barclays Development Fund. This Scheme dispensed over 50 loans of less than P3,000 each to small rural firms between 1976 and 1978 and achieved an excellent 90 percent repayment rate. This Scheme, however, has apparently not been actively continued.

10. Arable Land Development Program (ALDEP)

ALDEP, which began in 1977, has been designed to provide an integrated package of assistance designed to overcome the constraints faced by small scale arable crop farmers plowing less than 10 hectares and owning less than 40 cattle. One of the main components of this program is the provision of subsidized farm implements, fencing, water catchment tanks and draft animals.

The severity of the drought has made a rational assessment of its effect on agricultural output and employment impossible. Nevertheless, the resource transfer to and focus of attention on limited resource farmers, who make up the vast majority of rural households, has played an important role in helping sustain them in the rural areas during this drought period and in mitigating, to some degree, rural to urban migration.

The ALDEP program has also contributed to generating rural non-farm employment related to the supplying of agricultural inputs. Examples would include the water catchment tanks, the donkey harnesses and carts, the local production of agricultural inputs and the implement repair maintenance scheme.

11. Drought-Based Relief Program

The drought-based relief program, which began in 1980, also has contributed to maintaining employment opportunities in rural areas. There are currently four major components to the program:

The Human Relief Program;

The Labor Based Relief Program;

The Agricultural Relief Program; and

The Human Water Supplies Program.

Although all components have made some contribution to employment generation, Labor Based Relief has apparently had the greatest effect (see UNICEF/UNDP/WHO, A Socio-Economic Assessment of Drought Relief in Botswana). The component, introduced in 1982, was designed to promote short-term income earning opportunities for rural people by having them engage in

labor-intensive public works. In 1984 it was estimated that, with job rotation, 60,000 workers were employed at a daily wage of P2 per day, on projects ranging from road building, and well construction to dam construction. There does appear to have been a high propensity to invest on the part of the participants and some of these funds have been used to purchase artisan tools and equipment for small scale industries.

12. Relevant USAID Projects Having An Impact on Rural Employment.

a. Agricultural Technology Improvement Project

ATIP, which commenced in 1982, is designed to improve the capacity of the Ministry of Agriculture's research and extension programs to develop and extend farming systems recommendations relevant to the needs of small (limited resource) farmers. The three sub-objectives are to:

Improve the capacity of the GOB Department of Research to develop technologies for small farmer needs;

Improve the capacity of the extension service to transfer appropriate technologies and strengthen the linkage between research, extension, and farmers; and

Provide small farmers with relevant innovations in agricultural production technology and methods through field trials, demonstrations and farmer training.

The various evaluations of the project have been consistently positive. Not only have several important new insights been gained on improved practices and recommendations for small (limited resource) farmers in drought conditions - such as the usefulness of double plowing, and row planting - but a vital institution-building function has also been taking place - approximately 25 persons trained at B.S. and Masters level, 42 trained in short-term courses, and progress towards the integration of farming systems work into the Ministry of Agriculture. It is important to recognize that basic research and institution-building are by their very nature long-term exercises and that continued support of such activities is necessary if sustainable results are to be achieved. The Mission, however, is fortunate to be working with probably the best farming systems team in Africa and has wisely chosen to extend this project until 1990.

The rural employment generation effects of this project, however, are difficult to quantify precisely. The six year drought has made an assessment of the direct employment effects impossible. Many of the research findings - such as the efficacy of double plowing and the importance of donkey traction - will assist, however, the small (limited resource) farmers, who make up the bulk of rural households, in sustaining themselves in the rural areas during difficult times and will partially mitigate rural to urban migration. When good rainfalls return, increases in output and employment generated by these limited resource farmers, the primary target of ALDEP, should be forthcoming and enhanced by the lessons learned from ATIP. Finally, it should be noted that several

useful insights into the need for various types of locally-supplied inputs for small scale farmers, such as plow repair activities, donkey harnesses, and small carts, have been generated by this project. Indeed, research elsewhere indicates that strategies (such as ALDEP and ATIP) that emphasize small (limited resource) farmers generate more non-farm employment than those strategies that emphasize the larger scale farmers (see Kilby and Liedholm, 1986).

Two aspects of the project deserve some attention. First, even more attention should be directed towards improving the interaction between the on-farm research findings and:

The off-farm research groups;

The agricultural extension staff; and

Agricultural policy.

Much useful information is now being generated at the farm level that needs to be quickly disseminated and acted upon. One example may highlight the potential gain from such improved interaction. The finding that double plowing can be effective in achieving improved production is at odds with that component of the Accelerated Rainfed Arable Program (ARAP) that will subsidize farmers for only the single plowing of their land (up to 10 hectares). As an initial step, USAID and other donors should cooperate with the Ministry of Agriculture in sponsoring a two to three day seminar to discuss the question of the application of science and technology in improving agriculture in Botswana. Part of the seminar could be presentations on various programs and projects underway; it also could help to define what type of additional studies and programs are required.

Second, added attention should be given in the farming system research to the non-farm dimension of the household. Given the previously described complex interaction of activities in the rural household, failure to include these non-farm activities could result in the development of incorrect prescriptions.

D. PROJECT AND POLICY RECOMMENDATIONS

1. Project Design Implications

A review of the array of programs designed to assist rural small scale entrepreneurs in Botswana reveals that an unusually high number of projects have been successful. In most countries, such programs have typically met with failure, because small firms, particularly those in rural areas, are difficult targets to reach through project assistance. The firms are numerous, widely dispersed, and not easy to assist in a cost-effective manner.

What are the common characteristics of those schemes that proved to be successful in providing assistance to these firms in Botswana? Three general principles emerge.

First, the "successful" projects have typically uncovered a situation where there was only a single "missing ingredient" that needed to be supplied to the small rural firms. This might be a market link, a new skill, credit, a new technology or some other vital component needed to make the enterprise more economically viable. When the firm requires an integrated set of multiple ingredients to be economically viable, the project is more likely to end in failure. The Botswanacraft project, for example, provided the single missing

market link, while the Village Artisan Training programs for carpenters and the Palapye Brigades' water catchment training activity are examples of programs that were successful in providing a missing "training" ingredient. Correspondingly, a missing credit "ingredient" was provided by the apparently successful Barclays Development Lending Scheme.

An important corollary of the single missing ingredient is that schemes assisting existing firms are more likely to be successful that those that attempt to establish new firms. Existing firms are more likely to have fewer missing ingredients than new ones. The success of the village artisan bread baking training program working with women who were already producing "fat cakes" commercially reflects this principle. Another related corollary is that "industrial estate" programs will tend typically to be ineffective because too many missing ingredients - electricity, water, building, security and sometimes technical assistance - are being provided at high cost to small firms that may need only one or two of these services. The lack of success with the Factory Shell Program and with BEDU's industrial estates may be, in part, due to this factor.

A second general principle that emerges is that successful schemes tend to be industry and task specific. They were tailored to the needs of a particular product group rather to a general and disparate group of small producers. Some of the apparent success of various Brigade and village artisan training schemes, all of which were industry-specific (such as auto-repair or carpentry), reflect the principle.

A third principle is that before successful projects were launched, some prior surveys have been typically undertaken to assess the effective need for the proposed assistance intervention. Ideally, the starting point would be an intensive field reconnaissance in each of the major small rural enterprises activities to ascertain what the producers are doing, how the entire channel of related producers operate, and what constraints they face.

Although not undertaken to this degree, the surveys conducted by the RIO's in their districts were important in determining the types of and how many entrepreneurs should be sent for training. The success of many of the "appropriate technology" center innovations were traceable, in part, to the result of such studies. These three principles, which have been followed in several of the successful rural enterprise project interventions in Botswana, might usefully be taken into account when designing future projects in this area.

2. Targets of Opportunity

Many opportunities do exist for expanding productive employment and rural non-farm activities in Botswana. It should be stressed at the outset, however, that these opportunities are limited and the rural non-farm sector alone cannot solve Botswana's employment problem. The primary reason is that the typical driving force for rural non-farm activities, agricultural production, is not the dominant source of income for rural households in Botswana; the six-year drought has, of course, further reduced its contributions. The extraordinary competition that rural producers face from low

cost South African competitors additionally restrict the opportunities for an expansion of both farm and rural non-farm activities.

Nevertheless, an array of opportunities exists for increasing the contribution of nonfarm activities to the economy. These arise in the areas of the expansion and diversification of rural market opportunities, the provision of additional inputs, and in the policy arena.

3. Market Opportunities

With the expansion of rural incomes, the demand for many of the types of goods already produced by rural non-farm enterprises will continue to increase and provide scope for additional employment in these areas. Such activities as baking, carpentry, tanning, and cement blocks are examples of just some of the types of existing product lines currently yielding high returns that are likely to continue to be demanded by rural households. Construction activity should also continue to expand.

In addition, there are several currently unexploited opportunities. These are likely to be based on a natural advantage such as an available, low cost rural resource or a local, protected market "niche." A study commissioned by the GOB in 1984 on the prospects for the diversification of the small scale sector in Botswana, for example, identified 34 product lines that were thought to be currently economically viable (GOB, 1985). Not surprisingly, they fell into six broad categories: veld and forest products, wildlife products, horticulture and other crops, mineral products, livestock products, and "service and repair." The number of new jobs

created from the new activities was estimated to be 2412. Other repair activities directly serving agriculture, not included in the report, would also seem to be needed such as diesel engine and farm equipment repairing. There might also be scope for rural private firms to provide many of the livestock supplies, such as salt and mineral lick.

It is of paramount importance to note that the locus of much of this activity will shift to the emerging rural centers as Botswana's rural structural transformation proceeds. Evidence from other countries points to the dramatic increase in the importance of non-farm activities in larger rural towns and newly emerging "primary centers" (such as Kanye and Molepolole). Moving from the smallest rural settlement to the larger rural towns, commercial, service and repair employment densities (i.e number employed per unit of population) frequently increase by multiples of 5 and 10, while manufacturing densities more commonly grow by multiples of 2 or 3. It is important to disaggregate, however, because even within the sectors some activities fare better than others. Repair work, construction, service type activities, (such as barbering and laundering) and custom manufacturing activities (such as the production of high quality custom clothing) are typical examples of activities that grow particularly rapidly.

The largest of these emerging rural centers (such as Botswana's "primary centers"), with their growing concentrations of high income consumers and more highly skilled labor pools, can also serve as the focal points for the establishment of a new array of dynamic medium scale firms producing for the national market or even international

markets. Activities such as bicycle production, brick production, and specialized tanning activities - where scale economies are not large - are enterprise types that might be considered.

4. Input Delivery Opportunities

There would appear to be some opportunities for an expansion in the provision of several "missing" ingredients to facilitate an expansion of rural non-farm activities in Botswana. In the training areas, for example, there will be an increasing need for skill training in "growing areas" of manufacturing such as baking and carpentry, as well as emerging repair and service areas (such as auto, bicycle, radio, diesel engine and pump repair). There also appear to be too few RIO's in relation to the volume of potential clients particularly, and given the importance of reaching these far-flung rural entrepreneurs.

There also may be a need to consider developing a project that would be designed to deliver credit in a cost-effective way to small scale rural enterprises. Such a project would address a possible "market failure" in Botswana's existing financial market. Low-cost models, based on high volume, character-based lending, have been developed and successfully implemented in other parts of the world.

Finally, to support the development of dynamic medium-sized firms in the "primary centers", consideration might be given to the provision of "appropriately-designed" infrastructure facilities in these areas. Water and electricity would likely be important components of such facilities.

5. Policy Opportunities

There are several opportunities in the policy area that also might be considered to facilitate the growth of rural nonfarm activities. Mention has already been made of the overall policy distortions relating to the wage and exchange rates. Unlike most other countries in the world, however, the policy environment does not appear to be seriously distorted against small, rural firms. One key reason is that there are no trade or foreign exchange restrictions, which in most countries systematically favor the larger firms. Large firms also do not obtain subsidized capital. Thus, policy changes relating to removing distortions that are related to firm size do not appear to be required in Botswana.

Nevertheless, some suggestions in the policy areas might be considered. First, it is important to recognize that agricultural policies and programs have an important effect on the growth of rural non-farm activities. Even though agricultural crop production is relatively less important in Botswana than elsewhere in the world, this does not diminish the fact that what happens with respect to agricultural crop production does crucially affect the extent and nature of non-farm activity. Strategies that emphasize small farmers, for example, typically stimulate more non-agricultural employment via income and production linkage than those that focus on the larger commercial farmers. Correspondingly, decisions with respect to the effectiveness of various options in agriculture depend on the knowledge of rural non-farm activities. An important implication of these inter-relationships (and given the complexity of the rural

household) is that efforts to enhance even further the policy coordination between agriculture, commerce and industry, and other relevant ministries could be extremely fruitful.

Second, it is important that in the granting of licences for large-scale urban firms, careful consideration be given to the effects of those decisions on employment and income generation on the small scale rural firms. In some instances, it is possible that productive employment in economically viable small scale rural enterprises could be substantially reduced by granting licences to possibly less efficient, more capital-intensive large scale competitors. The negative effect of the decision to grant licenses to large scale chibuku beer producers on the income and employment opportunities of rural small scale (primarily female) sorghum beer producers has sometimes been cited in this regard (Haggblade, 1984).

Third, given the paucity of data on rural non-farm activities, policy decisions, of necessity, must be made "unencumbered by information". Serious consideration might thus be given to undertaking a comprehensive survey of these activities in Botswana to ameliorate this deficiency.

6. Recommendations for USAID Related Projects

The RSG, ATIP and BWAST projects have all contributed to generating rural employment by alleviating some key constraints. Given existing funding levels, the following recommendations are suggestions for further enhancing the contribution of these projects :

a. Consider continuing support of the training of the Rural Industrial Officers. This becomes particularly important if the qualification levels for some of the RIOs are lowered from the degree to diploma levels. A specialist might be brought in under BWAST auspices to find an institutional base for a short training course designed for RIO's in Botswana. BWAST funds could also be used to support the RIO's in-country training for this or other approved courses. One or two senior RIO's could also be sent abroad, supported by BWAST, to one of the three to six month small enterprise short courses, such as that offered by Cranfield College in the U.K..

b. Consider funding for two years an additional RIO, who would be specifically assigned to work with the ATIP project in the six villages where the farming system research is being conducted. The person should be at least a degree holder (possibly a Peace Corps volunteer or an expatriate with post-degree qualifications funded by BWAST), who would add the non-farm dimension to the research and information dissemination activities of the farming system research group by working jointly with it. This would also be a tangible way to strengthen the links between the Ministries of Agriculture and Commerce and Industry.

c. Consider funding a policy analysis position in the Ministry of Commerce and Industry or the Ministry of Finance and Development Planning. The person would likely be an expatriate with a Ph.D. in Economics or Agricultural Economics with previous policy experience who would work in close collaboration with a Ministry counterpart. The person in this position would be responsible for collecting and analyzing data and formulating policy in the area of rural nonfarm employment. Data collection activities might be funded within the auspices of this position. Individuals in such positions can, with the stroke of the pen, have more influence on generating rural non-farm employment than any single project intervention. USAID/Rwanda has funded such a position.

d. Expand the support of rural artisan training, particularly in those areas mentioned previously where the demand prospects are favorable. BWAST might increase its activities in these areas upon completion of the RSG.

e. Provide support for masters training for all 37 of the District Officers who were originally scheduled to be trained under the District Institutional Grant. Perhaps BWAST could be the funding mechanism.

f. Take a close look at private sector rural investment opportunities, especially those with links to agriculture, in the up-coming "USAID Private Sector Study".

g. Sponsor a two-to-three-day seminar to discuss the question of the application of science and technology in improving agriculture in Botswana. Part of the seminar could be presentations on various programs and projects underway; it could also help to define what type of additional studies and programs are required.

If additional sources of funding were to become available (such as from PL 480 programs), one new project has the potential to contribute importantly to rural employment generation in Botswana. The Mission might consider establishing a small rural enterprise lending scheme. This could be patterned after the successful models, several of which have been developed by AID, designed to provide funds in a cost-effective way to the smallest firms. The characteristics of these successful schemes include: the provision of working capital for short periods (e.g. three to nine 9 months) with new loans conditioned on repayment of existing loans, character-based quick screening of clients by local institutions or individuals, and interest rates charged that reflect the cost of capital (see Liedholm and Mead, 1987, for details). Whether or not such a scheme would be viable in Botswana and its possible magnitude would have to be determined by a pre-feasibility study. One of the key questions to be

answered before proceeding would be the identification of whether or not a viable institution, even informal, exists within Botswana upon which to build such a program. One possible model to consider would be the micro-enterprise support foundation proposed in Chapter V of this report.

V. EMPLOYMENT GENERATION IN THE FORMAL AND URBAN INFORMAL SECTORS

A. THE PROBLEM

1. Employment Gap and Its Implications for Formal Sector

GOB projections (reported in the Daily News, June 9, 1987, p. 1) for 1986-2000 indicate that employment growth in the formal sector will slow to 6% per year, well below the 10% p.a. 1976-85 growth but still very high compared to other countries. This growth will create about 8000 jobs per year (ignoring exponential effects in the short run). On the other hand, the 1986-91 estimate for labor-force growth is 12,000 workers per year, rising to 17,000 in the 1990's.

The initial gap between new jobs and new entrants to the labor force is thus 4000 jobs, quickly rising to 9000 jobs per year. However, possible reductions in South African mining opportunities and accelerated migration from traditional agriculture to urban areas point to the gap's being understated. In addition, there is a need to address the existing 25% unemployment rate.

Even if we consider only the short-term (4000 jobs p.a.) gap and expect expansion of the formal private (non-parastatal) sector to fill it, these 68,400 jobs must grow by 6 percentage points more than GOB-projected increases (presumably 6%), or a total of 12% per year. The above sector grew by 9% in 1985-86. This is considered a good year, particularly considering that real value added in the manufacturing sector has fallen slightly over the last four years (see Chapter I).

If we target employment growth in the rural non-farm and urban subsectors of the informal sector, in addition to that of the formal private sector, as part of the solution, then the combined subsectors (total 1985-86 employment 112,100) would have to grow by four percentage points more than normally expected. This is still aggressive, but it is hard to judge feasibility more accurately because of the lack of year-to-year historical growth figures and major uncertainties about the present size and future prospects of the non-farm informal sector.

2. Unusual Characteristics of Botswana Regarding Employment-generation Efforts

An obvious strategy for examining in more detail employment possibilities in the urban formal and informal sectors, as the following sections attempt to do, is to consider what has been done in other developing countries. However, Botswana has some unusual characteristics which the policy and project planner must take into account.

- Mobility of labor among employment subsectors

Batswana customs, family structure, easy access to South Africa and - perhaps most important, lack of sufficient opportunity in any one sector - encourage unusual flow between employment options such as agricultural, emigrant labor, rural non-farm, urban informal, rural formal and (probably to a lesser extent) urban formal. Many may work during the course of a year in two or more subsectors. Further, there is a parallel mobility of income, with the traditional family structure's facilitating such flows and actual work-sharing. As mentioned above, the

emigrant-labor option may well diminish in the future. One consequence of this mobility (or at least job-seekers' perception of its feasibility) is the reported hesitation of unemployed lower-secondary school leavers to take jobs in the informal sector, where wages are lower, working conditions rougher and promotion prospects poorer than in the urban formal sector. In many other countries such job seekers realize that they have little hope of formal-sector employment, so they make a go of it in the informal sector, particularly in the urban subsector.

Uncertainty in the employment climate

With 45% of total employment in traditional agriculture, which is almost entirely dependent upon rainfall, Botswana's highly variable and only slightly predictable weather produces two results. First, it makes the prospects of non-agricultural employment attractive, increasing urban migration. Second, even for those content to remain primarily farmers, it makes part-time rural non-farm employment necessary.

Diamond price and exchange-rate fluctuations, plus the possibility of regional uncertainty, limit the GOB's ability to reduce the uncertain climate through employment-creation schemes which require long-term budget commitments. The April 1987 IMF Staff Report indicates that foreign reserves could fall by 1991 to about one-third of those otherwise indicated if a diamond-price scenario similar to that of the early '80's were to repeat itself. Even greater problems would occur in the case of temporary or permanent closing of transport routes. Estimates exist which show that in any of these cases reserves would quickly be depleted. These estimates do not count less

quantifiable effects such as the return of miners, import cutoffs, and the loss of productive expatriates.

In comparison to many other developing countries, Botswana has had few years under present conditions, which are so different from those less than 20 years ago. This makes it difficult for planners, and, more important, families, employers and particularly students to perceive a clear picture of future prospects - positive or negative - and the options that will be open to them.

As stated above the great uncertainty about the strength of the informal sector is important not only in estimating the severity of the employment gap but also in determining the actual shortage of skilled manpower. The structure of informal businesses allows them to succeed without such manpower and under much harsher or uncertain economic conditions than is the case for formal-sector businesses (but with a social cost of lower labor productivity, earnings and other employment benefits). If it is true that the non-farm informal sector is as small as Chapter IV indicates, then Botswana's employment growth depends much more on formal-sector strengthening than is the case in many other countries. Consequently, the need for skilled manpower is particularly acute.

B. THE EMPLOYMENT-CREATION PROCESS

This section puts employment-generation into the firm's perspective. Government planners and managers should at least occasionally look at the process this way because private-sector employment creation has a high priority for Botswana but a low one for most firms.

In an interview with the Financial Times (September 25, 1986), President Masire responded to the question of what is Botswana's main challenge over the next five or ten years, as follows:

> "Industrialisation. In the past we marketed our labour in South Africa. Now we cannot: first because South Africa is drawing labour from the Bantustans; second, because our people find it difficult to transfer from a democratic society to South Africa.
>
> "In the next eight years we have 27,000 entrants annually [This is considerably higher than the 12,000 GOB estimate cited in the Daily News, June 9, 1987, p. 1] coming into the the labour force, so we would like to develop industries, as well as develop agriculture to meet our food requirements.
>
> "As for drought, it is difficult to plan, as its effects vary from region to region. But we keep funds in reserve which we call on when needed. External aggression, drought and unemployment have been the most serious of our problems. Our future stability and economic development will depend on our success in handling these problems."

A firm is in business to make money. It usually wants to regulate its affairs in such a way that it will continue to make money in the future, a process which often involves balancing the possibilities of making the highest possible profits today against those of making more money in the future. Naturally, the more uncertain the future is, the less enthusiastic will be the firm to make investments today in the

inputs which it converts to goods and services, such as plant and equipment, working capital, skilled manpower and more employees.

Looking more particularly at the decision to hire employees, uncertainty not only inhibits hiring, especially if the costs of hiring or training are high, but also the impression that substituting automatic equipment for labor will result in more consistent quality and certainly less personnel headaches. This may be particularly acute in the case of foreign-owned subsidiaries or joint ventures, where expatriate management may question the degree of local experience or may want to duplicate the production methods, use of parts or exact qualities of products resulting from the much larger operations "back home."

Thus the firm - particularly if it is big, foreign and operating in a highly uncertain environment - may often take strong measures to minimize employment, perhaps despite efforts which outsiders such as government may take to encourage it to hire more.

C. SOME CHARACTERISTICS OF FORMAL- AND URBAN INFORMAL SECTOR ORGANIZATIONS, ESPECIALLY THEIR USE OF SKILLED MANPOWER AND POTENTIAL FOR PRODUCTIVE EMPLOYMENT CREATION

The remarks in this and the following sections will be very brief because USAID plans a follow-on private-sector study which will examine the points discussed below in much more detail.

1. Private formal-sector firms and NGO's

Manufacturing, commercial, service and formal-sector agricultural firms, as well as non-profit but privately-controlled organizations, fall into this category. There appear to very few large ones, and these are predominately foreign controlled or joint ventures, as the following table shows:

TABLE 1

FIRMS EMPLOYING MORE THAN TEN PEOPLE

CATEGORY	1980	1984	% CHANGE
Locally Owned	10	32	320
Foreign Owned	45	122	171
Joint Ventures	26	55	112
Total	81	209	158

Source: Dimpex Associates, A Review of Private Enterprise Project Opportunities in Botswana, 1985.

Thus, 85% of larger firms in 1984 had at least some foreign participation, down from 88% in 1980.

No information has been found yet on the total number of firms by number of employees, but it is likely from experience elsewhere that the vast majority have around five employees. If the average were six, then the 68,400 ("1986 Employment Surveys, Preliminary Results, June 1987", figures for September 1986) private formal-sector employees would represent 11,400 firms, and, excluding the above 209 firms, there would be 11,200 firms in the 5-9 employee category. A hypothesis. which the upcoming study should help to confirm, is that these smaller firms are likely targets for improving the job-creation environment.

The "1986 Employment Surveys" shows that commercial, construction and manufacturing firms generate 59% of total non-government formal-sector employment, so it is especially important to look more deeply into the employment-generating process in these fields.

2. Parastatals

Some major parastatals are Air Botswana, Botswana Agricultural Marketing Board, Botswana Building Society, Botswana Development Corporation, Botswana Housing Corporation, Botswana Meat Commission, Botswana Power Corporation, Botswana Telecommunications Corporation, Financial Services Company of Botswana, and the Water Utilities Corporation. Taken together, they provide only 3% of the country's total 367,900 employment and 8% of formal sector jobs, but in 1985-86 employment in this subsector rose by 17%.

On the assumption that GOB is in the business of stimulating employment rather than providing it, the upcoming study will not discuss public-sector employment opportunities. However, in the upcoming private sector study, it warrants looking into two issues relating to parastatals. First, it appears that the GOB subsidizes loans to parastatals. This does not seem to be consistent with the main, private-sector thrust of GOB policy. Second, there may be some opportunities to improve operating results or indirectly promote private enterprise by privatizing one or more parastatals.

3. Government

For the reason mentioned above, government (as an employer) is not a focus of this or the forthcoming study. The education subsector provided 9% of formal-sector jobs but only 4% of total employment, growing by 9% in 1985-86. However, other chapters of this report indicate that education employment will grow much more rapidly over the next few years and will absorb much more scarce, skilled manpower.

4. Urban Micro-enterprises

As mentioned above, little data exist on this subsector despite its importance in employment creation. In other countries it often accounts for the majority of urban employment and is a particularly important employer of young, uneducated people who migrate to the city. It usually provides secure employment for the entrepreneur, with earnings well above the poverty line, and for several family members. Relative to larger firms, urban micro-enterprises (informal-sector firms) do not suffer so much from uncertain economic conditions and, perhaps most important, can create employment at about one-tenth the investment of larger firms. They use labor-intensive production methods for many reasons, mainly lack of long-term capital, lack of skills, and desire to maintain flexibility because of uncertain market conditions. Hence, when applied in this sector, a given amount of capital can often generate ten times the number of jobs as in the formal sector.

D. CONSTRAINTS TO EMPLOYMENT GENERATION

Before mentioning specific constraints, some general comments may be useful. First, from a firm's viewpoint,

constraints on business success (more profits over time) may be different from those on employment increases. For example, the lack of long-term debt and equity may inhibit capital investment but may actually encourage employment as a substitute for such investment. Similarly, an uncertain economic or political outlook may encourage fast in-out commercial operations, which are not very employment-intensive. Second, although the discussion below is based on some recent studies (e.g. see Dimpex Associates, op. cit., and ILO/SAPTEP, The Development of Small Scale Industries in Botswana), allowing a tentative listing based on descending severity, the planned private-sector study will give a much clearer picture of what constraints are important for specific industry segments.

1. South African competition

Because of the Southern Africa Customs Union and long relations with South Africa, no major barriers of distance, cost or taste protect Batswana producers from South African competition. In addition, the distribution system is very efficient. Customers even in the larger villages can buy at modern chain stores, while those farther out can order by mail from catalogs.

2. Market size and access

a. Internal

Only about 150,000 people are working in the national cash economy (Dimpex Associates, op. cit.). This is equivalent in size to a small city in a developed country, except that rather than living within about a 20-kilometer radius, in

Botswana's case most customers are strung along a strip several hundred kilometers long. On the positive side, however, experience elsewhere and reports here of use of South African mail-order catalogs indicate that the bulk of the population, supposedly not in the cash economy, actually do occasionally purchase things. An intelligent marketer will identify these few goods, develop an efficient distribution system and then have access to a much larger market.

b. Regional

In theory Botswana has access to the 30 million person SACU market. However, anecdotal evidence from Swaziland and Botswana indicates that at this time it is very hard to crack the efficient South African distribution systems. There is also some access to the smaller Southern African Development Coordination Conference (SADCC) market, so far mostly an unfulfilled dream.

c. Overseas

Evidence of Botswana's access to the European Community market through the Lome Convention is the cattle industry, which sells to the European Community (EC) at four times the world market price. However, the same industry's problems with hoof and mouth disease indicate how non-tariff barriers, which EC members have set up partly to protect their internal industries from other members' producers, might block export prospects for non-beef products. Further, the uncertainty (there is always the possibility of health and other non-tariff barriers) and cost of having to use South African seaports discourages exporting. Finally, growing protectionist sentiment in the USA and Europe (aimed against other developed countries but often affecting all) is a concern.

3. High formal-sector wages

Anecdotal evidence indicates that informal-sector businesses may not always pay the approximately P0.60 per hour minimum wage, equivalent to about $3.00 per day. However, formal-sector firms must honor the minimum wage and, in trying to enter export markets or compete with imports, must compete with RSA Bantustan very generous relocation incentives and with operations in locations more convenient to major markets, such as Haiti, which has similar wages.

4. Lack of skilled management and advice

Chapter II gave evidence of the extent of this problem.

5. Lack of informal-sector credit

A rural-industries study (reported in ILO/SAPTEP, op. cit.) indicated that 30% of small-scale industrialists were constrained by lack of capital. The FAP may, paradoxically, inhibit the growth of more agile but expensive credit sources. Experience in other countries indicates that informal-sector and small formal-sector entrepreneurs can benefit greatly from simple, rapidly-approved (one day to one week) working-capital credit, even if it is priced near their average internal rate of return. Further study is necessary to see if this is indeed the case in Botswana.

6. Local practices and attitudes

As discussed in Chapter II, Botswana's population remains 75% rural despite extremely difficult conditions for agriculture, an evident lack of rural non-farm employment opportunities and long-term contact with a modern, urbanized neighbor to the south

(and, to a lesser extent, Zimbabwe). This is powerful evidence, on the positive side, of the continued attraction of the pastoral life. But, on the negative side, it indicates major economic and political impediments, cultural and historical factors, as well as possibly an idealized conception of the pastoral scene - all of which mitigate against making a go of it in the modern private sector.

7. Government policies

The GOB foreign investment-approval process, reportedly can take four to six months. This will be looked at more fully in the follow-up private-sector study. Further, the IMF report cited above indicates that the GOB is considering tax increases (accompanying decreases in the top marginal personal tax brackets do not eliminate the problem for incorporated businesses even though such decreases may make the measures revenue neutral for Government and, indeed, give unincorporated businesses a competitive advantage) and reducing tax concessions. However, on balance and upon first examination, such GOB policies appear to be minor constraints to employment creation, while others, which section F discusses, have helped to create it.

E. OPPORTUNITIES TO INCREASE EMPLOYMENT

Repeating the statement made in the last section, the upcoming private-sector study will attempt to go into much more detail on this subject. The objective of the present section is to support section G's recommendations by indicating issues or possibilities that arise in the search for employment-expanding opportunities.

1. General characteristics and principles

An opportunity search, whether conducted by the GOB, donor organizations or private-sector players - as well as supporting policies or projects - should focus on opportunities with some of the following characteristics:

a. Labor-intensive

The very nature of the opportunity should be labor intensive, such as sorting cashew nuts or semi-precious gemstones, where the major value added is the discrimination of the sorter and where technology does not exist to automate the process. Alternatively, the opportunity should be one in which firms constrained to be labor intensive, such as informal-sector ones, have a competitive advantage.

b. Based on existing successful industries, skills or markets

It is uneconomical and unlikely to expect that a small country will come up with types of opportunities unknown in the rest of the world. More likely, a successful opportunity will "piggyback on," that is, represent a small percentage addition but large absolute increase, to an already-successful activity. New cattle-industry by-products, for example, extraction of small gland parts for the international pharmaceutical or cosmetic industries, might be too small an activity to interest the Botswana Meat Commission (BMC) but might allow a smaller firm with different international connections to provide a significant number of jobs.

c. Private sector will be motivated to scale up with only initial support

As stated above, the GOB does not want to make long-term commitments to subsidizing particular companies or projects. Most donor organizations would probably have similar feelings. Therefore, activities whose long-term viability depends upon permanent explicit subsidies or, worse, implicit taxes such as import protection, are flawed. On the other hand, help in surmounting an initial difficulty, such as selecting a foreign partner, may be feasible.

A major issue is wage rates - specifically, whether the GOB should continue to set relatively high ones, how long it should subsidize them through FAP, whether the minimum wage should apply in the informal sector and what the wage policy should be for formal or informal apprenticeship schemes. This report makes recommendations on these matters elsewhere. However, at this point it bears saying that a major side effect of this issue for potential investors is to raise uncertainty over future costs and, therefore, profits. A natural reaction is to opt for no investment at all, or at best a capital- rather than labor-intensive one, especially if the capital equipment can be easily removed or if it belongs to the investor now and has little alternate value to him.

d. Consistent with national cultural characteristics and national aspirations

A fashion-oriented crafts project (applying traditional Botswana motifs to items which must be produced in a labor-intensive way anywhere, developed-country consumers are

willing to pay luxury prices for and which have a quickly enough changing fashion to discourage copying by lower-cost countries) may be consistent with past and present national qualities. Identifying products and businesses which are likely to be commercial successes but also enhance (and take their strength from) national qualities of the future should have high priority.

e. "Missing ingredients" are readily available at reasonable cost and quality

For example, considering Botswana's skilled manpower and management shortage, execution of selected opportunities should not depend on large numbers of skilled managers. On the other hand, for example, a teleport opportunity (in which an already-available and distance-insensitive satellite link allows a U.S. airline reservation system to use English-fluent, low-cost Batswana during hours in which it would have to pay Americans night-shift differentials) requires little more than readily-available telecommunications equipment and a knowledgeable offshore partner.

f. Has been successful in similar countries and situations

The above teleport example has already started in Jamaica.

g. Flexible enough to perform well even under pessimistic economic/political scenarios

The best opportunities, for example, should not require access to or inputs from South Africa. The teleport, gemstone sorting or cattle small-gland extraction are examples of such activities.

2. By industry

Applying the above principle of "leading with your strength" would indicate emphasis on opportunities in industries such as minerals, meat, semi-desert crops and tourism. However, it is important to note that a number of examinations (e.g. Financial Times Survey, September 25, 1986; African Business, September 1986; Dimpex Associates, op. cit.; Economic Consultancies, Prospects for Diversification of the Small Scale Enterprise Sector in Botswana, 1985) have turned up few potential large-scale employment opportunities. For example, the national cattle herd is near its limit and 60% of tourists are South African weekenders. It is unlikely, therefore, that one more study will reveal any extraordinary opportunities. It is possible, however, that improved opportunity-seeking methods, facilitating GOB's and donors' efforts - but, most important, those of industry participants themselves - will begin a process of continuous scanning. This would turn the opportunity-seeking process from a batch to a continuous process.

3. By market

Generally speaking, the more local the market the less scarce management and other skills are needed. This implies

that the process mentioned above should not neglect such areas as the above mentioned Batswana who are primarily in the non-cash economy but are occasional consumers. Countertrade possibilities with SADCC states are also a possibility worth investigating. In these areas, looking at opportunities for service industries is important because they are somewhat more shielded from South African and overseas competition than is manufacturing. In the overseas area, it is important to remember that very few foreign firms know anything at all about Botswana and would not be interested in finding out unless they were presented with specific, quantified, exclusive profit opportunities in their present business areas. Special overseas market opportunities may occur in industries where country-by-country quotas apply. For example, Burma has just started to benefit from the US garment physical-quantity quota system. Hong Kong is shifting to higher-value clothing to maximize the value from its allocation, so producers there are helping the Burmese (if they buy Hong Kong clothing materials) to penetrate the US low-value segment.

4. By subsector

Opportunities for the urban informal and formal private subsectors are likely to be quite different; both merit attention. In the employment-generation field, Botswana probably cannot afford the luxury of concentrating on "point-with-pride" large-scale projects or even rural-based ones. Instead, it should attempt to generate opportunities in all areas of the private sector. Further, it should use all available vehicles - for example, setting a favorable policy

environment, encouraging expansion of existing firms in present and new business areas, supporting efforts of NGO's such as BEF to play roles in opportunity searches, as well as undertaking specific GOB- or donor-sponsored searches.

F. ASSESSMENT OF SOME PRESENT POLICIES, PROGRAMS AND ACTIVITIES

This section is concerned only with matters which have substantial impact on the urban/rural formal and urban informal subsectors. Further, it attempts only to provide a context for the recommendations and options in the next section, not yet another evaluation of projects and policies which mostly have already been thoroughly analyzed. Finally, it concentrates on the employment impact of these matters; more important impacts may occur outside of the employment field.

1. Non-USAID

What is most praiseworthy about GOB's impact on employment is its self-restraint. Rather than compromise itself by running onto the employment-creation field and joining in the play, it has generally concentrated on its roles as coach and referee.

The results of specific attempts to create employment are shown in the following table (compiled from ILO/SAPTEP, op. cit.):

TABLE 2

EMPLOYMENT IMPACT OF SOME G.O.B. PROJECTS

PROJECT	YEARS	JOBS CREATED
Brigades	1976-83	6951*
FAP	1982-86	1560
BEDU	1974-84	915
Factory Shell	1976-81	19
Total		9445

Source: ILO/SAPTEP, op. cit.

*This comprises Brigades trainees now employed, so it begs the question of how many would have found work without such training.

The above figures cover the whole country, not just the employment subsectors with which this section is concerned; are extremely tentative because they do not consider whether the employees would have found jobs (either in the aided firm or not) anyway; may involve double counting in cases where two or more of the above organizations aided a firm; and do not cover jobs which other GOB interventions may have created (see below).

Information on the employment-creation performance of other GOB institutions is even more scanty.

a. National Development Bank (NDB)

Conversations indicate major questions about the performance of this bank's portfolio. That question aside, a rough idea of NDB's urban job-creation performance comes from dividing its 1984-85 loan approvals for the three urban areas shown (Gaborone, Francistown and Selibe/Phikwe) by a hypothetical average P5000 per job created. The result is 934 jobs.

b. Financial Services Company of Botswana

NDB and the Botswana Development Corporation jointly own this industrial leasing company. Information is not yet available on its job-creation performance.

c. Tswelelo (Pty.) Ltd.

BDC, NDB and the Netherlands Development Finance Company own this small-scale enterprise lending and consulting company. Information is not yet available on its job-creation performance.

2. USAID

The direct employment-generation impact of the Rural Sector Grant and ATIP is discussed in Chapter IV. Besides the direct generation of teaching employment (discussed in Chapter VI), the PEIP and JSEIP attack a key employment problem well-described as follows:

> "A number of studies of the private sector suggest that the problem of small-scale, private-sector business is not so much a lack of specific skills, but rather an orientation toward business which places it as a subsidiary activity to cattle raising. Over and again the problem of management arises, whether one examines marketing, procurement, advertising and sales, personnel or accounts. The issue of motivation and general orientation to private business appears to be fundamental. This suggests a more comprehensive and culturally sensitive policy and program than something like management skills training or improving credit

> facilities. It suggests the need for the promotion of the concept of the entrepreneur using media, the formal education system, the vocational training centres and the extensive adult education system." (Hartwell, "Junior Secondary Education Project - USAID/Botswana Strategy Evaluation", May 1987)

PEIP and JSEIP have so far concentrated mostly on setting up systems within the educational establishment to help accomplish the above. Further their effects on employment will always be indirect. However unmeasurable they may be, they are fundamental.

Chapter VIII discusses the problem of freeing up private-sector entrepreneurs and employees for training. This problem is of course not unique to Botswana. Since a major part of the answer appears to be evening education and short-term (a few hours to five days) seminars, those parts of BWAST catering to these needs are most relevant to the present review.

BWAST I efforts largely centered on training public-sector officers who make decisions influencing private-sector operations, including employment generation. These efforts surely have had important but unquantifiable employment-generation effects. However, a more direct impact will come from BWAST II which is more heavily weighted toward the private-sector. Of specific interest are efforts to train a BEF officer in setting up self-liquidating short-term seminars; a handicraft expert who will tie the industry into efforts to find new product/market combinations and to build tourism; and, perhaps most important, to finance directly 15 person-months of short-term trainers for the private sector.

It is too early to say how well the system of using the BEF to nominate private-sector longer-term trainees will work. Two criticisms are that BEF appears to be over-relying on GOB long-term manpower-planning figures to apportion its nominees among specialties (resulting in a large number of accountants) and may not reach the smaller, more labor-intensive firms for in-country training. Chapter VI makes the point that the planning figures are very questionable, so perhaps BEF needs some more guidance.

G. POLICY AND PROJECT RECOMMENDATIONS FOR EMPLOYMENT GENERATION

The following recommendations are really hypotheses which the later private-sector study will attempt to confirm and expand.

1. Self-help

Very likely the activities with greatest promise of increasing employment and reducing the skilled-manpower shortage are those which individual firms and NGO's will undertake. During the private-sector study meetings with such firms and organizations will be conducted; one issue will be whether the GOB or donors should stop doing things which are now discouraging private-sector employment generation or the efficient use of skilled manpower.

2. Donors

a. Provide advisors to help establish or strengthen key NGO's and to increase the emphasis in schools on entrepreneurship

Current projects (such as BWAST, PEIP and JSEIP in USAID's case) provide the orientation, framework and funds to execute this recommendation. What is needed is no more than direction and coordination between projects. More specifically, experience elsewhere supports the GOB's wisdom in its requesting aid to orient projects more towards the private sector. In this sector, donors should work through NGO's, e.g., BEF, specific industry associations, a non-traditional exporters' association, 4-H clubs and foreign or ethnic chambers of commerce. Efforts are needed to assist entrepreneurs to plan and execute employment-generating investments, obtain training from existing sources for themselves and employees and to support entrepreneurial awareness in schools. For example, PEIP and JSEIP might be vehicles at the primary and junior secondary levels. NGO's might work directly with the Ministry of Education or individual schools to arrange for plant tours and talks by successful entrepreneurs, vacation-time or co-op work schemes and donations of teaching material from specific industries.

b. Support a profit-seeking collaborative-venture brokering service

The services of such a brokering service include preparing business plans for local entrepreneurs, seeking local or foreign business contacts, handling preliminary negotiations

and assisting in such implementation steps as government registration. In the longer term such a firm might serve foreign clients which want to make local contacts, move into venture capital, or put its own deals together. Such a brokering service normally takes an up-front fee from its client and and, upon consummation, a percent of the value of the deal. The BDC reportedly sees itself as playing such roles. Thus, especially given Botswana's small economy, the firm would probably always act in sindication with BDC. AID's Science & Technology Bureau is supporting such efforts in a number of countries. Therefore, USAID's contribution to such a scheme is expertise which BWAST (plus perhaps some S&T money) could finance. Scandanavia House experience in promoting such collaborative ventures is relevant; the upcoming private-sector study will look at this.

c. Support the establishment of a profit-seeking job placement and executive-search firm

As Chapter VIII points out, there are already some 125 technical-training sources with about 500 courses. Further, as mentioned in Chapter IX, firms pay a large premium for employing expatriate management and experts. A donor might consider supporting a local entrepreneur and providing expert assistance (USAID could do this through BWAST) to play a brokering role between training resources and employer desire to reduce costs. Once the broker received a search assignment, it would first try to locate a Motswana who was fully qualified now. It is likely that to produce the needed candidate, the broker would have to locate a partly-qualified person, then put

him or her through one or more training courses. Familiarity with such courses, the ability to advance the candidate enough funds to support himself while taking the courses and standard executive-search skills such as position specification and organizational counseling would give the broker its competitive advantage.

d. Urban micro-enterprise support foundation

It is quite possible that existing organizations now adequately serve the urban informal (micro-enterprise) subsector. Further, it may be that the performance of organizations such as BEDU indicates weaknesses in urban micro-enterprises which only costly, long-term interventions can address. On the other hand, in many similar countries, NGO's playing a modified money-lender's role have greatly stimulated informal-sector employment by targeting existing micro-enterprises whose only problem is the lack of small amounts of working-capital credit. USAID has much experience with such a model. Its role might be to finance a brief study to see if such credit is needed, such clients exist in sufficient numbers and local supporters would like to set up such a foundation. Other issues are whether operations can be in both urban and rural areas, as well as whether such a foundation could provide GOB with an opportunity to privatize some of its informal-sector support activities. Upon establishment, USAID or other donors might finance the foundation's first two years' expenses.

e. Support policy discussions based on private-sector motivation studies

To improve the GOB's very good track record on policy decisions which affect employment generation, a donor might support (after determining that such information definitely is not available) two related studies. The first one would investigate (using focus groups to generate hypotheses, then testing these with statistically-significant surveys) the processes which local firms follow in making their decisions to add more employees and to use scarce skilled manpower. The surveys would be designed to allow a rough estimate of the employment effect of any existing or proposed GOB policies which entered into these decision processes. The second type of study would be smaller scale, with the same objectives as the first but concentrating on proposed new employment-generating business projects. Raw material would be structured interviews with entrepreneurs whose projects were not or are not yet realized.

3. Government of Botswana

a. Improve consistency of subsector definitions and consider revising regulations which stifle the informal sector.

More exact and consistent definitions are necessary for GOB policies and projects. For example, the decision to use only self-employment and domestic service figures for the informal-sector part of national manpower planning is likely to understate the size and importance of this sector. In many similar countries the urban and rural

informal sectors support each other. For example, urban vegetable sellers buy and sell in small quantities, allowing newly-established vegetable growers to enter the market with quantities which would not interest a supermarket. Urban micro-enterprises provide agricultural implements and rural consumer goods, many made with scrap materials, selling to many people who would otherwise not be able to afford such goods at all. Upon first impression, at least, this link seems to be weaker in Botswana than elsewhere. Surely, competition from South Africa is a major reason, but GOB or town regulations (e.g. overly strict regulation of farmers' markets in towns) may play a role. Changing such regulations warrants study.

b. Investigate strengthening of a one-stop government-paperwork shop.

Stories are common in countries throughout the world of large and small businesses which would like to expand and are willing to comply with government regulations but are frustrated with paperwork. On first impression, such problems are not so serious here, but evidently they do exist (e.g. Dimpex Associates, op. cit., reports four to six month delays for foreign-investment approvals). There are interesting arguments against such one-stop shops, for instance, that they invite even higher bureaucratic walls between the offending agencies and the public and that they represent a dangerous concentration of power. However, GOB might engage a disinterested third party to investigate the need for and operation of such a facility.

c. Investigate the desirability of GOB's trying to second-guess the market in granting FAP grants and industrial licences.

In a small market such as Botswana's there is a legitimate concern that scarce resources will be wasted when entrepreneurs set up too many competing facilities and all fail, whereas one or two might have succeeded if government had limited their competition. On the other hand, even if government employees who make such decisions knew more about the industries concerned than did the entrepreneurs (which is unlikely), smart entrepreneurs would play the regulations to suit themselves by, for example, applying for the broadest possible industrial licences. Further, in Botswana major competition usually comes from South Africa, so the rationale for limiting two local firms' competition is elusive. GOB should set up a private-sector advisory task force to address this issue and in the meantime should concentrate on helping applicants to judge potential competition for themselves.

d. Expand FAP coverage to services and certain types of commerce.

It is unclear why a service or commercial business should always be less productive than a manufacturing one. For example, is a "manufacturer" which imports drums of cooking oil and repackages in imported consumer-size bottles more or less productive than an up-country retailer which dispenses the same product into customers' own containers? It appears that FAP regulations are complicated enough without such questionable distinctions. GOB should investigate simplifying regulations,

tying more benefits to employment-generation and extending the period of assistance, perhaps using prime-rate loans rather than grants during later years.

VI. THE ROLE OF MANPOWER PLANNING

Unlike the industrialized nations, much of whose development can be historically described, development in Botswana lies mainly in its future. In this situation, the task of creating productive income-earning opportunities is relatively unfettered by past commitments to established, if not outmoded, technologies, industries, and patterns of trade. Opportunities are more open, but that also implies that projections of the nature of future development, the directions of future diversification in the private sector, and manpower requirements to facilitate future growth are subject to greater uncertainty.

In terms of stimulating private sector expansion and diversification, that uncertainty places a premium on establishing a policy framework and a system of incentives that will automatically encourage and support private sector initiatives wherever they may arise, as opposed to identifying specific opportunities and tailoring support programs to each perceived need. The importance of general policies and incentives may well be enhanced as the rates of growth of mining and meat packing decline and a greater share of the responsibility for development shifts to other business sectors where opportunities are less well known. Similarly, in seeking to meet future manpower needs, uncertainty about the future patterns of development suggests that education and training systems should retain a high degree of flexibility so that they and the manpower they produce, can respond quickly to unanticipated needs that are certain to arise. Manpower

projections should assist in promoting that flexibility by indicating both likely manpower priorities and the considerable uncertainty attached to specific projections.

A. MANPOWER PLANNING IN BOTSWANA

Manpower planning is an essential ingredient of the planning process and the Government of Botswana has established an institutionalized system whose equivalent can be found in few, if any, countries in sub-Saharan Africa. Its primary function is to provide guidelines for the planning of domestic and foreign education and training and the recruitment and displacement of expatriates as needs arise and localization proceeds. It should do so by projecting manpower requirements and supplies by occupation, identifying related education and training specifications, and estimating imbalances between needs and availabilities. Presently, however, supplies are not projected by occupation.

Such planning is needed because, as noted in NDP VI, p. 66, "market forces are of limited relevance because of long lead times involved in training skilled people." In addition, because much of education and training in Botswana is either free or heavily subsidized, private perceptions of the net benefits of higher education (expected increases in future earnings less the private costs of higher education) exaggerate the true social benefits, and the private demand for higher education, left to itself, would surpass manpower needs.

Manpower planning, as a substitute for unreliable market forces, has its own deficiencies, some of a largely technical nature and others involving deeper methodological problems.

The several issues of National Manpower Development Planning produced by the Employment Policy Unit note, and indeed emphasize, many of these deficiencies and alert users to the possibility that the projections themselves may be subject to large margins of error. No effort has been made, however, to estimate the margins of error that may be involved.

Four issues of the manpower report have been prepared for the years 1982 through 1985. Technical problems relating to such things as the use in each sector of constant output/labor ratios and occupational structures, changing technologies and productivities, the pace of localization, attrition rates, adjustments for vacancies in the base year data, and the translation of occupational needs into educational and training requirements are addressed in various places in these reports and in other papers dealing with manpower planning. Some progress on these technical matters will certainly be made in forthcoming reports.

Issues involving greater uncertainty may be more intractable. How can projections be adjusted to reflect the likely future upgrading of job requirements beyond those actually needed to perform the job being filled? The establishment of new businesses and industries not now identified? Contingencies, such as a sharp decline in employment opportunities in South Africa? Considerations such as these suggest that projections of manpower requirements

should be made for several scenarios, or possibly given as ranges instead of specific numbers or as numbers with an indication of possible deviation.

The uncertainty and variability of manpower projections is, of course, not the same for all sectors. Manpower needs of Central Government can probably be projected with the smallest margin of error, closely followed by needs of Local Government. It is in the private/parastatal sector that the uncertainty of manpower projections increases. Within this sector, uncertainty probably increases as projections move from parastatals to established businesses to new, unidentified business activities. As sectoral growth rates are translated into occupational needs, different degrees of projection error may be transferred to different occupations.

Despite these difficulties, some common informa ion base is needed to facilitate internal consistency in Government planning for education and training and the creation of employment opportunities. Such a base, whose methodology and its limitations are understood, should also benefit the private sector in planning its own staffing patterns and in-service training programs, and donors in shaping technical assistance and external training programs.

The manpower planning exercise has now been going on since 1982. Government may wish to consider undertaking a review and evaluation of that experience with the objective of improving the methodology and the use of projections as a means of coordinating educational and training efforts in the public and private sectors and with donors. Draft terms of reference for such a review are appended to this section. Possibly the

work entailed could be fitted into the schedules of those already concerned with manpower projections. If not, USAID should consider supporting the effort.

B. THE EDUCATION AND TRAINING RESPONSE TO AN UNCERTAIN FUTURE

Uncertainty about private sector manpower requirements in the future suggests that at each level of education, the formal educational system should focus on those basic skills that are common to all or most of the future opportunities open to school leavers. Skills that are common to the needs of most businesses but which, in the aggregate, are required in relatively small numbers must be left largely to vocational schools (electrical and mechanical skills are examples) and the highest levels of the educational pyramid (doctors and physicists may apply). Skills that are enterprise or industry specific must be left to on-the-job training or industrial training and apprenticeship programs (hotel management, for example).

1. Grade 9 (Form 2) School Leavers

These considerations may provide useful guidelines for modifying curricula at various levels of education as announced in the latest development plan. As higher level manpower is produced in greater numbers, school leavers from Grade 9 will find most of their employment opportunities in rural farm and non-farm activities, the urban informal sector or the unskilled formal sector workforce. Other options may include teacher and vocational training.

There are two skills that it would seem appropriate to include in the junior secondary curriculum - agriculture, which has been incorporated, and simple bookkeeping skills. Simple bookkeeping skills, including computations of profit and loss, cash flows, and depreciation, could enhance prospects for Grade 9 school leavers whether on the farm, in the informal sector or as future teachers. These skills are common to most of the options open to Grade 9 school leavers and those students should benefit from the exposure even if they continue into senior secondary. Government may wish to consider integrating simple business computations into the junior secondary curriculum as a part of arithmetic, math and social science courses. USAID, through JSEIP, should consider helping with the curriculum modifications such a requirement would entail.

2. Senior Secondary Education

The considerations may be equally helpful at higher levels of education. The extent to which basic skills should be taught at the senior secondary level is a moot question. As enrollments expand, a firm basis for vocational and technical training, to be pursued after senior secondary, would be of value to many students. Some further exposure to elementary bookkeeping and commercial topics, building on the base established in junior secondary, might have the highest priority. Such studies should encompass knowledge of the business-related institutional setting in Botswana so that students know what options they may later have in seeking credit, farming advice, seeds, fertilizer, agricultural

packages, technological information, FAP subsidies and the like.

Detailed curriculum design is beyond the scope of this report, but the need to rethink the senior secondary curriculum, as enrollments begin to exceed by widening margins the opportunities for both more advanced education and employment, seems clear. Additional planning resources may also be required to schedule the construction of facilities, acquisition of equipment, teacher training and retraining, and possibly the establishment of standards for private schools, if these spring up in response to unmet private demands for education.

3. University Education

It is at the university level that training in skills common to general business needs assumes greater importance. At the university level, substantial specialization and diversification of choice is provided for students, but because of national manpower priorities, economies of scale must be sought in those areas of study common to most of the needs of the formal sector for high level manpower. Those areas may change over time but, as disclosed by the 1985 manpower survey, they presently include management, teaching, accounting, and engineering. In other areas, where economies of scale will be more difficult to achieve, the safety valves of expatriate employment, technical assistance and external training will need to be continued in use. The University seems to be well staffed and advised to perform its curricula planning function

but some of the needs disclosed in the manpower survey are not yet being served.

The Government may wish to consider the establishment of a school of management, within the University, which would offer both undergraduate and postgraduate work in management, marketing and accounting, serve needs in both the public and private sectors, and link up with the Institute of Development Management for short courses and as a consulting outlet. A good school should draw students from other countries in the region and, in time, become a valuable regional resource. Assistance with such an endeavor would require cooperation among several donors.

A project of this magnitude might benefit from a linking arrangement with an established management school in such countries as Brazil, India, the U.K. or the U.S. Before embarking on the project, the Government and the University should consider introducing a substantial salary differential favoring the faculty of the School over other University faculties in order to ensure that faculty trained abroad can be retained in the MBA program despite the strong competition for their services from the private sector.

4. Supporting Evidence

Some of the dimensions of future manpower needs are indicated in Table 3 which is based on data in National Manpower Development Planning 1985. (There are some anomalies in the basic data. For example, why are 397 additional doctors needed by 2001 but only 19 more medical assistants? And 33 more dentists, but only 14 more dental assistants? And as can

be seen in Table 1, why only 3613 more stenographers and typists when managers and government executive officials alone are projected to increase by nearly 9000?) For reasons already given, little faith should be placed in the precision of the numbers but the relative orders of magnitude do convey a sense of priorities. These support the more general conclusions and recommendations made above.

TABLE 3
ADDITIONAL TRAINED CITIZENS REQUIRED BY 2001
BY SELECTED OCCUPATIONS

OCCUPATION	Int'l Std. Classification	NUMBER
Engineers	022-029	1699
Engineering Technicians	031-039	2394
Nurses & related occupations	062,064,066,068-079	5015
Accountants	110	2084
Univ. & Higher Ed. Teachers	131	2371
Secondary Ed. Teachers	132	4346
Other Teachers	133-139	16909
Social & Personnel Workers	193-194	3058
Managers incl. govt. administrators	202-219	6533
Govt. Exec. Officials	310	2210
Stenographers, Typists/ etc.	321	3613
Bookkeepers & Cashiers, etc.	331-339	6974
Clerks	370-399	14004
Sales Personnel	400-490	14723
Catering & Lodging Personnel	500-540	5563
Farm & Livestock Workers	600-629	12523
Prod. Supervisors & Foremen	700	4707
Butchers	773	1353
Tailors, Servers, etc.	791-799	2056
Machine Tool Operators, etc.	831-839	2203
Mechanics, etc.	841-849	5583
Electrical Workers	851-859	2261
Plumbers, Welders, etc.	871-874	2894
Construction Workers	950-959	5097
Material Handling & Eqpt.operators	971-979	4718
Motor Vehicle Drivers	985	12189

(From National Manpower Development Planning 1985)

5. Vocational Training in the Private Sector

With respect to more specialized training, which many school leavers will require to address successfully their job opportunities in the formal sector, a strong case can be made for giving the private sector considerable freedom to supply the necessary training. First, those enterprises and industries needing specialized training for their own personnel can identify the needs and the kinds of training required more quickly than planners in government. Second, they may be able to provide more effective as well as more specific training.

Finally, entrepreneurs in the private sector should be encouraged to establish training institutions to meet perceived needs. There are at the present time some non-governmental organizations that provide typing and commercial learning opportunities. These are primarily non-profit organizations but there should be ample scope for profit-making educational enterprises to make a substantial contribution to filling national training needs such as typing, driver training, auto mechanics, electricians, sewing and tailoring and marketing. Indeed, fledgling entrepreneurs may find training a relatively easy field to enter with success. Government may need to establish standards for private sector education in order to control quality.

C. THE ROLE OF EXPATRIATES

In any consideration of manpower requirements, the role of expatriates and the objective of localization merit attention. The availability of expatriates provides an essential element of flexibility to meet domestic manpower

shortages and perform specialized tasks. Their presence also spawns a cross-fertilization of ideas, traditions and cultures which can only be a net benefit to all involved. However, in the case of technical assistance, primarily for the public sector, there may be a tendency in many countries to draw on such resources to excess simply because they are free or heavily subsidized. There is, unfortunately, a substantial international social cost involved in relying on expatriates for work that could be performed equally or nearly as well (and perhaps in some cases better) by local personnel. This problem arises to a much lesser extent in the private sector where the full cost of any expatriate employed is entered as a charge against enterprise revenues.

According to the latest manpower survey, there were over 7500 non-citizens filling occupational positions in Botswana in 1985. About 2300 of these must have been self-employed because the latest employment survey identifies only 5299 as paid employees in September 1986. Of the 5299, 1071 are in government (514 in education alone), 549 in parastatals, and 3681 in the private sector.

There are no statistical estimates of the amount by which the average international social cost of an expatriate in employment (considering costs of transport and all benefits) exceeds the cost of employing a comparable local person. As an example, however, if that excess were P20,000, then P105,980,000 could be saved, by donors and the public and private sectors taken together, if comparable local talent were available. That represents 20 per cent of the national wages and salaries reported as income for 1984/85 in the Statistical

Bulletin (March 1987, p. 5), but, of course, much of the cost in the public sector is incurred outside of Botswana.

For business firms, a reduction in their wage bill of this proportion could have a substantial effect on their competitive position in both the domestic and export markets. Clearly, the objective of localization is rooted in economic as well as social considerations. The cost of training for localization is, of course, significant but manpower projections of supply suggest that training is going ahead at a rate which should make localization feasible for both the public and private sectors by 2001 except for special needs which will always arise.

The pace of localization has in fact proceeded much more slowly in the private sector than in the public sector. Thus, in the private sector, in September 1986, 5.4 per cent of those employed were non-citizens while only 1.7 per cent of those employed in Central Government (excluding teachers) were expatriates. The Government might consider increasing allocations of bonded manpower to the private sector through its allocation committee as a means of enhancing the competitiveness of business enterprises.

D. THE CROSSOVER PROBLEM

Another feature of the manpower survey is its projections of imbalances between the demand and supply of manpower. Table 4 is extracted from National Manpower Development Planning 1985. p.51.

TABLE 4

MANPOWER IMBALANCE : SUPPLY MINUS REQUIREMENTS

	1985	1990	1991	1996	2001
Less than JC	282681	267931	265380	223538	141607
JC or Form 4	7489	19986	23137	42293	70540
Form 5 GCE or O Level	2961	5322	7315	22713	49089
A Level or Form 5 +	-6575	-1774	-593	7249	13003
Degree or Higher	-494	-78	92	1622	3166
TOTAL	286062	291386	295331	297415	277405

The principal issue to be addressed in this table is the crossover from a deficit of high and middle level manpower. As the manpower report itself notes, this crossover will entail changes in Government policies and programs and the planning of those changes should commence well in advance of the crossover itself.

1. The Timing of the Crossover

Some questions can be raised about the timing of the crossover but that it will occur in the not too distant future is virtually certain. It was earlier noted, however, that the projections of labor demand, which enter into the estimates of imbalances, are based on the assumption that fixed labor coefficients (the proportions that reflect the several levels of educational attainment represented among those actually employed in the base year) will remain unchanged throughout the projection period.

It is true that the productivity of labor employed should increase with the passage of time, and this will act to reduce the rate of growth of employment in each sector to something less than the rate of growth of sectoral output. But the opposing and probably stronger force with respect to those employed having high and middle level manpower qualifications will be the upgrading of job requirements. As the availability of high and middle level manpower increases, entry requirements will be raised for nearly all jobs. Some of this upgrading, especially in the early years, will be needed to bring qualifications into line with reasonable job specifications. As even more qualified people become available, however, there will be a natural and virtually irresistible tendency to escalate upgrading toward the higher qualifications to be found among those applying for work. The net effect is likely to be that labor coefficients in each sector will change over time in favor of higher educational attainments, and the demand for the more highly qualified groups of employees should be expected to grow more rapidly than value added in the sector. The tendency to upgrade job qualifications will pervade both the public and private sectors.

The imbalances between demands and supplies of high and middle level manpower are very sensitive to changes in the rates of growth in demand. For example, if the growth rate of the demand for people with University degree or higher education were 8 per cent on average instead of the 4.9 percent used in the manpower report, the crossover from excess demand to excess supply would occur about 1995 instead of in 1991. Using the same rate (8 per cent) for A level or Form 5 plus

training instead of the 5.9 per cent used in the report would have even more dramatic results. The crossover point would be delayed from about 1992 to well beyond 2001. Indeed, in this case a rate of 7 per cent would yield a crossover point precisely at 2001.

There may, of course, be opposite pressures on the supply side as noted earlier in this report. A strong private demand for education may cause supplies of high and middle level manpower from both public and private educational institutions taken together to grow more rapidly than the rates projected in the manpower survey. This effect will move the crossover point to an earlier point in time. Also, it should be noted that the crossover point may vary significantly for occupations, making a generalization difficult. The timing of the crossover point requires further careful study and planning for necessary changes in policies and programs should begin not later than the next development plan.

2. Senior Secondary Education

First, a decision will soon have to be made as to whether education at the senior secondary level will be provided for those who demand it or whether places in the public secondary schools will be rationed to, say, 10 per cent more than projected manpower needs. Rationing should enable Government to provide a quality education for those who attend senior secondary public schools. It should be recognized, however, that the excess demand for education at this level, given a public school rationing scheme, may express itself in the form of an expansion of private, self-help or for-profit community educational facilities that might be substandard in quality.

Projections in the manpower report suggest that the likely choice will be to allow senior secondary places in public schools to expand to meet most of the private demand for education at that level. This will inevitably mean some reduction in the quality of education at that level. It also suggests that the curriculum should provide a basis for vocational training but not vocational training itself because most students would then be trained for opportunities that are nonexistent.

3. Vocational and University Training

If Government is compelled to expand to excess senior secondary enrollments, the rationing problem is simply transferred to the next level of education - vocational and technical training and university education. At these levels, it is difficult to justify the training and education of elites in numbers much in excess of manpower requirements plus a safety factor, when at the same time the very poor are still searching for meager income-earning opportunities. The cost of allocating more resources to education is the sacrifice of income-earning opportunities that might have been created with the same resources.

4. Bonding

At the time the crossover occurs, the system of bonding students to Government employment should also be modified if not abandoned. Bonding reserves scarce high and middle level manpower to public sector employment. But when such manpower is in surplus, the role of bonding is reversed. It forces

Government to hire people in excess of real public sector needs. The Government becomes, in a sense, the employer of last resort. Indeed, in some educational fields, Government may already feel obligated to take those students not wanted in the private sector even if the numbers involved exceed public sector requirements.

Moreover, because opportunities outside of Government can easily be filled from the growing reservoir of unemployed high and middle level manpower, the numbers leaving public sector employment for private sector opportunities will diminish. The need for an allocation scheme will, of course, disappear at this time. Finally, the growing numbers of well-educated, but unemployed, people can compose a powerful lobby for change.

5. Education vs Employment

The crossover will surface the now latent problem for Government of seeking an appropriate balance in allocating the nation's limited human and physical resources between projects that expand higher education and projects intended to create income-earning opportunities. Moreover, if higher education expands too rapidly, the reduced resources available for creating employment opportunities will likely be directed disproportionately to jobs for the well-educated rather than to jobs for the very poor who are most in need of them.

The crossover clearly will place a great burden on educational planning and control systems. Even an effective family planning program cannot be counted on to alleviate these pressures for at least 15 years because those who will be exerting pressure on the higher education system and the job market 15 years hence are already born. The Government may wish to consider how its educational planning and control systems should be strengthened so that they can cope successfully with the tasks that lie ahead. USAID should consider how it might best respond to a request to assist with this task, perhaps by drawing on both the training and technical assistance resources of the BWAST Project.

ANNEX TO CHAPTER VI

Draft Terms of Reference

for

Improving Projections of the Demand for Labor and Skills

What is the present configuration of public and private sector employment (including the self-employed)

a. by occupation in skills required

b. by sub-sectors (or ministry and department, etc.), and

c. by geographic location (town or district),

particularly for categories requiring high, middle and vocational skills? Are projections of future configurations available?

What are they?

What methodologies were used in making them?

Assess the value of these projections as a guide to the planning of:

a. domestic training institutions, curricula and throughput,

b. foreign training programs by nature, level and duration of the training, and throughput, and employment generation programs.

If existing projections are seriously deficient, propose modifications in the methodologies which would enhance their value. Consider, in particular, how to identify and incorporate new sub-sectors, the impact of probable changes in policies regarding wage differentials, relative prices and

employment incentives, the likely upgrading of skill requirements for different occupations (changing job profiles), and contingencies related to uncertainties in Southern Africa.

Make recommendations as to how USAID might assist the public and private sectors to improve projection methodologies along the lines you have suggested.

VII. HIGHER EDUCATION

Education beyond Junior Secondary School (9 years of schooling) should be perceived quite differently from the basic education up to the Junior Certificate. Basic education is, quite appropriately, treated as a basic right in Botswana. But in strictly economic terms, Botswana is not yet sufficiently affluent for higher education to be a right or even a consumer good. Education beyond Junior Certificate is an investment, and an expensive one.

The other obvious contrast between basic and higher education is that at present, workers with basic education (through Junior Secondary) are in excess supply, but this is untrue for higher education. Thus, the unemployed are not those with higher education (Senior Secondary and beyond). University graduates are rationed through an allocation scheme to alternative employers. Expatriates continue to fill a vast array of posts, temporarily relieving excess demands for skilled Batswana.

USAID involvement in training at the higher education level is principally through the BWAST Project (Phase I 1982 - 89; Phase II 1986 - 94), plus teacher training under PEIP and JSEIP, and some agricultural training under ATIP discussed elsewhere in this report. BWAST provides resources for in-country training; training in the U.S. (and third countries); and experts, in part to replace temporarily Batswana going abroad for training.

This section outlines some issues with respect to the future of higher education and the role of BWAST in particular,

first looking at the demands for labor at these higher education levels, then turning to problems of supply.

A. DEMAND FOR LABOR WITH HIGHER EDUCATION

The best source of information available for manpower demand projections is National Manpower Development Planning, 1985. The data for projections with respect to various levels of higher education are summarized in Table 1. A word of explanation with respect to this table may be in order. The total figures exceed the sum of the three sectors explicitly shown because informal sector requirements are not reported separately but are included in the total figures. Four levels of education/training are distinguished. The first three are fairly straightforward, showing numbers of people predicted to be demanded with Form 5 preparation (including O-level), with A-levels, or a degree. The fourth column includes all people requiring post formal higher education training, though unfortunately the manpower plan offers no breakdown on whether this means on-the-job training, its duration or nature. As a result, virtually all demand from the education sector, for example, is for people requiring training, and teacher training in particular.

These data suggest a particular balance of demands for university graduates as opposed to those with senior secondary schooling, for example, and these figures are no doubt influential in planning capacity for these systems. But in any country, such data can be dangerously misleading for a number of reasons:

The data through 1991 are based on macro-economic sectoral projections associated with NDP6. In fact, NDP6 may well underestimate overall growth. The plan projects a growth rate of 4.8%, compared to an actual growth rate of 11.2% in the last plan, and the first years of NDP6 seem to have been far more successful than projected. Moreover, although overall actual and projected growth were not far apart in NDP5, this was not true for the sectoral components, the errors in which happened to cancel out. But the sectoral mix of growth is very important to manpower projections, and apparently relatively uncertain.

The manpower projections beyond 1991 are based on simple extrapolations of NDP6 sectoral growth projections. The data for the year 2001 or even 1996 are consequently subject to considerable margins of error.

TABLE 5: PROJECTIONS OF MANPOWER DEMAND

		Form 5 GCE and O-level	A level	Degree	Form 5 + with training
Total					
	1985	2785	98	1652	22987
	1991	3417	139	2194	34014
	1996	4356	184	2751	43184
	2001	5609	245	3458	54798
Priv.Formal & Parastatal					
	1985	394	82	31	5622
	1991	552	114	45	7749
	1996	697	147	58	10010
	2001	885	191	76	12981
Govt.(excl. education)					
	1985	2100	16	1074	7333
	1991	2414	25	1201	8495
	1996	2969	37	1446	10493
	2001	3619	54	1716	12870
Education					
	1985	1	0	453	10031
	1991	2	0	802	17771
	1996	3	0	1024	22680
	2001	4	0	1307	28947

Source: National Manpower Development Planning, 1985

The projections of schooling required are derived from sectoral output projections using three assumptions. First, that labor required per unit of output does not change, even though wages may change, FAP may induce greater labor intensity, and more appropriate technologies may become available. Second, that the occupational mix of labor does not change within a sector. Third, and certainly the most dubious assumption, that education required for a given occupation remains fixed. The last of these is particularly questionable as the educational system expands in any context, leading to escalating credentialism.

It is illustrative of the dangers inherent in this approach, that the numbers projected required for the educational sector are substantially different from the projections prepared by the Ministry of Education Planning Unit. The latter are based on projected enrollments, rather than a simple extrapolation of Government spending on education.

Above all, and central to this report, are the tremendous uncertainties with respect to prospects for the private sector. Even if the number of teachers and Government hiring plans can be adequately anticipated, this is not true for the private sector. The size and the industrial composition of the private sector will be highly dependent both upon the policy environment and many uncertain external factors, not the least of which is the future of Southern Africa.

The methodology of manpower planning in Botswana could be improved upon: allowance might be made for escalating credentialism (i.e. requiring higher and higher qualifications for a given job as time goes by); sensitivity analysis might be conducted, with best and worst scenarios tabulated. But in the end, projections over a sufficient period to plan for meaningful, appropriate expansion of university capacity in specific fields, given very long periods for necessary adjustments, will always remain highly speculative. Projections, even if much improved, will always be very uncertain. This is true in any country situation, not just in Botswana.

Because of this, it is important to consider retaining as much flexibility in the system as possible. This is particularly important with respect to personnel for the

private sector. Rather than planning for specific numbers of narrowly defined types of engineers, for example, the higher educational system may want to assume the demands will be for engineers with a broad training, ready to adapt to specific tasks on the job. The system will also need to plan to meet broad demands from the private sector for managers trained and able to make decisions, oriented towards problem solving rather than necessarily having detailed knowledge of accounting systems or particular portions of the law. If these demands are met for the private sector, employers can build on these general skills according to their own needs.

Despite the predominance today of Government in employment of workers with higher education, Government demands are still not fully met. Even for the development of the private sector, it is important that key Government posts be staffed with competent, well-trained people, or bureaucracy can simply become a bottleneck to industrial development.

The 5.4% annual growth in demand for labor with higher education projected in National Manpower Development Planning, 1985 is subject to wide margins of error. Projections for the numbers in education are high relative to Ministry of Education estimates, and private sector projections are extremely uncertain. But it is clear that there are going to be substantial demands for employees at higher education skill levels, and especially so if GDP growth does not drop to the NDP6 projected rates. Can these demands be met? How might limited supplies be allocated? What is the role of BWAST? To these questions, the next section is addressed.

B. OUTPUT OF THE HIGHER EDUCATIONAL SYSTEM, ALLOCATION AND BWAST

1. Existing and Projected Numbers

National Manpower Development Planning, 1985, reports 22256 people available in the labor force with Form 5 GCE, Form 5 plus training or A-level completed and 1159 with degrees as of 1985. Compared to estimated demand, this amounted to a shortfall of 3614 in the former category and 494 in the latter. Presumably, these baseline data are reasonably accurate.

The enrollment at Form 5 in 1985 was 2130, which was 20% of enrollment in Form 2. NDP6 projects enrollment in Form 5 by 1991 of 4947 or 25% of Form 2 projected enrollment. Apparently reflecting this expansion, the Manpower Development Plan 6 projects an excess supply and hence burgeoning unemployment of Form 5, Form 5 plus training and A-level labor by 1991. The precise numbers are extremely tenuous at best, both on the demand projections and anticipated enrollment. But if it is correct that an excess supply will emerge, then some serious rethinking about expansion of the Senior Secondary system may be warranted.

a. To pass through 25% of a vastly expanded Junior Secondary system, which may well prove of lower average pupil output quality in the short-run, might considerably dilute the quality of senior secondary education. It may be desirable, from the viewpoint of employers, for the school system to do a better job of training a smaller number in secondary school, with given resources. This alternative may, however, be

politically unacceptable.

b. If excess numbers do emerge from senior secondary schools, this will probably lead to dangerous frustrations and escalation of credentials required for given jobs, perhaps without commensurate productivity gains.

How might entry into senior secondary be controlled? As of January 1988, fees for senior secondary are to be abolished. This decision is probably irreversible. There will be considerable pressure to provide senior secondary schooling "on demand." This is not to be recommended. As noted in the introduction, higher education is an expensive investment, now to be provided free to students. Entry requirements will then need to act as the rationing device, and at the very least it would seem desirable that these be maintained or even raised. Indeed, a system of simply taking a given number of students, ranked according to exam results, may be preferable to pre-announcing a fixed cut-off result for entry. A heightened sense of competitiveness may not be a bad preparation for later employment in the private sector! But the general point here is that we believe the issues of selection criteria and planned size of the Senior Secondary system are in need of urgent consideration.

Projected enrollment at the University of Botswana, according to NDP6, is to rise from 1601 in 1985-6 to 3440 in 1990-1. Of these, 934 were projected for degree courses in 1985-6 and 2321 in 1990-1, with the remainder mostly in Diploma

Certificate Courses.* A rough estimate suggests an implied pass-through rate of about 30% of Form 5 students proceeding to the University of Botswana by 1990-1. As a result of this substantial expansion, plus foreign training of university students, the manpower plan also projects a surplus of workers with degrees by 1991, with respect to both public and private sector needs. As noted in Chapter VI, we feel that this crossover from a deficit of high level manpower to a surplus will be considerably delayed.

In any event, it is far too simple merely to look at the numbers of students. The quality and relevance of training are critical to the productivity of participants when they enter employment. Perhaps one reflection of this is the current major reliance on expatriate labor, especially in the private sector. According to the 1986 Employment Survey, 5299 non-citizens were in paid employment in Botswana, or some 4% of all such employment. But, while 70% of all of the non-citizen employees were in the private sector, only.52% of citizen employees were in the private sector. In addition, another 2200 non-citizens were self-employed, many of them professionally trained. The private sector is thus more dependent on expatriate labor, especially in commerce and manufacturing, than the public sector. Increasing the numbers and improving the quality of trained people for private sector employment will be crucial if localization and expansion of the

*These figures include non-Batswana students who are assumed to be about 5% of enrollment.

private sector are to occur simultaneously. BWAST is the only donor program currently enabling the selection of in-service private sector employees for in-country and external training. As the higher educational system in Botswana increases its share of training for employment in the private sector, some adjustments in the current educational strategy may be necessary to ensure the relevance of education and training for private sector employment.

2. Quality and Relevance of Higher Education

a. Senior Secondary Schools

Whatever the merits of the data in Table 5, they do suggest that demand for graduates of Form 5 is only after post-school training. This is probably inevitable if the system is to remain flexible. But nonetheless, the relevance of the senior secondary curriculum may well be called into question. At present, the curriculum prepares students for the Cambridge Overseas Secondary Certificate. Apparently the GOB plans to introduce a national examination instead and to reform the curriculum at that time, but not during NDP6. Coordination of a new curriculum and examination would seem to be a natural next project, playing an important role in designing an appropriate, flexible curriculum with regard to employment needs in the private sector. In particular, there is no reason that some very general business and engineering training should not be introduced into senior secondary schools. This would need to be coordinated with the addition of Technical Wing facilities now planned for some of the senior secondary schools.

In addition, it should be reiterated that it would seem advisable at this level to focus on upgrading the quality of education for a well-selected, smaller flow of students, rather than expanding the size of the system at least beyond present plan limits.

b. Technical Training at Higher Education Establishments

NDP6 describes the highest priorities in expansion of the University as being in Education and Natural Sciences. Both of these subjects primarily address the tremendous demand for teachers and especially the shortage of science teachers at senior secondary schools. For industrial expansion and for agriculture, on the other hand, trained engineers seem to be a high priority, and in this training the Polytechnic will play a major role. But the Polytechnic has apparently experienced tremendous difficulties in attracting appropriate staff and this would seem an area in which some form of assistance and donor help may prove essential. On the other hand, full-scale engineering training (versus basic engineering skill training) is clearly expensive, normally requiring considerable equipment. Some careful thought should therefore be given to the extent of in-country versus foreign training of engineers. But in either case, only basic training should be contemplated preferably at the Botswana Polytechnic once appropriately staffed, leaving more specific skills for on-the-job acquisition. (GOB officials, however, question limiting engineering training to "basic", noting that occupations relate

to specific fields, such as electrical, petroleum and chemical.) Both the Polytechnic and the Botswana Agricultural College may wish to consider methods of incorporating direct practical experience as part of the curriculum, in order to ensure a particular Botswana focus to the learning process. Sandwich programs in engineering, with an internship in industry, have become common in engineering programs in other parts of the world. It also seems that enhanced coordination between the research team working under ATIP and the Botswana Agricultural College might be fruitful.

c. Business Training

1. Undergraduate University Training

The main existing degree program in business at the University of Botswana is the B. Commerce. Students entering the program are above average for the University. But the existing curriculum is apparently not oriented towards problem solving and the University reports severe staffing problems in this sphere. A major difficulty is that salaries are tied to the University scale, whereas, around the world, business school salaries are normally substantially higher than in other departments. Some technique needs to be considered for raising salaries for business teaching, and if this cannot be done directly, a foundation might, for example, be attached to the Department to offer summer pay for research or consultancies.

2. Proposed MBA

Government has been encouraging the University to add an MBA program. Given the current staffing problems for the B.Comm. one might be sceptical. But a potential route to upgrading the B.Comm. may lie precisely in introducing an appropriate MBA. Before embarking on such a program, however, a commitment should be made to establish a significant salary differential for MBA faculty. Private sector competition for faculty members will be fierce and without high salaries it will be virtually impossible to retain qualified staff. A means for arranging consulting opportunities would also be desirable (and might serve as a partial substitute for higher salaries). If the Institute of Development Management could be used as a consulting intermediary, its other functions should be strengthened by the establishment of an MBA program.

Once started, the MBA faculty and program should exercise a favorable influence on the B.Comm. program and possibly also on the engineering program in the Polytechnic. One possibility that might be considered would be to work out joint programs with these two faculties so that students with either of these two backgrounds might attain an MBA degree more quickly.

In the recently introduced M.Ed. program, a link has been established with Florida State University to provide part of the training in Botswana, part in the US. In addition, US faculty are rotated through the University of Botswana. The University of Botswana seems very interested in a similar

arrangement for the MBA, and this link could be used simultaneously to build up the B.Comm. program. This seems a highly desirable possibility for USAID to explore, either within BWAST or as a separate project, relating directly to employment creation concerns in the private sector.

3. The Institute of Development Management

IDM offers short courses in business related fields. Currently it is not much used by the private sector. Some changes might help. At present there is almost no private sector representation in the governance of IDM, whereas private sector input would seem crucial. The private sector cannot release employees (and certainly not their best employees) for day-time training. But IDM offers almost no evening courses. One reason is that since it is a joint Botswana-Lesotho-Swaziland Institute, evening courses would be perceived as serving Botswana's needs alone. This could be circumvented if evening courses were also promoted in Lesotho and Swaziland. Otherwise Botswana may wish to offer evening courses independently of the consortium arrangement. A series of retired US business executives will be based in Botswana on short term bases, under the International Executive Services program. There would seem to be some potential for consultation or even short courses to be offered by these executives, either through IDM or elsewhere.

4. Training of Rural Industrial Officers

The RIOs are the key link for rural small enterprises in obtaining technical advice, credit and even initial ideas. The training program provided by Integrated Field Services seems to be good. But there are only 15 RIOs

and nearly half of these are expatriates. The chief limitation is inability to attract Batswana to spend time in the rural areas, given the present pay scale. University graduates assigned as RIOs tend to quit once their five year bond is served. Three suggestions might be made: first, to raise the pay scale for RIOs significantly; second, to recruit Form 5 graduates rather than degree holders, since we are told experience with the former tends to be superior; third, to try to recruit people from their home village to be returned there after training. (Apparently conflict of interests has not been a serious problem to date.) FAP is potentially important, but the application forms are complex and the program will never reach rural, informal activities unless the cadre of RIOs is substantially expanded (while maintaining high quality).

d. Training Abroad

Botswana has made tremendous strides in developing the quality of the University of Botswana and other higher education establishments. But foreign training remains highly prized both by employers and trainees. As far as U.S. training is concerned, GOB has financed a significant portion of that training through the Trust Funded Bursaries, with USAID and Academy for Educational Development administrative input. Under the BWAST project, USAID has been able to cooperate with the Government of Botswana and other donor agencies in providing training abroad for Batswana.

At this juncture, a certain amount of foreign training is essential if Botswana is to upgrade its top-level labor. Indeed, some such foreign training will still probably prove

cost-effective even in the long-run. Though expensive on average, foreign training permits use of facilities where scale economies are critical (such as when large scale equipment is required to train specific engineers).

On the other hand, there is a clear cost to foreign training. If the best students go abroad, the University of Botswana suffers as an establishment in the long-run.*

3. Technical Assistance and Training through BWAST

The USAID-funded Botswana Workforce and Skills Training Project (BWAST), managed by the Academy for Educational Development, has, in our view, played a very constructive role in supporting both public and private sector efforts to improve supplies of skilled manpower and their relevance for the generation of productive income-earning opportunities. Because the project can respond in a highly flexible manner to newly perceived needs in the private as well as the public sectors, it seems especially appropriate for Botswana, an economy in which the pattern of future development has many highly uncertain features. Moreover, as the problem of coping with uncertainties about the path of future development and diversity is common to most developing nations, many of the features of BWAST may be transferable to other settings. For these reasons, a brief review of the BWAST

*See Ulla Kann, "The Second University of Botswana", SIDA, Gaborone, March 1980.

approach to manpower development in Botswana is in order. We will focus on its training and technical assistance components.

BWAST shares in the funding of and/or helps to manage external (normally up to two years) and in-country (one week to nine months) training for both private and public sector participants who usually have jobs on self employment opportunities to which to return. It is the only donor currently providing such training options to Batswana in the private sector. This gives BWAST a very special and important role in Botswana. It should also be noted that the private sector component has been increased in BWAST II relative to BWAST I.

a. External Training

Since its inception in 1982, BWAST has funded or administered external training for 358 participants, of which 184 have completed their studies. Of those who have returned, 46 were funded by MOE bursaries. By degrees obtained, those who have returned have earned 2 Ph.Ds, 1 DVM, 48 Masters, 97 Bachelors, ? Associates, and 20 Diplomas. The others (14) completed short-term courses averaging two months in length. As higher education facilities expand in Botswana, a need to shift this composition toward higher degrees will arise, unless the national need for higher level training is met from other sources.

BWAST II, over four years, will provide 240 scholarships for external training of which 176 will be for long-term study programs. Sixty-one are being placed in the 1987 academic year. The private sector has been allocated 80 long-term

training opportunities and 24 short-term training slots.

The relevance of this training for employment generation must be judged largely in terms of the subjects studied and the present and likely future positions of those selected for training. It is in BWAST II, however, that the focus on employment creation was introduced and training for the private sector was substantially increased.

In making judgments about who to train, a distinction must be drawn between initial and secondary employment effects. Training any Motswana who has a job to which he can return will improve his productivity; if he is promoted, his vacancy will need to be filled; if he replaces an expatriate, localization is advanced and the number of Batswana employed, though not total employment, is increased. This criterion, however, crumbles as a means of selecting trainees when funds for training are limited because anyone who would be employed after training would qualify for training.

In order to establish criteria for allocating limited BWAST funding for training among the many who may apply, it is necessary to evaluate the secondary effects of training. How will the trainee, given his career ladder, and the organization for which he is expected to work, contribute as a result of his training, to the creation of other employment opportunities?

An attempt has been made in this report to examine and recommend ways in which income-earning opportunities can be created in both urban and rural areas. Identifying the human resources and skills necessary to convert those opportunities into realities is the first essential step in defining the

criteria that should be followed in selecting people for training. Throughout this report several suggestions have been made about kinds of training, which BWAST might fund, that would contribute to employment creation in both the private and public sectors. These should be examined as leading indicators of criteria for training.

Of the 61 participants being sent abroad for training in 1987, 56 are sponsored under BWAST II. Of these, 24 are from the private sector and 32 from the public sector. The subjects to be studied, for the most part, have relevance for employment creation. In the private sector, management is the principal focus with four trainees to study business administration; four, human-resources-related management and statistics; five, accounting (usually on the management career ladder); three, hotel management; and two, business skills. Two will be studying construction management or technology and one graphic design. The relationship of the studies of three trainees to secondary employment creation is more attenuated; real estate management (1) and insurance (2) would, on the surface have little impact on secondary employment opportunities.

About 9 of the 24, however, are being trained for companies that are large and profitable enough to afford and arrange their own training. That the training may assist with localization does not in itself generate secondary employment opportunities. The other trainees seem to have been more appropriately selected.

Subjects to be studied by trainees from the public sector and the postings to which trainees will return seem well calculated to support employment creation efforts within

government. Little, if any, training, however, is directed to district level needs under this project. The better public sector record probably reflects the longer experience USAID has had in working with government as compared with the private sector where criteria are still being developed.

BWAST has experienced some difficulties in selection of private sector trainees. A number of the trainees are from successful, many multinational, corporations who should be able to finance studies for their own employees. On the other hand, almost no small enterprises can afford to put candidates forward, since employers are required to continue trainees' pay while away. In addition, the private sector is certainly not overstaffed with high level people, (some interviewees maintained that the opposite was true of GOB). Thus the private sector finds it difficult to release many for training and especially their better employees. It should also be recognized that any such training is not specific to the sponsoring firm, who are then in danger of losing the employee on return. (Should some equivalent of bonding for the private sector be introduced?)

b. <u>In-Country Training</u>

For these reasons, the private sector (as well as the Directorate of Public Service Management) may prefer in-country training, and BWAST has a significant component of such training. In addition to a substantial carryover from BWAST I, BWAST II provides over its four years, for 1000 person months of in-country training and reserves 300 of these months for the private sector. We have noted three difficulties that

need to be addressed in the operation of this component of BWAST. First, it has been difficult to find appropriate training programs in Botswana for private sector employees under BWAST, in part because such institutions as IDM do not provide evening courses as mentioned above. This problem should diminish as training facilities expand in Botswana and more evening and short-term courses become available.

Second, much of the in-country training, in common with external training, is going to employees in larger firms. Most training needs in small enterprises are being identified by Rural Industries Innovation Center (RIIC) and the Brigades and forwarded to USAID through the Ministries of Commerce and Industry, and Education respectively. But of over 400 participants who have been identified for in-country training so far in 1987, only 74 have been identified by these sources. Undoubtedly the BEF, which is the agency responsible for nominating the others in the private sector identified for training, has located some from small scale enterprises, but without greater resources, it is questionable whether the BEF can extend its recruiting capabilities to reach effectively the rural areas.

Third, many of the small scale and especially one-person enterprises have difficulty in releasing people for training at some distant location. Perhaps for some types of training, means can be found to shift the mobility requirement from the trainee to the trainer, possibly through mobile training vans.

c. Technical Assistance

Technical assistance has been and continues to be an important component of BWAST. It supports the training function by filling positions while Batswana are studying abroad or in-country and more directly, by sharing knowledge and work experience with those with whom the expatriates work. Through mutual agreement on posts to be filled and shorter term consultancies needed, the technical assistance component contributes to the planning and execution of policies, programs and projects that impinge most directly on the creation of employment opportunities.

BWAST II includes funds for 72 person years of operational experts (OPEXers) for the public sector and will consider requests from private sector organizations, such as BEF, where the impact of the expatriates will be wider than a single enterprise. Short-term technicians can be supplied for both the public (30 person months) and the private (15 person months) sectors.

We have identified only benefits from this component of BWAST. The posts and consultancies requested and filled, especially under BWAST II clearly support either or both training and employment creation objectives; the quality of the people selected is high; and the limited feedback we have had, primarily from Government has been positive.

d. Criteria for Selecting Students and OPEX Posts

Because AED, the administrator of BWAST does not itself nominate (a GOB or BEF responsibility) or approve (USAID responsibility) candidates for the training, or initiate

requests for technical assistance, a heavy burden is placed on the criteria used for making and approving such nominations and requests. On the whole, judgment and flexibility should be retained throughout the process and, indeed, the process of selection has seemed to work reasonably well. A few comments may be in order.

With respect to candidates for training:

- Their probable future impact on skills improvement or employment creation through the planning or execution of relevant policies, programs, and project should be considered; decisions on nominations should be based more on the career ladders of candidates than on their present positions.
- A strong preference among candidates in the private sector should be given to those from small scale enterprises and, among these, to those with growth potential.
- Candidates from labor-intensive enterprises should be given preference over candidates from capital-intensive firms.
- Candidates from enterprises that have a large multiplier effect on suppliers (e.g. Botswana Craft), or customers (e.g. insecticides and fertilizers).

With respect to OPEXers in the private sector, the present criteria referred to above, seem to be working well, and in the public sector, the process of mutual agreement now

in place deserves only commendation.

In conclusion, BWAST has played an important and flexible role in manpower development and employment creation in Botswana, and, subject to funding availability, could do so for the foreseeable future. The question should be raised, however, as to whether the flexibility of the BWAST approach should not be extended to further other objectives as well, such as, family planning, localization, and the extension of amenities to rural areas. A multi-objective BWAST has much to recommend it.

4. A Note on the Bonding System

At present, University graduates are assigned to particular posts for five years after graduation, essentially to repay their education which is provided free. During these five years, graduates also pay 5% of their earnings to Government, again in repayment.

If a serious organized private sector is to emerge in Botswana, this bonding system may warrant rethinking. Private industries need to be free to attract students and to provide them with specific training while still young. This will tend to mean higher salaries for those with university education, at least if they enter the burgeoning private sector. But whether such an elite with high salaries should be provided with a free education may well be questioned. An obvious alternative is a system of loans to students, perhaps with some repayments forgiven in lieu of Government (and especially rural) service. This issue is to be the topic of a detailed World Bank study over the next nine months.

C. EXPATRIATE LABOR

The extraordinary role of expatriate labor in Botswana has already been noted. But two issues with respect to this are worth further comment.

Expansion of the private organized sector is likely to raise demands for expatriate labor very significantly, at least in the short-run. The current focus of expatriate labor in the private sector is a reflection of this. Given the very high costs of expatriate labor, the private sector will have a very clear incentive to train Batswana to replace the expatriates given access to Batswana with sufficient general educational background. Thus far, GOB has been very understanding with respect to the need for expatriates. That understanding may need to be extended rather generously in the initial stage of expansion of the private sector. There clearly are costs associated with such a strategy: the tensions resulting from sharp salary differentials, the repatriation of earnings, and the provision of consumer goods to serve expatriate needs. But without such an initial influx, manufacturing and commerce are extremely unlikely to grow or at least will do so very slowly, and the pressures for associated semiskilled jobs cannot wait for such slow development. The expatriate labor should be seen as providing considerable flexibility in the short-run, given extreme difficulties of predicting precise areas of expertise likely to be needed.

Botswana is blessed with an extremely competent set of Batswana in senior Government posts, and this has been a major factor in speeding the development process since Independence.

Expatriates also play a major role as technocrats, and their availability gives Government an important degree of flexibility in access to talent that might not be readily available from domestic sources. Expatriates should also be seen as a means of sharing learning and work experience with both counterparts and subordinate staff in order to ensure that the next generation of Batswana senior leaders can assume their responsibilities as soon as possible.

VIII. TECHNICAL AND VOCATIONAL TRAINING

A. THE SKILLS TRAINING SYSTEM IN BOTSWANA

The distinction between education and training is not fixed, so it is not surprising that in Botswana, as elsewhere, the skills training system overlaps the educational one. Training is preparation for a particular job or kind of job. Education is preparation for a whole spectrum of life's situations, of which obtaining skills for work is but one. Approaching the dividing line between education and training, the balance between theory and executional skills in the information covered is one way of deciding whether a given program is professional education or technical/vocational training.

There are at least 125 sources, excluding in-service training, of technical and vocational courses of greater than 30 hours in length (see Preparing for Jobs: Training Opportunities in Botswana, 1987, prepared in final form by the Academy for Educational Development). These training organizations offer more than 500 courses. The above compilation does not count officially-supported opportunities for external training (e.g. under BWAST) or those in South Africa, which some local organizations presently use.

The following outlines the major elements of the skills training system in Botswana :

1. Public and Quasi-public Sector
    a. Formal training

- Training institutions (Botswana Polytechnic, Botswana Institute of Administration and Commerce, Automotive Trades Training Centre, Botswana Police College, National Health Institute)
- Ministries or parastatals (e.g. Roads Training Centre, Botswana Meat Commission, Department of Water Affairs)

b. Out-of-school training (Brigades, Rural Industries Innovation Centre, Integrated Field Services)

2. Private Sector

a. Business/industry training (e.g. Debswana, Barclays Bank, Kalahari Ford)

b. Proprietary training (e.g. Aunt Ellen's Typing School, Gaborone Cathedral Commercial School, driving schools).

Another institution, the Institute of Development Management, is a multilateral (Botswana, Swaziland, Lesotho) and is on the borderline between education and skills development. Further, the GOB is presently establishing four vocational training centers outside of Gaborone. Overall, there are probably 8000-9000 Batswana enrolled in the public-sector and major business/industry portions of the training system.

However, the majority of skills training almost surely takes place on the job, outside of the above institutions. As elsewhere, this part of the system has the most flexibility and probably the quickest impact on business growth and job

creation. Thus, any measures to strengthen the system (reduce the skilled-manpower shortage) must not neglect this element of the system. In the public sector The Directorate of Public Service Management influences the allocation of trainees among formal training institutions, external training (e.g. that which BWAST finances) and on-the-job training. In the private sector there is no single organization with so much influence. However, the Association of Training and Development Officers (representing large companies but also parastatals) and the Botswana Employers Federation (with 500 members, three-fourths of which have less than 50 employees) have some impact.

B. MAJOR SKILLS DEVELOPMENT ISSUES

1. What role should centralized manpower planning play in the skills-development system?

Horror stories, such as the need for 2084 accountants by the year 2001, vs. the present number, five - support the argument of some that the public sector should play a leading role in planning skills development, including the ordering of spending priorities. Indeed, a prioritized list (including sub-specialities, not shown below) of occupations in critical need exists (Walter J. Tait, Report on Consultation for Private Sector Training Needs Assessment, 1987): accountants, engineers, technicians, insurance underwriters, construction, hotel and catering and transportation. On the other hand, Chapter VI of this report makes the point that the projections behind such conclusions are at best uncertain, particularly where they apply to the private sector, because of inherent uncertainties about the direction of future economic growth and the intensity of need of each skill in the future.

2. What should be the relation of the formal education and the skills development systems?

Previous chapters have pointed out that the primary and CJSS curricula contain little vocational preparation except for compulsory courses in agriculture. Further, they lack compulsory math and physical science. Related to this, it appears that the Cambridge Overseas Examination does not require such courses, so many students stick to less vocationally relevant ones in order to get the best grades possible. Some employers assert that the lack of an urban, industrial tradition in Botswana implies that the schools have a responsibility to instill traits such as on-time performance, familiarity with simple machines and the virtues of hard work. They argue that, while senior secondary and tertiary education, plus vocational training, should prepare students for particular jobs, primary and junior secondary schools should supply pre-vocational skills and attitude formation.

3. How should potential trainees best gain access to the skills training system?

As stated elsewhere in this report, the BWAST project reports that potential private-sector trainees, particularly those from small companies, cannot get away for daytime courses, their employers cannot afford to pay them during training periods and they worry that the trainees will switch jobs after being trained. Further, with reported major deficiencies in school career advisors and the bewildering variety of training options mentioned at the beginning of this chapter, it is likely that many potential trainees cannot

effectively access the system. A final aspect of this issue, applying to GOB decision makers, is whether to emphasize system access to unemployed school leavers (thereby getting them off the streets and making a national asset more accessible to perhaps the most needy), or whether to concentrate on upgrading the skills of already-employed people (thereby maximizing the economic effect of such training and minimizing the problem of credentialism, described elsewhere in this report).

4. What is an appropriate quality level for the skills-training product, and should the government control it?

There are many aspects to this issue. For example, it appears that the engineering technician training at Botswana Polytechnic comes close to engineering education. One employer complains that graduates know theory but cannot fix cars. Another aspect is the question of using skills-aptitude testing, as well as academic standing, for training institution admission. Finally, the largest element of the system, on-the-job training has the following deficiencies:

> "This process can be very frustrating for both the employer and the employee: The employer loses time, material and sometimes even expensive equipment when training unskilled personnel; the new employee may feel very unhappy due to the industrial environment, strict working hours, industrial safety regulations, a supervisor without pedagogical abilities and may finally decide to go back to the cattle-post." (Gottsleben and Rosch, Strengthening the Industrial Training and Trade Testing System of Botswana, 1984).

C. RECOMMENDATIONS

Summarizing the above section, the three major problems involved with the skill training system are determining the relationship of primary and junior secondary education to it, ensuring that enterprising and qualified trainees have access to it, and ensuring that relevant training is offered. The following recommendations address these problems.

1. Encourage training in the private sector

Even if the GOB were not opposed in principle to excessive meddling with the private sector, the manpower-planning projection problems mentioned above, plus Botswana's overall economic uncertainty, would make it difficult to impose a government-dominated system.

A better approach is to subject the system, as much as possible, to the discipline of the free market. Public-sector technical and vocational training facilities in many countries (and presumably in Botswana) may initially be set up and staffed to supply trainees with skills which are in short supply. However, fossilization may set in. Instructors often cannot be dismissed simply because their teaching skills are no longer relevant, and budgets do not allow hiring new ones to teach newly-relevant skills.

One possible model to consider is that used by a Massachusetts private vocational school which supplies graduates mainly to the nearby high-technology industry. Government grants and loans are available to help needy students pay part of the tuition but, as long as the school retains its certification, the granting authorities do not

interfere in the student's choice of courses. The student is making a major financial sacrifice to attend; the financial sacrifice is in terms of the tuition paid and also the salary lost if the course attended is during working hours. Therefore, the student wants and demands some assurance before signing up that he will get a good job upon graduation. The school does not guarantee anything, but it displays its detailed placement record (by time period, skill type and major employing company). It also explains that it has a board of advisors chosen from major employing companies, whose incentive to serve is the power to alter, every two months, the courses offered, and (informally) to get first crack at the best graduates. The board members also arrange that their companies donate equipment so that graduates will prefer such products in whatever firm they join, generating sales for the board members' companies.

GOB should ask donors to supply vocational training experts with backgrounds in the above types of schools. USAID could consider supplying them through BWAST and IESC, and perhaps the Peace Corps could consider assisting. Many of the above principles could also be applied to public-sector training institutions, improving the quality and relevance of their training.

2. Subject public-sector training institutions as much as possible to market forces.

The increased use of co-op (sandwich) courses is an excellent move which the GOB has already taken. Among other things, it provides a direct link, through the trainee, between

the institution and employing organizations. In addition, GOB should assure that trainees pay what is for them significant fees to receive training. Low-interest loans or deductions from eventual salary checks (tied in for control purposes to the employers' FAP or other grants) could finance such fees. Finally, although perhaps difficult, GOB should continue to use employer liaison committees to allocate a significant number of training-institution positions to those already employed.

3. Encourage the informal-sector apprenticeship system.

As stated above, on-the-job training is probably the largest element of the system. A particular aspect of this type of training merits attention. For the informal sector an unpaid apprenticeship system exists in many countries. The extent of such a system in Botswana is not known, but there is some evidence that it exists through the extended and geographically-dispersed family. Some aspects of the system (e.g. children's working long hours) obviously lead to abuses. But the alternative, unemployment, is perhaps even more abusive. The system particularly favors rural non-farm enterprise because urban entrepreneurs, who initially have the skills, naturally prefer trainees who intend to leave the city, and thus not compete with the trainer.

4. Facilitate access to the skills-training system.

As recommended elsewhere in this report, primary and junior secondary education curricula should avoid becoming too vocational (for reasons of retaining a flexible response to uncertain future economic conditions as well as retaining their

broad, educational qualities) but they should introduce some pre-vocational courses. Similarly, as also recommended elsewhere, senior secondary and tertiary education should seek to provide basic skills common to all or most formal-sector activities, rather than trying to meet specific industry needs. Specifically, university should concentrate on management, teaching, accounting and engineering. The above pre-vocational skills should also include those which industrial societies impart informally, such as why grease is important in machinery, how to read gauges and what they mean, and the role of punctuality.

As recommended elsewhere, industrial associations (e.g. Hotel and Tourism, Motor Traders, Transport and Hauling, Manufacturers and Exporters, Building and Construction and Farmers) and individual companies could serve their own interests and those of providing access and direction to skills training by arrange member visits to schools and other institutions. The BEF has a particularly important role to play. The principle is that it upgrade its ability to advise members and potential trainees on which courses to take. As this ability must last beyond the BWAST project period, BEF needs to seek ways to make this activity self-financing.

A particular need is to make skills training more accessible to existing informal-sector rural and urban businesses. Their labor intensity makes them particularly likely to generate more employment if the skills imparted allow existing employees to make the businesses more competitive. Further, training the owners and employees of existing businesses, rather than on the unemployed or students, makes a quicker employment-generation effect. Specific requirements

are that the courses not be given in a classroom setting, be at night and weekends and take place close to the places of business. BEDU's training van approach is one alternative.

5. Attempt to assure that training institutions deliver their products at stated and consistent quality levels, but avoid setting rigid quality and content standards for them.

The new apprenticeship and trade testing system, with its three levels, is a good example. The government does not attempt to specify which level is appropriate for a particular job but only that a particular trainee has attained a certain level. A similar approach to certifying private-sector skills training institutions should be possible.

IX. CONCLUSIONS AND RECOMMENDATIONS FOR GOVERNMENT AND USAID

Botswana is a special country in many respects. It is democratic; it has an excellent record in human rights; and it is non-racist in stark contrast with the tragic situation across its borders to the south. It is a country with an independent judiciary and a free press and in a political sense is a model to be followed in the developing world. Its location in the center of Southern Africa, a region experiencing turmoil, adds a dimension of strategic importance to the country. From its inception, Botswana has provided major leadership for the Southern African Development Coordination Conference (SADCC). The headquarters of SADCC are, in fact, in Botswana.

But it is not only in the political sphere that Botswana has shown such promise, it is also in the economic field. An emphasis on the private sector is a dominant theme, while at the same time the Government has shown a strong social consciousness in meeting basic human needs of the people. Since Independence, Botswana has had an average annual GDP rate of growth of 12-13%. Considerable progress has taken place in education, infrastructure, health, and industrial development. The country has had the benefit of a burgeoning mineral sector, particularly in diamonds, but it has also been faced with severe economic problems, particularly six consecutive years of drought which have seriously affected the agricultural sector upon which 75 - 80% of the people rely. Botswana has been able to meet less than 10% of its food grain requirements over the past several years.

The Government has taken extraordinary steps to help people in the rural areas to maintain their incomes, and has introduced new programs to help those living in the rural areas. The Government has increased its foreign exchange reserves as a hedge against the continuing drought situation and because of the vulnerability of the country in the troubled southern Africa region. It has recognized that the reserves have been based in large part upon a favorable foreign exchange rate movement between the rand and the dollar which could be dissipated quickly with an exchange rate movement in the opposite direction or a fall in diamond prices. With large reserves, the temptation is there to move ahead with substantial projects which would have popular appeal but little economic promise. The existence of continuous budgetary surpluses also generates political pressures on the Government to relax its sound fiscal policies. The Government has insisted that its projects be economically feasible. The authorities are aware of the need to build infrastructure and to accelerate development in the non-mining sectors, and they are proceeding to do so while seeking to contain recurrent spending commitments within limits that can be maintained even when revenues and reserves are drawn down to cover risks, some of which are certain to materialize.

A. THE FOREIGN EXCHANGE CONTROVERSY

At the end of 1986, foreign exchange reserves amounted to approximately P2200 million or the equivalent of 24 months of visible imports. These reserves have accumulated in part because of limited capacity within Government, the parastatals

and the private sector to identify, plan and implement productive, largely self-sustaining projects, but also as additional protection against growing risks.

Reserves have grown over the last two years primarily because of (1) an improved market for and supply of diamonds and (2) favorable movements in the exchange rate between the US dollar, in which most exports are priced, and the rand, in which most imports are priced. But the very fact that these two factors have had coincident, favorable movements, which have increased reserves, also mean that the risk of a reversal has been substantially increased. Hence, the very causes of the increase in reserves are in themselves reasons now to hold higher reserves than would otherwise be necessary. It does seem likely that the strength of the diamond market will persist for a few years, but the risk of a reversal in exchange rate movements, largely from a strengthening of the Rand versus the US dollar, may begin to materialize in the not too distant future.

It seems reasonable for Botswana to hold larger reserves currently, for several other reasons. Political and economic uncertainties in southern Africa are certainly greater today than even a few years ago, and risks related to access to seaports, markets for imports and employment opportunities in the region, if they materialize, will require substantial foreign exchange reserves. The continuing drought, the possibility of diminishing foreign aid in the form of food supplies, and the need to increase food reserves may all entail foreign exchange protection. The eventual resolution of the problems now confronting the copper-nickel mine may also draw down foreign exchange reserves. Finally, but by no means least

important, larger foreign exchange reserves are now required to cover the rising costs and quantities of imports and to maintain the free trade posture which has been a hallmark of Botswana for so many years.

Botswana is also taking a prudent course in development, giving strong emphasis to ensuring that programs and projects are economically feasible before financing. The GOB has not succumbed to growing pressures for moving forward with programs having popular approval but doubtful long-term values. Reserves can, of course, be drawn down as quickly as they have been accumulated. Moreover, they only buy time to regroup - to adjust Government policies, to arrange foreign loans, to seek additional foreign aid - and to restructure the economy as changed circumstances may require. The adjustment time required is dependent not only on contingency plans and the reaction time of Government but also on the response time of foreign lenders and donors, and that, too, adds to the uncertainty and the need to hold foreign exchange reserves. A guaranteed response, in advance of the realization of risks, would reduce the need to hold reserves.

As the banking system is awash with liquidity and reserves do appear to offer reasonable protection against the risks cited above, the Government has advanced implementation dates for some projects, accepted some new projects not included in NDP6, and increased its allocations to recurrent expenditure. It would seem that the Government shares the views of many that the reserve position, coupled with continuing budget surpluses, is not currently a constraint on development.

Constraints on public sector development efforts take several different forms. The limited capacity to identify, plan and implement projects has already been noted. When a preference must be given to self-liquidating projects, ones which can cover their own recurrent costs through their own generation of revenues, those tasks are made more difficult. But that preference can easily be justified. Other projects require increases in the recurrent budget of Government. If such increases are excessive, the apprehension about or actual realization of foreign exchange risks may entail the cancellation of some on-going projects and a consequent disruption of the entire economy. Risk-related events would reduce Government revenues through lower mineral revenues, customs receipts, income taxes and interest income from the foreign exchange reserves themselves. Moreover, the credit rating of Government, now high (in part because of the reserves position), may deteriorate, raising interest costs just when more money must be borrowed. Clearly, planned increases in recurrent spending by Government should be limited to levels that can reasonably be expected to be manageable during trying as well as prosperous times.

This kind of focus on Government spending and its capacity to implement is probably misplaced. The private sector has ready access to both domestic credit and foreign exchange. Indeed, the failure of the private sector to respond to easy credit and ready access to reserves is an alarming feature of today's economy in Botswana. It probably results from a number of factors including, perhaps particularly for smaller enterprises, an inability to identify opportunities, an

aversion to and perhaps an exaggeration of risks entailed in locating or expanding in Botswana, and inadequate incentives.

The Government cannot, and should not, be expected to solve all of the problems of the private sector. If it attempted to do so, it would very likely destroy private initiative in the process. But it could, and perhaps should, do something about incentives. If Government is having difficulty identifying projects on which to spend prudent amounts of its current surpluses, it could easily with a stroke of the pen reduce its revenues by reducing the company tax. The surplus is reduced and private sector incentives are increased. Caution must be exercised, of course. Reductions in taxes which must soon be reversed can be nearly as disruptive as the cancellation of projects whose maintenance costs can no longer be afforded.

The role of donors, and USAID in particular, should be to maintain a stable and continuing level of concessionary assistance to both the public and private sectors as the Botswanan economy moves through the volatile years ahead. The argument that "excess" foreign exchange reserves in Botswana diminish the need for concessionary assistance must be weighed carefully against the opposing argument that such assistance is needed to support domestic development, which, in turn, may be essential to sustain the political and economic system and the regional role of the nation.

Development assistance is intended to promote development, to enhance the productivity and well being of the majority of the people who are living on the brink of subsistence. The resources made available should expand the

opportunities for these people to participate in (contribute to and benefit from) development and improve their abilities to seize those opportunities.

There is no good single indicator of opportunities but a very rough one is the value of a nation's non-human resources stated on a per capita basis. This figure is clearly large in advanced countries and very low in less developed countries. Indeed, one of the important purposes of development assistance is to attempt to close that gap.

Foreign exchange reserves represent a command over physical resources - in Botswana's case, truly a very limited command. The nation's stock of assets, physical and liquid (foreign exchange reserves), is small and the conversion of liquid into physical assets would not change the total, although a larger share in the form of physical assets might enhance the rate of development. But to argue that foreign exchange reserves are excessive is to question the composition of a nation's resources, not the nation's need for additional resources. Any attempt to adjust the composition in favor of less liquid assets by unilaterally reducing concessional assistance may simply lead to a reduction in imports as Government, following its established principles, seeks to maintain a "safe" level of reserves and essentially the same composition of resources.

The stability and reliability of concessional assistance, its consistency through cyclical fluctuations and the volatility of unexpected events, should be features on which the government and the private sector can rely. Attempts to move in and out will become entangled in uncertain response

times and a diminished familiarity with the needs of the nation. We strongly recommend that USAID take the route of stability and constructive assistance.

B. MATTERS OF GOVERNMENT POLICY

The team has addressed issues of Government policy with respect to employment generation and manpower development with considerable humility given our brief exposure to economic conditions in Botswana. We have, however, identified a few strands of policy and some development opportunities which Government may wish to explore more fully.

Among the constraints on private sector development, the level of real wages stands out as a major deterrent. Some gradual reduction, perhaps by limiting wage adjustments to something less than inflation, would be beneficial. The FAP program substitutes subsidies for real wage reductions but the five-year limit and the declining feature of the labor subsidy merit reconsideration. The high cost to private firms of employing expatriates is another aspect of the same problem and lends weight to the argument that localization should proceed as rapidly as qualified replacements can be trained.

The problem of rural-urban migration places a premium on efforts to sustain rural farm and non-farm incomes and to improve amenities, such as housing, health and education facilities, in rural areas. Higher wage differentials for service in rural areas, better linkages between lending institutions and smaller rural enterprises in need of credit, and improved coordination at district level of the functions of ministries having rural responsibilities are matters deserving

consideration.

In the urban formal sector, there is some evidence that reductions in administrative complexities, such as those encountered in investment licensing and FAP grant approvals, would improve private enterprise initiatives and planning for expansion. Better linkages, possibly through the establishment of private brokering services, are also needed between (1) banks and smaller enterprise applicants for credit, (2) foreign and domestic investors, and (3) vocational training opportunities and occupational needs in the private sector.

The timing of the likely crossover from a shortage to a surplus of high and middle level manpower deserves further careful study. When it occurs the need for a manpower allocation mechanism will virtually disappear; the bonding system, if retained, could place the Government in the embarrassing position of becoming the employer of last resort; and some means of rationing limited higher education and vocational training places among a surplus of candidates will need to be established. Considerable advance planning will be needed to adjust Government policies to the very different problems the crossover will entail.

The consideration now being given to the establishment of an MBA program at the University should be moved into the planning stage. Things needing clarification include differential salaries for MBA faculty, a link with a good foreign management school, relations with the B.Comm. program and engineering at the Polytechnic, and a possible consulting linkage with IDM.

With respect to vocational training, the team feels that the scope for private sector participation is substantial and should be encouraged both in the form of on-the-job training and as independent, privately operated schools.

These recommendations are not exhaustive. A detailed list of recommendations can be found in Section D of this chapter, and discussions supporting them appear in the relevant chapters of this report.

C. A MODIFIED STRATEGY FOR USAID

USAID's strategy to assist Botswana in the development of basic education, appropriate agricultural technology, key rural sector linkages, the recruitment of expatriates, and arrangements for both external and in-country training has served the country well over the years that the strategy has been in place. That strategy has focussed on critical needs and it is clear from assessments by Batswana that the assistance provided has had a significant impact on and made an important contribution to the development of the nation.

Equally important, these achievements have been realized in an efficient manner. The internal effectiveness of the several projects involved has been very good. Moreover, those presently responsible for the management and administration of the on-going projects have impressed us with their analytical, but concerned, approach and with their dedication to the efficient operation of their projects as a means of assisting development in Botswana.

Our suggestions for modifying this strategy are intended primarily to redirect the thrust of the strategy toward employment creation and the revitalization of the private sector. The means for doing so are mainly already in place, and the modified package we now propose should not require much, if any, increase in funding.

Support for basic education has been especially timely and successful. The PEIP project deserves commendation. Its very success leads us to believe that the functions of the project should soon be substantially institutionalized and an extension of the project should be needed only to clean up loose ends. We do feel, however, that a curriculum specialist should be added to the project as soon as possible, as this segment of the project does need strengthening.

The substantial changes now being introduced by the GOB in Junior Secondary, including the transition from a 7-2-3 system to a 6-3-3 system and the decision to universalize basic education through Grade 9 (Form 2) suggest that the JSEIP project should be extended to assure continuing support for Junior Secondary throughout this trying period. Here, too, a curriculum specialist is needed to assist with needed curriculum modifications and, if requested, the introduction of business-related matters into arithmetic and social studies classes.

The Rural Sector Grant is winding down, but the team has recommended that support for some of the activities financed under the grant, particularly the training of rural artisans, Rural Industrial Officers and Development Officers at district level should be continued under other umbrellas.

ATIP is scheduled to conclude in 1990. In its last years, we feel that much attention should be given to strengthening the now rather tenuous linkages among research, extension and the farmers, as well as those between farm and non-farm rural activities. This may be an area of need where the Peace Corps could provide valuable, low cost assistance. We would expect that these linkages will also be of concern to the National Research and Science Technology Council which we understand will soon be established in Botswana.

The BWAST project is impressive both in concept and in its execution. Hopefully, it can be replicated in other African nations where USAID operates. The flexibility of BWAST in meeting technical assistance needs and providing both external and in-country training is especially important to Botswana because the shape of future development, especially in the private sector, is very uncertain. In these circumstances, a rapid response time is particularly valuable. BWAST is working to improve the criteria it is using with Government and the private sector to establish priorities for training and technical assistance as they bear on employment creation. Some suggestions have been made in this report with respect to criteria and other recommendations have been made on specific training and technical assistance needs which are indicative of the kind of criteria we see as useful.

The reshaping of existing projects outlined above should release some funds in the future for other activities. Certainly the totality of our recommendations for USAID assistance would require more funds than the present budget allows. The USAID office will need to choose carefully among

these options in allocating its limited resources.

We see as a clear need, and an opportunity for USAID, to assist with the early establishment of an MBA program at the University. This may turn out to be a large and costly endeavor, however, and the cooperation of other donors will almost certainly be sought by the GOB, if it decides to move ahead with the establishment of this new degree program.

Numerous references throughout this report have been made expressing concern about the weakness of linkages between those needing and those supplying credit, investment funds, technology, and vocational training opportunities. We would give special emphasis to a possible role for USAID to improve credit linkages between lending institutions and smaller enterprises in both urban and rural areas and linkages between foreign and domestic investors necessary to establish joint ventures. We recommend that USAID give serious consideration to these opportunities because relatively small inputs of training and technical assistance could expand considerably the growth of private sector activities and the participation of Botswana in private sector development. Recommendations as to ways in which USAID should fund its activities are beyond the scope of this report. However, we feel that the Food Assistance strategy could play a role here. We note also that USAID has played a very constructive role in drought, relief through food aid and disaster assistance. Peace Corps assistance might also be useful in helping RIO's to help small enterprise applicants for credit through the complications of FAP procedures.

As universal education moves through to Form 2, more students will also enter Senior Secondary. There may be a need to re-examine the Senior Secondary curriculum to ensure its relevance to the changing opportunities that will be opening up for Form 5 school leavers. Possibly such assistance could be arranged, if it is requested, either through JSEIP or BWAST.

Finally, our priorities would include assistance with family planning, should the Government make such a request, because the ultimate effect of a lower rate of population growth on the size of the labor force is a critical factor in reducing unemployment. Related to family size is the adequacy of child nutrition. Assistance with this problem, if requested, should be favorably considered because improved nutrition and child care is an important determinant of learning capability.

There is considerable cooperation between USAID and the Peace Corps in Botswana, particularly in the field of education, where many Peace Corps volunteers are teachers in the secondary schools. There is also cooperation in agriculture and in food relief programs. Peace Corps is a valuable resource. As mentioned above, USAID should make every effort to work with Peace Corps to the extent appropriate in carrying out project activities. Peace Corps has demonstrated its ability to recruit highly qualified personnel, and the numbers required for certain medium-level but important skills. Peace Corps - USAID cooperation could provide added resources to small enterprise development and rural employment creation. It should also be considered in any expanded support for population programs.

These priority considerations do not exhaust our list of recommendations, as a brief glance at the next section will disclose. We do feel that a focus on those discussed above would enhance the effectiveness of the USAID strategy as it relates to support for Government's efforts to generate employment opportunities and to develop the high and middle level manpower required to promote growth and localize employment.

D. LIST OF SPECIFIC RECOMMENDATIONS

I. Introduction

1. If requested, USAID should consider favorably opportunities to assist in limited ways with family planning, prenatal care and infant nutrition, as part of a long-term effort to improve the quality of the labor force and decrease its rate of growth.

II. The Economic and Policy Setting

1. FAP should be revised as follows:

   a. The temporary nature of the FAP wage subsidy provides insufficient incentive, and the current 5-year limit warrants reconsideration.

   b. To avoid commitment to a permanent subsidy, a subsidy rate indexed to the gap between the minimum wage and an indicator of real labor cost might be considered, requiring Government and not employers to bear the cost of the minimum wage.

c. The present value of the subsidy rate on unskilled labor needs to be substantially raised to close the gap between the existing minimum wage and the real labor cost today. Other provisions of FAP, providing capital subsidies, might however be removed.

d. The application procedures need to be simplified; at present they are a deterrent to small-scale and especially rural applicants.

e. More Rural Industrial Officers are critically needed to assist with implementation of FAP in rural areas.

2. As an alternative or supplement to a revised FAP scheme, a dual exchange rate might be considered, offering a premium exchange rate for non-traditional exports and on labor-intensive manufactured imports.

3. An examination of potential financial intermediation institutions is needed, especially focused on working-capital needs of viable small-scale enterprises, in particular examining methods of insuring against risk and more flexible definitions of collateral, perhaps with an intermediary institution acting between the banks and borrowers.

III. Basic Education

1. The Government should consider introducing bonus payments to primary and junior secondary school teachers who conduct classes in remote rural areas.

2. Planning should be initiated for the more intensive use of primary and junior secondary teacher training facilities and the construction of additional ones in order to meet the future demand for teachers and to reduce, first, the numbers of unqualified teachers and, second, the numbers of expatriate teachers.

3. The high wastage rates of primary and junior secondary school teachers should be examined, both to confirm their accuracy and to identify means by which they might be reduced.

4. More attention should be given to the criteria for selecting primary and junior secondary school teachers for in-service training in order to improve the cost-effectiveness of workshops.

5. A curriculum expert should be added to the PEIP team as soon as possible, and curriculum planning should become the primary focus of an extension of PEIP.

6. Given the projection of large numbers of unqualified teachers in junior secondary schools, the planned class size of 24 should be reexamined; larger classes with qualified teachers may be preferable to smaller classes with unqualified teachers.

7. Consideration should be given to introducing simple bookkeeping, profit and loss, and cost-effectiveness methods and computations into the junior secondary curriculum.

8. The planning component of JSEIP with respect to both educational expansion and curriculum modification should be enlarged in the next extension of the project.

IV. Employment Generation in Rural Areas

1. Rural assistance policies and projects should have the following characteristics:

- Address situations where there is only a single "missing ingredient," and supply that ingredient;
- Be industry and task specific; and,
- Survey needs before designing projects.

2. Expand the support of rural artisan training, particularly in those areas where the demand prospects are favorable.

3. Consider continuing support of the training of the Rural Industrial Officers.

4. Consider funding for two years an additional RIO, assigned to work with the ATIP project in the six villages where the farming system research is being conducted.

5. Consider funding a policy analysis position in the Ministry of Commerce and Industry or the Ministry of Finance and Development Planning, responsible for collecting and analyzing data and formulating policy in the area of rural non-farm employment.

6. Provide support for masters training for all 37 of the District Officers who were originally scheduled to be trained under the District Institutional Grant.

7. Take a close look at private sector rural investment opportunities, especially those with links to agriculture, in the up-coming USAID Private Sector Study.

8. Sponsor a two-to-three-day seminar to discuss the question of the application of science and technology in improving agriculture in Botswana.

9. Consider establishing a small rural enterprise lending scheme patterned after the successful models, several of which have been developed by AID, designed to provide funds in a cost-effective way to the smallest firms. Botswana and its possible magnitude would have to be determined by a pre-feasibility study.

10. Consider undertaking a detailed survey of rural non-farm activities in Botswana.

V. Employment Generation in the Formal and Urban Informal Sectors

1. Identify, through the up-coming private-sector study and a related one investigating employers' decision processes when planning employment-generating projects, GOB and donor activities which, if stopped or strongly altered, will have a positive impact on employment.

2. Provide advisors to help establish or strengthen key NGO's and to increase the emphasis in schools on entrepreneurship.

3. Support a profit-seeking international collaborative-venture brokering service.

4. Support the establishment of a profit-seeking job placement and executive search firm.

5. Investigate, and if justified, help to establish a micro-enterprise support foundation, whose major business is making working-capital loans to clients whose only barrier to business expansion and employment generation is the lack of such credit.

6. Study the strengthening of a one-stop government-paperwork shop.

7. Set up a private-sector advisory task force to assess the desirability of the GOB's present policy of trying to second-guess the market in issuing FAP grants and industrial licences.

8. Expand FAP coverage to services and certain types of commerce, simplifying regulations and speeding approval time in this and other ways, tie more benefits to employment generation and extend the period of assistance using loans rather than grants during later years.

VI. The Role of Manpower Planning

1. Make manpower-requirement projections for several scenarios or give as ranges.

2. Review and evaluate manpower planning methodology, with objective of better coordinating education and training in the public and private sectors.

3. Include simple pre-vocational skills in the JS curriculum and some emphasis on elementary bookkeeping and commercial topics in that of senior secondary.

4. At the University level stress management, teaching, accounting and engineering education.

5. Consider establishment of University school of management, possibly with links to similar foreign schools, and introduce a faculty salary differential.

6. Give the private sector considerable freedom to supply vocational training, but GOB should continue to control quality.

7. Consider increasing allocations of bonded manpower to the private sector in order to increase alternatives to employing expatriates.

8. At the time skilled-manpower demand/supply crossover occurs, revise or abolish the bonding system.

VII. Higher Education

1. Whereas basic education through Junior Secondary is appropriately viewed as a basic right, higher education beyond this point should be seen as a national investment, and an expensive one.

2. Given uncertainties in manpower-planning estimates, particularly relating to the private sector, all higher education should be designed for maximum flexibility, offering a basis of advanced education upon which the private sector can train according to their specific needs as they emerge.

3. Given the investment nature of higher education, it may be preferable to consider training a smaller number of people well, rather than diluting resources over much larger enrollments. This is true both for Senior Secondary and University education.

4. A system of Senior Secondary advancement by rank order on exams might be considered, similar to that now used for University admission.

5. As those excluded from public higher education by any rationing mechanism will seek other higher education alternatives, thus stimulating the supply of self help and other private educational facilities, some regulation may be required.

6. Since the curriculum and examination system at the Senior Secondary level are scheduled for reform, donor agency support for this process is strongly recommended.

7. In undertaking this curriculum reform, there seems no reason not to think of elementary business and engineering principles as part of that curriculum, perhaps to be coordinated with the Technical Wings of the Senior Secondary schools.

8. The Polytechnic should be supported in solving its staffing problems in the area of basic engineering training.

9. Some form of Polytechnic internship may be highly desirable to give practical, industrial experience.

10. The Botswana Agricultural College and the ATIP team should be encouraged to develop closer ties, particularly to help in introducing some of the new technologies and specific Botswana applications into the curriculum.

11. The University should be encouraged to adopt a system of differential salaries across disciplines, in particular to solve current major staffing problems in the business field.

12. The University should explore the possibility of adding an MBA program.

13. A special combined program might be developed, offering a B.Comm. degree or a B.Sc. degree in engineering followed by an MBA, perhaps on an accelerated basis.

14. The Institute for Development Management may need to supplement its Botswana component in order to offer evening courses, especially for in-service training for the private sector.

15. Mechanisms need to be explored for increasing the number of Rural Industrial Officers: enhanced pay, focussing on Form 5 rather than University graduates, and recruiting from home villages are each to be recommended.

16. BWAST offers a flexible vehicle and should be used fully. The selection criteria for training under BWAST warrants some careful consideration, shifting the focus towards smaller businesses and away from larger corporations.

17. Overseas training of Batswana needs to continue for the foreseeable future, specifically where scale economies of teaching are particularly important.

18. Careful consideration needs to be given to the current bonding/allocation system of University students. A loan program superficially seems a more attractive alternative, but specific recommendations should await results of the World Bank study.

19. Flexibility in availability of specific skills should be retained through temporary use of expatriate labor, particularly for expansion of the private sector.

20. Expatriate technocrats in Government should be enccuraged to allocate a significant portion of their time to counterpart training, to ensure continuation in to the next generation (but in larger numbers), of the extremely competent levels of Batswana civil servants available today.

21. A study is needed on improving projections of the demand for labor and skills.

VIII. Technical and Vocational Training

1. Encourage strengthening the private-sector element of the skills-training system by supplying vocational training advisors with private-sector backgrounds, and apply competitive principles to public-sector training institutions.

2. Encourage the informal-sector apprenticeship system.

3. Facilitate access to the skills-training system by introducing pre-vocational courses and experiences into the school curricula, assisting business-oriented NGO's to advise members and potential trainees on which courses to take and making training more accessible to informal-sector firms.

4. Attempt to assure that training institutions deliver their products at stated and consistent quality levels, but avoid setting rigid quality and content standards for them.

APPENDIX A

TERMS OF REFERENCE

STRATEGY ASSESSMENT AND EVALUATION

USAID/Botswana will be undertaking two internal studies during the May through July, 1987 period. While the studies are internal to USAID, they will be developed in close cooperation with the Government of Botswana. The first study will be an evaluation of USAID's overall strategy and will be followed by a separate, although related private sector strategy study.

I. STRATEGY ASSESSMENT AND EVALUATION

The strategy evaluation team will include Dr. Edgar O. Edwards, recently retired economic advisor to the Government of Kenya (Team Leader); Dr. Robert Lucas, Professor, Boston University; Dr. Carl Liedholm, Professor, Michigan State University; and Mr. Cameron Smith, Private Sector Consultant.

The four main questions to be addressed by this team are as follows:

1. Are USAID Botswana's education projects and training programs helping give Batswana the skills they will need to hold and effectively perform the jobs of the future? (What is the job market of the future to look like?)

2. What are USAID's projects and programs doing to help create jobs, particularly in rural areas? As part of this second issue, on-farm/off-farm enterprises and rural employment will be

addressed in light of lessons learned and being learned from the Rural Sector Grant, the Agricultural Technology Improvement grant and other programs of the GOB.

3. What modifications, if any, in our manpower programs are needed to better meet our basic skills development strategy?

4. In what ways could the AID program act in a catalytic or more direct basis to help in the actual creation of jobs, particularly in rural areas?

These questions, while specific to USAID programs, only have relevance in the context of assisting and supporting the policies and programs of the Government of Botswana as they relate to the generation of employment opportunities and the enhancement of needed skills in the labor force. These policies and programs must also be addressed by the team in order to ensure that the recommendations which emerge are consistent with and supportive of the objectives of Government.

During the course of their work the team will meet with a Government of Botswana reference group and other Government officials, USAID project Chiefs-of-Party and selected OPEXers, University of Botswana staff, Embassy and USAID staff and others in the community as appropriate. Field trips outside of Gaborone to selected sites will also be programmed.

The team will prepare a report which will be an internal U.S.A.I.D. document; it, however, will be thoroughly

coordinated with the Government of Botswana. The report should contain specific recommendations in the various areas covered by the questions listed in this scope of work. The recommendations will help in identifying what modifications might be made to the Mission's present portfolio, within current levels of funding, and what lessons could be learned from USAID projects that would be of value to other development efforts.

Discussion

In this study, USAID is primarily interested in a specific assessment of the manpower development and education strategy and programs, and their effectiveness in addressing Botswana's employment problems. The team should examine the appropriateness of the Mission's strategy focus in addressing existing manpower imbalances in Botswana. The main element of the Mission's strategy has been to train and educate to meet the demand for skilled manpower, and the study should emphasize that element. But there is another critical feature of the manpower problem. That "other half" of the manpower problem in Botswana is the present and worsening unemployment problem, as growth in the labor force outstrips the number of jobs being created. The team should also look at how the Mission's strategy addresses this part of the problem. An assessment of this issue should include an examination of whether there are any links between increased educational levels and increased employment opportunities. For example, has an increase in the number of educated Batswana generated an increase in job opportunities, either through (i) an increase in overall

economic activity or (ii) improved policies/programs affecting employment creation?

Given, however, the methodological difficulties involved in establishing these type of linkages, we believe it will also be necessary to approach the question from the demand side: i.e. given Botswana's resource endowment and markets, what kind of jobs are likely to be generated over a ten to twenty year horizon, and what factors can lead to a increase in jobs? Do the existing training and education programs and services (whether AID, other donor or Government funded) appear adequate and appropriate to meet those manpower development needs?

These questions are difficult to approach in a less than comprehensive study. The analysis should be kept to manageable proportions by, for example, relying mainly on secondary sources and interviews with planning officials in GOB agencies. Any projections of this sort are bound to be broad-based, and the objective should be limited to identifying broad sectoral categories of manpower.

Specific Questions for Team Members

A. Questions for the Rural Enterprise Specialist and Private Sector Specialist:

1. Which elements of currently successful employment generation are critical in Botswana?

2. What is the potential for job creation from development of the private sector (e.g. Agriculture, Mining, Industry, Commerce, etc.)? What are the general constraints to private sector job creation? What are the possibilities for easing those constraints?

3. What is the potential for job creation through the development of small enterprises and employment opportunities in the rural areas? What has been the experience of the Rural Sector Grant, the Agricultural Technology Improvement Project and rural employment activities of the Office of Rural Development Coordination in the Ministry of Finance and Development Planning? What are the general constraints to job creation through rural development? What can be done to ease those constraints?

4. How have manpower considerations (availability/quality of workers, training facilities, etc.) affected past investment decisions in Botswana?

5. In sum, where will new jobs be created and what skill levels will they require?

The Rural Enterprise and Private Sector specialists should also provide general guidance on areas to be emphasized in the related private sector strategy study.

B. Questions for the Manpower Development Specialist:

1. To what extent will Botswana be able to meet manpower needs suggested by the answer to A.5 above?

2. To what extent are USAID's strategy and manpower development/education projects helping to meet the basic training requirements of the future job force of the Botswana economy?

3. To what extent are AID trained participants actually assisting in job creation and income generation?

4. What role can/should the Government play in ensuring that these are policies and programs required to develop individuals with the necessary skills for private sector jobs? Can/does it do so effectively?

C. Strategy recommendations to be made by the Team Leader and the Assessment Team.

1. What modifications, if any, in our manpower programs are needed to better meet our basic skills development strategy?

2. Should all or most of our funds be provided in the manpower development and education area?

3. In what ways could the AID program act in a catalytic or more direct basis to help within present levels in the actual

creation of jobs, particularly in rural areas? (In this area, assess the rationale for continuing concessional assistance in the face of Botswana's large foreign exchange reserves.)

4. What lessons can be learned from Botswana in the areas of skills development and rural job creation which could be applied elsewhere?

Other Concerns

An additional concern with the Botswana strategy is the gap between basic education, addressed by the primary and junior secondary programs, and the college level training provided by the participant training programs. The Manpower Development Specialist should examine the adequacy, timeliness, relevance and appropriateness of secondary, vocational and technical training programs in filling this gap in the strategy.

With respect to Question B.3 and based on other AID evaluation experience, it may be difficult or impossible for the assessment to directly measure the impact of returned participants on employment creation and income generation. The team might consider a three part analysis, first evaluating the impact of training on participants, then the impact of returned participants on organizational capabilities, and finally evaluating the role and impact of the organizations in employment creation and income generation. The Rural Enterprise and Private Sector Specialists should determine which Government activities are important to economic development, which Government Ministries and departments

targeted by the participant training programs are the most critical to employment creation and income generation, and whether the capabilities of the targeted ministries and departments are being improved by returned participants.

ACRONYMS

ABLE	American Business Linkage Enterprise
AD	Agricultural Demonstrator
AED	Academy for Educational Development
AFA	Automatic Financial Assistance
ALDEP	Arable Lands Development Program
ARAP	Accelerated Rainfall Arable Program
ATDO	Association of Training and Development Officers
ATIP	Agricultural Technology Improvement Project
BAS	Business Advisory Service
BAC	Botswana Agricultural College
BDC	Botswana Development Corporation
BEDU	Batswana Enterprises Development Unit
BEF	Botswana Employers' Federation
BIA	Botswana Institute of Accountancy
BIAC	Botswana Institute of Administration and Commerce
BMC	Botswana Meat Commission
BRIDEC	Brigades Development Centre
BWAST	Botswana Workforce and Skills Training Project
CFA	"Case by Case" Financial Assistance
CFDA	Communal First Development Area Strategy
CJSS	Community Junior Secondary School
CSO	Central Statistics Office
DPSM	Directorate of Public Service Management
EC	European Community
EPC	Employment Policy Coordinator

EPU	Employment Policy Unit
FAP	Financial Assistance Policy
GDP	Gross Domestic Product
GOB	Government of Botswana
IDM	Institute of Development Management
IECC	Industrial Extension Coordinating Committee
IESC	International Executives Service Corps
ILO	International Labor Organization
JC	Junior (Secondary School) Certificate
JS	Junior Secondary (School)
JSEIP	Junior Secondary Education Improvement Project
MBA	Masters in Business Administration
MCE	Molepolole College of Education
MCI	Ministry of Commerce and Industry
MFDP	Ministry of Finance and Development Planning
MLGL	Ministry of Local Government and Lands
MLHA	Ministry of Labour and Home Affairs
MOA	Ministry of Agriculture
MOE	Ministry of Education
NDB	National Development Bank
NDP 6	Sixth National Development Plan (1985-91)
NEMIC	National Employment Manpower and Incomes Council
NGO	Non-government Organization
OPEX	Operational Expert
P	Pula, the currency of Botswana (worth about US$0.56 in June 1987)
PDC	Production Development Committee
PEDF	Productive Employment Development Fund
PEIP	Primary Education Improvement Project

PETC	Productive Employment Technical Committee
PTTC	Primary Teacher Training College
RDC	Rural Development Council
RDU	Rural Development Unit
RECU	Research Extension Coordination Unit
RELO	Research Extension Liaison Officer
RIIC	Rural Industries Innovation Center
RIO	Rural Industrial Officer
RIOC	Rural Industrial Officer Cadre
RIP	Rural Industries Promotions
RSA	Republic of South Africa
RSG	Rural Sector Grant
SACU	Southern African Customs Union
SADCC	Southern African Development Coordination Conference
STTA	Short-term Technical Assistance
TIPA	Trade and Investment Promotion Agency (Ministry of Commerce and Industry)
TTC	Teacher Training College
ULG	Unskilled Labor Grant
ULGS	Unified Local Government Service
VAT	Village Artisan Training

Notes:

Batswana	Citizens of Botswana
Motswana	A citizen of Botswana

APPENDIX C
PEOPLE INTERVIEWED

Government of Botswana (GOB) Reference Group

Nelson Mokgethi	Macro-Economist, MFDP
Theodore Valentine	Employment Policy Coordinator, MFDP
Richard Dempsey	National Manpower Planner, MFDP
Eric Odotei	Planning Officer, MOE
Babe Botana	Planning Officer, MLHA
Howard Sigwele	Senior Agricultural Economist, MOA
Reuben Boiyane	Senior Industrial Officer, MCI
Michael Douse	Training Advisor, DPSM

GOB Officials, Private Sector Representatives, Educators

Baledzi Gaolathe	Permanent Secretary, MFDP
J. Clark Leith	Economic Consultant, MFDP
Freddie Modise	Government Statistician, MFDP
John Wilson	Macro-Economist, MFDP
Jakes Swartland	Deputy Permanent Secretary, MOE
Gillis Axelson	Director, Brigades, MOE
Peter Jones	Senior Technical Education Officer, MOE
M.M. Oagile	Manpower Planner, DPSM
Norman Root	Manpower Planner, DPSM
Ulla Kann	National Institute for Development Research and Documentation
Lepetu Setshwaelo	Regional Director, IDM
Prof. Tom Tlou	Vice Chancellor, University of Botswana
Prof. Terence Davis	Deputy Vice Chancellor, University of Botswana
Edward Kemsley	Principal, Botswana Agricultural College
Yvonne Merafe	Rural Sociologist, MOA
John Ballard	Principal, Botswana Polytechnic, MOE

Bruce Blewett and Robert Brink	Coopers and Lybrand (Botswana)
Brian Egner	Economic Consultant (Private)
Kit Morei	Director, Rural Industries Innovation Center
David Inger	Managing Director, Rural Industries Promotion
Modiri Mbaakanyi	Director, Botswana Employers' Federation
H.B. Mahlone	Integrated Field Services, MCI
Victor Nyadza	Integrated Field Services, MCI
Michael Smith	Training Advisor, Botswana Power Corporation
David Cownie	Consultant

Donor Representatives

Asbjorn Eidhammer	NORAD
Helmut Geese	German Embassy
Francisco da Camara Gomes	EEC
Paul Jenkins	British High Commission
Hans von Sponeck	UNDP
Anders Trydell	SIDA (Sweden)

US Government Officials and USAID Contractors

Natale Bellocchi	Ambassador U.S. Embassy
Johnnie Carson	Deputy Chief of Mission U.S. Embassy
Lloyd Pierson	Director, Peace Corps
John Hummon	USAID Mission Director
John Roberts	USAID Assistant Director
Mark Anderson	USAID Executive Officer
Ann Domidion	USAID Human Resources Development Officer
Paul Daly	USAID Agricultural Development Officer

William Elliott	USAID Project Development Officer
David Benedetti	Field Coordinator Botswana Workforce and Skills Training Project (BWAST)
Richard Betz	Assistant Field Coordinator, BWAST
Max Evans	Chief of Party Primary Education Improvement Project (PEIP)
Luther Haseley	Deputy Chief of Party, PEIP
Ash Hartwell	Chief of Party, Junior Secondary Education Improvement Project
David Norman	Chief of Party, Agricultural Technology Improvement Project

Note: This is a representative list of the major contacts made by the team, but is not all-inclusive.