

Japan International Cooperation Agency (JICA)
Ministry of Education, the Republic of Ghana

The Study for Development of a Master Plan to Strengthen Technical Education in the Republic of Ghana

Final Report
Main Report

November 2001

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The exchange rate applied in the Study is;
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(September, 2001)

Preface

In response to a request from the Government of the Republic of Ghana, the Government of Japan decided to conduct a "Study for Development of a Master Plan to Strengthen Technical Education in the Republic of Ghana" and entrusted the study to the Japan International Cooperation Agency.

JICA selected and dispatched a study team headed by Dr. Yoshihiro Asano of Pacific Consultants International to Ghana between March 2000 to December 2001. In addition, JICA set up an advisory committee headed by Mr. Nobuhide Sawamura, Associate Professor of Hiroshima University, between March 2000 and December 2001, which examined the study from technical points of view.

The Team held discussions with the officials concerned of the Government of Ghana and conducted field surveys at the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of this project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Ghana for their close cooperation extended to the study.

December, 2001



Takao Kawakami

President

Japan International Cooperation Agency

Mr. Takao Kawakami
President
Japan International Cooperation Agency
Tokyo, Japan

Letter of Transmittal

Dear Sir,

We are pleased to formally submit herewith the Final Report of "the Study for Development of a Master Plan to Strengthen Technical Education in the Republic of Ghana".

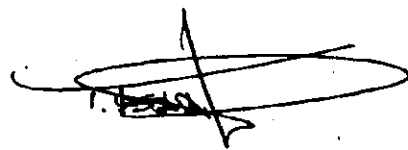
This report compiles the results of the Study, which was undertaken in the Republic of Ghana from March 2000 through December 2001 by the Study Team, represented by Pacific Consultants International.

We had been assisted by many people for the accomplishment of the Study, and we would like to express our sincere gratitude and appreciation to all those who extended their kind assistance and cooperation to the Study Team, in particular, Ministry of Education who act as the counterpart agency.

Also, we acknowledge the effective assistance by all the officials of your Agency and the Embassy of Japan in the Republic of Ghana.

We hope that the report will be able to contribute to the development of technical education for Ghana.

Very truly yours,



Yoshihiro Asano

Team Leader,
The Study for Development of
a Master Plan to Strengthen
Technical Education in the
Republic of Ghana

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GLOSSARY AND ACRONYMS

| WORD | GENERALLY ACCEPTED MEANING |
|---|---|
| AGI | Association of Ghana Industries |
| Assessment | Within the context of Competency-Based Training (CBT), it means more than written "examination". It is the process of collecting evidence and making judgments on whether competency has been achieved. |
| ATO | Accredited Training Organization - In the proposed reformed system, institutions can be accredited by the National Qualifications Authority to award national certification |
| Attachment | Generally refers to the on-the-job training period in industry negotiated for TVET students undertaking TVET programs. |
| BECE | Basic Education Certificate Examination – Administered at the end of Junior Secondary School (JSS) to determine entry into Senior Secondary School (SSS). |
| CBT | "Competency-Based Training" - is a systematic learning process in which the primary concern is the student's demonstrated attainment of knowledge and skills required to accomplish a series of objectives and tasks relevant to a selected occupational goal. CBT methodology provides learners with the recognition and accreditation of previously acquired knowledge and skills, flexibility in scheduling learning activity, self-paced individualized study determined by a student's learning style and the possibility of starting and finishing a program at any time during the year. |
| Competencies | Also referred to as "competency standards", they focus on what is expected of people in workplaces rather than on the learning process. They specify the knowledge, skills, and the application of that knowledge and skill in the workplace as well as the ability to transfer and apply the competency in new situations, environments and contexts. |
| Competency Standard | The standards are set in a packaging framework designed to facilitate flexibility, multi-skilling and specialization. The framework is based on the principle that the individual unit of competency, apart from perhaps a small number of "Core" units, should not be exclusively related to a particular occupation or employment classification level. |
| Competencies - Core Units | Competencies that are a necessary part of the skill profile of every job in industry – they form the skills profile of all employees. |
| Competencies - Foundation Units | Competencies that are deemed to be common and necessary in the industry. Core units are determined for each qualification within training packages and must be achieved for each qualification. |
| Competencies - Pre-requisite Units | Refers to specific competencies that are required as support in terms of pre-requisite skills and knowledge. |

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| Competencies - Specialization Units | These units describe the diverse range of competencies required across the industry |
| CRDD | Curriculum Research and Development Division – A part of the Ghana Education Service, this division is responsible for curriculum development for Junior Secondary Schools. Vocationally oriented curriculum is developed in association with the National Board for Small Skills Industries (NBSSI). |
| ECOWAS | Economic Community of West African States |
| Education | Some theorists have differentiated between “education” and “training” by stating that “training is orientated towards the present job, education is orientated towards future jobs”. |
| EIRR | Economic Internal Rate of Return |
| ERP | Economic Recovery Program |
| GES | Ghana Education Service in Ministry of Education, |
| GHANTA | Ghana National Training Authority – a body that does not currently exist, but will be recommended to be formed to supervise TVET reform across all sectors in Ghana in similar fashion to the Australian body “ANTA”. |
| GIMPA | Ghana Institute for Management and Public Administration |
| GOG | Government of Ghana |
| GEF | Ghanaian Emigrants’ Fund |
| GRATIS | Ghana Regional Appropriate Technology Industrial Service |
| GSS | Ghana Statistical Service |
| HND | Higher National Diploma – Qualification introduced by the Universities Rationalization Committee in the early 1990s in association with key stakeholder groups. The HND qualification was accredited by the National Accreditation Board (NAB) in 1995. |
| ICCES | Integrated Community Centers for Employable Skills, administered by the Ministry of Employment and Social Welfare |
| Intermediate Craft Course | 3 Year course, conducted at Technical Institutes (TI), which is intended to “train students, apprentices and other categories of trainees as craftsmen”. |
| IT | Information Technology |
| ITAB | Industry Training Advisory Board – key channels of advice and information between the TVET system and industry, providing a means for industry needs to be articulated and acted on. Each main industry sector has an ITAB which is responsible for identifying all competencies which underpin the training packages/curricula offered. |
| ITTU | Intermediate Technology Transfer Units administered by the Ministry of Environment, Science and Technology (MEST). |

| | |
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| JICA | Japan International Cooperation Agency |
| JSS | Junior Secondary School |
| MEST | Ministry of Environment, Science, and Technology |
| MESW | Ministry of Employment and Social Welfare - It is now named Ministry of Manpower and Employment Development |
| MOE | Ministry of Education |
| NAB | National Accreditation Board – Primary agency for accreditation of TVET institutions and curriculum as national standard |
| NABPTEX | National Accreditation Board for Professional and Technician Examinations – responsible for curriculum and examination administration and certification for HND |
| NACVET | National Coordinating Committee for Technical and Vocational Education and Training |
| NCC | National Craftsman's Certificate – comprises three qualifications including Grade 1, 2 & 3 awarded by the Ministry of Employment and Social Welfare (MESW) through administration of the National Trades Test. |
| NCTE | National Council for Tertiary Education – Primary agency for administration of Universities and Polytechnics |
| NQA | National Qualifications Authority |
| NQF | National Qualifications Framework – A certification system that incorporates all TVET qualifications, defines the various levels of each course conducted and specifies linkages and pathways between each level. |
| NTTC | National Trades Training Council |
| NVTI | National Vocational Training Institutes administered by the Ministry of Employment and Social Welfare (MESW). |
| Polytechnic | Established through enactment of the Polytechnics Law (1992) they were authorized to offer the HND by the Universities Rationalization Committee in 1993. |
| Post-Compulsory | Generally refers to education levels, which are above the level deemed compulsory for all students by governments. In Ghana it is above Junior Secondary School (JSS) level. |
| Post-Secondary | Generally refers to levels of education, which are post year 12. In Ghana the situation is more complex because of the various ministerial and sectoral divisions of education and training programs. |
| RPL | Recognition of prior learning (sometimes referred to as RCC or "Recognition of Current Competencies"). It is aimed at avoiding duplication of effort when a person can demonstrate competence. |

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| RTO | Registered Training Organization – many countries have adopted systems in which organizations other than “TVET institutions” can be nationally registered to conduct their own training <i>and issue national qualifications</i> . |
| SDF | Skill Development Fund |
| SSTS | Senior Secondary Technical School |
| SOE | State Owned Enterprises |
| SSS | Senior Secondary School |
| Technician Certificate | Divided into Certificates I, II and III they are offered at Technical Institutes and require Senior Secondary Certificate, Intermediate Craft or Advanced Craft as a prerequisite depending on the subject area the trainee wants to undertake. |
| TEU | Technical Examinations Unit - Under the administration of the Ghana Education Service (GES) of the Ministry of Education (MOE), this agency is responsible for curriculum development, administration and conduct of examinations and certification for “non-tertiary” course in Technical Institutes (TI) and Polytechnics. |
| TI | Technical Institutes – Traditionally referred to as “second cycle institutions”, these institutes were set up to take in students from disparate backgrounds for full time or block- release programs offered at Intermediate Craft, Advanced Craft and Technician I, I & III levels. |
| Training | (See “Education” for distinction). Also defined as a process which “develops job skills, knowledge and attitudes which are required immediately in the workplace. |
| Training Package | Replacing the term “curriculum”, they provide the basic building blocks for technical and vocational education and training (TVET) programs. They bring primarily through industry-managed initiative and process. |
| TVET | Technical and Vocational Education and Training - term used by any countries to distinguish this sector from general education courses |
| UCC | University of Cape Coast |
| UCEW | University College of Education of Winneba |
| KNUST | Kwame Nkrumah University of Science and Technology |
| VET | Vocational Education and Training - often used as an alternative description for TVET. |
| WAEC | West Africa Examinations Council - International examinations agency, operating in West African countries, authorized to conduct examinations and issue certification at the end of senior secondary school. |

CHAPTER 1 INTRODUCTION

1.1 Background of the Study

In response to a request from the Government of the Republic of Ghana (hereinafter referred to as the GOG), the Government of Japan decided to conduct a technical cooperation project called the Study for Development of a Master Plan to Strengthen Technical Education in the Republic of Ghana (hereinafter refer to as the Study).

The Japan International Cooperation Agency (JICA), the official agency responsible for the implementation of technical cooperation programs, conducted the Study in accordance with relevant laws and regulations in force in Japan. The Ministry of Education (MOE) of Ghana acted as the Counterpart Agency, which coordinated the implementation of the Study with other relevant government agencies. The Scope of Work for the Study was agreed between MOE and JICA on December 1999 (see Appendix 1.1), and the Study started from March 2000.

1.2 Goal and Objectives

The goal of the Study was to develop a Master Plan to improve technical education system in Ghana in terms of human resource development, institutional strengthening and facilities improvement towards the year 2020, with particular focus on polytechnics. The Study was to investigate ways in which the technical education sector could be restructured so that it may develop the mechanisms required for sustainable economic growth, the sector may become less dependent on the government budget, and the sector may achieve the flexible human resource development system in response to changes in the demand of the labor market.

1.3 Implementation Framework

1.3.1 The Study Phase and Work Items

The Study was divided into three phases: 1) Review of technical education systems in Ghana, 2) Development of a master plan to strengthen technical education, and 3) Development of institutional strengthening programs for selected polytechnics and pilot programs in polytechnics.

The Phase I study - Review of technical education systems in Ghana - was conducted from March to July 2000, and it comprised the following work items:

- Collection and analysis of information regarding technical education and skill development.
- Preparation of Inception Report (April 2000).

-
- Discussion of the Inception Report with GOG. The Minutes of Meeting on the Inception Report are included in Appendix 1.2.
 - Identification of issues and problems of technical education in Ghana.
 - Review and analysis of the linkages between the education sector and the industrial sector.
 - Identification of issues to strengthen technical education.
 - Preparation of a Progress Report and the first workshop inviting various key stakeholders was implemented on July 2000.
 - Comparative analysis of management systems in technical institutions in Japan.

The Phase II study - Development of a Master Plan to strengthen technical education - was conducted from August 2000 to March 2001, and it comprised the following work items:

- Analysis of issues and constraints and implementation of the second workshop (September 2000).
- Clarification of roles and functions of technical education institutions.
- Development of the Master Plan to strengthen technical education institutions.
- Development of implementation plan and preliminary cost estimation.
- Comparative analysis of management systems of technical education institutions in other countries, including the United Kingdom, South Africa, Singapore, Malaysia, and Thailand.
- Preparation of Interim Report (December 2000).
- Presentation and discussion of Interim Report (February 2001). The Minutes of Meeting on the Interim Report are included in Appendix 1.3.

The Phase III study -- Development of institutional strengthening programs for selected polytechnic institutes -- was conducted from April to October 2001, and it was composed of the following work items:

- Selection of three (3) pilot polytechnics to propose institutional development programs.
- Selection of six (6) pilot programs to introduce Competency-Based Training (CBT) approach into polytechnics.
- Comparative analysis of technical education reform in Australia and Ireland.
- Implementation of workshops and supplementary survey of the present situation of the polytechnics.
- Identification of existing industries related to pilot programs.
- Estimation of labor market demand.

- Development of institutional strengthening measures for the pilot polytechnics and pilot programs
- Recommendations of priority projects and action programs
- Preparation of Draft Final Report
- Presentation and discussion of Draft Final Report (National Forum to discuss outcomes of the Study was held in September 2001). The Minutes of Meeting on the Draft Final Report are included in Appendix 1.4
- Preparation of Final Report

1.3.2 The Study Team

JICA organized a Study team comprised of experts from Pacific Consultants International (PCI) and experts from other sources. In order to provide technical advice to the Study team, JICA organized an Advisory Committee chaired by Prof. Nobuhide Sawamura of Hiroshima University. A list of the Study team members, together with their assigned roles, are shown below.

- Dr. Yoshihiro Asano, Team Leader/Education Policy/Economic Development
- Mr. Toru Ishibashi, Deputy Team Leader/Technical Education Development
- Mr. Joji Watanabe, Operations and Management Planning
- Dr. Keiji Kamei, Education Policy/Curriculum Development
- Mr. Roger De Zilwa, Education Policy/Curriculum Development
- Mr. Robert Crothwaite, Education Policy/Curriculum Development
- Mr. Robin Rackowe, Labor Market Analysis
- Ms. Marcia Burick, Non-formal Education/Social Institutions
- Mr. Masatoshi Kaneko, Economic and Financial Analysis
- Mr. Sotaro Watanabe, Infrastructure Development in Technical Education
- Mr. Masayuki Hirata, Facility Development in Education Equipment
- Mr. Akio Odani, Administrative Coordinator/Market Analysis for Manufacturing Products

For efficient implementation of the Study, MOE organized a counterpart team. The counterpart team assisted in obtaining reliable output, using their socio-cultural knowledge and experience in Ghana. The members were:

- Dr. George Afeti, Team Leader/Principal, Ho Polytechnic
- Mr. Francis Ernest Yeboah, Accra Polytechnic, MOE
- Mr. Francis Kodjo Angmorteh, Technical Examination Unit, MOE

1.3.3 Steering Committee in Ghana

MOE organized a Steering Committee to promote smooth implementation of the Study according to the agreement between JICA and Government of Ghana. The Steering Committee members were:

- Dr. Mohammed Ibn Chambas, Deputy Minister of MOE
- Mr. Paul Effah, Executive Director of National Council for Tertiary Education (NCTE)
- Mr. J. Budu-Smith, Deputy Director General, Ghana Education Service (GES)
- Mr. Mathew Kambonaba, Director, SRIMPR
- Mr. A. N. Kaku, Acting Director, Technical/Vocational Education, GES
- Dr. George Afeti, Principal, Ho Polytechnic
- Dr. Nana Baah Boakye, Principal, Accra Polytechnic

1.4 Structure of the Report

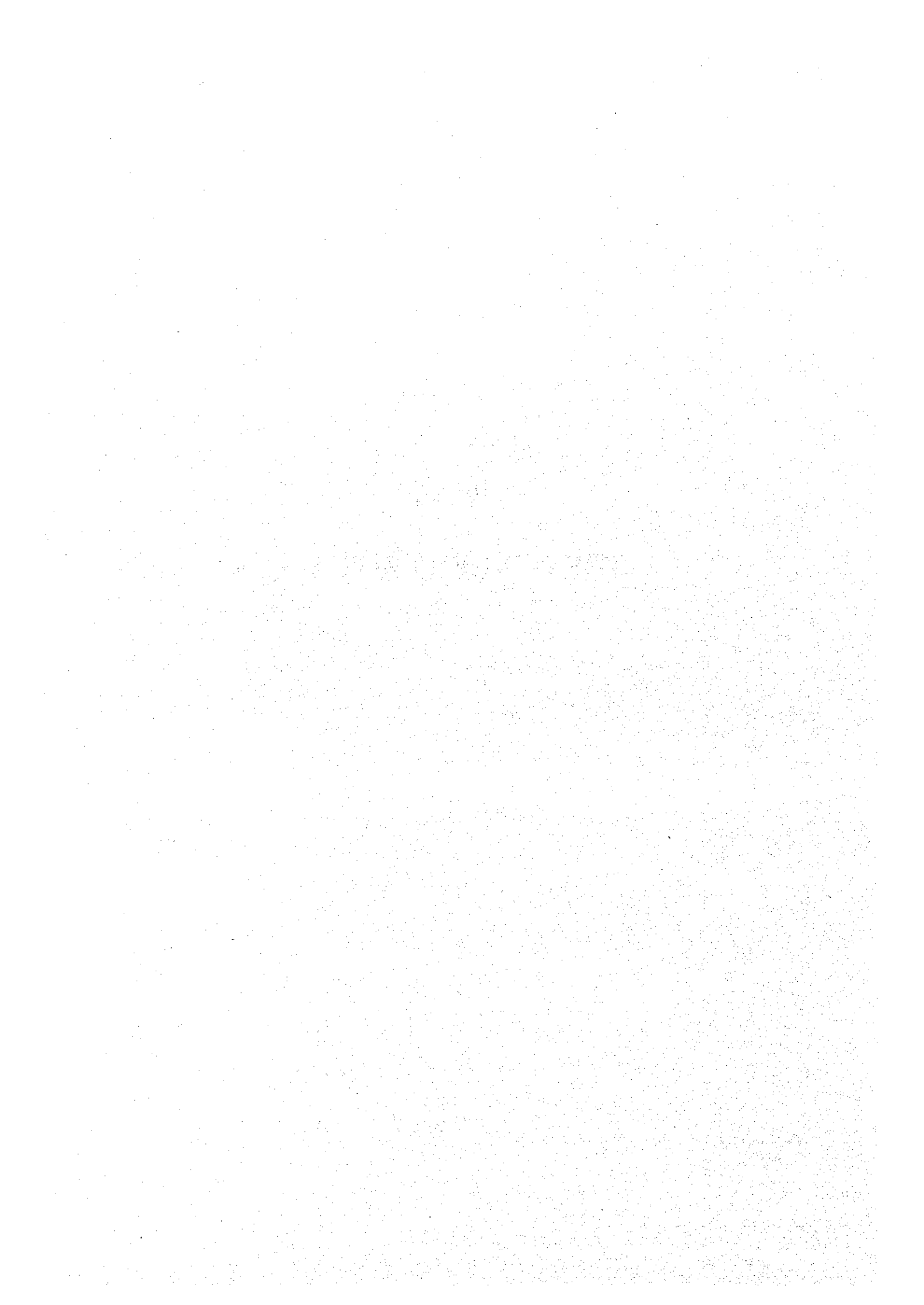
The report is divided broadly into two parts: Part I, called "The Current Situation," consists of four chapters which mainly analyze the issues and problems of the technical education sector and its relevant areas. Chapter 2 gives an overview of current socio-economic conditions in Ghana; Chapter 3 analyzes the labor market by using existing data and documents; Chapter 4 discusses Ghana's present technical education system; and Chapter 5 identifies specific areas of curriculum development of technical education with emphasis on polytechnics.

Part II, called "Planning to Strengthen Technical Education," consists of four chapters. Chapter 6 presents major considerations for the preparation of a master plan to strengthen technical education; Chapter 7 formulates a master plan to strengthen technical education towards the year 2020; Chapter 8 examines implementation programs for selected pilot polytechnics and pilot programs proposed in the master plan; and Chapter 9 presents an urgent action program designed to initiate the TVET reform process.

The Appendices include supporting data and information for the Study.

PART I

THE CURRENT SITUATION



CHAPTER 2 OVERVIEW OF SOCIO-ECONOMIC CONDITIONS

2.1 Population

Ghana is located in West Africa, bound to the north by Burkina Faso, to the east by Togo, and to the west by Cote d'Ivoire. The country gained its Independence in 1957, and was the first nation in sub-Saharan Africa to do so.

The total population of Ghana (Table 2.1.1) increased from 8.6 million in 1970 to 12.3 million in 1984, and was estimated to have reached 18.4 million in 2000. The average annual growth rate was 2.62 percent between 1970 and 1984, decreasing slightly to 2.56 percent between 1984 and 2000.

Rapid urbanization is a global phenomenon, and Ghana is no exception. About one-third of the country's population (32 percent) resided in urban areas in 1984. The urban population had grown at an average annual rate of 3.4 percent between 1970 and 1984, which was more than one point higher than the growth rate of the rural population (2.3 percent) during the same period. Although the recent figures of urban and rural population from the Population Census 2000 are not yet available, it is expected that the urban population has grown significantly over the last two decades.¹

The country is divided, for administrative purposes, into 10 regions: Western, Central, Greater Accra, Eastern, Volta, Ashanti, Brong Ahafo, Northern, Upper West, and Upper East. The population distribution by region in 1970, 1984 and 2000 is shown in Table 2.1.2. The Western, Greater Accra, Ashanti and Northern regions experienced a higher population growth rate than the national average of 2.6 percent per annum between 1984 and 2000.

Greater Accra, which includes the nation's capital of Accra, increased in population by more than double, from 1.4 million in 1984 to 2.9 million in 2000. The average annual growth rate of the Greater Accra region was 4.5 percent between 1984 and 2000, which was nearly two points higher than that of the national average. The Central, Eastern, Volta, Upper West and Upper East regions, on the other hand, experienced a lower population growth rate than the national average during the same period. It can be seen that about one third of the country's population is concentrated in two regions: Greater Accra (15.8 percent) and Ashanti (17.3 percent) in 2000.

¹ According to the Ghana Statistic Service, the share of urban population is projected at 42 percent of the total population in 2000. *Analysis of Demographic Data*, 1995, pp. 47-50.

Table 2.1.1 Population of Ghana, 1970, 1984 and 2000

| | 1970 | 1984 | | 1970-84 Growth Rate | 2000 | | 1984-2000 Growth Rate |
|------------------|---------|---------|-------|------------------------|---------|-------|--------------------------|
| | (1,000) | (1,000) | (%) | (% p.a.) | (1,000) | (%) | (% p.a.) |
| Total Population | 8,559 | 12,296 | 100.0 | 2.62 | 18,412 | 100.0 | 2.56 |
| Male | 4,247 | 6,064 | 49.3 | 2.58 | 9,025 | 49.0 | 2.52 |
| Female | 4,312 | 6,232 | 50.7 | 2.67 | 9,387 | 51.0 | 2.59 |
| Urban | 2,472 | 3,935 | 32.0 | 3.38 | | | |
| Rural | 6,086 | 8,361 | 68.0 | 2.29 | | | |

Source: Ghana Statistical Service (GSS), Analysis of Demographic Data, April 1995
GSS, 2000 Population & Housing Census: Provisional Results Data, August 2000

Table 2.1.2 Population distribution by Region, 1970, 1984 and 2000

| Region | 1970 | 1984 | | 1970-84 Growth Rate | 2000 | | 1984-2000 Growth Rate |
|-------------|---------|----------|-------|------------------------|----------|-------|--------------------------|
| | (1,000) | (1,000) | (%) | (% p.a.) | (1,000) | (%) | (% p.a.) |
| Western | 770.0 | 1,157.8 | 9.4 | 3.0 | 1,842.8 | 10.0 | 2.9 |
| Central | 890.1 | 1,142.3 | 9.3 | 1.8 | 1,580.0 | 8.6 | 2.0 |
| Gt. Accra | 851.6 | 1,431.1 | 11.6 | 3.4 | 2,909.6 | 15.8 | 4.5 |
| Eastern | 1,261.6 | 1,680.8 | 13.7 | 2.4 | 2,108.8 | 11.5 | 1.4 |
| Volta | 947.2 | 1,211.9 | 9.9 | 1.8 | 1,612.2 | 8.8 | 1.8 |
| Ashanti | 1,481.6 | 2,090.1 | 17.0 | 2.3 | 3,187.6 | 17.3 | 2.7 |
| Brong Ahafo | 766.5 | 1,206.6 | 9.8 | 3.3 | 1,824.8 | 9.9 | 2.6 |
| Northern | 727.6 | 1,164.5 | 9.5 | 3.4 | 1,854.9 | 10.1 | 3.0 |
| Upper West | 319.8 | 438.0 | 3.6 | 2.3 | 573.8 | 3.1 | 1.7 |
| Upper East | 542.8 | 772.7 | 6.3 | 2.6 | 917.2 | 5.0 | 1.1 |
| Total | 8,559.3 | 12,296.0 | 100.0 | 2.6 | 18,412.2 | 100.0 | 2.6 |

Source: GSS, Analysis of Demographic Data, April 1995
GSS, 2000 Population & Housing Census: Provisional Results Data, August 2000

2.2 Recent Economic Trends

2.2.1 Economic Recovery Program

In the early 1960s Ghana had the highest per capita income among African countries. Its economic and financial situation deteriorated, however, during the 1970s and the early 1980s, due to substantial increases in the price of oil, severe droughts and mismanagement by the Government. In fact, income per capita declined by 30 percent between 1970 and 1983.² The sharp decline in Ghana's economy resulted in a deterioration of living conditions and caused a large number of skilled workers to emigrate. It is believed that nearly two million Ghanaians are now living outside the country, including a large number of people with higher education.

² Sudharshan Canagarajah and Dipak Mazumdar. *Employment, Labor Markets and Poverty in Ghana: A Study of Changes During Economic Decline and Recovery*. The World Bank Economic and Sector Work., p.5.

In 1983 Ghana launched an Economic Recovery Program (ERP), with support from the World Bank and the IMF. The program was aimed at directing economic and financial policies away from predominantly centralized control and strict regulations, to a more liberal and market-oriented economy. The initial phase of the program (1983-1986) focused mainly on economic stabilization, through the removal of exchange restrictions and price controls. From 1987, the program emphasized liberalization policies, combined with structural and institutional reforms. The exchange system was further liberalized; flexible pricing policies for cocoa were introduced; privatization of state-owned enterprises was promoted; and a major restructuring of the financial sector was initiated. As a result of the ERP, the macro-economic conditions improved: the average growth rate of real GDP went from negative growth between 1980 and 1983 to 4.3 percent per annum between 1983 and 1991.³

Since 1991, Ghana has implemented economic recovery programs on its own initiative. During the first half of the 1990s, Ghana faced a major trade imbalance, the result of lack of foreign earnings from exports. This was mainly caused by the decline of agricultural output and power generation, due to adverse climatic conditions. The overall economic condition has improved since the mid 1990s. The growth of real GDP has improved from 3.3 percent in 1994 to 4.0 percent in 1995, 4.6 percent in 1996, 4.2 percent in 1997, and 4.6 percent in 1998. It reached 5.5 percent in 1999 (Table 2.2.2). The average annual growth rate of real GDP between 1993 and 1999 was 4.4 percent.

2.2.2 Divestiture Program

Prior to the period of the Economic Recovery Program (ERP), Ghana's economic development strategies relied heavily on the activities of State Owned Enterprises (SOE). The public sector had interests in about 350 enterprises, and engaged in diversified activities, such as agriculture, mining, manufacturing, construction, service delivery, tourism and banking. As part of the overall ERP, the government launched the SOE reform program in 1988 and established a Divestiture Implementation Committee (DIC), which was charged with the divestiture of those SOEs, which were not competitive in a market economy. By the end of the ERP in 1991, the financial condition of the SOEs had improved as a result of the efforts of the DIC.

The government's privatization strategy for the SOEs was further supported by the adoption of the Law for the Divestiture of State Interests in 1993, which authorized the divestiture of enterprises through the sale of shares. Table 2.2.1 shows divestiture programs between 1991 and 1999. By December 1999, 233 state-owned enterprises had been approved for divestiture by the President's Office⁴.

³ African Development Bank and African Development Fund, *Ghana: Country Strategy Paper*, Paper prepared for the Annual Meetings of the Boards of Governors, 1996, pp.8-9.

⁴ Divestiture Implementation Committee, Fact Sheets: Ghana's Divestiture Program

Table 2.2.1 Progress of divestiture program, 1991-1999

| Mode | 1991 | 1992 | 1993 | 1994 | 1885 | 1996 | 1997 | 1998 | 1999 | Total |
|-----------------|------|------|------|------|------|------|------|------|------|-------|
| Sales of assets | 16 | 4 | 3 | 30 | 19 | 18 | 15 | 7 | 15 | 127 |
| Sales of shares | 11 | 5 | 2 | 2 | 6 | 1 | 2 | 2 | 4 | 35 |
| Joint venture | 6 | 3 | 1 | 4 | 0 | 4 | 1 | 2 | 0 | 21 |
| Lease | 3 | 1 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 7 |
| Liquidation | 24 | 2 | 5 | 5 | 6 | 0 | 0 | 0 | 1 | 43 |
| Total | 60 | 15 | 11 | 42 | 31 | 23 | 19 | 11 | 21 | 233 |

Source: Divestiture Implementation Committee

2.2.3 Recent Economic Activities, by Sector

The annual growth rate of GDP by sector between 1993 and 1999 is shown in Table 2.2.2 and its percentage distribution is shown in Table 2.2.3. The recent economic activities by sector are summarized as follows:

(1) Agriculture

Agriculture is the dominant sector of the Ghanaian economy. In 1999 it accounted for 36.9 percent of GDP (based on 1993 constant prices). In the agriculture sector, food and livestock production has the largest share with 24.4 percent of GDP in 1999, followed by fishing (4.9 percent); forestry and logging (3.9 percent); and cocoa (3.6 percent). Agricultural output has grown at 4.3 percent per annum between 1993 and 1999. Forestry and logging production increased significantly, with an average growth rate of 10.5 percent during the same period, which is the highest growth rate of production among the sub-sectors.

Cocoa is the major traditional export commodity in Ghana. It showed a growth rate of 9.0 percent per annum between 1993 and 1999. The output of cocoa was estimated at 420,000 tons⁵ in 1999, which is the second largest production in the world, after that of Cote d'Ivoire. Ghana's major food products are starchy crops, such as cassava, yam, cocoyam and plantain, with a total production of 14.8 million tones in 1999.⁶

(2) Industry

Industrial production increased at an average annual growth rate of 4.6 percent between 1993 and 1999. The share of industrial production of GDP in 1999 was 25.1 percent (based on 1993 constant prices), which has increased slightly (by 0.3 percent) from its share in 1993. The industrial sector comprises the mining and quarrying, manufacturing, electricity and water, and construction sub-sectors. The manufacturing sub-sector had the largest contribution (9.1 percent) to the GDP in 1999, followed by construction (7.9 percent), mining and quarrying (5.6 percent), and electricity and water (2.5 percent).

⁵ ISSER, *The State of the Ghanaian Economy in 1999*, p.88

⁶ ISSER, *The State of the Ghanaian Economy in 1999*, p.86.

Ghana's main mineral products are gold, diamonds, bauxite and manganese. Gold production has increased from 26,100 kg in 1991 to 72,100 kg in 1999, while other minerals, such as diamonds, bauxite and manganese, showed little change in production during the same period.⁷

Manufacturing consists largely of resource-based activities, such as food processing, beverages, tobacco, textiles and garments, wood processing, paper products, non-metallic and mineral products.

Among the industrial sub-sectors, construction (5.4 percent per annum), mining and quarrying (4.9 percent per annum) showed higher growth rates than the average growth rate of the industrial sector (4.6 percent per annum) between 1993 and 1999. The manufacturing sub-sector showed a lower growth rate of 3.8 percent per annum during the same period.

Table 2.2.2 Annual growth rate of GDP by sector at constant 1993 prices, 1993-1999

| Item | Growth rate | | | | | | |
|--|-------------|------|------|-------|--------|------|---------|
| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 1993-99 |
| AGRICULTURE | 1.9 | 3.7 | 5.2 | 4.3 | 5.3 | 5.6 | 4.3 |
| 1 Agriculture & livestock | 0.9 | 3.5 | 6.3 | 2.6 | 3.2 | 4.5 | 3.5 |
| 2 Cocoa production & marketing | 12.2 | 11.0 | 2.9 | 9.3 | 11.1 | 7.9 | 9.0 |
| 3 Forestry & logging | 1.8 | 2.0 | 2.7 | 21.5 | 22.1 | 15.0 | 10.5 |
| 4 Fishing | 1.2 | 1.6 | 3.0 | 0.6 | 1.8 | 2.5 | 1.8 |
| INDUSTRY | 3.5 | 4.1 | 4.7 | 6.4 | 2.5 | 6.3 | 4.6 |
| 1 Mining & quarrying | 5.1 | 5.5 | 4.2 | 5.6 | 4.0 | 5.0 | 4.9 |
| 2 Manufacturing | 1.5 | 1.8 | 3.5 | 7.3 | 3.0 | 6.0 | 3.8 |
| 3 Electricity & water | 5.3 | 6.0 | 6.4 | 10.2 | (10.0) | 7.9 | 4.1 |
| 4 Construction | 4.2 | 5.2 | 6.1 | 4.4 | 5.5 | 7.0 | 5.4 |
| SERVICES | 5.0 | 4.7 | 4.2 | 6.5 | 6.0 | 5.3 | 5.3 |
| 1 Transport, storage & communication | 6.1 | 4.2 | 5.0 | 7.2 | 4.0 | 6.0 | 5.4 |
| 2 Wholesale & retail trade, restaurants & hotels | 5.5 | 6.5 | 8.3 | 9.5 | 5.0 | 6.5 | 6.9 |
| 3 Finance, insurance, real estate & business | 4.0 | 3.0 | 4.2 | 6.7 | 8.0 | 5.0 | 5.1 |
| 4 Government services | 5.1 | 5.0 | 2.4 | 4.3 | 7.0 | 4.5 | 4.7 |
| 5 Community, social & personal services | 3.0 | 2.6 | 1.1 | 7.3 | 3.9 | 6.0 | 4.0 |
| 6 Producers of private non-profit services | 2.5 | 3.0 | 1.8 | 7.2 | 5.1 | 3.9 | 3.9 |
| SUB-TOTAL | 3.3 | 4.1 | 4.8 | 5.6 | 4.7 | 5.7 | 4.7 |
| Net indirect taxes | 3.3 | 3.1 | 3.1 | (7.5) | 3.0 | 4.0 | 1.4 |
| Equals: Gross Domestic Product in purchasers' values | 3.3 | 4.0 | 4.6 | 4.2 | 4.6 | 5.5 | 4.4 |

Note: () is minus

Source: Ghana Statistical Service, 1998, Quarterly Digest of Statistics; ISSR, The State of the Ghanaian Economy in 1999.

⁷ ISSER, The State of the Ghanaian Economy in 1999, p. 117

Table 2.2.3 Percentage distribution of GDP by sector at constant 1993 prices, 1993-1999

| Item | Percentage distribution | | | | | | |
|---|-------------------------|-------|-------|-------|-------|-------|-------|
| | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
| AGRICULTURE | 36.9 | 36.4 | 36.3 | 36.5 | 36.6 | 36.8 | 36.9 |
| 1 Agriculture & livestock | 25.7 | 25.1 | 25.0 | 25.4 | 25.0 | 24.7 | 24.4 |
| 2 Cocoa production & marketing | 2.8 | 3.0 | 3.2 | 3.2 | 3.3 | 3.5 | 3.6 |
| 3 Forestry & logging | 2.8 | 2.7 | 2.7 | 2.6 | 3.1 | 3.6 | 3.9 |
| 4 Fishing | 5.7 | 5.6 | 5.4 | 5.4 | 5.2 | 5.0 | 4.9 |
| INDUSTRY | 24.8 | 24.9 | 24.9 | 24.9 | 25.4 | 24.9 | 25.1 |
| 1 Mining & quarrying | 5.5 | 5.6 | 5.6 | 5.6 | 5.7 | 5.7 | 5.6 |
| 2 Manufacturing | 9.4 | 9.2 | 9.0 | 8.9 | 9.2 | 9.1 | 9.1 |
| 3 Electricity & water | 2.6 | 2.6 | 2.7 | 2.7 | 2.9 | 2.5 | 2.5 |
| 4 Construction | 7.4 | 7.5 | 7.6 | 7.7 | 7.7 | 7.7 | 7.9 |
| SERVICES | 27.5 | 28.0 | 28.1 | 28.0 | 28.7 | 29.1 | 29.0 |
| 1 Transport, storage & communication | 4.3 | 4.4 | 4.4 | 4.4 | 4.6 | 4.5 | 4.6 |
| 2 Wholesale & retail trade, restaurants & hotels | 5.8 | 5.9 | 6.1 | 6.3 | 6.6 | 6.6 | 6.7 |
| 3 Finance, insurance, real estate & business services | 4.1 | 4.1 | 4.1 | 4.1 | 4.2 | 4.3 | 4.3 |
| 4 Government services | 10.6 | 10.8 | 10.9 | 10.6 | 10.6 | 10.9 | 10.8 |
| 5 Community, social & personal services | 1.8 | 1.8 | 1.8 | 1.7 | 1.8 | 1.8 | 1.8 |
| 6 Producers of private non- profit | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| SUB-TOTAL | 89.3 | 89.3 | 89.4 | 89.5 | 90.7 | 90.8 | 91.0 |
| Net indirect taxes | 10.7 | 10.7 | 10.6 | 10.5 | 9.3 | 9.2 | 9.0 |
| EQUALS: Gross Domestic Product in purchasers' values | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: GSS, Quarterly Digest of Statistics. 1998, p.124.

ISSER, The State of The Ghanaian Economy in 1999, pp.7-8

(3) Services

The service sector has grown at an average annual rate of 5.3 percent between 1993 and 1999, which is the highest growth rate, compared with the agriculture sector (4.3 percent) and the industrial sector (4.6 percent), during the same period. The share of service production in GDP has increased by 1.5 points from 27.5 percent in 1993 to 29.0 percent in 1999.

In the service sector, government services produced about 10.8 percent of GDP in 1999, which was the largest share in the production of services. Next were the wholesale and retail trade and the restaurant and hotel sub-sector accounting for 6.7 percent of the GDP, followed by the transport, storage and communications sub-sector (4.6 percent), and the finance, insurance and business services sub-sector (4.3 percent).

Among the six sub-sectors, the wholesale and retail trade and hotel and restaurant sub-sector experienced the highest annual growth rate of 6.9 percent between 1993 and 1999.

This was followed by the transportation, storage and communications sub-sector (5.4 percent), the finance sub-sector (5.1 percent) and the government services sub-sector (4.7 percent), during the same period. According to the data prepared by the Ghana Tourist Board (Table 2.2.4), there has been a consistent increase in the number of arrivals, with an average growth rate of 6.7 percent between 1994 and 1999. In 1999, 372,000 tourists arrived, with foreign exchange earnings estimated at US\$304.1 million.

Table 2.2.4 Arrivals and receipts from tourism, 1994-1999

| | Arrivals | | Receipts | |
|------|----------|------------|---------------------|------------|
| | No. | % Increase | Amount (\$ million) | % Increase |
| 1994 | 271,310 | | 227.6 | |
| 1995 | 286,000 | 5.41 | 233.2 | 2.46 |
| 1996 | 304,860 | 6.59 | 248.8 | 6.69 |
| 1997 | 325,438 | 6.75 | 265.6 | 6.74 |
| 1998 | 347,952 | 6.92 | 301.4 | 13.5 |
| 1999 | 372,000 | 6.91 | 304.1 | 0.37 |

Source: Ghana Tourist Board, Ministry of Tourism
 ISSER, The State of the Ghanaian Economy in 1999, p. 140 and p. 145.

2.3 National Development Policies: Ghana - Vision 2020

2.3.1 Long-Term Vision

Ghana's long-term planning and socio-economic development policies are discussed in a plan called "Ghana -Vision 2020" (hereafter referred to as Vision 2020), which was formulated by the National Development Planning Commission (NDPC) in 1995. According to Vision 2020, the long-term plan for Ghana is to achieve "the status and standard of living of a middle-income country"⁸ by the year 2020. The basic development objectives are "to reduce poverty, increase employment opportunities and average incomes and reduce inequalities, in order to improve the general welfare and material well-being of all Ghanaians."⁹

In order to achieve the planned objectives, Vision 2020 emphasizes the importance of science and technology as the major medium for development. The overall development policies and programs are discussed in terms of five basic development themes: 1) human development, 2) economic growth, 3) rural development, 4) urban development, and 5) an enabling environment. These themes are summarized as follows:

⁸ Ghana - Vision 2020 (The First Step: 1996-2000), Presidential Report on Coordinated Program of Economic and Social Development Policies, p.31.

⁹ Ghana - Vision 2020 (The First Step: 1996-2000), p. 31

(1) Human Development

The basic goals of human development are to reduce poverty, increase average incomes and reduce disparities in incomes and opportunities. These goals will be achieved by reducing the population growth rate (to 2 percent per annum by 2020); reducing infant and child mortality and general morbidity; improving food security and nutrition; and further increasing access to health services, safe water and sanitation, and adequate housing. Human development also involves the achievement of basic education and increased access to secondary and tertiary education. In addition, Vision 2020 emphasizes the importance of improvement of technical and vocational training to improve the technical proficiency of labor force.

(2) Economic Growth

The basic goal of economic growth is to establish an open and liberal market economy that optimizes economic development and ensures the maximum welfare and material well being of all Ghanaians. The aim of economic growth is to transfer the country from a low-income to a middle-income country by achieving a long-term average growth rate of GDP of over 8 percent per annum. In order to achieve this goal, a major shift in economic structure is essential, with a target to reduce agriculture's share to below 20 percent of GDP and increase industry's share to 37 percent of GDP by 2020 (Table 2.3.1).

Table 2.3.1 Target of GDP share by sector, 2020

| Sector | 2020 (Target) |
|--------------------|---------------------|
| Agriculture sector | 18.0% (below 20.0%) |
| Industrial sector | 37.0% |
| Service sector | 45.0% |

Source: Ghana Vision 2020

(3) Rural Development

Even though the rural population has declined over the last few decades,¹⁰ about two thirds of the population of Ghana still live in rural areas and 80 percent of the rural dwellers are classified as poor. The major goal of rural development is to reduce the disparities in incomes and the standard of living between the rural and urban populations. This will be achieved by judicious allocation of public investment in favor of rural areas.

(4) Urban Development

Urban settlements perform a pivotal role in the national economy, as catalysts for social, economic and cultural development. Vision 2020 estimates that the urban population will increase to 15 million or nearly half of the total population by 2020.¹¹ The basic

¹⁰ Regarding urban and rural population, see the section 2.1 of this report.

¹¹ Ghana – Vision 2020 (The First Step: 1996-2000), p. 39

aim of urban development is not to try to halt urbanization but to ensure that small and medium-sized towns and cities adequately fulfill their roles as service centers for their rural hinterlands and that the process of urbanization contributes positively to national development. This will be achieved by a more spatially equitable and rational distribution of population between urban and rural environments.

(5) An Enabling Environment

The objective is to create an enabling environment, in which all sections of society can contribute to a sustained and accelerated rate of social and economic development. In addition to the contributions from human development, the current reforms in the public administration and the legal framework will experience a further deepening in order to make positive contributions to the development effort.

2.3.2 Economic Development Policies

As mentioned in the previous section, the long-term vision for Ghana is to achieve the status and standard of living of a middle-income country by 2020. In order to achieve the long-term target, a major shift in economic structure is essential in order to increase productivity at internationally competitive prices. The sector development policies and strategies are described as follows¹²:

(1) Agricultural Sector

- Promote an adequate and secure supply of food and raw materials at competitive prices.
- Achieve agricultural production at an average growth rate of 4 percent per annum, as a mean of enhancing rural development and supporting economic growth.
- Increase crop production through the application of improved technology.
- Expand and diversify exports of agricultural products by making the sector more price-competitive and export-oriented.
- Ensure that the exploitation of renewable land-based natural resources -- soil, water, forests, wildlife and fish stocks -- is on a sustainable basis.
- Establish effective linkages between forestry and other sectors, such as the agriculture, manufacturing, building construction, tourism, and recreation sectors.
- Promote multiple use and management of land and forest resources, consistent with sound ecological practices.
- Promote an effective and integrated watershed management system, in order to ensure an adequate supply of water for human and agricultural uses and for prevention of soil erosion and floods.

¹² Ghana - Vision 2020 (The First Step: 1996-2000), pp. 35-36

(2) Industrial Sector

- Increase industry's share of GDP to 37 percent by 2020, with an average annual growth rate of over 12 percent.
- Make Ghanaian manufactured products internationally competitive.
- Expand the range of manufactured goods to meet domestic demand and diversify exports.
- Ensure that all industrial operations are environmentally friendly.
- Increase domestic and foreign private investment in mining and expand production of mineral products.
- Establish effective linkages between mining and quarrying, manufacturing and construction.
- Establish an efficient and internationally competitive construction industry.
- Maximize the use of local raw materials in the construction industry.

(3) Service Sector

- Establish an efficient system for storage, transportation and distribution of goods and services.
- Establish Ghana as a major venue for international tourism and increase foreign earnings from the tourism industry.
- Establish Ghana as a major center for cultural and sporting activities and increase foreign exchange earnings from these activities.
- Establish an efficient financial system in the private sector and promote Accra as a major financial center.

2.4 International Trade

2.4.1 Balance of Payments

Ghana's overall balance of payments went into deficit in 1999 with the amount of US\$93 million¹³, after it experienced surpluses of US\$249 million in 1995, US\$25 million in 1997, and US\$99 million in 1998 (Table 2.4.1). This was caused by a large trade deficit, which increased from US\$257 million in 1995 to US\$1,112 million in 1999.

¹³ Bank of Ghana, Annual Report 1999

Table 2.4.1 Summary of balance of payments

| Year | (million US\$) | | | | |
|---------------------------------------|----------------|----------|----------|----------|----------|
| | 1995 | 1996 | 1997 | 1998 | 1999 |
| Trade balance | -256.6 | -366.9 | -638.3 | -805.7 | -1,111.5 |
| Merchandise exports (f.o.b.) | 1,431.2 | 1,570.1 | 1,489.9 | 2,090.8 | 2,116.6 |
| Merchandise imports (f.o.b.) | -1,687.8 | -1,937.0 | -2,128.2 | -2,896.5 | -3,228.1 |
| Net invisibles (services & transfers) | 112.9 | 43.1 | 88.6 | 425.7 | 355.8 |
| Capital account | 459.1 | 285.5 | 492.7 | 449.8 | 493.1 |
| Errors and omissions | -66.3 | 19.4 | 81.8 | 29.6 | 169.2 |
| Overall balance | 249.1 | -18.9 | 24.8 | 99.4 | -93.4 |

Source: Annual Report 1999, Bank of Ghana

There is a belief that the trade deficit in Ghana has been caused mainly by external factors: price fluctuation of cocoa, gold and oil in the world markets. Gold and cocoa are Ghana's major export items, with a share of over 60 percent of the total exports in 1999. Their prices have been going down for these years, which has weakened Ghana's exports. On the other hand, oil is Ghana's major import item, and its price has recently been going up. These factors have adversely affected the trade balance.

However, even if these items (gold, cocoa, and oil) are excluded from the trade balance, the trade deficit has increased from US\$484 million in 1995 to US\$1,386 million in 1999 (Table 2.4.2). This suggests that the trade deficit of Ghana has not been caused not only by external factors but also by weaknesses in the internal economic structure.

Table 2.4.2 Trade Balance excluding Cocoa, Gold, and Oil

| Year | (million US\$) | | | | |
|---|----------------|--------|---------|---------|---------|
| | 1995 | 1996 | 1997 | 1998 | 1999 |
| Trade balance...(A) | -256.6 | -366.9 | -638.3 | -805.7 | -1111.5 |
| Cocoa beans (export, f.o.b.)...(B) | 361.1 | 479.8 | 384.8 | 541.6 | 497.3 |
| Cocoa products (export, f.o.b.)...(C) | 28.4 | 72.2 | 85.2 | 78.8 | 55.1 |
| Gold (export, f.o.b.)...(D) | 647.2 | 612.4 | 579.2 | 687.8 | 710.8 |
| Oil (import, f.o.b.)...(E) | 191.0 | 233.9 | 18.9 | 215.0 | 333.3 |
| Trade balance, excluding the items above...(F)* | -483.5 | -757.2 | -1174.6 | -1289.9 | -1385.7 |
| Growth rate (%) of item (F) | - | 56.6 | 55.1 | 9.8 | 7.4 |

Note: (F)=(A)-(B)-(C)-(D)+(E)

Source: Prepared by the Japan International Cooperation Agency (JICA) Study team, based on Annual Report 1999, Bank of Ghana

When we look at the breakdown of services and transfer accounts in the balance of payments, two items have contributed to reduce the deficit of the trade balance. The amount of private transfers accounted for US\$472 million and net receipts from travel for US\$279 million in 1999. Together they amounted to US\$751 million, which corresponded to 68 percent of the total trade deficit in 1999. It is the view that the key factors to improve the balance of payments in Ghana are to strengthen the structure of economy to promote exports, as well as to increase private transfers and receipts from travel.

2.4.2 Trade Characteristics

(1) Major Export and Import Commodities in Ghana

According to external export (FOB) statistics in 1999, Ghana's major export commodities were "Gold, precious metals, industrial diamonds, and imitation jewelry" (US\$608 million), followed by "cocoa products and chocolates" (US\$465 million), "wood products" (US\$205 million), "fruit" (US\$91 million), and "aluminum products" (US\$84 million). These 5 items together accounted for 81 percent of the Ghana's total exports in 1999.

Ghana's major import commodities are "petroleum, gas products, and electrical energy" (US\$532 million), followed by "vehicles and their parts" (US\$500 million), "machinery parts not containing electrical components" (US\$391 million), "machinery parts containing electrical components" (US\$235 million), and "printed materials" (US\$207 million). These 5 items together accounted for 57 percent of the total of Ghana's imports in 1999.

(2) Ghana's Trade Partners

In terms of distribution of Ghana's trade partners by region¹⁴ (Table 2.4.3), about 45 percent of the total export value in 1999 was delivered to "Western Europe", followed by "Eastern Europe and Central Asia" (29.5 percent). These two regions together accounted for 75 percent of Ghana's total export.

In respect to the origins of Ghana's imports, about 31 percent of the total import value was brought from "Western Europe," followed by "Eastern Europe and Central Asia" (19.7 percent), and "East Asia and Pacific" (14.6 percent).

Ghana's large deficit in the trade balance was caused by the trade with "East Asia and Pacific" (26.8 percent) and "Americas" (23.6 percent).

Ghana is a member of the Economic Community of West African States (ECOWAS), which aims at establishing an economic union. Ghana's trade with West Africa was relatively small, with 9.6 percent of the total export and 10.5 percent of the total import in 1999.

¹⁴ The World Bank classified into 9 groups, such as West Africa, East and Southern Africa, North Africa, Eastern Europe and Central Asia, Rest of Europe, Middle East, South Asia, East Asia and Pacific, and Americas

Table 2.4.3 Ghana's trade partners (in 1999)

| | Export...(A) (million US\$) | (%) | Import...(B) (million US\$) | (%) | Trade balance... (C) (net) (million US\$) | (%) |
|------------------------------------|--------------------------------|--------------|--------------------------------|--------------|---|--------------|
| East Asia and Pacific | 76.6 | 4.3 | 479.9 | 14.6 | -403.3 | 26.8 |
| South Asia | 9.5 | 0.5 | 54.9 | 1.7 | -45.4 | 3.0 |
| North Africa | 1.8 | 0.1 | 9.3 | 0.3 | -7.5 | 0.5 |
| Americas | 89.3 | 5.0 | 444.4 | 13.5 | -355.2 | 23.6 |
| Middle East | 12.6 | 0.7 | 34.3 | 1.0 | -21.7 | 1.5 |
| East and Southern Africa | 89.2 | 5.0 | 188.1 | 5.7 | -99.0 | 6.6 |
| West Africa | 170.9 | 9.6 | 343.8 | 10.5 | -172.8 | 11.5 |
| Western Europe | 807.6 | 45.3 | 1,003.1 | 30.5 | -195.5 | 13.0 |
| Eastern Europe and Central Asia | 526.1 | 29.5 | 647.0 | 19.7 | -120.9 | 8.1 |
| Others | 1.0 | 0.1 | 81.8 | 2.5 | -80.8 | 5.4 |
| Total | 1,784.6 | 100.0 | 3,286.6 | 100.0 | -1,502.1 | 100.0 |

Source: Prepared by the JICA Study team, based on External Export and Import Statistics, GSS

2.4.3 Foreign Investment

Foreign investment is an important factor in the balance of payments in Ghana. There are six bodies that are responsible for the administration of foreign investment in Ghana. They are Ghana Investment Promotion Center, the Ghana Stock Exchange, the Divestiture Implementation Committee, the Ghana Free Zones Board, the Minerals Commission, and the Ghana National Petroleum Corporation.

(1) Ghana Investment Promotion Center

The Ghana Investment Promotion Center (GIPC) was established in 1994 in order to promote investment from the private sector. According to information prepared by the GIPC¹⁵, a total of 1,084 foreign direct investment projects have been registered between September 1994 and June 2000 (Table 2.4.4). The total capital was US\$1.55 billion, which consists of foreign equity (US\$390 million), foreign loans (US\$878 million), local equity (US\$195 million), and local loans (US\$83 million). In respect to the number of projects by sector, the services sector had the largest number of projects, followed by manufacturing, tourism, building and construction, and agriculture. These projects have generated employment for around 60,000 Ghanaians and about 3,700 non-Ghanaians.

¹⁵ Ghana Investment Promotion Center, Statistics on Registered FDI Projects, Second Quarter 2000 Investment Report.

Table 2.4.4 Foreign direct investment projects registered in GIPC, between September 1994 and June 2000

| | Number of projects | Investment cost (million US\$) | Expected employment (Ghanaian) | Investment cost per person employed (Ghanaian) (US\$) |
|-------------------------|--------------------|--------------------------------|--------------------------------|---|
| Service | 289 | 864.2 | 11,550 | 74,825.1 |
| Manufacturing | 279 | 301.9 | 19,564 | 15,431.4 |
| Tourism | 124 | 24.1 | 9,589 | 2,516.4 |
| Building & construction | 86 | 104.8 | 9,815 | 10,672.4 |
| Agriculture | 83 | 168.8 | 2,739 | 61,632.0 |
| General trade | 76 | 74.2 | 1,061 | 69,943.4 |
| Export trade | 75 | 8.0 | 3,019 | 2,646.6 |
| Liaison office | 72 | 0.0 | 2,658 | 0.0 |
| Total | 1,084 | 1546.0 | 59,995 | 25,769.1 |

Source: Prepared by the JICA Study team, based on Statistics on Registered FDI Projects, Second Quarter 2000 Investment Report, Ghana Investment Promotion Centre

(2) Ghana Stock Exchange

The Ghana Stock Exchange (GSE) handles portfolio investments. The total market capitalization of the GSE has grown at an average annual rate of 7.5 percent between 1995 and 1999.¹⁶ There is, however, no exact figure of the contribution to the balance of payments, because the transactions have been done in local currency (Cedis) and also there is no distinction between foreign and domestic investors.¹⁷ Although the total market capitalization decreased by 1.2 percent in 1999, the GSE experienced the best performance of capital mobilization among ECOWAS (Economic Community of West African States) countries in 1998.¹⁸ It is the view that the stock market of Ghana has the potential to attract foreign investment and to become a regional financial center in West Africa, provided that reliable financial systems are in place.

(3) Divestiture Implementation Committee

Divestitures of state-owned enterprises (SOEs) have been undertaken by the Divestiture Implementation Committee (DIC). The DIC's objective is to sell SOEs to foreign and domestic enterprises. In 1999, the DIC had an income of US\$17.0 million through sales of SOEs.¹⁹

(4) Ghana Free Zones Board

The Ghana Free Zones Board was established in 1996 under the Free Zone Act and comes under the control of the Ministry of Trade and Industry. Ghana Free Zones Board aims to promote investment from international and domestic enterprises in Free

¹⁶Ghana Stock Exchange, Fact Book 1999.

¹⁷ Some part of the increase in capital was brought in by foreign investors, but foreign currency which was changed into Cedis to buy shares and bonds is accounted for as an item of private transfer in the balance of payments.

¹⁸ The GSE gained around 700 billion Cedis in 1998, as capital mobilization.

¹⁹ Annual Report 1999, Bank of Ghana

Zones, which provide several incentives for investors, such as exemption from Customs duties and import licenses, and lower income or profits taxes. There are three Free Zones designated by the Ghana Free Zones Board²⁰. The total number of enterprises registered in the Ghana Free Zones Board were 57, of which 43 enterprises were operating in 1998 and they created around 4,000 jobs. The total capital of the enterprises in the Free Zones was about US\$117 million.

(5) Minerals Commission and Ghana National Petroleum Corporation

Direct investments in the mining sector and petroleum sector are registered in Minerals Commission and Ghana National Petroleum Corporation respectively, under the Ministry of Mines. These bodies have attempted to collect statistical data of the enterprises, including employment and capital, but reliable information is not available due to enterprises' reluctance to disclose such data.

²⁰ According to *Annual Report 1998 of Ghana Free Zone Board*, Tema Export Processing Zone, Sekondi Export Processing Zone, and Fumesua Inland Free Zone were declared Free Zones.

CHAPTER 3 THE LABOR MARKET

3.1 National Employment Policy

The Constitution of the Republic of Ghana affords all citizens the right to work. Based on the Constitution, the over-riding long-term goal for employment is contained in Vision 2020. The basic objectives include, inter alia, to “increase employment opportunities,” which is to be attained by efforts to “maximize opportunities for the creation of productive employment; pursue macro-economic policies which promote employment and do not depress the demand for labor; and ensure equitable terms and conditions for workers in all sectors, including the self-employed and informal sectors”.²¹

Government policies have an indirect effect on practically all labor. Monetary, fiscal and exchange rate policies, for example, are likely to affect all who work in or depend on export- and import-related activities.

In order to create employment opportunities for all Ghanaian people, the Government has introduced several policy measures as follows²²:

- promotion of greater participation of women in productive employment;
- priority to the most deprived areas, in respect of infrastructure development;
- promotion of employment in rural areas;
- liberalization of trade practices;
- increased access to education and vocational training;
- investment incentives to labor-intensive forms of production; and
- strengthening of links between human resource development and industry, agriculture and other productive sectors.

With these policy measures, the government is endeavoring to encourage promotion of employment in the formal sector by the year 2020²³.

²¹ Ghana - Vision 2020 (The First Step: 1996-2000), 1995, Presidential Report to Parliament on Coordinated Program of Economic and Social Development Policies, pp. 31-32.

²² Ghana-Vision 2020, The First Medium-Term Development Plan (1997-2000), 1997, Government of Ghana, pp. 54-56

²³ Ministry of Employment and Social Welfare, personal communication with staff

3.2 Labor Market Analysis

3.2.1 Labour Force and Population

There is little reliable data available for discussion and analysis of the labor market in Ghana. The most recent information on the labor market is from household surveys, such as the Core Welfare Indicators Questionnaire (CWIQ) Survey, in which 14,514 households were interviewed nationwide. The survey was carried out in 1997 by the Ghana Statistical Service (GSS), in collaboration with the World Bank.²⁴

Based on the data from this survey, Ministry of Employment and Social Welfare (MESW) estimated the size of the working population. Selected key indicators of the Ghanaian labor market in respect of labor force and population are shown in Table 3.2.1. MESW estimated that the total labor force in the country amounted to 8.2 million in 1997, and that the annual growth rate of the labor force was 2.7 percent between 1990 and 1997.

It was also estimated that the annual number of new entrants to the labor market (1996-2000) was 230,000. Although described as new entrants, MESW explained that this was the net entry to the labor market, by which was meant new entrants, minus those who retired, died or otherwise left the labor force, such as by emigration. According to MESW, the net annual number of entrants to the labor force had been estimated at 150,000 before 1996. The increase to 230,000 had been due to an increase in the number of entrants from Junior Secondary Schools (JSSs) which, owing to changes resulting from educational reform, had become a major exit point, at an earlier age and with lower levels of skills, from the education system into the labor force.

Table 3.2.1 Labor force and population

| | |
|---|--------------|
| Total population (1997) | 18.3 million |
| Total labor force (1997) | 8.2 million |
| Annual rate of growth of the labor force (1990-1997) | 2.7 % |
| Estimated annual number of new entrants to the labor market (1996-2000) | 230,000 |
| Labor force, aged 15-19 years (1997) | 11.0 % |
| Labor force, aged 15-34 years (1997) | 54.4 % |
| Children, aged 10-14 years in the labor force (1997) | 13.0 % |
| Females in the labor force (1997) | 51.0 % |
| Proportion of urban population (1997) | 37.0 % |

Source: Labor Market Skills Newsletter, Ministry of Employment and Social Welfare (MESW), January 1999.

²⁴ This survey on the labor force was undertaken by MESW, with the support of the World Bank. The results of the survey, however, were not available at the time of writing this report.

The provisional results of a national population census, undertaken in April 2000, showed that the total population had increased by 49.7 percent from the population in the 1984 census and was now 18.4 million, of which females accounted for just over half (51 percent). The average annual growth rate was 2.6 percent between 1984 and 2000. On the basis of the provisional result of the population census and the number of new entrants to the labor market, MESW projected that the total labor force in 2000 would have reached 8.8 million, which indicated that the labor force has increased at an average annual growth rate of 2.0 percent between 1997 and 2000.

3.2.2 Education of the Labour Force

The literacy rate and the educational levels of the labor force are shown in Table 3.2.2. While a little less than half (48 percent) of the labor force was literate, the literacy rate for men (62 percent) was substantially higher than the literacy rate for women (36 percent).

Almost half (45 percent) of the labor force had never attended school (39 percent) or had not completed primary education (6 percent), while half (50 percent) of the labor force had completed primary school (13 percent), JSS (31 percent) or SSS (5 percent).

A very small portion (1 percent) of the labor force had post-secondary education. There were a substantially greater percentage of men than women at each level of education, but this was especially notable in respect of post-secondary education, where the percentage of men was 6 times as high as the percentage of women.

Table 3.2.2 Literacy rate and educational levels of the labor force

| | Male | Female | Total (%) |
|--------------------------------------|------|--------|-----------|
| Literacy rate | 62.3 | 36.4 | 47.9 |
| Highest educational level completed: | | | |
| Never attended school | 28.1 | 47.4 | 38.8 |
| Primary not completed | 5.1 | 6.9 | 6.1 |
| Primary completed | 12.2 | 13.2 | 12.7 |
| JSS completed | 38.2 | 25.5 | 31.2 |
| SSS completed | 8.2 | 3.2 | 5.4 |
| Post-Secondary | 2.4 | 0.4 | 1.3 |

Note: The team was informed that, where the percentages given in the statistics do not add up to 100, this was due to weighting (MESW, personal communication).

Source: Labor Market Skills Newsletter, MESW, January 1999.

3.2.3 Employment, Underemployment and Unemployment

The percentage share of employment by public and private sectors in 1997 is shown in Table 3.2.3. The importance of the share of the private sector (93 percent) of employment points to the relatively modest share of the public sector (7 percent).

In respect to the private sector, 89 percent of employment is provided by the informal sector. The private formal sector accounts for only 4 percent of employment.

Table 3.2.3 Employment by public and private sectors (1997)

| | Male | Female | Total (%) |
|-------------------------------|------|--------|-----------|
| Public and semi-public sector | 10.6 | 3.3 | 6.9 |
| Private sector: | | | 93.1 |
| Private formal sector | 7.5 | 1.4 | 4.2 |
| Private informal sector | 75.8 | 90.8 | 89.0 |

Source: Labor Market Skills Newsletter, MESW, January 1999.

Rural and urban unemployment (1997) is shown in Table 3.2.4. According to the table, unemployment among urban poor accounts for 7 percent, which is 3 times as prevalent as among rural poor (2.2 percent), with male unemployment much higher than female unemployment amongst urban poor, but only slightly higher amongst rural poor.

Table 3.2.4 Rural and urban unemployment (1997)

| | Male | Female | Total (%) |
|----------------------------------|------|--------|-----------|
| Unemployed, over 15 years of age | 4.7 | 3.2 | 3.9 |
| Unemployed rural poor | 2.3 | 2.2 | 2.2 |
| Unemployed urban poor | 9.2 | 5.2 | 7.0 |

Source: Labor Market Skills Newsletter, MESW, January 1999.

Table 3.2.5 shows the characteristics of underemployment in 1997. The underemployed are considered to be workers who do not have full-time jobs, but are economically active. The underemployed are statistically included in the numbers of those employed.

According to this figure, a total of 52 percent of the labor force was considered to be underemployed. More men (25 percent) than women (19 percent) were underemployed because there was no work available, but more women (23 percent) than men (9 percent) were underemployed because they had to work at home or on the holding.

Table 3.2.5 Underemployment (1997)

| | Male | Female | Total |
|--|------|--------|-------|
| Worked less than 5 days/week or less than 8 hours/day | 3.3 | 3.2 | 3.2 |
| Not working full-time or currently not working, because: | | | |
| No work available | 24.6 | 18.7 | 21.3 |
| Must work at home or on holding | 9.3 | 23.4 | 17.1 |
| Sickness | 8.7 | 12.2 | 10.6 |
| Total | 45.9 | 57.5 | 52.2 |

Source: Labor Market Skills Newsletter, MESW, January 1999.

3.2.4 Employment by Sector

Employment by industrial sector (1997) is shown in Table 3.2.6. The sector consisting of agriculture, forestry and fishing had the largest share of employment (56 percent), followed by the retail trade (21 percent), service industries (10 percent) and manufacturing industries (5 percent).

Men dominate employment in all sectors, except in manufacturing industries, where the proportion of women is slightly higher, and in the retail trade, where a much higher proportion of women than men are employed.

Table 3.2.6 Sectoral employment (1997)

| | Male | Female | Total (%) |
|--------------------------------------|------|--------|-----------|
| Agriculture, forestry, fishing | 61.8 | 51.2 | 55.9 |
| Mining | 0.7 | 0.0 | 0.3 |
| Construction | 4.3 | 0.2 | 2.0 |
| Manufacturing | 4.7 | 5.0 | 4.9 |
| Transport, communications, utilities | 3.6 | 0.2 | 1.7 |
| Wholesale trade | 0.6 | 0.4 | 0.5 |
| Retail trade | 6.1 | 32.5 | 20.8 |
| Financial, insurance, real estate | 0.5 | 0.2 | 0.3 |
| Service industries | 17.7 | 10.2 | 10.2 |

Note: The team was informed that, where the percentages given in the statistics do not add up to 100, this was due to weighting (MESW, personal communication).

Source: Labor Market Skills Newsletter, MESW, January 1999.

3.2.5 Employment in the Formal and Informal Sectors

Ghana's labor market is characterized by a large number of persons employed in the informal sector. There are two widely used definitions of the informal sector:

- 1) Employment in entities in which less than 5 persons are employed. (definition used by GSS)

- 2) Employment when a person is employed by entities which are not formally registered, and so do not pay taxes. Since this is illegal, work is being done to register such entities in Suwame Magazine, the largest integrated area of the informal sector in Kumasi. (definition used by MESW)

The informal sector consists of mostly self-employed persons, who operate small enterprises, with easy entry and easy exit. The informal sector, which is chiefly found in agriculture and in the retail trade, is the most dynamic sector and absorbs a lot of labor. It is believed to be growing at a rate of 5 percent per year.²⁵ The informal sector is often characterized as having low productivity, poor skills, low wages and few inputs. Comprehensive and reliable data are, however, largely unavailable, making it difficult to analyze the informal sector of employment in Ghana.

The statistical data prepared by GSS shows only the employment structure of the formal sector.²⁶ Table 3.2.7 shows the number of persons in formal employment, by public and private sectors. Total formal employment amounted to 464,000 persons in 1985, which was only 8 percent of the total employment of 5,422,000 persons, as found in the 1984 population census.

Formal employment in Ghana was, for many years, dominated by the public sector. Public sector employment expanded from 184,000 persons in 1960, to 288,000 in 1970, and 397,000 in 1985. However, it dropped sharply, by more than 200,000 persons, to 189,000 in 1990. One of the causes of the significant decrease during the second half of the 1980s has been the privatization of many public and state-owned enterprises under the Economic Recovery Program (ERP).

Formal employment in the private sector, on the other hand, fell continuously from 149,000 persons in 1960, to 110,000 in 1970, 46,000 in 1980, and 40,000 in 1990. The private sector accounted for only 17 percent of the total formal employment of 229,000 persons in 1990.

Table 3.2.7 Employment in the formal sector, 1960-1990

| Year | Private sector | | | Public sector | | | Total formal sector | | |
|------|----------------|---------|--------|---------------|---------|--------|---------------------|---------|--------|
| | (x1,000) | % share | % p.a. | (x1,000) | % share | % p.a. | (x1,000) | % share | % p.a. |
| 1960 | 149 | 44.7 | | 184 | 55.3 | | 333 | 100.0 | |
| 1965 | 118 | 29.8 | -4.6 | 278 | 70.2 | 8.6 | 396 | 100.0 | 3.5 |
| 1970 | 110 | 27.6 | -1.4 | 288 | 72.4 | 0.7 | 398 | 100.0 | 0.1 |
| 1975 | 137 | 30.1 | 4.5 | 318 | 69.9 | 2.0 | 455 | 100.0 | 2.7 |
| 1980 | 46 | 13.6 | -19.6 | 291 | 86.4 | -1.8 | 337 | 100.0 | -5.8 |
| 1985 | 67 | 14.4 | 7.8 | 397 | 85.6 | 6.4 | 464 | 100.0 | 6.6 |
| 1990 | 40 | 17.5 | -9.8 | 189 | 82.5 | -13.8 | 229 | 100.0 | -13.2 |

Source: GSS, *Quarterly Digest of Statistics*. Cited in the World Bank Economics and Sector Working Paper: *Employment, Labor Market and Poverty in Ghana*, by Sudharshan Canagarajah and Dipak Mazumdar, p.8

²⁵ Ministry of Employment and Social Welfare (Interview with staff)

²⁶ Ghana Statistic Service, *Quarterly Digest of Statistics*, 1998.

3.3 Estimation of the Labor Market

3.3.1 Supply of Labor

On the basis of the percentages given earlier in this Chapter, the supply of and demand for labor in 2000 has been estimated in Table 3.3.1. It can be calculated that out of a labor force of 8.8 million in 2000, a total of 3.9 million persons (44 percent) were reportedly in full employment, 4.6 million persons (52 percent) were underemployed and 0.3 million persons (4 percent) were unemployed. It is notable that illiterate persons (4.6 million) constitute a very large share of the labor force and that members of the labor force who have post-secondary education are relatively few in number (114,000 persons).

Table 3.3.1 Summary of labor market, 2000

| | Total (%) | Persons (thousands) |
|--|-----------|---------------------|
| <i>Supply:</i> | | |
| Labor force in 2000 | 100.0 | 8,800 |
| Literate | 47.9 | 4,215 |
| Post-secondary education | 1.3 | 114 |
| <i>Demand:</i> | | |
| Full employment | 43.9 | 3,863 |
| Underemployment | 52.2 | 4,594 |
| Unemployment | 3.9 | 343 |
| Total | 100.0 | 8,800 |
| Full employment by public and private sector | | |
| Public and semi-public sector | 6.9 | 267 |
| Private sector: | 93.1 | 3,596 |
| Formal private sector | (4.1) | (158) |
| Informal private sector | (89.0) | (3,438) |
| Total | 100.0 | 3,863 |
| Full employment by sector | | |
| Agriculture, forestry, fishing sector | 55.9 | 2,159 |
| Industrial sector (manufacturing, mining, construction, utilities) | 8.9 | 344 |
| Service sector (wholesale, retail, finance, service) | 31.8 | 1,228 |
| Others | 3.4 | 132 |
| Total | 100.0 | 3,863 |

Source: Prepared by the JICA Study team, based on the figures from *Labor Market Skills Newsletter*, MESW, January 1999.

3.3.2 Demand for Labour

In respect of the demand for full employment (3.9 million persons), by far the dominant sector is the informal private sector (3.4 million persons). The demand in the formal sector is very much less, with public and semi-public entities employing 0.3 million persons and the formal private sector only 0.2 million persons.

The demand for labor by sector is dominated by agriculture, forestry and fishing (2.2 million persons), followed by the wholesale and retail trades, finance, and personal service sector (1.2 million persons), and manufacturing, mining, construction, and utilities sector (0.3 million persons).

3.3.3 Summary of Labour Market in Ghana

The labor market in Ghana can be summarized as follows:

- The estimated gap (4.9 million persons) between the supply of labor (8.8 million persons) and the demand for labor (3.9 million persons) is largely filled by underemployment (4.6 million persons) including part-time workers, unpaid workers and self-employed persons. There is relatively small number of persons with no employment (0.3 million persons).
- The informal private sector (3.4 million persons) is by far the most significant employer in the labor market in Ghana. The public and semi-public sectors (0.3 million persons) have decreased their employment as a result of the Economic Recovery Program. The demand for labor in the formal private sector (0.2 million persons) is extremely low.
- By sector groupings, by far the most important is agriculture, forestry and fishing sector (2.2 million persons), followed by the service sector including wholesale trade, retail trade, finance and social services (1.2 million persons). The demand for labor in mining, construction and manufacturing (0.3 million persons) is relatively much less than in the agriculture and service sectors.

CHAPTER 4 OVERVIEW OF THE TECHNICAL EDUCATION SECTOR IN GHANA

4.1 Definitions

4.1.1 Definition of Technical Education

The term “technical education” is interpreted in many ways. On the one hand, it is used to describe narrow academic programs related to technological and scientific fields. The term, however, is also used to describe much wider contexts including various skills and knowledge needed for employment in industry and business. In Ghana, technical education often refers to institution-based education and training programs operated under the Ministry of Education (MOE) and other Government ministries.

There is also debate about the distinction between “education” and “training”. The term “education” is often used to describe programs that deliver “high level” knowledge and skills, which are predominantly “theory-oriented.” “Training,” on the other hand, is used by many to describe formal and non-formal programs that deliver “lower level” skills which are predominantly “practically-oriented”.

With the recent rapid changes in technology, and in the global labor market, these narrow definitions of technical and vocational education, and the separation of education and training, are neither appropriate nor useful. There are no longer clear divisions between “technical and vocational” and “education and training.” We need to adopt a more comprehensive perspective. In this Study, we use the term “technical and vocational education and training (TVET)” as a comprehensive term which covers institution-based formal or non-formal education and training programs. These programs are generally designed to prepare individuals with the skills and knowledge necessary for specific occupations or productive activities in the various sectors of the economy.

4.1.2 Definition of Formal and Non-formal Education and Training

Pedagogical literature describes formal education as a structured educational system provided by the state or by private institutions receiving some certification from the state. Non-formal education is, on the other hand, seen as education that takes place outside of the formally-organized school. It is called non-formal education because it is noncompulsory; it does not lead to formal certification and may or may not be supported by the state.

According to the World Bank’s policy paper on tertiary education in Ghana, “formal” and “non-formal” programs, particularly in relation to TVET, are defined as follows:

- *Formal TVET* is defined as a “sub-system that consists of institutions that provide classroom/workshop based instruction. They follow written curricula and students take formal examinations for which certificates are awarded. Most formal TVET activities take place in institutions managed by the various government ministries, religious organizations, NGO’s and private schools.”²⁷
- *Non-formal TVET* “covers the traditional apprenticeship system, on-the-job training, and all those skill training activities that do not lead to formal certification.” It is also noted that non-formal TVET “has no clear organizational structure” and that “there is a close link between training and real production.” This definition argues further that “there are no common testing and certification procedures,” and “there is virtually no government support, control, or supervision in the *non-formal TVET*.”²⁸

These definitions still do not seem to relate to what is commonly referred to as formal and non-formal TVET, as used by people actually involved in the delivery of education and training in Ghana. For instance, the Non-Formal Education Division of the MOE uses the term non-formal education exclusively to describe its many programs involved in literacy education. It was felt that all kinds of TVET programs under the MOE are formal because they are regular programs, are institutionalized, and follow a curriculum and certain roles and regulations.²⁹

In recognition of the disparate definitions of the term, we still must arrive at a working definition that will be used in this report when we refer to formal and non-formal education and training. In some instances, we will use the term formal to describe a school-based education and training with a degree or a certificate program. Elsewhere, we may use the term non-formal to describe a community-based or privately sponsored training program³⁰, whether it may or may not offer a degree or a certificate. In all cases, we should recognize that a labor certificate, giving evidence of competency in a skill, has value in the labor market, whether it has been achieved “formally or non-formally.”

4.2 Overview of the Formal TVET System in Ghana

There are many institutions, both public and private, operating in the formal TVET system in Ghana, and they reflect different characteristics and roles which are not clearly defined in a written statement such as an Education Law. The following is a brief description of the roles of these various institutions, with some comments on their capacity to deliver the type and level of training intended. Statistic data of selected

²⁷ The World Bank (2001). Draft TVET Policy Framework for Ghana. Development for MOE/NACVET/MMDE under the Vocational Skills and Informal Sector Support Project

²⁸ *Ibid*

²⁹ Interview with Mrs. S. Bende, Deputy Director for Materials Development, Non-Formal Education Division, MOE, 11 July, 2000.

³⁰ For example, the type of short-term entrepreneurial training given by the National Business and Professional Women of Ghana, supported by the Friedrich Naumann Foundation.

TVET institutions were shown in Appendix 4.1 and comparative analysis of Ghanaian education with other countries were discussed in Appendix 4.2.

4.2.1 Ministry of Education

Within the Ministry of Education (MOE), Junior Secondary Schools (JSS), Senior Secondary Technical Schools (SSTS) and Technical Institutes (TI) are considered non-tertiary institutions related to TVET and administered by the Ghana Education Service (GES), whereas Polytechnic, University and Teacher-training Colleges are considered tertiary education and are administered by the National Council for Tertiary Education (NCTE).

(1) Junior Secondary Schools

Junior Secondary Schools (JSS) offer several pre-vocational and pre-technical subjects such as Catering, Woodcraft, Paper-Craft, Graphic Design, Sculpture, and Sewing. Students of JSS can select two subjects if the capacity to deliver these subjects exists at the school. The stated aim of these courses is to prepare students for real life. The main objective is to produce shop floor level apprentices and workers. According to the 1998 MOE statistics, only 35 percent of JSS students progress through to a higher level of formal education. After JSS, some students have the opportunity to continue in a technical/vocational education stream by gaining access to other institutions.

(2) Senior Secondary Technical Schools

Besides general Senior Secondary School (SSS), there are Senior Secondary Technical Schools (SSTS), whose primary objective is to not only provide students with a good general education but also practical skills in preparation for technical and vocational oriented courses offered in tertiary institutions.³¹

SSTS is administratively under the Secondary Education Division of GES within the MOE, and the curriculum and the examination are the responsibility of West Africa Examination Council (WAEC). The Senior Secondary Certificate is also issued by WAEC.

SSTS provides pre-vocational courses for future apprentices and workers, foremen and base level technicians in catering, woodworks, metal works, building, electric works, etc. with some hands-on experiences higher than Junior Secondary Schools (JSS). JSS graduates with the Basic Education Certificate Examination (BECE) may apply to enter SSTS.

(3) Technical Institutes

Technical Institutes (TI) provide vocational and academic courses for Senior Secondary School (SSS) leavers, with the stated aim of producing highly-skilled apprentices, workers, foremen and technicians in various technical fields including

³¹ University and Polytechnic entry is determined by results in the Senior Secondary Certificate examinations, which is undertaken at the end of the third year..

Electrical/Electronics, Building, Automotive, Furniture Manufacturing, Fitting & Machining and Metal Fabrication.

TIs take in students from different educational and training levels and backgrounds. The students can be broadly categorized into full-time and block-release groups, with some undertaking special industry programs. (Full-time students undertake classes throughout the week for three terms. Block release students undertake their training courses part-time. They are full-time employees who are released for prescribed days of the week to attend classes and undertake classes.) The TIs use a variety of means to assess the suitability of applicants. Assessment includes interviews as well as other testing and TI administration will, in certain circumstances, consider prior experience in their selection process.

TIs offer Intermediate and Advanced Craft courses and Technician courses, including the Technician Part III course which is considered a "tertiary" program. Thus, broadly speaking, TIs cover non-tertiary and a small component of tertiary technical education in addition to formally certified apprenticeship programs. In addition to these programs, some TIs are also offering customized short-term courses which are specifically tailored to suit industry needs. Generally in the case of customized courses, industry organizations make direct contact with the institutes and negotiate a contract for provision of training. Because a number of TI staff have had considerable practical training, significant industry experience and often also overseas training, some institutes are able to respond quickly and efficiently to these demands.

Specific TIs such as Accra Technical Training Center (ATTC) seem to be particularly successful within this area of TVET provision. ATTC is now offering new courses such as Small Engine Craft, Auto Body Repair Craft, Business System Technician, and Industrial Maintenance Technician courses. Since these courses are new to Ghana education, ATTC has formulated a Committee composed of experts from industry, CRDD of GES, TEU of GES, and staff from the institute to devise a new curriculum. Canadian and French curriculum models have been the basis for curriculum development, because these countries have provided the assistance to commence the new courses.

Since there are no set teaching/learning resources, teachers of TIs use a range of different resources usually adapted from imported textbooks and manuals. The Staff Development Offices within the institutes also provide assistance by conducting workshops and giving individual guidance. Although textbooks are usually listed on the back pages of the curricula/syllabi, and are sometimes available from the library, most teachers make handouts and distribute them to the students at a minimal price.

(4) Polytechnics

In 1993, due to the mounting pressure of demand for tertiary education and the projected need for highly skilled human resources, eight Technical Institutes were upgraded to tertiary level education institutions and called "polytechnics." It is expected that an additional two TIs will be upgraded to polytechnics in the near future.

Polytechnics have been authorized to issue a new qualification called the Higher National Diploma (HND).³²

A Polytechnic Law, was passed in 1992, stating that the primary roles of the polytechnics are to:

- Provide tertiary education through full-time courses in the field of manufacturing, commerce, science, technology, applied social science, applied arts;
- Encourage study in technical subjects at tertiary level;
- Provide opportunity for development, research and publication of research findings.

The polytechnic sector provides tertiary level technical & business education at Higher National Diploma (HND) level in the fields of Engineering (Mechanical, Civil, Automobile and Chemical Engineering), Applied Science (including Computer Science and Hospitality and Tourism), and Business & Management studies. The stated course objectives are to produce highly skilled workers, technicians, managers and engineers to support modern industries in a competitive global market. In addition to tertiary level courses, some of the polytechnics still offer technician-level courses similar to those offered by TIs.

(5) Universities

There are five Universities in Ghana: The Kwame Nkrumah University of Science and Technology (KNUST), University of Ghana, University of Cape Coast, University of Development Studies, and University College of Education at Winneba (UCEW). KNUST, the University of Ghana, and the University of Cape Coast provide tertiary education in a number of technical fields including Agriculture, Engineering, Science and Mining. The stated objective of the universities is to produce engineers, technical supervisors and future managers to be able to develop and manage industries and organizations.

(6) Teacher Training and Professional Development Institutions

There are three teacher education streams that prepare people for what is regarded as “professional” or “non-professional” status as teachers. The status levels of teachers generally determine which educational institutions they are allocated to. The teacher education streams comprise: 1) Thirty-eight teacher training colleges offering 3-year courses for SSS graduates to become general teachers of elementary school and JSS; 2) University College of Education of Winneba (UCEW) offering one to three year courses enabling people to qualify as professional teachers; and 3) Several of the major Universities offer 4-year certification courses, allowing people to become teachers at UCEW, Polytechnics, SSS, Teacher Training Colleges, and TIs.

³² Summary of University Rationalization Committee Draft Final Report, 1993.

UCEW plays an important role in developing professional teachers. The main areas offered are: 1) Specialized professional studies in education, 2) General, cultural and social studies education, 3) Language education, 4) Science education and 5) Applied arts and technology education.

4.2.2 Ministry of Employment and Social Welfare

The Ministry of Employment and Social Welfare (MESW) is responsible for twenty-seven National Vocational Training Institutes (NVTIs) across the country. These institutes provide people with technical and vocational training to upgrade their skills. People with academic backgrounds can also enroll at NVTI centers which offer National Craftsman Certificate, Grade I and II, based largely on the British City and Guild system.

(1) National Vocational Training Institutes (NVTI) and Integrated Community Centers for Employable Skills (ICCES)

The Ministry of Employment and Social Welfare (MESW) administer both training organizations of NVTI and ICCES. They are possible alternatives for students who are not able to gain entrance to SSS or post-secondary institutions. These training organizations are also accessible to students who drop out from JSS and SSS.

Broadly, NVTI provide vocational training courses for those who have completed Junior Secondary Schools. The stated aim of the NVTI is to produce apprentices, workers, foremen, and base level of technicians in such fields such as Automotive, Carpentry, Catering and Hairdressing.

ICCES centers provide non-formal skill-oriented courses to train young people particularly in rural areas. Its main aim is centered on poverty alleviation, the reduction of unemployment, and rural-urban drift, by contributing to the development of small-scale enterprises throughout the country.

Particular emphasis, in both types of centers, is placed on acquiring practical and management skills in order to enable students to either work in small enterprises or start their own businesses. Although they nominally offer a three-year structured course, it is generally recommended that students search for jobs while they are undertaking the programs, and leave the program as soon as they find an appropriate job.

There are 27 NVTI pilot centers with an enrolment of approximately eight thousand students. Students pay 250,000 Cedis per year to the school to cover the purchase of materials. NVTI offers summer teacher training courses particularly focusing on teaching methodology, and many polytechnic teachers attend these workshops. Since many funding agencies, including the U.K. and Japan, have provided substantial assistance to NVTI over the past decade, some of the centers have up-to-date learning materials, vehicles, maintenance equipment, and teaching aids.

4.2.3 Ministry of Environment, Science and Technology

The Ministry of Environment Science and Technology (MEST) operates ten Ghana Regional Appropriate Technology Industrial Service/Intermediate Technology Transfer Units (GRATIS/ITTU), to provide Technical Institute (TI) graduates with more practical and updated techniques. They generally offer two and three-year training courses. Often small business-incubation schemes are offered in conjunction with the courses offered. These schemes are designed to provide graduates with support for starting-up manufacturing businesses.

(1) Ghana Regional Appropriate Technology Industrial Service (GRATIS) & Intermediate Technology Transfer Units (ITTU)

Both GRATIS and ITTU mainly provide additional opportunities for TI and SSS graduates to obtain more practical, hands-on skills. Programs offered are either a two to three years course in the fields such as Metal Work, Wood Processing, Civil Engineering, and Production Technology including CAD. Sometimes short courses from between three- six months in duration are offered in areas such as Material-Dying, Hospitality and Computers.

(2) Regional College of Applied Arts, Science and Technology

These colleges include Post-Secondary Training Colleges administered under the Ministry of Education, Agricultural Training Colleges administered under the Ministry of Agriculture and the Nurses Training Colleges administered under the Ministry of Health.

4.2.4 Administrative and Advisory Processes and Procedures of MOE

There are a number of organizations providing a range of advisory and administrative functions. Two professional institutions are the Institute of Professional Studies (IPS) and the Ghana Institute of Languages (GIL). There are four institutions of research and training: Ghana Science Association, Ghana Academy of Arts and Sciences, Encyclopedia Africana Projects, and Institute of Chartered Accountants. In addition, there are three supervisory bodies as shown below:

- The National Council for Tertiary Education (NCTE)³³ is an advisory body to the Minister of Education in the development of institutions providing tertiary education.
- The National Accreditation Board (NAB) is the primary agency for accreditation of tertiary institutions and curriculum as national standard
- The National Accreditation Board for Professional and Technician Examinations (NABPTEX) is responsible for curriculum and examination administration and certification of the Higher National Diploma (HND).

³³ Within the Ministry of Education, Junior Secondary Schools, Technical Senior Secondary Schools and Technical Institutes are considered non-tertiary institutions and administered by the Ghana Education Service (GES), whereas Polytechnic and University courses are designated as tertiary education, and are administered by the National Council for Tertiary Education (NCTE).

4.2.5 Analysis of Budget, Enrolment and Unit Cost in the Education Sector

Table 4.2.1 summarizes the past performance of the overall education sector in Ghana since 1991 in relation to budget, enrolment and unit education cost by type of education institution. Major findings are:

- The government budget share of the education sector has been decreasing gradually from 23 percent in 1991/92 to 18 percent in 1997/98. Within the MOE budget, the share of the tertiary education has been slightly increasing from 10 to 12 percent and that of the technical and vocational training sub-sector has been stable at 1 percent.
- The average growth rate of the total government budget in US\$ terms is 5.8 percent for the last eight years, while that of the MOE budget is 3.9 percent. Within the MOE budget, the average growth rate of the tertiary education is 6.7 percent and the technical and vocational training sub-sector is minus 0.5 percent, which implies the government has clear strategies and continuous efforts to strengthen the higher education to support the national economic development, jointly observing the higher growth rate of the SSS budget, 5.5 percent.
- With enrolment, Table 4.2.1 shows the relatively low growth rates of primary and JSS enrolment, considering the high population growth rate in this country, which is 2.5 percent. This is because the statistics do not include the enrolments in private schools, which have been growing quite rapidly.
- The enrolment growth rate of tertiary education is very high at 20.3 percent for the last eight years, while that of the technical and vocational training is minus 3.7 percent. This shows people's preference for higher education and the Government strategies to expand the training capacity of the tertiary education institutions.
- In relation to the unit education budget in US\$ terms, due to rapid enrolment growth it has been decreasing by minus 11.3 percent in the tertiary education sub-sector for the last 5 years. The decreases in JSS and SSS have been minus 1.2 percent and minus 0.4 percent respectively.
- The unit education cost per student per year for tertiary education in Ghana is around US\$600 to US\$800 for the last five years, which is a significantly small amount compared to the cost for tertiary education in other countries.³⁴ Although the education cost varies among nations due to the cost of infrastructure and teachers' salary, Ghana faces a serious financial constraint in tertiary education.

This statistical analysis suggests that the quality of tertiary education in Ghana has been sharply decreasing due to the rapid increase of their enrolment. One of the solutions to improve the quality of education is to introduce a cooperative scheme with the private sector due to the difficulties in increasing the government budget for the education sector.

³⁴ The unit education cost per student per year at Nagaoka National College of Technology in Japan is US\$15,000 and US\$4,500 at Chisholm Institute in Australia.

Table 4.2.1 Budget, enrolment, and unit education cost by levels of education

| Budget (US\$) | 1991/92 | | 1993/94 | | 1995/96 | | 1997/98 | | 1999/00 | | Growth rate |
|--|-------------|------|-------------|------|-------------|------|-------------|------|-------------|------|--------------|
| | (Mil. US\$) | | (Mil. US\$) | | (Mil. US\$) | | (Mil. US\$) | | (Mil. US\$) | | |
| Primary education | 70 | 36% | 65 | 34% | 67 | 36% | 82 | 35% | 75 | 28% | 0.76% |
| JSS | 43 | 22% | 47 | 25% | 39 | 21% | 49 | 20% | 49 | 18% | 1.69% |
| SSS | 19 | 10% | 19 | 10% | 20 | 11% | 31 | 13% | 30 | 11% | 5.53% |
| Technical & vocational training | 2 | 1% | 2 | 1% | 2 | 1% | 2 | 1% | 2 | 1% | -0.54% |
| Tertiary education | 19 | 10% | 19 | 10% | 18 | 9% | 28 | 12% | 31 | 12% | 6.65% |
| Other administrative services | 43 | 22% | 37 | 19% | 41 | 22% | 46 | 19% | 80 | 30% | 7.89% |
| Total of MOE budget | 196 | 100% | 189 | 100% | 188 | 100% | 237 | 100% | 266 | 100% | 3.87% |
| Total Government budget | 872 | | 925 | | 1,175 | | 1,293 | | n.a. | | 5.78% |
| | 22.5% | | 20.5% | | 16.0% | | 18.4% | | | | (upto 98/99) |
| Enrolment (Public only) | | | | | | | | | | | |
| Primary education | 1,807,223 | | 1,910,408 | | 1,955,713 | | 1,959,651 | | 2,106,200 | | 1.93% |
| JSS | | | 655,642 | | 677,660 | | 678,159 | | 697,392 | | 1.03% |
| SSS | 144,700 | | 176,654 | | 185,479 | | 190,003 | | 208,739 | | 4.69% |
| Technical & vocational training | | | 14,472 | | 16,078 | | 14,547 | | 13,824 | | -0.76% |
| Tertiary education | 11,857 | | 16,923 | | 26,481 | | 36,626 | | 51,872 | | 20.26% |
| Unit education cost (US\$/student/year) | | | | | | | | | | | |
| Primary education | 39 | | 34 | | 35 | | 42 | | 35 | | -1.15% |
| JSS | | | 72 | | 58 | | 72 | | 70 | | -0.42% |
| SSS | 133 | | 108 | | 110 | | 162 | | 141 | | 0.81% |
| Technical & vocational training | | | 149 | | 129 | | 142 | | 141 | | -0.92% |
| Tertiary education | 1,587 | | 1,151 | | 672 | | 770 | | 607 | | -11.32% |

Source: Statistic Department, MOE

With regard to tertiary education, the student enrolment in universities has increased at an annual rate of 16 percent since 1990/91, while enrolment in polytechnics has been rapidly growing at the annual rate of 32 percent for 1996/97 to 98/99, as shown in Table 4.2.2. This is because of the rapid enrolment growth in the SSS level, as well as people's recognition of the importance of higher education.

Table 4.2.2 Enrolment trend of tertiary institutions

| | (persons) | | | | | | | | | |
|-------------------------------------|--------------|---------------|---------------|---------------|---------------|--------------|---------------|---------------|---------------|----------------|
| | 90/91 | 91/92 | 92/93 | 93/94 | 94/95 | 95/96 | 96/97 | 97/98 | 98/99 | |
| University | | | | | | | | | | |
| Univ. of Ghana | 4,017 | 4,699 | 5,363 | 5,594 | 6,956 | | 8,495 | 8,606 | 9,939 | |
| Univ. of Scie. & Tech. | 3,980 | 4,754 | 4,374 | 4,702 | 4,890 | | 6,079 | 6,876 | 8,573 | |
| Univ. of Cape Coast | 2,000 | 2,404 | 2,652 | 3,190 | 4,273 | | 5,342 | 7,264 | 7,882 | |
| Univ. College of Education | | | 1,889 | 1,840 | 1,747 | | 2,955 | 3,554 | 4,605 | |
| Univ. for Dev. Studies | | | | 39 | 134 | | 255 | 384 | 502 | |
| Total | 9,997 | 11,857 | 14,278 | 15,365 | 18,000 | 0 | 23,126 | 26,684 | 31,837 | (90-99) |
| Annual growth rate | | 18.6% | 20.4% | 7.6% | 17.1% | | | 15.4% | 19.3% | 15.6% |
| Average annual new enrolment | 2,499 | 2,964 | 3,570 | 3,841 | 4,500 | 0 | 5,782 | 6,671 | 7,959 | |
| Polytechnic | | | | | | | | | | |
| Accra Polytechnic | | | | 644 | 1218 | 2157 | 2422 | 2858 | 2713 | |
| Kumasi Polytechnic | | | | 407 | 1323 | 1719 | 1870 | 2153 | 2445 | |
| Takoradi Polytechnic | | | | 235 | 542 | 907 | 1128 | 1710 | 2098 | |
| Ho Polytechnic | | | | 237 | 346 | 748 | 1184 | 1482 | 1582 | |
| Cape Coast Polytechnic | | | | 35 | 166 | 270 | 430 | 632 | 1133 | |
| Tamale Polytechnic | | | | | 39 | 117 | 269 | 433 | 652 | |
| Sunyani Polytechnic | | | | | | | 67 | 366 | 1221 | |
| Koforidua Polytechnic | | | | | | | 50 | 308 | 1082 | |
| Total | | | | 1,558 | 3,634 | 5,918 | 7,420 | 9,942 | 12,926 | (96-99) |
| Annual growth rate | | | | | 133.2% | 62.9% | 25.4% | 34.0% | 30.0% | 32.0% |

Note: Enrolment of polytechnics includes both of Technician certificate courses and Higher National Diploma (HND) courses.

Source: Handbook, National Council for Tertiary Education (NCTE), Nov. 1999

4.3 Overview of Non-formal TVET Provision

There are a number of organizations delivering a range of non-formal TVET courses. These courses generally focus on "life skills" and are conducted for adults (especially women), post JSS and early SSS leavers living in rural areas. Many non-formal training providers often collaborate in offering their programs with non-governmental organizations (NGO) such as the Ghana Association of Private Voluntary Organizations in Development (GAPVOD). Such organizations attempt to offer non-formal training courses and seek possible sources of funding from the range of local and overseas development assistance agencies operating in Ghana.

When certification is provided for training delivered in the non-formal sector, it is usually a statement of completion. This certification does not generally relate to the certification offered for courses undertaken within the formal education sector. The following are some examples of organizations operating in the non-formal TVET sector:

4.3.1 Community-based Programs

The Private Enterprise Foundation (PEF) is one of the larger organizations offering entrepreneurial training both in regional capitals and in rural districts. The programs are predominantly two to three day workshops mainly for women involved in small business and micro-enterprise type activity. The approach to training is essentially "hands-on" and includes topics such as basic bookkeeping and management of human resources. The PEF often work in cooperation with the National Board for Small Scale Industries (NBSSI), which runs regional advisory and business centers, and also with some Intermediate Technology Transfer Units (ITTU).

The Friedrich Naumann Foundation, which is an aid agency linked to the German Free Democratic Party, channels their development aid primarily through organizations such as the Association of Ghana Industries (AGI), Business and Professional Women (BPW) and the Institute for Economic Development (IED). BPW, for example, are funded to conduct grass roots level training programs for women who already have job skills in areas such as cosmetics/soap manufacturing, bead-making, tie-dye and batik production and weaving. In recent years, up to sixteen workshops have been organized for around five-hundred women to give them training in technical and entrepreneurial, management and train-the-trainer skills.

Also at the grass roots level, organizations such as Learning, Helping, Living have been established to assist with income-generating schemes for both males and females who have completed JSS. It provides various kinds of training programs including "informal" apprenticeship schemes in the areas of automotive, dressmaking and other general trades. Other examples of community-based providers are The Network of Women Artisans, which manages a private training institution training youth in automotive and spray-painting, and the Center for Rural Industry in Ho, which offers training in dressmaking and entrepreneurial skill. There are also a number of small, community-based enterprises offering craft workshops in the regional capitals.

Most of these community-based providers function independently but are loosely coordinated by the Ghana Association of Private Voluntary Organizations in Development (GAPVOD). The GAPVOD represents these community-based providers and other non-government organizations, and with a view to accessing and coordinating aid from international agencies.

4.3.2 Church-run Programs

Church-run institutes have been an important feature of TVET provision in Ghana for a considerable time. Some, such as St Paul's TI in Koforidua, have been incorporated into the formal TVET system. The major churches, however, continue to conduct technical and vocational training particularly at the grass roots level. The Presbyterian Church, for example, runs eight vocational training centers, which focus on the delivery of entrepreneurial skills at post-JSS level and also for early leavers from SSS. The Multi-denominational Program for Female Vocational Training also conducted through these centers, focuses on providing young women with hands-on skills in non-traditional areas with the objective of involving women in occupations that have been traditionally dominated by men.

Another example of a Church-run operation is the Catholic Relief Services mission. Operating since 1958, this mission operates mainly in the three northern regions. Its major goal is to enhance education and capacity building to enable people to engage more productively in the economy. The training function of these operations focuses predominantly on areas such as literacy and numeracy, basic book-keeping, and accounting that is specifically related to preparation for establishing and maintaining small credit schemes and agriculture and horticulture courses that are relevant to current development in the regions.

4.3.3 Industry and Private Institute Programs

Non-formal training programs are provided by many of the larger companies. VALCO, for example, have a core of four full-time trainers who supervise and conduct courses for all employees on an annual basis. The curricula for the courses are designed in-house, and certification is also internally provided. Other companies such as Unilever and GAFCO also offer various types of training programs for their employees who receive internal certification for courses completed.

Private education and training centers such as NIIT have emerged in Ghana to provide specific skills sets that are currently required in the labour market. Originating in India, NIIT Education and Training Center is part of a global network of thirty countries providing information technology (IT) training. The center is set up with up to date IT equipment with twenty-four hour ISDN services, and purports to offer courses that are relevant to industries and enterprises not just in Ghana but in many other countries as well.

As with the other types of TVET provided outside of ministry-run institutions, there is no articulation between formal institutional certification and that provided for successful completion of these courses.

4.3.4 Polytechnics and Non-formal TVET

This section discusses the relationships between polytechnics and non-formal TEVT, based on interviews with staff from educational institutions, government agencies and programs, foundations, NGO's, community and faith-based programs, private training institutes, and concerned individuals throughout the country.

It has been expressed by MOE that tertiary institutions should not be seen only as "elite islands" for formal education and training.³⁵ This statement means that publicly supported tertiary institutions including polytechnics should be an accessible resource for the community as a whole.

The people involved in TVET programs at the pre-tertiary level commonly mentioned that students in these programs could use more and better in-depth training in business management and entrepreneurial skills. The overwhelming majority of graduates of TVET programs, such as from local apprenticeships, NVTI, ITTU, ICCES, or the like, tend to go into their own businesses, where there is a huge need for upgrading their skills. ITTU, for instance, expressed a concern for enhanced business-related skills for the students, and they could greatly benefit from the expertise of polytechnics, including short-term courses or seminars in relation to computer and information technology, especially for smaller businesses.

Takoradi Polytechnic has already begun to offer short-term courses in a number of technical fields, and hopes to expand into computer studies.³⁶ Ho Polytechnic is another example where short-term courses have been offered. Whether such specialty courses are called continuing education, short-term, or enrichment courses, there seems to be a strong demand from the community at large for a linkage to expertise of the polytechnics.³⁷ There is a strong desire for some linkage between the polytechnics and other formal and non-formal TEVT programs. The MOE has emphasized the importance of regional Vocational Technical Resource Centers (VOTECs) in improving technical and vocational skills of the community.³⁸ The polytechnics also have the potential to adopt the role of resource centers, providing linkages with non-formal technical and vocational education and training organizations.³⁹

4.3.5 Distance-learning as a Non-formal TVET Programme

In Ghana, full-scale distance-learning education has not yet commenced, but small-scale projects by using audio-visual aids together with conventional media have already begun at several places. University College of Education at Winneba (UCEW) and University of Cape Coast provide distance-learning programs for training teachers.

³⁵ Comment by Mr. Budu-Smith, Deputy Director General, GES of the MOE and former Director of Vocational Education, GES, at Steering Committee Meeting on 5 July 2000.

³⁶ Article in *Daily Graphic*, 11 July, 2000.

³⁷ Interview with Dr. Baah Boackye, Principal, Accra Polytechnic, 4 July, 2000.

³⁸ See the Republic of Ghana, *Comprehensive Development Framework: EDUCATION*, Ministry of Education, November, 1999, p.17.

³⁹ Interview with Dr. Baah Boackye, Principal, Accra Polytechnic, 4 July, 2000.

Ghana Institute for Management and Public Administration (GIMPA) is engaged in management training at the advanced professional level. The people engaged in these programs are supportive to the use of distance-learning as a method in the formal and non-formal technical education. The current status of distance-learning programs is described as follows.

(1) University College of Education at Winneba (UCEW)

UCEW provides distance-learning for teachers. Distance-learning provides the education to obtain an advanced diploma for in-service teachers, who work in elementary and secondary schools, but not for technical teachers at TIs or Polytechnics. This project for UCEW started in 1991 with a UK Grant Aid (approx. US\$5.3 million) that employed 4 experts during a 3-year period to provide technical assistance. Actual operation of the distance education commenced in 1999, targeted to 2000 teachers, but the first year's students were 196 teachers. Its courses are in the fields of mathematics (general), science (general), life skills, English language and education (pedagogy). The textbooks were written by professors of University of Ghana, UCC, and KNUST.

(2) Ghana Institute for Management and Public Administration (GIMPA)

GIMPA's mission is to train senior managers, from public, private and academic institutions, in policy and decision-making. GIMPA with 25 full-time teachers and many part-time teachers currently provides mainly short-term non-formal management training for managers and executives by using conventional paper media.

The distance-learning center attached to GIMPA commenced operation in June 2000 by the assistance of the World Bank.⁴⁰ The capacity is for 30-50 persons in each class. All courses are brought to GIMPA through a hub in Washington DC. Supply-driven courses are obtained from the World Bank Institute, which also awards a certificate to participants. Demand-driven courses are those requested by participants, which may be supplied by the World Bank or any other institution. The courses at the distance-learning center are mostly of 3 days, 7 days or 15 days duration.

The distance-learning center has a video conference system through the Global Network with its headquarters in Washington DC. Through the video conferencing system, GIMPA can provide a venue for international conferencing for the students who want to acquire management expertise from universities in other advanced countries, although GIMPA does not provide MBA courses through the distance-learning. Because of the short history of distance-learning programs at GIMPA, the number of students in such MBA programs is still limited, but it is expected that distance-learning center will be frequently used to implement management training sponsored by foreign aid agencies.

⁴⁰ There are similar centers in Africa, Asia and Latin America, and they are financed by the World Bank. The centers located in other countries are in the Dominican Republic, Vietnam, Singapore, Senegal, PRC, Spain, Paris, Cote d'Ivoire, Ethiopia, Tanzania, Egypt and Bolivia.

(3) Integrated Technical Transfer Units (ITTU)

The development of the ITTU is one of the most successful projects initiated by CIDA (Canadian International Development Agency), and currently supported by the EU (European Union). The ITTU program, which is managed and coordinated at a center located in Tema, also has worked to establish entrepreneurial revolving loan funds. Until July 2000, only five of the ten centers had such funds. An EU grant of Euro\$4.5 million will provide funds especially for rural enterprise funding.

ITTU has two major sections responsible for teaching materials development and publishing. Both are small but well functioning within their capacities. The teaching material development section has been developing educational videos since 1990. They have eight series of video productions including textile, machining and foundry, each of which consists of several videotapes. The total number of videotapes developed there is approximately fifty. Through their projects, videotapes produced by ITTU Tema have been duplicated and distributed to other regional ITTUs in each region of Ghana. These videotapes are being utilized to train the trainees at each regional ITTU. The total number of trainees in the longest training for three years at ITTU is around 300 in total.

(4) Ministry of Education (MOE)

MOE has a plan to expand distance-learning programs for all levels of education throughout the nation in the near future. In fact, the national policy framework on distance education is now being studied. At this moment, however, the plan is not yet authorized by the committee and does not have any specific budgetary support for the implementation of distance-learning programs.

For the effective development of the distance-learning programs, practical attachment and periodical meetings are necessary for students and tutors. Moreover, the success of distance-learning programs will require sizeable investments to establish regional centers for nationwide distribution. These regional centers need to be able to provide technical training in the practical use of the equipment, and enable the purchase and maintenance of the necessary technical equipment at accessible places. The distance-learning programs could also perform an outreach function in cooperation with ongoing community-based and non-formal training programs.⁴¹ There is also the potential for polytechnics to function as regional centers and offer the distance-learning courses as formal and non-formal educational and training programs

⁴¹ People who ran apprentice workshops in Cape Coast and Kumasi were quite receptive to the possibility of being used as distance-learning training centers. ITTU staff, in such centers as Bolgatanga and Wa, were also receptive to the possibility of being a community-based distance-learning center, in cooperation with the polytechnic program. Personal communication with ITTU staffs in Bolgatanga and Wa, 30 June and 1 July, 2000.

4.4 Summary of the Ghanaian Formal TVET System

Table 4.4.1 provides a brief summary of the Ghanaian education system as discussed in Chapter 4. The summary is classified as follows: Goals are indicative of the government's administrative policy or overall aim. Design is indicative of the responsible entities and process undertaken in the development of the curriculum. Delivery strategy is the method used to implement the design. Outcomes represent the certification awarded and destination of students. The review process indicates the responsible entities and process undertaken in reviewing and maintaining the curriculum.

Table 4.4.1 Summary of TVET system

| Ministry | Educational Sector | GOALS Policy Directions Govt. Legislation | DESIGN Process of curriculum development | DELIVERY STRATEGY | OUTCOMES Certification & Student destinations | REVIEW PROCESS | |
|------------------------------|--|--|--|--|--|--|---|
| MOE Ministry of Education | JSS (Pre-Vocational & Pre-technical subjects) | A Draft Technical Vocational Education & Training Policy Framework for Ghana is before Parliament The overall objective for the proposed policy is to improve the technological proficiency of the Ghanaian labor force | Prepare students for real life | CRDD of GES designs curriculum in collaboration with NBSSI | Predominately academic approach Lack of facilities & equipment impede effective teaching & learning | JSS Certificate of attainment An estimated 35% of students will enroll in SSS | CRDD of GES revises curricula in consultation with NBSSI. 'Pre-technical/vocational currently under review |
| | SSS / SSTS | | Broad secondary education with greater emphasis on technical subjects | National curricula determined by WAEC for all SSS level subjects | Predominately a academic approach. Lack of facilities & equipment impede effective teaching & learning | The Senior Secondary Certificate is awarded Depending on results students may enter university, TIs, Polytechnics or workforce | Responsibility of WAEC Review information unavailable at this time |
| | Technical Institutes (TI) | | Emphasis on practical skills to produce technically qualified individuals | Design based on national & international curricula (predominantly based on Canadian & French models) | Balance of academic and practice approach. Practical emphasis supported by higher availability of technical facilities | Certification includes: - Craft (3 levels) - Technician (3 levels) (Students who complete Technician. Level III may enter Polytech) | New courses formulated by committee comprising experts from industry, CRDD, TEU & TI |
| | Polytechnic | | Polytechnic Law proposed: • tertiary full-time courses in - Manufacturing - Commerce - Sci. & Tech. - App. Soc. Sci. - App. Arts • study in technical subjects at tertiary level • -Research & - Publications | Original HND curricula were adaptations of previous university (2 yr.) Diploma courses. Courses accredited by NABPTEx/NAB | Predominately an academic theory based approach. Lack of facilities, appropriately experienced staff & equipment impede effective teaching & learning | Certification is HND. Successful candidates may apply to university or seek employment. Some Polytechnics offer non-tertiary courses | COPP commenced revising existing HND curricula Curricula to be ratified by NABPTEx & accredited by NAB Review commenced in 1999 |

| Ministry | Educational Sector | GOALS Policy Directions Govt. Legislation | DESIGN Process of curriculum development | DELIVERY STRATEGY | OUTCOMES Certification & Student destinations | REVIEW PROCESS | |
|--|---------------------------------|--|---|---|--|---|---|
| MESW Ministry of Employment & Social Welfare | NVTI & ICCES | <i>A Draft Technical Vocational Education & Training Policy Framework for Ghana is before Parliament (See MOE section above)</i> | NVTA 1970 Proposed establishment of NVTI centers for: <ul style="list-style-type: none">• apprenticeship & in-plant training• instructor training• Voc. guidance• training standards.• manpower requirements• international coop | NVTI Board with Committee of Trade Tests determined current curricula based on existing international models It is intended that decisions are based on occupational analysis | Highly practical Imbalance of resource allocation between training centers lead to a lack of standardized outcomes | Certification: - Grade. 1 & 2 Trades Cert. - National Craftsman Cert. Employment No articulation to other levels education | Responsibility of Committee of Trade Tests in NVTI Review information unavailable at this time |
| MEST Ministry Of Environment Science & Technology | GRATIS /ITTU | | To upgrade - skills of exit students from T.I.s & SSS | No formal process of curriculum design and maintenance is apparent. | Courses are usually 2 to 3 years duration in the fields of : <ul style="list-style-type: none">- metal work- wood work- engineering Short courses also available in areas such as: <ul style="list-style-type: none">- home eco.- computers | No formal certification or other credentials offered. Participants in some courses may receive certificates of achievement or completion | Responsibility and review information unavailable at this time |