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Honor — Fraternity — Justice

Ministry of Economy and Finance

**Directorate of Studies and
Programming**

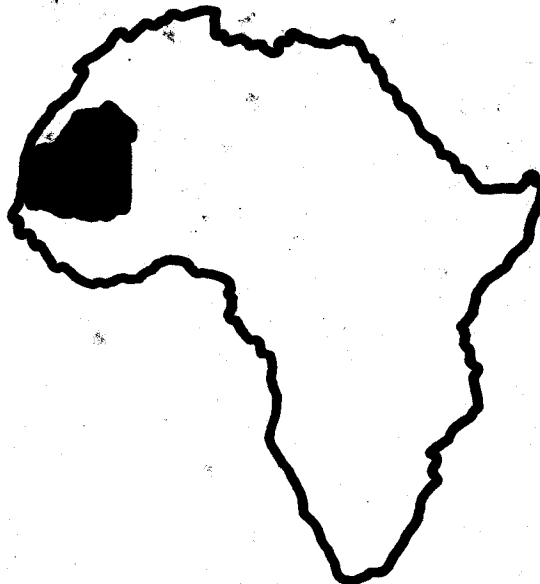


RAMS PROJECT

Rural Assessment and Manpower Surveys

Manpower Skills

FS 3-1



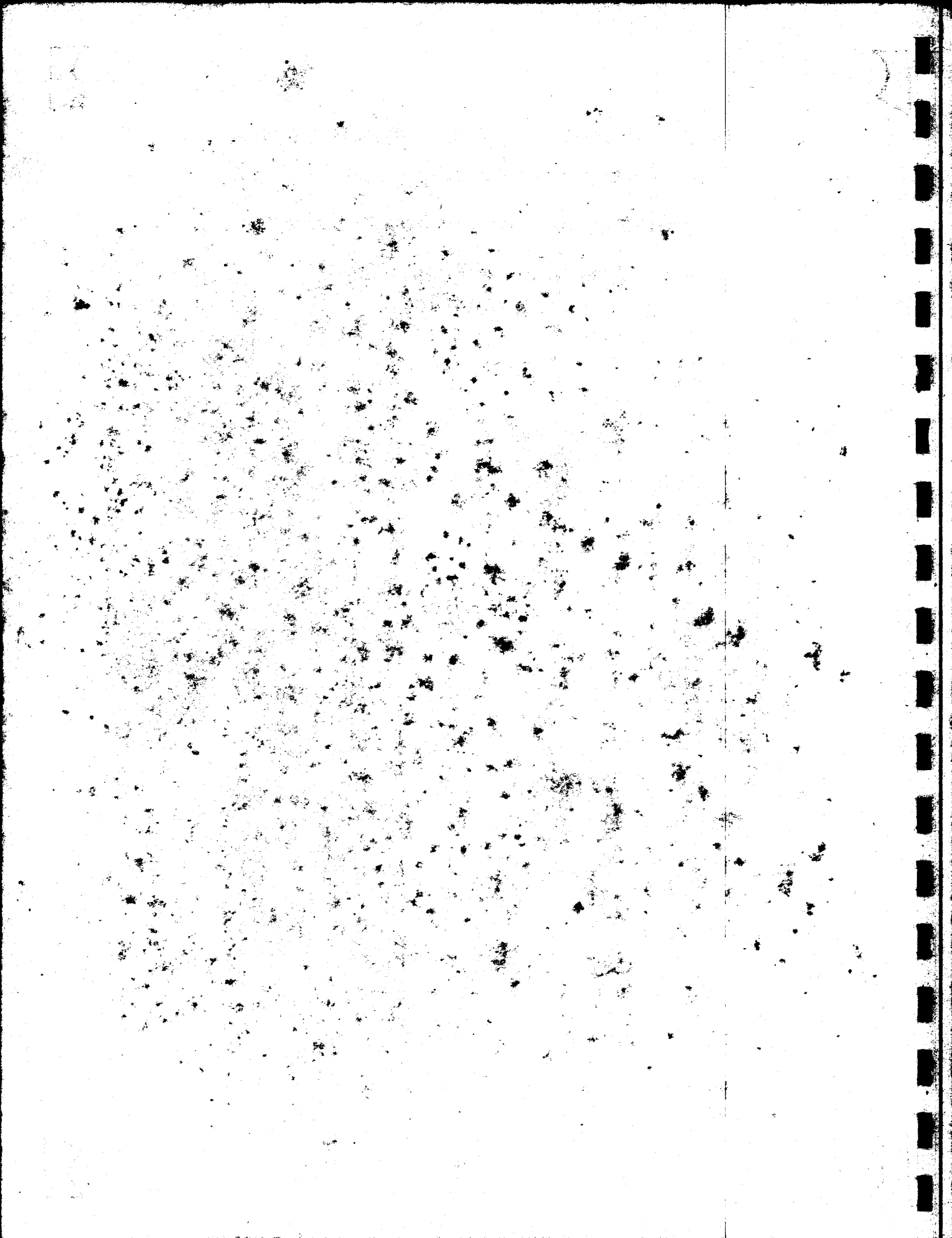
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Volume I

08844



Manpower Skills

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Introduction to the Four Volumes Covering Manpower
and Employment

The RAMS project title, Rural Assessment and Manpower Survey, is only indicative of the scope of the effort as far as manpower is concerned. From the beginning, the intent of the "manpower survey" portion was to be comprehensive, encompassing manpower surveys and analysis, employment surveys and analysis, and educational systems, both formal and non-formal. All of these are interrelated. In developing and analyzing the data base during Phase I of RAMS, it appeared appropriate to present the findings in four volumes as follows:

Volume I - Manpower Skills

Chapter 1 of this Volume documents the literacy level of the Mauritanian population and labor force. Chapter 2 describes the educational level of the population as a whole, with additional detail on the sedentary and nomad portions. The educational levels of the entire labor force are then presented, with details by occupation and economic sector.

Although the primary focus of RAMS is on the rural sector, the interaction of the modern and traditional sectors (rural and urban) is recognized in the overall functioning of the economy. The workers' educational levels, skills and qualifications of the modern sector are also subject to a RAMS survey the results of which are reported in Chapter 3 of this Volume. This Chapter also covers other aspects of the modern sector employment as revealed by the survey.

In Chapter 4, the Civil Service is described from a manpower and employment perspective, based on personnel information furnished by the Ministry of Economy and Finance.

Chapter 5 treats the Non-Structured Business Sector of the economy. The sector provides the major portion of urban employment. A RAMS survey which enumerated over 11,000 non-structured activities in Nouakchott alone, is described in detail.

Chapter 6 briefly summarizes the current school population figures and Chapter 7 projects these figures to the year 2000, demonstrating the major effect the graduates will have on the structure of the work force.

Chapter 8 describes the basis for a Human Resources Planning system and the actions that can be taken to make a start in this direction.

Volume II - Evaluation of the Formal Educational System describes the formal government school system and certain private technical training centers. The report gives particular attention to the internal efficiency of the primary, secondary and professional systems of education. These are studied in the light of the educational needs of a largely rural and illiterate society. The cost of formal education, problems of training enough Mauritanian teachers, and the lack of sufficient planning capability are all addressed.

The report points out that the lack of planning in particular has led to serious regional imbalances in the availability of schools and an un-coordinated system of technical education with few provisions for training people with less than a secondary education.

The report concludes that the system is alienated from the fundamental needs of manpower training as related to the task of rural development. It recommends mass, basic education focused on functional literacy, numeracy, and the skills enabling people to find productive work in their own milieu.

Volume III - Report on Non-Formal Education

This report thoroughly examines the potential of non-formal (out-of-school) education to deal with the severe imbalance in Mauritania between the supply and demand for practical, production-related skills needed for economic development.

The report is in three parts. The first conveys an understanding of the nature of non-formal education-organized learning activities which take place in a wide variety of settings, but with the focus on practical skills which can be learned in a relatively short term. Many developing countries have come to realize that this type of education is an effective way to involve the majority of their peoples in the development process, and that they must therefore seek the appropriate trade-off between formal and non-formal education.

The second part looks in fine detail at the ongoing non-formal education programs in Mauritania, both those which are directly linked to productive work and those indirectly linked. In the **direct** category are governmental, non-governmental and foreign donor programs in agriculture, herding, and fishing, among others. The effectiveness of both the programs and the services and organizations which deliver them is analyzed and discussed. In the indirect category are, for example, the health and environmental programs. This part of the report makes clear that the most widespread use of non-formal education is in the traditional occupations in the form of apprenticeships. The report stresses the need for material and institutional support, and for innovative means of revitalizing this type of rural learning.

The third part describes the results of a RAMS survey designed to assess the qualifications of rural people in six traditional occupations, one of which was women's activities. The survey questionnaire dealt with the individuals' experience, family influences, schooling, training and learning outside the family, and attitudes affecting learning. The results and analysis of this pioneering effort form an important part of the overall assessment of national manpower skills, and **are thus** a logical

extension of Volume I. They serve as a basis for the formulations of appropriate non-formal training programs and therefore fit equally well in Volume III.

Volume IV -- Employment Report commences with an analysis of the 1977 census data in terms of population totals, manpower stock and the labor force. It next describes the characteristics of the population including sedentary/nomad, rural/urban, age, gender and geographic distributions. This basic information is then further analyzed in employment terms using sectoral and occupational breakdowns and employment/unemployment figures. Some critical aspects of the employment situation came to light, including:

- a dramatic increase in urban unemployment between the 1977 census and the results of a 1980 RAMS employment survey;
- the inability of the small modern sector to absorb large numbers of the unemployed or the new entrants to the labor force, estimated to average 15,000 year until the year 2000;
- the high dependency ratios: each male between 20 and 64 supports 5 other persons. This makes savings and investment difficult, yet these are needed to effect structural change in the rural sector;
- the fact that over three-fourths of the population live in villages and small towns of less than 5,000 persons, and that they are primarily self-employed. The prospects for these people are in improving their production -- better tools and support facilities to more farmers -- and in generating a steady increase in wage employment through agricultural processing facilities and other small-scale industries.

The volume concludes with alternative projections of the labor force to the year 2000 and the factors, conditions and policy discussions which will bear on the employment situation in the future.

The subject matter of the four volumes are not only interrelated, but they can be conceptualized as a system for accelerating the process of human resources development in Mauritania. A survey of Household Employment, done in the summer of 1980 brings up to date selected census figures of 1977 and provides an insight into certain other aspects of unemployment, employment, educational levels and manpower supply. This is published separately as a supplement to the Employment Situation.

Educational Levels of the Population1.1. Literacy

Literacy and numeracy are an important part of any individual's total manpower skills. Obviously they are not required to successfully accomplish some jobs. Equally obviously, they are useful in most jobs and are absolutely essential to many jobs. Literacy and numeracy are a prerequisite for all further formal education and for much of the nonformal education and training required to improve the skills of individual workers.

On a national level, it is generally recognized that before a developing country can "take off" economically, a significant proportion of the country's labor force must be literate. In Mauritania, the literate population numbered 191,000 or 17.0% of the population 6 years and over. Of these:

55,000 read/wrote Arabic and French
111,000 read/wrote Arabic only
24,000 read/wrote French only
1,000 read/wrote other languages

Table 1.1 summarizes the distribution of literacy rates of the population by language and rural/urban place of residence and Table 1.2 presents the distribution of the 6 and over population by age group and by type of literacy.

The 191,000 people who are already literate are a significant manpower resource. Furthermore, it is a resource which will last. Over 143,000 of that group were between the ages of 6 and 39 and will continue to contribute this skill to the national effort in the years to come.

A major effort must be made to increase the literacy rates of the labor force before more rapid economic development can occur. Present efforts, laudable as they are, are insufficient. The public primary school system and the Koranic school system reach only a small part of the adult illiterates.

The size of the program needed is indicated by the size of the population involved. Between now and the year 2,000, the education system should consider literacy programs for:

1. all children who will be entering school
2. the 286,000 children now age 14 who are illiterate, whether currently in school or not
3. the 384,000 adults age 15-39 who are illiterate
4. those illiterate adults over 40 who wish to become literate.

1.2 Educational Levels

Like literacy and numeracy, an important part of an individual's manpower skills is his education.

There are many reasons for having a formal education system and for educating the population. One of the most important of those reasons, and the one which is addressed in this section, is to prepare people to enter the work force and to increase their productivity as workers. Some education, particularly technical training, teaches specific work skills which are immediately, directly applicable to a specific job; while other education may be only indirectly applicable, or designed to meet other education goals other than manpower development.

Although it is in itself an important topic, no analysis will be made here of the applicability of specific curriculum content to manpower development. See Volume II where it is thoroughly covered.

As with literacy, formal education is not necessarily required to satisfactorily fill many jobs, but it is usually helpful, and it is essential for certain occupations.

The educated population corresponds so closely with the literate population that it can be assumed that they are the same group. About 189,000 people have received some education: slightly more than half of them in the formal public school system and slightly less than half only in family or organized traditional/religious education. Some 80,000 have at least some primary education, another 14,000 have some secondary education, and almost 3,000 have advanced technical or professional education. In terms of percentages, about 8% of the population over age 6 have at least some primary education, while an additional 1% have at least secondary education, and less than 1% more have completed advanced technical or professional education. The rest, roughly 90% of the population have no formal education beyond Koranic school.

This distribution is summarized below as Table 1.3 and presented in detail by Department as Table 1.4.

1.3 Educational Levels of the Sedentary Population

Table 1.5 presents the distribution of the sedentary population age 6 and over by educational level, activity status (salaried, dependent, worker, etc.) and sex. Table 1.6 does the same for the nomad population.

Table 1.1

Number of Literate Persons and Literacy Rates of
Population Age 6 and Over Rural and Urban and
Language 1977

| | Rural | | | | | | | | Total National | |
|-------------------|--------------------------|----|------------------------------|-----|----------------------------|------|--------------------------|-----|-----------------|----|
| | Urban Number (000) | % | Sedentary Number (000) | % | Nonadic Number (000) | % | Total Number (000) | % | Number (000) | % |
| Read and write | 38 | 12 | 16 | 4 | 1 | 0.4 | 17 | 2 | 55 | 5 |
| French and Arabic | | | | | | | | | | |
| Read and write | 35 | 16 | 38 | 8 | 58 | 10 | 76 | 9 | 111 | 10 |
| Arabic only | | | | | | | | | | |
| Read and write | 18 | 8 | 5 | 0.8 | 1 | 0.07 | 6 | 0.5 | 24 | 2 |
| French | | | | | | | | | | |
| Other languages | - | - | - | - | - | - | - | - | 1 | 1 |
| Total Literates | 91 | 37 | 59 | 12 | 40 | 10 | 99 | 12 | 191 | 17 |

Source: 1977 computer printout table TC 17 : data are summarized without adjustment.

Table 1.2
Population Age 6 and Over by Sex, Age Group, and Type of Literacy (1977)

| Age Group | Sex | Illiterate | Type of Literacy | | | | | Total Population |
|---------------------|-----|------------|------------------|--------|-----------------------------|-----------------|----------------|------------------|
| | | | Classical Arabic | French | Classical Arabic and French | Other Languages | Total Literate | |
| All ages 6 and over | M | 390,470 | 75,190 | 17,930 | 42,110 | 630 | 135,860 | 526,330 |
| | F | 506,520 | 35,810 | 5,980 | 13,340 | 120 | 55,250 | 561,770 |
| | T | 896,990 | 111,000 | 23,910 | 55,450 | 750 | 191,110 | 1,088,100 |
| 6 - 9 | M | 78,300 | 7,200 | 280 | 2,290 | 10 | 9,780 | 88,080 |
| | F | 76,590 | 3,800 | 220 | 1,660 | - | 5,680 | 82,270 |
| | T | 154,890 | 11,000 | 5500 | 3,950 | 10 | 15,460 | 170,350 |
| 10 - 14 | M | 60,120 | 7,970 | 1,370 | 12,980 | 20 | 22,340 | 82,460 |
| | F | 66,400 | 4,180 | 940 | 6,190 | 10 | 11,320 | 77,720 |
| | T | 126,520 | 12,150 | 2,310 | 19,170 | 30 | 33,660 | 160,180 |
| 15 - 19 | M | 46,950 | 6,620 | 2,970 | 11,300 | 30 | 20,920 | 67,870 |
| | F | 63,900 | 3,530 | 1,460 | 3,440 | 20 | 8,450 | 72,350 |
| | T | 110,850 | 10,150 | 4,430 | 14,740 | 50 | 29,370 | 140,220 |
| 20 - 24 | M | 34,360 | 8,510 | 4,240 | 6,750 | 20 | 19,520 | 53,880 |
| | F | 49,390 | 3,240 | 1,360 | 1,490 | 10 | 6,100 | 55,490 |
| | T | 83,750 | 11,750 | 5,600 | 8,240 | 30 | 25,620 | 109,370 |
| 25 - 29 | M | 29,690 | 5,520 | 2,650 | 3,590 | 230 | 11,990 | 41,680 |
| | F | 45,320 | 3,610 | 850 | 350 | 20 | 4,830 | 50,150 |
| | T | 75,010 | 9,130 | 3,500 | 3,940 | 250 | 16,820 | 91,830 |
| 30 - 39 | M | 43,880 | 9,900 | 3,390 | 3,430 | 180 | 16,900 | 60,780 |
| | F | 70,690 | 4,930 | 740 | 170 | 40 | 5,880 | 76,570 |
| | T | 114,570 | 14,830 | 4,130 | 3,600 | 220 | 22,780 | 137,350 |
| 40 - 49 | M | 40,130 | 11,380 | 2,030 | 1,290 | 100 | 14,800 | 54,930 |
| | F | 54,190 | 5,290 | 250 | 20 | 20 | 5,580 | 59,770 |
| | T | 94,320 | 16,670 | 2,280 | 1,310 | 120 | 20,380 | 114,700 |
| 50 - 59 | M | 30,110 | 9,250 | 720 | 410 | 40 | 10,420 | 40,530 |
| | F | 39,220 | 4,530 | 110 | 20 | - | 4,660 | 43,880 |
| | T | 69,330 | 13,780 | 830 | 430 | 40 | 15,080 | 84,410 |
| 60 and over | M | 26,930 | 8,840 | 230 | 70 | - | 9,190 | 36,120 |
| | F | 40,820 | 2,700 | 50 | - | - | 2,750 | 43,570 |
| | T | 67,750 | 11,540 | 330 | 70 | - | 11,940 | 79,690 |

Source: 1977 census computer printout table TC 17. These data are summarized without adjustment.

Table 1.3

Summary of Education Levels of the Population
age 6 and over (1977)

| Level of Education | Number | % of Educated | % of Population 6 and over |
|----------------------------|----------|---------------|-------------------------------|
| Technical and Professional | 2,990 | 1.5% | 0.3% |
| Secondary and higher | 14,120 | 7.4% | 1.3% |
| Primary | 80,240 | 42.4% | 7.6% |
| (sub-total formal) | (97,350) | (51.4%) | 9.2% |
| Organized Traditional | 19,580 | 10.3% | 1.8% |
| Family Traditional | 72,370 | 38.2% | 6.8% |
| (sub-total traditional) | (91,950) | (48.5%) | 8.7% |
| Grand Total | 189,300 | 100% | 17.9% |
| No Education | 863,960 | | 82.0% |

Source : Summarized from Census table TC 22.

Table 1.4

Population age 6 and over by the Type of Education Received, by Department (1977)

| Name of Department | No Education | Traditional Family Education | Organized Traditional Education | Primary Education | Secondary and Higher Education | Technical and Prof. Education | Total |
|------------------------------|--------------|------------------------------|---------------------------------|-------------------|--------------------------------|-------------------------------|--------|
| NOUAKCHOTT ARRondissement 1 | 12,940 | 2,630 | 260 | 3,730 | 670 | 140 | 20,370 |
| NOUAKCHOTT ARRondissement 2 | 4,530 | 458 | 150 | 1,910 | 630 | 70 | 7,740 |
| NOUAKCHOTT ARRondissement 3 | 6,290 | 1,010 | 310 | 4,910 | 1,970 | 690 | 15,180 |
| NOUAKCHOTT ARRondissement 4 | 6,190 | 710 | 220 | 3,360 | 1,930 | 320 | 12,730 |
| NOUAKCHOTT ARRondissement 5 | 29,550 | 3,130 | 730 | 7,070 | 1,340 | 220 | 42,040 |
| AMOURI | 19,130 | 1,090 | 200 | 580 | 70 | 10 | 21,080 |
| BASSIKOUNOU | 12,390 | 840 | 260 | 740 | 30 | 10 | 14,270 |
| DJIGUENNI | 15,590 | 920 | 360 | 480 | 20 | 10 | 17,380 |
| NEHA | 28,320 | 2,870 | 700 | 1,860 | 150 | 100 | 34,000 |
| OULATA | 12,510 | 330 | 120 | 420 | 50 | 10 | 13,530 |
| TIMBUERA | 20,120 | 1,050 | 570 | 1,130 | 50 | 10 | 23,550 |
| ALOUN | 22,310 | 2,060 | 170 | 2,790 | 350 | 90 | 27,770 |
| KOBORNI | 21,200 | 1,070 | 590 | 310 | 100 | - | 23,270 |
| TAMCHAKETTI | 26,690 | 2,580 | 250 | 400 | 70 | - | 29,990 |
| TINTANE | 17,950 | 1,930 | 230 | 920 | 80 | - | 21,110 |
| KARNIWOUL | 23,310 | 940 | 410 | 310 | - | - | 24,970 |
| BOUMDID | 6,860 | 1,750 | 830 | 200 | 50 | - | 9,690 |
| GUEROU | 10,430 | 1,150 | 610 | 280 | 60 | 10 | 12,540 |
| KANKOSSO | 19,880 | 730 | 80 | 580 | 100 | 10 | 21,380 |
| KIFFA | 28,100 | 2,680 | 280 | 2,030 | 220 | - | 33,310 |
| KAEDI | 34,900 | 1,620 | 160 | 4,300 | 500 | 150 | 41,630 |
| MAGHAMA | 17,670 | 360 | 20 | 930 | 80 | 30 | 19,090 |
| M'BOUT | 36,080 | 720 | 30 | 1,540 | 60 | 10 | 38,440 |
| MONCHEL | 14,100 | 270 | 440 | 800 | 60 | 20 | 15,690 |
| AJEG | 30,480 | 2,090 | 1,120 | 1,590 | 230 | 100 | 35,610 |
| BABABE | 11,720 | 430 | 40 | 970 | 140 | 10 | 13,310 |
| BOCHE | 23,870 | 680 | 80 | 2,410 | 420 | 60 | 27,520 |
| MAGHIA-LAHJAR | 24,930 | 1,980 | 1,150 | 800 | 50 | 10 | 28,920 |
| M'BAGNE | 15,770 | 490 | 130 | 660 | 20 | - | 17,070 |
| BOUTILIMIT | 33,570 | 8,700 | 1,880 | 2,690 | 620 | 100 | 47,560 |
| KEUR MASSENE | 13,560 | 2,020 | 40 | 1,040 | 100 | 30 | 16,790 |
| MEDERDRA | 28,180 | 4,360 | 1,800 | 1,770 | 260 | 10 | 36,380 |
| OUED NAGA | 7,910 | 930 | 1,170 | 270 | 60 | - | 10,340 |
| R'KIZ | 31,380 | 3,270 | 1,020 | 1,640 | 340 | 20 | 37,670 |
| ROSSO | 19,840 | 1,430 | 360 | 4,060 | 710 | 100 | 26,500 |
| AOUJEFT | 10,480 | 880 | 50 | 270 | 30 | 10 | 11,720 |
| ATAR | 16,500 | 2,910 | 440 | 4,060 | 500 | 250 | 24,660 |
| CHINGUETTI | 6,240 | 350 | 70 | 680 | 40 | 10 | 7,390 |
| NOUADHIBOU | 10,940 | 970 | 190 | 4,050 | 770 | 70 | 16,990 |
| LA GUERA | 530 | 10 | - | 120 | 20 | - | 680 |
| MOUDJERIA | 21,890 | 1,040 | 230 | 1,310 | 50 | - | 24,520 |
| TICHIT | 4,430 | 280 | 60 | 110 | - | 10 | 4,890 |
| TIDJIKJA | 24,710 | 2,290 | 170 | 2,390 | 190 | 70 | 29,820 |
| OULD YENCE | 17,220 | 360 | 170 | 840 | 40 | 10 | 18,640 |
| SELIBABY | 42,150 | 1,200 | 90 | 1,320 | 170 | 60 | 44,990 |
| BIR MOGHREIN ET AIN-BEN-TILI | 990 | 30 | 30 | 240 | 70 | - | 1,360 |
| F'DERICK | 1,840 | 250 | 70 | 600 | 60 | 10 | 2,830 |
| ZOUERATE | 8,560 | 940 | 100 | 3,230 | 390 | 20 | 13,240 |
| AKJOUJT | 9,230 | 1,590 | 1,140 | 1,540 | 200 | 90 | 13,790 |

Source: census able TC 22

Table 1.5

Distribution of the Sedentary Population 6 Years of Age and Over
By Detailed Activity Status, by Type of Education and by Sex (1977)

| Type of Education | Sex | Activity Status | | | | | | | | | | |
|--------------------------------------|--------|-----------------|------------------|-------------------|---------------|----------------|----------------|------------|-------------|----------|----------------|---------|
| | | Unemployed | Salaried Workers | Dependent Workers | Self-Employed | Owners-Workers | Family Workers | Housewives | Handicapped | Students | Other Inactive | Total |
| No Education or Beginner Trad. Educ. | Male | 19,860 | 33,620 | 5,820 | 78,100 | 220 | 30,650 | 0 | 7,020 | 4,880 | 67,920 | 248,110 |
| | Female | 10,600 | 4,390 | 5,860 | 14,990 | 10 | 26,540 | 144,430 | 21,620 | 2,800 | 79,460 | 310,700 |
| | Total | 30,460 | 38,010 | 11,680 | 93,090 | 230 | 57,190 | 144,430 | 28,640 | 7,680 | 147,380 | 558,810 |
| Traditional Family Education | Male | 3,760 | 4,260 | 410 | 15,260 | 190 | 2,170 | 0 | 1,700 | 370 | 1,780 | 29,900 |
| | Female | 1,620 | 140 | 80 | 1,460 | 0 | 560 | 15,340 | 3,460 | 50 | 1,630 | 24,340 |
| | Total | 5,380 | 4,400 | 490 | 16,720 | 190 | 2,730 | 15,340 | 5,160 | 420 | 3,410 | 54,240 |
| Organized Traditional Education | Male | 1,160 | 1,360 | 70 | 5,250 | 70 | 210 | 0 | 680 | 100 | 540 | 9,440 |
| | Female | 50 | 20 | 0 | 50 | 0 | 10 | 780 | 110 | 0 | 90 | 1,150 |
| | Total | 1,210 | 1,380 | 70 | 5,300 | 70 | 220 | 780 | 790 | 100 | 630 | 10,590 |
| Primary Education | Male | 2,790 | 10,760 | 410 | 2,500 | 30 | 800 | 0 | 140 | 39,180 | 970 | 57,580 |
| | Female | 1,360 | 1,340 | 10 | 80 | 0 | 110 | 2,940 | 30 | 19,780 | 920 | 26,570 |
| | Total | 4,150 | 12,100 | 420 | 2,580 | 30 | 910 | 2,940 | 170 | 58,960 | 1,890 | 84,150 |
| Secondary and Higher Education | Male | 980 | 6,540 | 40 | 330 | 40 | 20 | 0 | 40 | 6,550 | 80 | 14,620 |
| | Female | 170 | 880 | 10 | 30 | 0 | 0 | 560 | 10 | 1,260 | 0 | 2,920 |
| | Total | 1,150 | 7,420 | 50 | 360 | 40 | 20 | 560 | 50 | 7,810 | 80 | 17,450 |
| Technical and Prof. Education | Male | 40 | 2,430 | 0 | 20 | 10 | 0 | 0 | 0 | 490 | 10 | 3,000 |
| | Female | 0 | 330 | 0 | 0 | 0 | 0 | 70 | 0 | 60 | 0 | 460 |
| | Total | 40 | 2,760 | 0 | 20 | 10 | 0 | 70 | 0 | 550 | 10 | 3,460 |
| Grand Total | Male | 28,610 | 58,970 | 6,750 | 101,460 | 560 | 33,850 | 0 | 9,580 | 51,570 | 71,300 | 362,650 |
| | Female | 13,840 | 7,100 | 5,960 | 16,610 | 10 | 27,220 | 164,120 | 25,230 | 23,950 | 82,100 | 366,140 |
| | Total | 42,450 | 66,070 | 12,710 | 118,070 | 570 | 61,070 | 164,120 | 34,810 | 75,420 | 153,400 | 728,790 |

Source: Bureau of Statistics, based on 1977 census.

Several observations are evident. Almost all of those with a formal education are in the sedentary population. Of those at the technical and professional education level, most are in salaried positions in the work force. Among those who have a secondary school level of education there are almost as many students still in school as there are workers in the work force. Among those who are at the primary school level, students outnumber workers almost 4 to 1. There are some "educated unemployed": over 4,000 (5%) of the primary school, and over 1,000 (6.6%) of the secondary school graduates were unemployed.

The inactive population (excluding students) does not have much formal education. Only 2% of the housewives and less than 2% of the "other inactive" (who are mostly age 6 and older children) had any formal education. If female labor force participation rates were to increase, the influx into the labor force would be of uneducated rather than educated women. However, it can be anticipated that a relatively large influx of current students will enter the labor force in the foreseeable future.

A further observation is worthy of note. A large proportion (6%) of the formally educated manpower are not yet in the labor force. They are still in the classroom and are going to increase markedly the number and skills of that labor force and the need for jobs in the years to come.

1.4 Educational Levels of the Nomad Population

Slightly less than 2,000 nomads (less than 1%) have received a formal public education of any kind.

Table 1.6 describes the nomad education for persons six or more years of age by sex, type of instruction received and region. The vast majority, 92 percent of the nomad population (329,865 persons) have received no education or only a beginning of a traditional education. Five percent of the population (19,283 persons) have received a traditional education, 2 percent (8,319 persons) have an organized traditional education, 0.5 percent (1,846 persons) have some general primary education, and 0.02 percent (75 persons) have some secondary or post-secondary education. Regional differences in educational attainment are evident but no clear pattern emerges.

A much lower percentage of women receive education. Only 32% of those who received a traditional family education are women; the percentage with higher levels of education declines continually to 20% for primary school graduates. No nomad woman is reported to have a higher level of education.

Table 1.6

Nomad Population Six or More Years of Age by Sex, Type of Educational Instruction Received and Region

(Data Express Numbers of People)

Region

| Type of Educational Instruction Received | Sex | Rodh Oriental | Hodh Occidental | Assaba | Gorgol | Brakna | Trarza | Adrar | Tagant | Guidimaka | Nord | Total | Percent |
|--|--------|---------------|-----------------|--------|--------|--------|--------|--------|--------|-----------|-------|---------|---------|
| No Education or Partial Trad. Educ. | Males | 32,204 | 21,561 | 12,338 | 5,589 | 16,372 | 30,770 | 7,071 | 13,934 | 3,167 | 3,608 | 146,614 | |
| | Female | 34,906 | 27,802 | 19,274 | 7,050 | 21,513 | 41,404 | 6,135 | 18,411 | 3,705 | 3,051 | 183,251 | |
| | Total | 67,110 | 49,363 | 31,612 | 12,639 | 37,885 | 72,174 | 13,206 | 32,345 | 6,872 | 6,659 | 29,865 | (92%) |
| Traditional Family Educ. only | Males | 737 | 1,807 | 1,420 | 156 | 1,107 | 6,064 | 405 | 1,169 | 30 | 215 | 13,110 | |
| | Female | 15 | 189 | 220 | 4 | 158 | 4,449 | 422 | 223 | - | 493 | 6,173 | |
| | Total | 752 | 1,996 | 1,640 | 160 | 1,265 | 10,513 | 827 | 1,392 | 30 | 708 | 19,283 | (52%) |
| Organized Traditional Education only | Male | 817 | 474 | 1,060 | 44 | 915 | 3,200 | 6 | 491 | 26 | 373 | 7,406 | |
| | Female | 4 | - | 18 | 41 | 316 | 459 | - | 6 | - | 69 | 913 | |
| | Total | 821 | 474 | 1,078 | 85 | 1,231 | 3,659 | 6 | 497 | 26 | 442 | 8,319 | (22%) |
| General Primary Education | Male | 157 | 155 | 190 | 182 | 100 | 296 | 83 | 227 | 1 | 85 | 1,476 | |
| | Female | 22 | 21 | 45 | 114 | 41 | 37 | 59 | 26 | - | 5 | 370 | |
| | Total | 179 | 176 | 235 | 296 | 141 | 333 | 142 | 253 | 1 | 90 | 1,846 | (0.52%) |
| General Secondary and Post Secondary Educ. | Male | 3 | 8 | 2 | 11 | - | 39 | - | 7 | - | 5 | 75 | |
| | Female | - | - | - | - | - | - | - | - | - | - | - | |
| | Total | 3 | 8 | 2 | 11 | - | 39 | - | 7 | - | 5 | 75 | (0.02%) |
| Technical and Professional Education | Male | - | - | - | - | - | - | - | - | - | - | - | |
| | Female | - | - | - | - | - | - | - | - | - | - | - | |
| | Total | - | - | - | - | - | - | - | - | - | - | - | |
| Total | Male | 33,918 | 24,005 | 15,010 | 5,982 | 18,494 | 40,369 | 7,565 | 15,828 | 3,224 | 4,286 | 168,681 | |
| | Female | 34,947 | 28,012 | 19,557 | 7,209 | 22,028 | 46,349 | 6,616 | 18,666 | 3,705 | 3,618 | 190,707 | |
| | Total | 68,865 | 52,017 | 34,567 | 13,191 | 40,522 | 86,718 | 14,181 | 34,494 | 6,929 | 7,904 | 359,388 | (100%) |

Source: 1977 Census of Mauritania: Computers printout table NC 11: these data are summarized without adjustment.

Chapter 2

Educational Levels of the Labor Force

2.1 Literacy

From the analytical point of view it is important to consider both the total manpower stock as well as the part of it which is currently available for work (labor force), because there are among the inactive population those who will eventually enter the labor force.

Among the nomad population, about 40,000 were literate, mostly in Arabic. No information was available about how many of them were in the labor force because of the difficulties encountered in defining the nomad labor force.^{1/}

Of the sedentary labor force of about 300,000, some 69,000 (23%) were literate, while more than 232,000 of those already working or seeking work were illiterate.

Since only 69,000 of the literate population is in the sedentary labor force, another 81,000 must be in the sedentary inactive population. This high figure is understandable when it is realized that in the school year during which the census was taken (1976-1977) there were some 75,000 students enrolled in schools, ranging the primary to the university level. There were actually more of the literate population out of the labor force (most of them in school) than there were in the sedentary labor force itself. This is shown in the diagram below:

^{1/}This matter is discussed in more detail in Volume 4 on the Employment Situation.

Literate Population by Group (1977)
(000's)

| | |
|--|-----|
| Total | 190 |
| Nomads | 40 |
| Sedentary | 150 |
| Sedentary Labor Force | 69 |
| Sedentary Inactive Population | 81 |
| Students in formal education generally presumed to be literate | 75 |

The distribution by occupational group of the 69,000 literate and 232,100 illiterate workers shown in Table 2.1

Table 2.1

Literacy by Occupational Group of the Sedentary
Labor Force 1977
(000)

| <u>Occupational Group</u> | <u>Literate</u> | <u>Illiterate</u> | <u>Total</u> | <u>%Literate</u> |
|---|-----------------|-------------------|--------------|------------------|
| No Occupation | 9,5 | 26,9 | 36,4 | 26 |
| Agricultural Workers | 10,0 | 133,0 | 143,0 | 7 |
| Industrial Workers | 1,6 | 2,0 | 3,6 | 44 |
| Artisan Workers | 2,2 | 10,7 | 12,9 | 17 |
| Administrators and Communication Workers | 6,5 | 0,9 | 7,4 | 88 |
| Construction and Public Work Workers | 4,8 | 12,0 | 16,8 | 29 |
| Commerce (and Transportation) Workers | 16,6 | 20,5 | 37,1 | 45 |
| Professional and Technical Workers | 1,7 | 0,3 | 2,0 | 85 |
| Armed Forces and Security Workers | 9,2 | 6,6 | 15,8 | 58 |
| Service and Social Workers | 7,4 | 18,9 | 26,3 | 28 |
| <hr/> | | | | |
| Total Sedentary Workers | 69,2 | 232,1 | 301,3 | 23 |

Source: Data summarized from census table SA 20 bis.

As shown, the number of literate workers is biggest in commerce. The next is in agriculture, despite the fact that it has by far the smallest percentage of literate workers. "Armed forces and security workers" and those who claimed to have "no occupation" have 10,000 literate workers each. Virtually all of the "no occupation" group are unemployed; they constitute 86.2% of the 42,228 total sedentary unemployed. It is instructive to note that almost 10,000 workers claimed to be literate and without occupation. The smallest groups numerically of literate workers were artisans, professional and technical workers, and industrial workers with about 2,000 each.

The distribution of literacy by percentage shows a more familiar pattern. "Administrators and communication workers" and "professional and technical workers" are of course very high. Artisans showed a low percentage of literacy (17%), and agricultural workers were very low. (7%).

Literacy is useful for all workers, and it is assumed that current literacy and education efforts will continue to upgrade the work force.

There are however two groups of workers which deserve particular attention: agricultural workers and artisans. If individual productivity and production is to be significantly increased in the agricultural sector and the urban nonstructured sector, the manpower skills of the workers in those sectors must be improved. Literacy and numeracy are necessary prerequisites to much of the needed education, both formal and nonformal, which will be necessary for the improvement of these manpower skills.

Table 2.2 compares literacy and illiteracy at the traditional level and that at the formal level, for both the total population and for the sedentary labor force. In the year 1977, the number of literates was somewhat higher at the formal level than at the traditional level for the population (6 years and over): 97,000 vs. 91,000. In the sedentary labor force, there were more traditionally-educated literates than formal literates. It is worth noting that close to two-thirds of the literates were still in school and thus not yet in the labor force.

2.2 By Occupation

The educational attainment of employed and unemployed sedentary workers in 93 occupational groups is presented in Tables 2.3 and 2.4.

They indicate that of the 259,000 employed sedentary workers:

78% (201,634 persons) were not able to read and write:

0.4% (907 persons) while literate, had no education;

12% (30,803 persons) have a traditional Koranic education;

6% (15,055 persons) have completed primary education;

2% (4,911 persons) have completed 1st cycle secondary education;

1% (2,839 persons) have completed some form of technical or professional training.

Table 2.5 shows the distribution of literacy/illiteracy by occupational groups for the employed sedentary population. Illiteracy is high among agriculture, construction, service, and commercial workers. Thus, 132,267 out of 142,124 agricultural workers were illiterate, as were 11,008 out of 15,035 construction workers, 19,758 out of 35,644 workers in commerce and transport, and 18,539 out of

Table 2.2
Comparison of Population Age 6 and Over and
 Sedentary Labor Force by Educational Level (1977)

| Educational Level | Population age 6 and over | | Sedentary Labor Force | |
|---|---------------------------|---------|---------------------------|---------|
| | No. of Persons (000's) | Percent | No. of Persons (000's) | Percent |
| No education or beginner | 864 | 82 | 230 | 76 |
| Traditional family (Koranic) education | 72 | 7 | 30 | 10 |
| Organized traditional education (Mahadras) | 19 | 2 | 8 | 3 |
| Sub-total traditional education | 91 | 9 | 38 | 89 |
| Primary School | 80 | 8 | 20 | 7 |
| Secondary School or superior | 14 | 1 | 9 | 3 |
| Technical and Professional | 3 | 0.3 | 3 | 1 |
| Sub-total formal education | 97 | 9 | 32 | 11 |
| Total Population | 1,052 | 100 | 300 | 100 |

...21...

Table 2.3

Employed Sedentary Population 12 or more Years of Age
by Type of Education and Occupational Group in 1977

(Data Express Numbers of People)

| 10 Census Occupational Groups | Census Code Number | 93 Census Occupational Groups | Level of Education | | | | | | | | | |
|--|---|---|--------------------|--------------|-----------------------|-------------------|-------------------------------|-------------------------------|---------------------------------|-------|--|--|
| | | | Illiterate | No Education | Traditional Education | Primary Education | 1st Cycle Secondary Education | 2nd Cycle Secondary Education | Technical/Professional Training | Total | | |
| Agricultural Workers | 10 | Agricultural Workers in Large Projects | 718 | 2 | 83 | 29 | 8 | 1 | 4 | 845 | | |
| | 11 | Farmers | 58,508 | 97 | 4,165 | 501 | 11 | 1 | 63,283 | | | |
| | 12 | Gardeners | 986 | 2 | 105 | 7 | | | 700 | | | |
| | 13 | Nurserymen | 167 | | 79 | 3 | | | 249 | | | |
| | 14 | Herders | 9,442 | 19 | 2,122 | 77 | 5 | 1 | 11,666 | | | |
| | 15 | Berbers | 10,810 | 4 | 363 | 59 | | 1 | 11,237 | | | |
| | 16 | Charcoal Producers and Lumber Jacks | 687 | | 17 | 5 | 1 | 1 | 711 | | | |
| | 17 | Fishermen | 2,181 | 2 | 80 | 105 | 6 | 1 | 2,375 | | | |
| | 18 | Hunters | 11 | | 2 | | | | 13 | | | |
| 19 | Others in Agriculture | 49,157 | 42 | 1,271 | 563 | 11 | | 51,045 | | | | |
| Industrial Workers | 20 | Industrial Foremen | 20 | 9 | 18 | 43 | 44 | 66 | 31 | 231 | | |
| | 21 | Minors | 86 | 3 | 22 | 16 | 7 | 1 | 135 | | | |
| | 22 | Mineral Processing | 8 | | 1 | 6 | | | 15 | | | |
| | 23 | Food Processing | 6 | | 3 | 1 | 2 | | 12 | | | |
| | 24 | Textile Workers | 1 | | 7 | 3 | | | 4 | | | |
| | 25 | Metal Workers | 280 | 13 | 83 | 223 | 73 | 20 | 695 | | | |
| | 26 | Tool Operators | 26 | 4 | 10 | 35 | 20 | 5 | 98 | | | |
| | 27 | Warehousemen | 32 | | 8 | 61 | 18 | | 119 | | | |
| | 28 | Non-Specialized Industrial Labor | 1,185 | 4 | 225 | 78 | 3 | | 1,495 | | | |
| 29 | Other Industrial Workers | 227 | 30 | 91 | 139 | 71 | 1 | 563 | | | | |
| Artisan Workers | 30 | Tanners | 45 | | 1 | | | | 46 | | | |
| | 31 | Leatherworkers | 2,779 | 3 | 208 | 26 | | | 3,016 | | | |
| | 32 | Weavers | 1,158 | 1 | 89 | 22 | 1 | | 1,271 | | | |
| | 33 | Tailors | 1,209 | 14 | 433 | 191 | 19 | 1 | 1,867 | | | |
| | 34 | Basket Makers | 100 | | 9 | 2 | | | 111 | | | |
| | 35 | Jewelers | 2,186 | 7 | 527 | 95 | 5 | 1 | 2,821 | | | |
| | 36 | Pottery Workers | 225 | | 7 | 4 | | | 236 | | | |
| | 37 | Producers of Household Articles | 50 | | 13 | 2 | 1 | | 66 | | | |
| | 38 | Slaughters, Bakers | 1,439 | 4 | 124 | 90 | 9 | 2 | 1,668 | | | |
| 39 | Other Artisans | 912 | 1 | 158 | 16 | 2 | 1 | 1,090 | | | | |
| Administration and Communication Workers | 40 | Office Managers | 17 | 1 | 33 | 70 | 142 | 75 | 129 | 467 | | |
| | 41 | Administrative Agents | 148 | 13 | 165 | 577 | 349 | 80 | 101 | 1,433 | | |
| | 42 | Secretaries | 21 | 12 | 184 | 960 | 435 | 84 | 180 | 1,876 | | |
| | 43 | Bookkeepers | 13 | 6 | 40 | 238 | 354 | 141 | 180 | 972 | | |
| | 44 | Orderlies | 606 | 11 | 261 | 166 | 7 | | | 1,051 | | |
| | 45 | Receptionists | 3 | | 6 | 48 | 10 | | 1 | 68 | | |
| | 46 | Radio/Telephone Operators | 31 | 1 | 33 | 237 | 52 | 22 | 16 | 302 | | |
| | 47 | Communication Workers | 3 | | 1 | 11 | 6 | 2 | 3 | 26 | | |
| | 48 | Printers | 12 | 2 | 13 | 32 | 48 | 21 | 45 | 173 | | |
| 49 | Other Administrations and Communication Workers | 41 | 4 | 53 | 102 | 116 | 45 | 110 | 471 | | | |
| Construction and Maintenance Workers | 50 | Contractors, Foremen | 98 | 2 | 80 | 114 | 43 | 28 | 29 | 394 | | |
| | 51 | Manual Labor in Construction | 5,897 | 26 | 680 | 195 | 12 | | | 6,810 | | |
| | 52 | Heavy Machinery Operators | 286 | 4 | 122 | 135 | 25 | 7 | 11 | 590 | | |
| | 53 | Painters | 2,491 | 20 | 373 | 302 | 47 | | 7 | 3,240 | | |
| | 54 | Plumbers | 299 | 2 | 52 | 53 | 20 | 9 | 2 | 442 | | |
| | 55 | Electricians | 113 | 4 | 27 | 60 | 6 | 1 | 3 | 214 | | |
| | 56 | Heater/Fans | 173 | 6 | 92 | 279 | 127 | 27 | 26 | 730 | | |
| | 57 | Carpenters | 639 | 9 | 173 | 288 | 37 | 3 | 10 | 1,159 | | |
| | 58 | Construction Apprentices, Equipment Operators | 442 | 2 | 21 | 127 | 10 | | 2 | 606 | | |
| 59 | Other Construction and Public Works Workers | 570 | 9 | 138 | 86 | 26 | 6 | 15 | 850 | | | |

Table 2.3 (continued)

(Data Express Numbers of People)

| 10 Census Occupational Groups | Census Code Number | Level of Education | | | | | | | | Total |
|-------------------------------|--|--------------------|--------------|-----------------------|-------------------|-------------------------------|-------------------------------|---------------------------------|---------|-------|
| | | Illiterate | No Education | Traditional Education | Primary Education | 1st Cycle Secondary Education | 2nd Cycle Secondary Education | Technical/Professional Training | | |
| 93 Census Occupational Groups | | | | | | | | | | |
| 60 | Owners and Directors in Commerce or Transportation | 130 | 3 | 174 | 26 | 14 | 9 | 7 | 363 | |
| 61 | Wholesale Merchants and Transporters | 763 | 4 | 384 | 52 | 7 | 1 | - | 1,211 | |
| 62 | Retail Merchants | 12,083 | 66 | 8,211 | 770 | 114 | 25 | 7 | 21,276 | |
| 63 | Peddlers | 376 | 1 | 166 | 17 | 2 | - | - | 562 | |
| 64 | Salesmen | 1,894 | 11 | 1,238 | 367 | 79 | 15 | 10 | 3,614 | |
| 65 | Sales Agents and Supervisors | - | - | 24 | 73 | 87 | 65 | 27 | 276 | |
| 66 | Insurance and Real Estate Agents | - | - | - | 1 | 5 | 6 | 2 | 14 | |
| 67 | Dockers, Seamen | 605 | 7 | 190 | 98 | 12 | 2 | - | 914 | |
| 68 | Drivers, Mechanics | 3,738 | 82 | 1,200 | 1,643 | 277 | 54 | 90 | 7,084 | |
| 69 | Others in Commerce and Transportation | 169 | 7 | 53 | 55 | 27 | 11 | 8 | 330 | |
| 70 | Architects, Technical Engineers | 11 | - | - | - | - | 245 | 30 | 286 | |
| 71 | High Level Technicians | 3 | - | - | - | - | 116 | 63 | 182 | |
| 72 | Chemists, Geologists | 3 | - | - | - | - | 3 | 9 | 42 | |
| 73 | Biologists, Agronomists | - | - | - | - | - | 38 | 11 | 49 | |
| 74 | Economists, Accountants | - | - | - | - | - | 224 | 34 | 258 | |
| 75 | Judges, Lawyers | 1 | - | 35 | 1 | - | 53 | 9 | 99 | |
| 76 | Artists, Writers | 278 | 1 | 63 | 42 | 35 | 69 | 16 | 504 | |
| 77 | Sociologists, Anthropologists | 2 | 2 | 2 | 5 | 8 | 21 | 3 | 43 | |
| 78 | Others in Government Administration | 7 | 2 | 52 | 27 | 26 | 305 | 53 | 472 | |
| 79 | Other Professional and Technical Workers | 1 | - | 4 | 4 | 2 | 10 | 4 | 25 | |
| 80 | Armed Forces Officers | 3 | - | 5 | 24 | 40 | 69 | 54 | 195 | |
| 81 | Armed Forces Staff | 1 | 1 | 9 | 17 | 27 | 69 | 43 | 167 | |
| 82 | Soldiers, Policemen | 4,008 | 103 | 1,657 | 2,943 | 747 | 100 | 330 | 9,888 | |
| 83 | Guards, Militia | 2,274 | 96 | 1,021 | 612 | 55 | 3 | 8 | 4,069 | |
| 84 | Customs Officials | 55 | 2 | 75 | 157 | 81 | 5 | 26 | 401 | |
| 85 | Prison Workers, Detectives | 129 | 4 | 129 | 233 | 101 | 5 | 37 | 638 | |
| 86 | Firemen, Environmental Protection Officers | 36 | - | 21 | 37 | 17 | 4 | 13 | 128 | |
| 87 | Clerks | 53 | 12 | 17 | 6 | 4 | - | - | 82 | |
| 88 | Armed Forces Technicians | 5 | - | 6 | 28 | 30 | 23 | 20 | 112 | |
| 89 | Others in Armed Forces | 3 | - | - | 1 | - | 1 | - | 5 | |
| 90 | Doctors | 7 | 1 | - | 1 | 2 | 73 | 4 | 88 | |
| 91 | Nurses | 16 | 1 | 15 | 115 | 119 | 29 | 166 | 461 | |
| 92 | Mid-Level Health Workers | 253 | 13 | 112 | 320 | 31 | 2 | 22 | 753 | |
| 93 | Secondary School Teachers | 2 | 1 | 15 | 3 | 20 | 452 | 53 | 546 | |
| 94 | Primary School Teachers | 20 | 6 | 447 | 247 | 600 | 189 | 714 | 2,223 | |
| 95 | Other School Personnel | 67 | 4 | 85 | 40 | 35 | 38 | 16 | 285 | |
| 96 | Houseboys | 15,769 | 53 | 821 | 322 | 49 | 6 | 4 | 17,024 | |
| 97 | Workers in Personal Services | 1,500 | 16 | 183 | 177 | 57 | 14 | 6 | 1,953 | |
| 98 | Clergy | 517 | 4 | 1,311 | 29 | 7 | 5 | - | 1,873 | |
| 99 | Other Service Workers | 388 | 3 | 203 | 10 | 1 | 3 | 1 | 609 | |
| 01 | Investors | 4 | - | 1 | 2 | - | 1 | - | 8 | |
| 02 | Apprentices | 316 | 1 | 18 | 68 | 4 | - | - | 407 | |
| 03 | Retirees and NEC ^{2/} | - | - | - | - | - | - | - | - | |
| 09-99 | Total Sedentary | 201,634 | 907 | 30,803 | 15,055 | 4,911 | 3,017 | 2,839 | 259,166 | |

1/ No explanation has been found for this group; it may include illegible responses and certain nonresponses.

2/ Not elsewhere classified includes those who reported no occupation (mainly inexperienced workers) and those whose responses were illegibly recorded on the survey instruments.

Table 2.4

Unemployed Sedentary Population 12 or more Years of Age by the Type of Education and Occupational Group 1977

(Data Express Numbers of People)

| 10 Census Occupational Groups | Census Code Number | 93 Census Occupational Groups | Level of Education | | | | | | | | Total |
|--|---|---|--------------------|--------------|-----------------------|-------------------|-------------------------------|-------------------------------|---------------------------------|-----|-------|
| | | | Illiterate | No Education | Traditional Education | Primary Education | 1st Cycle Secondary Education | 2nd Cycle Secondary Education | Technical/Professional Training | | |
| Agricultural Workers | 10 | Agricultural Workers in Large Projects | - | - | - | - | - | - | - | - | - |
| | 11 | Farmers | - | - | - | - | - | - | - | - | - |
| | 12 | Gardeners | - | - | - | - | - | - | - | - | - |
| | 13 | Nurserymen | - | - | - | - | - | - | - | - | - |
| | 14 | Herders | - | - | - | - | - | - | - | - | - |
| | 15 | Bergers | 296 | - | 80 | 5 | - | - | - | - | 381 |
| | 16 | Charcoal Producers and Lumber Jacks | 8 | - | 1 | 2 | - | - | - | - | 10 |
| | 17 | Fishermen | 28 | - | 6 | 4 | 1 | - | - | - | 39 |
| | 18 | Hunters | - | - | 1 | - | - | - | - | - | 1 |
| 19 | Others in Agriculture | 475 | 3 | 45 | 16 | 4 | - | - | - | 543 | |
| Industrial Workers | 20 | Industrial Foremen | 1 | - | - | - | - | - | - | 1 | 2 |
| | 21 | Miners | 2 | - | 1 | - | - | - | - | - | 3 |
| | 22 | Mineral Processing | - | - | - | - | - | - | - | 1 | 1 |
| | 23 | Food Processing | - | - | - | - | - | - | - | - | - |
| | 24 | Textile Workers | - | - | - | 1 | - | - | - | - | 1 |
| | 25 | Metal Workers | 39 | - | 4 | 17 | 5 | - | - | 1 | 66 |
| | 26 | Tool Operators | 1 | - | - | - | - | - | - | - | 2 |
| | 27 | Warehousemen | - | - | - | 1 | - | - | - | - | 1 |
| | 28 | Non-Specialized Industrial Labor | 124 | - | 42 | 14 | 1 | - | - | - | 181 |
| 29 | Other Industrial Workers | 12 | - | 2 | 7 | 1 | - | - | - | 22 | |
| Artisan Workers | 30 | Tanners | 2 | - | - | - | - | - | - | - | 2 |
| | 31 | Leatherworkers | 18 | - | 1 | 2 | - | - | - | - | 21 |
| | 32 | Weavers | 474 | 1 | 31 | 6 | - | - | - | - | 512 |
| | 33 | Tailors | 79 | - | 21 | 19 | 2 | - | 1 | - | 122 |
| | 34 | Basket Makers | 1 | - | - | - | - | - | - | - | 1 |
| | 35 | Jewelers | 22 | - | 4 | 3 | - | - | - | - | 29 |
| | 36 | Pottery Workers | 1 | - | 1 | - | - | - | - | - | 2 |
| | 37 | Producers of Household Articles | - | - | 2 | - | - | - | - | - | 2 |
| | 38 | Slaughters, Bakers | 50 | - | 3 | 3 | - | - | - | - | 56 |
| 39 | Other Artisans | 9 | - | 3 | 5 | - | - | - | - | 17 | |
| Administration and Communication Workers | 40 | Office Managers | - | - | - | 3 | 1 | 1 | - | - | 5 |
| | 41 | Administrative Agents | 3 | - | 7 | 64 | 19 | 3 | 1 | - | 97 |
| | 42 | Secretaries | 17 | 2 | 53 | 210 | 44 | 5 | 9 | - | 340 |
| | 43 | Bookkeepers | 2 | - | 1 | 16 | 21 | 18 | 7 | - | 65 |
| | 44 | Orderlies | 15 | - | 7 | - | - | - | 1 | - | 23 |
| | 45 | Receptionists | - | - | - | 7 | 3 | - | - | - | 10 |
| | 46 | Radio/Telephone Operators | - | - | 1 | 7 | 2 | - | - | - | 10 |
| | 47 | Communication Workers | - | - | - | 2 | 1 | 1 | - | - | 4 |
| | 48 | Printers | - | - | 1 | 2 | 2 | 1 | - | - | 6 |
| 49 | Other Administrations and Communication Workers | 3 | - | 4 | 3 | 3 | 2 | - | - | 15 | |
| Construction and Public Works Workers | 50 | Contractors, Foremen | 1 | - | 7 | 1 | - | 1 | - | - | 10 |
| | 51 | Manual Labor in Construction | 744 | 6 | 119 | 39 | 2 | - | - | - | 910 |
| | 52 | Heavy Machinery Operators | 8 | - | 5 | 3 | 1 | - | - | - | 17 |
| | 53 | Masons | 158 | 1 | 35 | 18 | 1 | - | - | - | 213 |
| | 54 | Painters | 45 | 1 | 5 | 4 | 1 | - | - | - | 56 |
| | 55 | Plumbers | 9 | - | 2 | 5 | 2 | - | 1 | - | 19 |
| | 56 | Electricians | 17 | - | 2 | 25 | 11 | 2 | 6 | - | 63 |
| | 57 | Carpenters | 54 | 1 | 12 | 22 | 2 | 1 | - | - | 92 |
| | 58 | Construction Apprentices, Equipment Operators | 13 | - | 6 | 1 | - | - | - | - | 20 |
| 59 | Other Construction and Public Works Workers | 33 | - | 16 | 4 | 2 | - | 1 | - | 56 | |

Table 2.4 (continued)

(Data Express Numbers of People)

| 10 Census Occupational Groups | Census Code Number | Level of Education | | | | | | | | Total |
|-------------------------------|--|--------------------|--------------|-----------------------|-------------------|---------------------|---------------------|---------------------------------|-----------|-------|
| | | Illiterate | No Education | Traditional Education | Primary Education | 1st Cycle Secondary | 2nd Cycle Secondary | Technical/Professional Training | | |
| 60 | Owners and Directors in Commerce or Transportation | - | - | - | - | - | - | - | - | - |
| 61 | Wholesale Merchants and Transporters | - | - | - | - | - | - | - | - | - |
| 62 | Retail Merchants | - | - | - | - | - | - | - | - | - |
| 63 | Peddlers | - | - | - | - | - | - | - | - | - |
| 64 | Salesmen | - | - | - | - | - | - | - | - | - |
| 65 | Sales Agents and Supervisors | 274 | - | 278 | 51 | 14 | 1 | 1 | 618 | |
| 66 | Insurance and Real Estate Agents | - | - | 1 | 6 | 4 | 3 | 1 | 15 | |
| 67 | Dockers, Seamen | 54 | - | 25 | 16 | 2 | 1 | - | 97 | |
| 68 | Drivers, Mechanics | 420 | 5 | 148 | 160 | 23 | 2 | 1 | 759 | |
| 69 | Others in Commerce and Transportation | 7 | 1 | - | 4 | 1 | 2 | 1 | 16 | |
| 70 | Architects, Technical Engineers | - | - | - | - | - | 1 | - | 1 | |
| 71 | High Level Technicians | 1 | - | - | - | - | 3 | - | 4 | |
| 72 | Chemists, Geologists | - | - | - | - | - | - | - | - | |
| 73 | Biologists, Agronomists | - | - | - | - | - | 1 | - | 1 | |
| 74 | Economists, Accountants | 1 | - | - | - | - | 8 | - | 9 | |
| 75 | Judges, Lawyers | - | - | - | - | - | 4 | - | 4 | |
| 76 | Artists, Writers | 1 | - | 4 | 2 | 1 | 4 | - | 12 | |
| 77 | Sociologists, Anthropologists | - | - | - | - | 1 | - | - | 1 | |
| 78 | Others in Government Administration | - | - | 1 | - | - | 3 | 1 | 5 | |
| 79 | Other Professional and Technical Workers | - | - | - | - | 1 | 1 | - | 2 | |
| 80 | Armed Forces Officers | - | - | - | - | - | 1 | - | 1 | |
| 81 | Armed Forces Staff | - | - | - | - | - | 1 | 1 | 2 | |
| 82 | Soldiers, Policemen | 19 | 1 | 5 | 9 | 1 | 1 | - | 36 | |
| 83 | Guards, Militia | 10 | - | 7 | 4 | - | - | - | 21 | |
| 84 | Customs Officials | - | - | 2 | 3 | - | 1 | 1 | 7 | |
| 85 | Prison Workers, Detectives | 3 | - | 1 | 3 | 3 | - | - | 10 | |
| 86 | Firemen, Environmental Protection Officers | - | - | - | - | 1 | - | - | 1 | |
| 87 | Clerks | 1 | - | 1 | 1 | - | - | - | 3 | |
| 88 | Armed Forces Technicians | 2 | 1 | - | 3 | 3 | - | - | 9 | |
| 89 | Others in Armed Forces | 1 | - | - | - | - | - | - | - | |
| 90 | Doctors | - | - | - | 1 | - | 2 | - | 3 | |
| 91 | Nurses | 1 | - | 1 | 6 | 7 | 2 | 3 | 20 | |
| 92 | Mid-level Health Workers | 22 | - | 4 | 20 | - | - | 1 | 47 | |
| 93 | Secondary School Teachers | - | - | - | - | - | 14 | - | 15 | |
| 94 | Primary School Teachers | 1 | - | 9 | 5 | 11 | 4 | 1 | 32 | |
| 95 | Other School Personnel | 1 | - | - | 1 | - | 1 | - | 3 | |
| 96 | Houseboys | 327 | 1 | 37 | 14 | - | 1 | - | 380 | |
| 97 | Workers in Personal Services | 28 | - | 5 | 10 | - | - | 1 | 44 | |
| 98 | Clergy | 7 | - | 24 | - | - | - | - | 31 | |
| 99 | Other Service Workers | - | - | - | 1 | - | - | - | 1 | |
| (01) | Investors | - | - | - | - | - | - | - | - | |
| (02) | Apprentices, | 24 | 1 | 3 | 5 | - | - | - | 33 | |
| (03) | Retirees and NEC ^{2/} | 26,555 | 67 | 5,494 | 3,045 | 593 | 138 | - | 43,35,935 | |
| 01-99 | Total Sedentary | 30,524 | 92 | 6,581 | 3,910 | 799 | 234 | 88 | 42,228 | |

1/ No explanation has been found for this group; it may include illegible responses and certain nonresponses.

2/ Not elsewhere classified includes those who reported no occupation (mainly inexperienced workers) and those whose responses were illegibly recorded on the survey instruments.

Table 2.5

Sedentary Population Employed in 1977 By Educational
Background and Occupational Group

(Data Express Numbers of People)

| Occupational Groups | Type of Education Completed | | | | | | | Total |
|--|-----------------------------|-----------------|--------------------------|----------------------|-------------------------------------|-------------------------------------|---------------------------------------|---------|
| | Illiterate | No Education | Traditional Education | Primary Education | 1st Cycle Secondary Education | 2nd Cycle Secondary Education | Technical Professional Training | |
| Agriculture | | | | | | | | |
| Total | 132,267 | 168 | 8,287 | 1,349 | 42 | 3 | 8 | 142,124 |
| % by Occupation | (93%) | (0.1%) | (6%) | (1%) | (0.03%) | (0%) | (0%) | (100%) |
| % by Education | (66%) | (1%) | (27%) | (9%) | (1%) | (0.1%) | (0.3%) | (34%) |
| Industry | | | | | | | | |
| Total | 1,871 | 63 | 461 | 605 | 238 | 71 | 58 | 3,367 |
| % by Occupation | (56%) | (0.02%) | (14%) | (18%) | (7%) | (2%) | (2%) | (100%) |
| % by Education | (1%) | (7%) | (2%) | (4%) | (5%) | (2%) | (2%) | (1%) |
| Artisan | | | | | | | | |
| Total | 10,103 | 30 | 1,569 | 448 | 37 | 2 | 3 | 12,192 |
| % by Occupation | (83%) | (0.2%) | (13%) | (4%) | (0.3%) | (0.02%) | (0.02%) | (100%) |
| % by Education | (5%) | (3%) | (3%) | (3%) | (1%) | (0.07%) | (0.1%) | (5%) |
| Administration & Communication | | | | | | | | |
| Total | 895 | 50 | 789 | 2,441 | 1,519 | 470 | 765 | 6,929 |
| % by Occupation | (13%) | (1%) | (11%) | (35%) | (22%) | (7%) | (11%) | (100%) |
| % by Education | (0.4%) | (6%) | (3%) | (16%) | (31%) | (16%) | (27%) | (3%) |
| Construction & Public Works | | | | | | | | |
| Total | 11,008 | 89 | 1,760 | 1,639 | 353 | 81 | 105 | 15,035 |
| % by Occupation | (73%) | (1%) | (12%) | (11%) | (2%) | (1%) | (1%) | (100%) |
| % by Education | (5%) | (10%) | (6%) | (11%) | (7%) | (3%) | (4%) | (6%) |
| Commerce & Transport | | | | | | | | |
| Total | 19,758 | 181 | 11,640 | 3,102 | 624 | 188 | 151 | 35,644 |
| % by Occupation | (55%) | (1%) | (33%) | (9%) | (2%) | (1%) | (0.4%) | (100%) |
| % by Education | (10%) | (20%) | (38%) | (21%) | (13%) | (6%) | (5%) | (14%) |
| Professional & Technical | | | | | | | | |
| Total | 306 | 5 | 156 | 79 | 71 | 1,111 | 232 | 1,960 |
| % by Occupation | (16%) | (0.3%) | (8%) | (4%) | (4%) | (57%) | (12%) | (100%) |
| % by Education | (0.2%) | (1%) | (0.5%) | (0.5%) | (1%) | (37%) | (8%) | (1%) |
| Armed/Security Forces | | | | | | | | |
| Total | 5,567 | 218 | 2,930 | 4,058 | 1,102 | 270 | 531 | 15,685 |
| % by Occupation | (42%) | (1%) | (19%) | (26%) | (7%) | (2%) | (3%) | (100%) |
| % by Education | (3%) | (24%) | (10%) | (27%) | (22%) | (9%) | (19%) | (6%) |
| Service/Social Workers | | | | | | | | |
| Total | 18,539 | 102 | 3,192 | 1,264 | 921 | 811 | 986 | 25,815 |
| % by Occupation | (72%) | (0.4%) | (12%) | (5%) | (4%) | (3%) | (4%) | (100%) |
| % by Education | (9%) | (11%) | (10%) | (8%) | (19%) | (27%) | (35%) | (10%) |
| Apprentices, Retirees and N.E.C. 1) | | | | | | | | |
| Total | 320 | 1 | 19 | 70 | 4 | 1 | 0 | 415 |
| % by Occupation | (72%) | (0.2%) | (5%) | (17%) | (1%) | (0.2%) | 0 | (100%) |
| % by Education | (0.2%) | (0.1%) | (0.1%) | (0.5%) | (0.1%) | (0.03%) | 0 | (0.2%) |
| Total Sedentary | | | | | | | | |
| Total | 201,634 | 907 | 30,803 | 15,055 | 4,911 | 3,017 | 2,839 | 259,166 |
| % by Occupation | (78%) | (0.4%) | (12%) | (6%) | (2%) | (1%) | (1%) | (100%) |
| % by Education | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) |

1) Not Elsewhere Classified includes those who reported no occupation (mainly inexperienced workers) and those whose responses were illegibly recorded on the survey instruments.

Source: 1977 Census of Mauritania, Computer printout table SA 20 BIS. These data are summarized without adjustment.

25,815 service workers. In industry, 1,835 out of 3,367 workers were illiterate; in administration and communication 895 out of 6,839; armed forces and security 6,609 out of 15,813, and professional and technical 306 out of 1,906.

Table 2.6 describes the level of educational attainment and last occupation worked for the 42,228 unemployed members of the sedentary population. Higher percentages of unemployed workers than employed workers have a traditional or primary level of education: 16% of unemployed workers have a traditional education and 9% of them have a primary educational education; but for employed workers the corresponding figures are 12% and 6%.

About 2% of both employed and unemployed workers have completed the 1st cycle of secondary education but only about 0.6% and 0.2% of unemployed workers have completed the 2nd cycle of secondary education and of Professional and Technical training, respectively. Only 1% of employed workers completed each of these two levels of education.

The relatively high concentration of unemployed workers among Apprentices, Retirees, and Inexperienced Workers suggest, firstly, most unemployed workers have probably not had jobs outside their traditional rural activities, and so they have not had the opportunity to gain the skills needed to make them more than marginally useful to employers; secondly, labor turnover is fairly low in the modern sector, once the workers have gained the required skills. Those workers who fail to acquire necessary skills quickly, however, are laid off and join the ranks of inexperienced workers. Employer demand for labor is relatively low in the modern sector regardless of educational attainment. This hypothesis is suggested by the slight buldge in employed graduates from traditional and primary levels of education. Unemployed workers as a whole have higher levels of

Sedentary Population Unemployed in 1977 By Educational Background and Occupational Group

(Data Express Numbers of People)

| Occupational Groups | Type of Education Completed | | | | | | | Total |
|--|-----------------------------|--------------|-----------------------|-------------------|-------------------------------|-------------------------------|---------------------------------|--------|
| | Illiterate | No Education | Traditional Education | Primary Education | 1st Cycle Secondary Education | 2nd Cycle Secondary Education | Technical Professional Training | |
| Agriculture | | | | | | | | |
| Total | 807 | 3 | 133 | 26 | 5 | 0 | 0 | 974 |
| % by Occupation | (83%) | (0.3%) | (14%) | (3%) | (0.5%) | 0 | 0 | (100%) |
| % by Education | (3%) | (3%) | (2%) | (1%) | (1%) | 0 | 0 | (2%) |
| Industry | | | | | | | | |
| Total | 179 | 0 | 49 | 40 | 8 | 0 | 3 | 279 |
| % by Occupation | (64%) | 0 | (18%) | (14%) | (3%) | 0 | (1%) | (100%) |
| % by Education | (1%) | 0 | (1%) | (1%) | (1%) | 0 | (3%) | (1%) |
| Artisan | | | | | | | | |
| Total | 656 | 1 | 66 | 38 | 2 | 0 | 1 | 764 |
| % by Occupation | (86%) | (0.1%) | (9%) | (5%) | (0.3%) | 0 | (0.1%) | (100%) |
| % by Education | (2%) | (1%) | (1%) | (1%) | (0.2%) | 0 | (1%) | (2%) |
| Administration & Communication | | | | | | | | |
| Total | 40 | 2 | 74 | 314 | 96 | 31 | 18 | 575 |
| % by Occupation | (7%) | (0.3%) | (13%) | (55%) | (17%) | (5%) | (3%) | (100%) |
| % by Education | (0.1%) | (2%) | (1%) | (8%) | (12%) | (13%) | (20%) | (1%) |
| Construction & Public Works | | | | | | | | |
| Total | 1,082 | 9 | 209 | 122 | 22 | 4 | 8 | 1,456 |
| % by Occupation | (74%) | (1%) | (14%) | (8%) | (1%) | (0.3%) | (0.5%) | (100%) |
| % by Education | (4%) | (10%) | (3%) | (3%) | (3%) | (2%) | (10%) | (3%) |
| Commerce & Transport | | | | | | | | |
| Total | 755 | 6 | 452 | 237 | 44 | 8 | 4 | 1,506 |
| % by Occupation | (50%) | (0.4%) | (30%) | (16%) | (3%) | (0.5%) | (0.3%) | (100%) |
| % by Education | (2%) | (7%) | (7%) | (8%) | (6%) | (3%) | (5%) | (4%) |
| Professional & Technical | | | | | | | | |
| Total | 3 | 0 | 5 | 2 | 3 | 25 | 1 | 39 |
| % by Occupation | (8%) | 0 | (13%) | (5%) | (8%) | (66%) | (3%) | (100%) |
| % by Education | (0.01%) | 0 | (0.1%) | (0.1%) | (0.4%) | (11%) | (1%) | (0.1%) |
| Armed/Security Forces | | | | | | | | |
| Total | 36 | 2 | 16 | 23 | 8 | 4 | 2 | 91 |
| % by Occupation | (40%) | (2%) | (18%) | (25%) | (9%) | (4%) | (2%) | (100%) |
| % by Education | (0.1%) | (2%) | (0.2%) | (1%) | (1%) | (2%) | (2%) | (0.2%) |
| Service/Social Workers | | | | | | | | |
| Total | 387 | 1 | 80 | 58 | 18 | 24 | 8 | 576 |
| % by Occupation | (67%) | (0.2%) | (14%) | (1%) | (3%) | (4%) | (1%) | (100%) |
| % by Education | (1%) | (1%) | (1%) | (10%) | (2%) | (10%) | (9%) | (1%) |
| Apprentices, Retirees and N.E.C. 1) | | | | | | | | |
| Total | 26,579 | 68 | 5,497 | 3,050 | 593 | 138 | 43 | 35,968 |
| % by Occupation | (74%) | (0.2%) | (15%) | (8%) | (2%) | (0.4%) | (0.1%) | (100%) |
| % by Education | (87%) | (74%) | (84%) | (78%) | (74%) | (59%) | (49%) | (85%) |
| Total Sedentary | | | | | | | | |
| Total | 30,524 | 92 | 6,581 | 3,910 | 799 | 234 | 88 | 42,228 |
| % by Occupation | (72%) | (0.2%) | (16%) | (9%) | (2%) | (0.6%) | (0.2%) | (100%) |
| % by Education | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) | (100%) |

1) Not Elsewhere Classified includes those who reported no occupation (mainly inexperienced workers) and those whose responses were illegibly recorded on the survey instruments.

Source: 1977 Census of Mauritania, Computer Printout table SA 20 BIS. These data are summarized without adjustment.

literacy and higher completion rates for traditional and primary education than employed workers. They also have the same completion rates in the 1st cycle of secondary education as employed workers. This suggests that jobs in the modern sector are difficult to obtain regardless of workers level of educational attainment. It is also possible that some expressed unemployment among the "apprentices and inexperienced" group reflects the implicit desire of workers to seek jobs in the modern sector (even though they have had no work experience there). More research is needed as to whether education itself carries with it a form of indoctrination which induces young workers to forego rural employment opportunities and search for difficult-to-find jobs in the modern sector.

2.3 By Economic Sector

According to the census figures of 1977, 76.6% of the nation's sedentary population had "no education" (formal or non-formal). Of the remainder, only 6.7% had a primary school education, 3.0% a secondary school education, and only 1% a technical or professional education. The remaining 12.7% had a traditional family or Islamic education.

This condition was more pronounced in agriculture (89.6%) in household services (84.1%) in artisanal manufacturing (79.2%) and construction (77.2%). The figures are higher in the rural areas and somewhat lower in the urban areas.

Going to the other extreme, that part of the sedentary labor force with the highest educational qualifications is found working for the Government and Financial Institutions. Thus, this sector

occupies 79.4% of those with technical and professional education (2,250 out of 2,830), 55.4% of those who have completed secondary school (5,000 out of 9,040), and 36.7% of those with a primary school education (7,410 out of 20,190). If the para-statal enterprises in water, electricity, and mining are included (as a group), then the Government's absorption of the relatively highly qualified personnel rises further: by another 240 (8.5%) at the technical-professional level, 1,420 (15.8%) of the secondary school graduates, and 1,810 (9.0%) of primary school graduates.

Other features in the rural areas are worth noting. The commercial sector has the highest percentages of workers with a traditional education: 34.9% (25.0% traditional family and 9.9% traditional Islamic), while it is also the sector, after Government and Finance, with the smallest percentage of workers with no education, 57.8%.

Certain differences between the rural and urban areas stand out. All of the sectors have somewhat lower rates of no education in the urban areas, and, conversely, somewhat higher rates for primary and secondary education. In some cases, the differences are small as in the case of household services sector, and in others much larger, as in the case of the para-statal enterprises and the construction sector. Also, those with some education (traditional family, traditional Islamic, primary school) represent 15.4% in the rural areas and 26.7% in the urban areas.

The differences between the educational levels of the 259,166 employed and the 42,228 unemployed are relatively small in all sectors. Thus, it is not clear that any conclusions can be drawn from the fact that illiteracy was 93.0% among employed agricultural workers (132,267

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out of 142,124) and 33.0% among unemployed workers (807 out of 974), and 33.0% among employed artisans (10,103 out of 12,192) and 86.0% among the unemployed (656 out of 764), etc. Perhaps the most interesting finding here is that 85.0% of the total unemployed (35,968 out of 42,228) were apprentices, indicating that the young and inexperienced were having difficulties in finding employment. The level of education is approximately the same among the employed and unemployed of this group. (Tables 2.7, 2.8, and 2.9).

Table 2.7

Sedentary Labor Force by Economic Sector and Educational Level 1977

| Level of Education: | Economic Sector | | | | | | | | | | Total | |
|-----------------------|-----------------|------------|--------------------------|--------|------------|-------------------------|----------------------------|---------------------|------------------------------------|-----------------------|---------|---------------|
| | Agriculture | Extractive | Modern Water, and Elect. | Mfg. | Craft Mfg. | Const. and Public Works | Commerce, Rest. and Hotels | Trans. and Communi- | Gov't. and Financial: and Services | Household: and Busi.: | | Not Elsewhere |
| No Education- | | | | | | | | | | | | |
| Number | 128,220 | 3,690 | 980 | 10,670 | 8,270 | 16,870 | 3,300 | 12,390 | 19,320 | 26,980 | 230,690 | |
| % No Education | 55.6 | 1.6 | 0.4 | 4.6 | 3.6 | 7.3 | 1.4 | 5.4 | 8.4 | 11.7 | 100.0 | |
| % of Sector | 89.6 | 47.6 | 66.2 | 79.2 | 77.2 | 57.8 | 63.2 | 41.4 | 84.1 | 72.6 | 76.6 | |
| Traditional Family | 10,490 | 430 | 120 | 1,850 | 740 | 7,300 | 410 | 2,050 | 1,750 | 4,770 | 29,910 | |
| % Trad. Family | 35.1 | 1.4 | 0.4 | 6.2 | 24.4 | 24.4 | 1.4 | 6.9 | 5.9 | 15.9 | 100.0 | |
| % Sector | 7.3 | 5.5 | 8.1 | 13.7 | 7.0 | 25.0 | 7.9 | 6.8 | 7.6 | 12.8 | 9.9 | |
| Traditional Islamic | 2,470 | 160 | 50 | 140 | 140 | 2,880 | 30 | 830 | 540 | 1,050 | 8,290 | |
| % Trad. Islamic | 29.8 | 1.9 | 0.6 | 1.7 | 1.7 | 34.7 | 0.4 | 10.0 | 6.5 | 12.7 | 100.0 | |
| % Sector | 1.8 | 2.1 | 3.4 | 1.1 | 1.3 | 9.9 | 0.6 | 2.8 | 2.3 | 2.8 | 2.8 | |
| Primary Education | 1,780 | 1,810 | 180 | 680 | 1,130 | 1,520 | 1,030 | 7,410 | 1,150 | 3,500 | 20,190 | |
| % Primary | 8.8 | 9.0 | 0.9 | 3.4 | 5.6 | 7.5 | 5.1 | 36.7 | 5.7 | 17.3 | 100.0 | |
| % Sector | 1.3 | 23.4 | 12.2 | 5.0 | 10.5 | 5.2 | 19.7 | 24.8 | 5.0 | 9.4 | 6.7 | |
| Secondary Education | 80 | 1,420 | 140 | 130 | 270 | 560 | 400 | 5,000 | 200 | 840 | 9,040 | |
| % Secondary | 0.9 | 15.8 | 1.5 | 1.4 | 3.0 | 6.2 | 4.5 | 55.4 | 2.2 | 9.4 | 100.0 | |
| % Sector | 0 | 18.3 | 9.5 | 1.0 | 2.5 | 1.9 | 7.7 | 16.7 | 0.9 | 2.3 | 3.0 | |
| Tech./Profess. Train. | 0 | 240 | 10 | 0 | 160 | 70 | 50 | 2,250 | 20 | 30 | 2,830 | |
| % Tech./Profess. | 0 | 8.5 | 0.4 | 0 | 5.6 | 2.5 | 1.8 | 79.4 | 0.8 | 1.0 | 100.0 | |
| % Sector | 0 | 3.1 | 0.6 | 0 | 1.5 | 0.2 | 0.9 | 7.5 | 0.1 | 0.1 | 1.0 | |
| Total | 143,040 | 7,750 | 1,480 | 13,470 | 10,710 | 29,200 | 5,220 | 29,930 | 22,980 | 37,170 | 300,950 | |
| % Sedentary L.F. | 47.5 | 2.3 | 0.5 | 4.5 | 3.5 | 9.7 | 1.8 | 9.9 | 7.6 | 12.5 | 100.0 | |
| % Sector | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | |

Source: -Population Census 1977

Rounded figures.

Table 2.8
Urban Sedentary Labor Force by Economic Sector and Educational Level 1977

| Level of Education Completed | Economic Sector | | | | | | | | | | Total |
|------------------------------|-----------------|------------|----------------------|---------------------|--------------|------------------------|--------------|----------------|--------------------|---------------------------|---------|
| | Agriculture | Extractive | Modern Manufacturing | Craft Manufacturing | Construction | Commerce, Public Works | Rest, Hotels | Transportation | Gov't. & Financial | Household & Bus. Services | |
| No Education | 6,400 | 3,160 | 820 | 4,890 | 6,670 | 10,000 | 2,850 | 7,130 | 10,440 | 14,940 | 67,300 |
| % No Education | 9.5 | 4.7 | 1.2 | 7.3 | 9.9 | 14.9 | 4.2 | 10.5 | 15.5 | 22.2 | 100.0 |
| % of Sector | 81.2 | 45.3 | 63.5 | 76.1 | 74.8 | 61.5 | 61.3 | 36.9 | 81.3 | 70.0 | 63.6 |
| Traditional Family | 910 | 360 | 110 | 730 | 650 | 3,660 | 370 | 1,160 | 980 | 2,310 | 11,240 |
| % Trad. Family | 3.1 | 3.2 | 1.0 | 6.5 | 5.8 | 32.5 | 3.3 | 10.3 | 8.7 | 20.6 | 100.0 |
| % Sector | 11.5 | 5.2 | 8.5 | 11.4 | 7.3 | 22.6 | 8.1 | 6.0 | 7.5 | 10.8 | 10.6 |
| Trad. Islamic-No. | 190 | 110 | 50 | 100 | 120 | 920 | 30 | 340 | 190 | 490 | 2,540 |
| % Trad. Islamic | 7.5 | 4.3 | 2.0 | 3.9 | 4.7 | 36.2 | 1.2 | 13.4 | 7.5 | 19.3 | 100.0 |
| % Sector | 2.4 | 1.6 | 3.9 | 1.5 | 1.3 | 5.6 | 0.6 | 1.8 | 1.4 | 2.3 | 2.4 |
| Prim. Educ.-No. | 340 | 1,710 | 170 | 580 | 1,060 | 1,110 | 960 | 4,800 | 1,060 | 2,760 | 14,550 |
| % Primary | 2.3 | 11.8 | 1.2 | 4.0 | 7.3 | 7.6 | 6.5 | 33.0 | 7.3 | 19.0 | 100.0 |
| % Sector | 4.3 | 24.5 | 13.2 | 9.0 | 11.9 | 6.8 | 20.5 | 24.9 | 8.3 | 12.9 | 13.7 |
| Second./Higher-No. | 50 | 1,390 | 130 | 130 | 270 | 510 | 390 | 4,170 | 190 | 790 | 8,020 |
| % Second./Higher | 0.6 | 17.2 | 1.6 | 1.6 | 3.4 | 6.4 | 4.9 | 52.0 | 2.4 | 9.9 | 100.0 |
| % of Sector | 0.6 | 19.9 | 10.0 | 2.0 | 3.0 | 3.1 | 8.4 | 21.6 | 1.4 | 3.7 | 7.5 |
| Tech./Profess.-No. | 0 | 240 | 10 | 0 | 150 | 70 | 50 | 1,710 | 20 | 30 | 2,280 |
| % Tech./Profess. | 0 | 10.5 | 0.4 | 0 | 6.6 | 3.1 | 2.2 | 75.0 | 0.9 | 1.3 | 100.0 |
| % Sector | 0 | 3.5 | 0.8 | 0 | 1.7 | 0.4 | 1.1 | 8.8 | 0.1 | 0.3 | 2.2 |
| Total | 7,390 | 6,970 | 1,290 | 6,430 | 8,920 | 16,270 | 4,650 | 19,310 | 12,880 | 21,320 | 105,930 |
| % of Urban Educ. | 7.4 | 6.6 | 1.2 | 6.1 | 8.4 | 15.4 | 4.4 | 18.2 | 12.2 | 20.1 | 100.0 |
| % Sector | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Source: Population Census 1977.

Rounded figures.

Table 2.9

Rural Sedentary Labor Force by Economic Sector and Educational Level 1977

| | Agriculture | | Extractive | | Manufacturing | | Construction and Commerce | | Transportation | | Government | | Household | | Not Elsewhere Classified | | Total |
|---------------------|-------------|-------------|------------|-------------|---------------|-------------|---------------------------|-------------|----------------|-------------|------------|-------------|-----------|-------------|--------------------------|-------------|-------|
| | Completed | % of Sector | Completed | % of Sector | Completed | % of Sector | Completed | % of Sector | Completed | % of Sector | Completed | % of Sector | Completed | % of Sector | Completed | % of Sector | |
| No Education | 121,820 | 530 | 160 | 5,780 | 1,600 | 6,870 | 450 | 5,260 | 8,870 | 12,040 | 163,380 | | | | | | |
| % of no Educ. | 74.6 | 0.3 | 0.1 | 3.5 | 1.0 | 4.2 | 0.3 | 3.2 | 5.4 | 7.4 | 100.0 | | | | | | |
| % of Sector | 90.1 | 68.0 | 84.1 | 82.1 | 89.3 | 53.1 | 78.9 | 49.8 | 87.8 | 76.0 | 83.8 | | | | | | |
| Trad. Family | 9,580 | 70 | 10 | 1,120 | 90 | 3,640 | 40 | 890 | 770 | 2,460 | 18,670 | | | | | | |
| % of Trad. Family | 51.3 | 0.4 | 0 | 6.0 | 0.5 | 19.5 | 0.2 | 4.8 | 4.1 | 13.1 | 100.0 | | | | | | |
| % of Sector | 7.1 | 9.0 | 5.3 | 15.9 | 5.0 | 28.2 | 7.0 | 8.4 | 7.7 | 15.5 | 9.6 | | | | | | |
| Traditional Islamic | 2,280 | 50 | 0 | 40 | 20 | 1,960 | 0 | 490 | 350 | 560 | 5,750 | | | | | | |
| % of Trad. Islamic | 39.7 | 0.8 | 0 | 0.6 | 0.3 | 34.0 | 0 | 8.5 | 6.1 | 10.0 | 100.0 | | | | | | |
| % of Sector | 1.7 | 6.4 | 0 | 0.6 | 1.2 | 15.2 | 0 | 4.6 | 3.5 | 3.5 | 2.9 | | | | | | |
| Primary Education | 1,440 | 100 | 10 | 100 | 70 | 410 | 70 | 2,610 | 90 | 740 | 5,640 | | | | | | |
| % of Primary | 25.5 | 1.7 | 0.2 | 1.7 | 1.3 | 7.3 | 1.3 | 46.3 | 1.6 | 13.1 | 100.0 | | | | | | |
| % of Sector | 1.1 | 12.8 | 5.3 | 1.4 | 3.9 | 3.1 | 12.3 | 24.6 | 0.9 | 4.7 | 2.9 | | | | | | |
| Secondary/Higher | 30 | 30 | 10 | 0 | 0 | 50 | 10 | 830 | 10 | 50 | 1,020 | | | | | | |
| % of Sec./Higher | 2.9 | 2.9 | 1.0 | 0 | 0 | 5.0 | 1.0 | 81.3 | 1.0 | 5.0 | 100.0 | | | | | | |
| % of Sector | 0 | 3.8 | 5.3 | 0 | 0 | 0.4 | 1.8 | 7.8 | 0.1 | 0.3 | 0.5 | | | | | | |
| Tech/Prof. Training | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 540 | 0 | 0 | 550 | | | | | | |
| % of Tech/Prof. | 0 | 0 | 0 | 0 | 1.8 | 0 | 0 | 98.2 | 0 | 0 | 100.0 | | | | | | |
| % of Sector | 0 | 0 | 0 | 0 | 0.6 | 0 | 0 | 5.1 | 0 | 0 | 0.3 | | | | | | |
| Total | 135,150 | 730 | 130 | 7,040 | 1,790 | 12,930 | 570 | 10,620 | 10,100 | 15,850 | 195,020 | | | | | | |
| % of Rural Sed. | 69.3 | 1.6 | 0.1 | 3.6 | 0.9 | 6.6 | 0.3 | 5.4 | 5.2 | 8.0 | 100.0 | | | | | | |
| % of Sector | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | | | | | | |

Source : Population Census 1977
Rounded figures.

Chapter 3
The Modern Sector

3.1 Introduction

Two essential methods of developing manpower skills are obviously education and job experience. For every job there are certain skills that can be learned only through formal or nonformal instruction and others through instruction supplemented by learning on the job.

This and the following sections analyze the existing stock of manpower skills in the modern sector from the perspective of educational level and job experience.

Earlier chapters of this report analyzed the existing work force of 450,000 persons in terms of economic sectors, occupations, and rural/urban areas.

This section contains the findings of the RAMS Census of the Modern Business Sector which was conducted during the period March through June 1980. The census covered 199 firms with 5 or more employees in the six largest cities of Mauritania. These cities and their respective population are:

| <u>City</u> | <u>1977 Population¹</u> |
|-------------|------------------------------------|
| Nouakchott | 134,704 |
| Nouadhibou | 21,930 |
| Kaedi | 20,707 |
| Zouerate | 19,473 |
| Rosso | 16,510 |
| Kiffa | 10,266 |
| Total | <u>223,590</u> |

This census was conducted jointly by RAMS and the Department of Labor of the Ministry of Health, Labor and Social Affairs. Information collected included:

1. Number of firms and employees by economic sector
2. Employment by citizenship and sex
3. Employment of labor contractors
5. Salaries and employment grade by occupational group
6. Apprentices by trade
7. Education, training and experience by occupational group
8. Training school graduates employed by trade
9. Turnover of workers
10. Forecast of manpower requirements by occupational group
11. Minimum desirable education, training and experience by occupational group
12. Recruitment problems by occupation
13. Means of recruitment by occupational group.

Of the 199 businesses contacted in the RAMS Survey, a response in some form or another was received by 191 of them (96%). Those that did not respond appeared to be out of business or small in size; therefore, the census is quite representative of the entire modern sector.

Two firms, the national mining company (SNIM) and a private road construction firm, with 6,303 employees constitute 41% of the entire sector. The inclusion of these two firms have skewed the overall

¹For more information on the Department of Labor's role in the Census of Business of the Modern Sector, and Survey response rates, see Section 11 C, Methodology of the 1980 Census of the Modern Sector.

figures, for they are "huge in" comparison with the general run of enterprises and establishments in the modern sector. In any case, the following discussion includes the case with these two firms and without them.

3.2 Size of Firms

Most of the businesses in the modern sector are quite small in terms of the number of employees hired. (No data were gathered on the value of assets.) There are 74 firms or 33.7% with less than 15 employees, and 146 or 76.4% with less than 50 employees. Only 29 or 15.2% businesses had more than 100 employees each. Of them, SNIM with 5,132, and the road construction firm with 1,121, are by far the largest.

If the work force of the two largest enterprises (SNIM and the private construction company) is subtracted from the total of 15,123, the average size of the work force falls to 46.7 from 79.2 per establishment.

Although total employment is relatively low in the modern sector, this sector pays higher salaries, and together with the government sector absorbs the largest part of educated and highly skilled manpower.

3.3 Employment Status

Table 3.1 divides the work force by the employment status of workers. As expected, the bulk (74%) is permanent. A rather surprisingly high proportion (21%) consists of occasional day laborers, suggesting a fluid, irregular work force that is probably paid minimum level wages and has low skill and productivity levels. The remaining 5% is divided between employers and proprietors (2%), labor contractors (2%), apprentices and part-time workers (less than 1%), and independent workers (0.1%). The latter two groups seem suspiciously low and may be underreported. According to discussions with labor officials, the practice of labor contracting seems to be more widespread than the 279 workers (or 2%) reported would indicate. The figure for independent workers also appears doubtful. In the population at large, a significant proportion are independent workers engaged directly (rather than through a labor contractor) as contractors or temporary employees. A contract is made usually to do a specific job during a limited amount of time. Presumably, some of these independents are successful enough to have employees working for them. The low response, only 19 workers (or 0.1%) suggests either that there really are not many in this category or that the category may have been misunderstood and the questionnaire reflected "employers and proprietors" instead.

The category "employers and proprietors", which includes 233 for the 191 businesses, is not unusually high, including as it does owners who also work in multiple-ownership companies.

Table 3.1

Employment Status of Workers in all Businesses in
Mauritania's Six Largest Cities and Towns in 1980^{a/}

| Employment Status | Male | Female | Total | Percent of Distribution |
|---|--------|--------|--------|----------------------------|
| Employers and Proprietors | 220 | 13 | 233 | 2 |
| Permanent Employees | 10,722 | 603 | 11,325 | 74 |
| Occasional day Laborers | 3,125 | 12 | 3,132 | 21 |
| Part-time Permanent Workers, Apprentices, and New Conditional Workers | 127 | 3 | 130 | 0.9 |
| Independent Workers ^{b/} | 18 | 1 | 19 | 0.1 |
| Contract Workers ^{c/} | 253 | 26 | 279 | 2 |
| Total | 14,465 | 658 | 15,123 | 100 |
| Percent Distribution | 96 | 4 | 100 | |

^{a/}Data based on business establishment with five or more employees.

^{b/}Hired by a firm on a contract basis.

^{c/}Hired by an intermediary that supplies labor to a firm on a contract basis.

Source: 1980 Census of Businesses of the Modern Sector.

3.4 Skill Level

As shown in Table 3.2 employees were also classified by skill level using the eight categories generally recognized in Mauritania:

- Management
- Management Staff
- Master Craftsmen
- Qualified Employees
- Skilled Workers
- Assistants
- Laborers
- Apprentices

Of the 15,562 employed, 2% are top management and another 3% are professional staff.

3.5 Economic Sectors

Table 3.3 shows the distribution of workers by economic sector. As noted above, the mining industry is by far the single largest employer in the modern sector (excluding Government). Its 5,182 employees constitute one-third of total private modern sector employment. The mining industry and the national water and electricity company constitute the Extractive Industries sector and contribute a total of 5,701 employees, 37% of the total modern sector.

Table 3.2

Employment By Occupational Groups, Place of Origin and Sex of Workers

(Data Express Numbers of Workers)

| Occupational Group | Mauritanian | Males Other African | Other Non-African | Mauritanian | Females Other African | Other Non-African | Total | Percent Distribution | Percent Male |
|---------------------|-------------|---------------------------|----------------------|-------------|-----------------------------|----------------------|--------|-------------------------|-----------------|
| Management | 241 | 7 | 62 | 3 | 2 | 4 | 319 | 2% | 97% |
| Management Staff | 569 | 120 | 500 | 30 | 2 | 20 | 1,241 | 8% | 96% |
| Master Craftsmen | 2,338 | 104 | 326 | 153 | 9 | 60 | 2,990 | 19% | 92% |
| Qualified Employees | 2,001 | 67 | 1 | 262 | 3 | 5 | 2,339 | 15% | 88% |
| Qualified Craftsmen | 2,892 | 66 | - | 132 | - | 1 | 3,091 | 20% | 96% |
| Special Assistants | 2,839 | 33 | - | 73 | - | 3 | 2,948 | 19% | 97% |
| Laborers | 2,546 | 3 | - | 15 | - | - | 2,569 | 16% | 19% |
| Apprentices | 65 | - | - | - | - | - | 65 | 0.4% | 100% |
| Total | 13,491 | 405 | 889 | 668 | 16 | 93 | 15,562 | | |

Percent Distribution

87%

3%

6%

4%

0.1%

0.5%

100%

99.4%

95%

Source: 1980 RAMS Establishment Survey. These data are based on establishments with five or more employees.

Table 3.3

**Employment By Economic Sector in All Business Establishments in Mauritania's
Six Largest Cities and Towns in 1979, by Size of Establishment, Sex and
Area of Origin^{a/}**

| Economic Sector | Size of Establishment | | | | Total | Percent Distribution |
|--|-----------------------|--------------|--------------|---------------|---------------|----------------------|
| | 5 - 14 Employees | 15 - 49 | 50 - 99 | 100 or More | | |
| 1. Agriculture | | | | | | |
| Total | - | 39 | - | 104 | 143 | 1% |
| % Male | - | 95 | - | 98 | | 97% |
| % Mauritanian | - | 95 | - | 100 | | 99% |
| % Non-African | - | 0 | - | 0 | | 0% |
| 2. Extractive Industries plus Water & Electricity | | | | | | |
| Total | - | - | - | 5,701 | 5,701 | 37% |
| % Male | - | - | - | 97 | | 97% |
| % Mauritanian | - | - | - | 80 | | 90% |
| % Non-African | - | - | - | 8 | | 8% |
| 3. Modern Manufacturing | | | | | | |
| Total | 117 | 294 | 51 | 901 | 1,363 | 9% |
| % Male | 100 | 73 | 100 | 82 | | 87% |
| % Mauritanian | 72 | 64 | 94 | 94 | | 90% |
| % Non-African | 3 | 8 | 4 | 6 | | 5% |
| 4. Craft Manufacturing^{a/} | | | | | | |
| Total | - | - | - | - | - | - |
| % Male | - | - | - | - | - | - |
| % Mauritanian | - | - | - | - | - | - |
| % Non-African | - | - | - | - | - | - |
| 5. Construction and Public Works | | | | | | |
| Total | 23 | 130 | 189 | 2,002 | 2,522 | 16% |
| % Male | 100 | 94 | 99 | 99 | | 99% |
| % Mauritanian | 74 | 76 | 90 | 80 | | 81% |
| % Non-African | 9 | 5 | 3 | 14 | | 12% |
| 6. Commerce, Restaurants and Hotels | | | | | | |
| Total | 262 | 463 | 293 | 598 | 1,616 | 10% |
| % Male | 96 | 94 | 97 | 91 | | 96% |
| % Mauritanian | 84 | 88 | 89 | 99 | | 92% |
| % Non-African | 5 | 5 | 3 | 0.3 | | 3% |
| 7. Transport and Communications | | | | | | |
| Total | 89 | 155 | 164 | 1,308 | 1,716 | 11% |
| % Male | 81 | 85 | 93 | 96 | | 92% |
| % Mauritanian | 93 | 93 | 95 | 97 | | 96% |
| % Non-African | 3 | 5 | 1 | 3 | | 3% |
| 8. Government & Financial Institutions | | | | | | |
| Total | 21 | 243 | 387 | 1,357 | 2,008 | 13% |
| % Male | 26 | 95 | 89 | 90 | | 90% |
| % Mauritanian | 95 | 96 | 95 | 99 | | 98% |
| % Non-African | 0 | 2 | 3 | 0.4 | | 1% |
| 9. Household and Business Services | | | | | | |
| Total | 68 | 425 | 0 | 0 | 493 | 3% |
| % Male | 97 | 98 | - | - | | 98% |
| % Mauritanian | 60 | 95 | - | - | | 90% |
| % Non-African | 15 | 3 | - | - | | 4% |
| Total | 580 | 1,927 | 1,084 | 11,971 | 15,562 | 100% |
| % Male | 94 | 94 | 94 | 95 | | 95% |
| % Mauritanian | 80 | 88 | 92 | 90 | | 90% |
| % Non-African | 2 | 5 | 2 | 7 | | 2% |

^{a/}Based on establishments with five or more employees.

^{b/}Excluded from the survey.

Source: 1980 RANS Business Establishment Survey.

Five other sectors have the following proportions of the work force:

| | | |
|--------------------------------|-----|-----------------|
| Construction and Public Works: | 16% | 2,522 employees |
| Financial Institutions: | 13% | 2,008 employees |
| Transport and Communications: | 11% | 1,716 employees |
| Commerce: | 10% | 1,616 employees |
| Modern Manufacturing: | 9% | 1,363 employees |

In Mauritania, the definition of sectors differs somewhat from the norm: most of the extractive industry is in the modern sector; manufacturing is divided between modern and artisan manufacturing, so the former should be all modern sector and the latter should be all nonstructured or traditional sector; in construction and public works (26%) and transportation and communication (35%), the modern sector contributes a significant portion -but still less than half of total employment. The government and the financial sector numbers are misleading because the Government, the largest single employer in the country, was not included in this census, but was the subject of a separate study. By far the largest group of employment in the country is in agriculture, which forms a negligible part of the modern sector. (SONADER projects and cooperatives were not included in the survey). The next largest group of employment in the country is in commerce, which contributes about 5% to this sector; after government, the fourth largest group of employment is in "service" which provides only 22% to it.

It is little wonder then that, overall, modern sector employment contributes less than 4% to the total employment of the country and 6% to sedentary employment.

3.6 Expatriate Workers

Almost all of the workers in the modern sector are Mauritians. Of the 15,562 total work force, 14,159 or 91% are nationals. In addition, 421 (3%) other Africans and 982 (6%) non-African expatriates were reported, making a total of 1,403 jobs which could become available if all of the expatriates in the modern sector were to be replaced by Mauritians. The 1977 census reported a total expatriate population of 12,734 of both sexes and all ages. This survey suggests that roughly 10% of them are working in the modern private business sector. Although the number and proportion of expatriates is quite small, their location within the occupational groups is significant. Of the 1,241 in professional staff positions, 652 are expatriates representing over 1/2 of second-level management. Predominant among the foreigners in management positions are non-Africans; 586 versus 131 of other nationalities.

Foreigners were also important at the clerical staff level, numbering almost 500 of the 2,990 employees or 17%.

A complete Mauritanization of the modern sector work force would not provide many additional jobs for Mauritians, since they already hold most of them anyway. Relative to their number however, expatriates hold a high share of high-level jobs.

This analysis, it should be noted, does not include consideration of the government, which itself includes significant numbers of foreigners working as secondary school teachers and senior-level advisors. (Table 3.4)

3.7 Gender

Most of the workers in the modern sector are males. The 14,785 males in this sector constitute 95% of the total. No economic sector contains less than 87% males.

The 777 women reported as working in the modern sector (excluding government) make up only 5% of that work force. At the same time, they make up a miniscule 0.2% of the more than 394,000 women age 15-64 estimated for 1980.^{1/} Table 3.5 shows their distribution by employment. A total of 492 or 63% are classified as skilled and technical. Only 8% are in management positions; 2 are reported laborers and none as apprentices.

^{1/}Calculation based on RAMS' Study Demographic Projections, Appendix Table K.

Table 3.4

Expatriate Workers in the Modern Sector by Economic Sector (1980)

| Economic Sector | Number of Expatriate Workers | Percent Distribution |
|------------------------------|------------------------------|----------------------|
| 1. Agriculture ^{a/} | 4 | 0.2 |
| 2. Extractive | 586 | 42 |
| 3. Manufacturing | 125 | 9 |
| 5. Construction | 426 | 30 |
| 6. Commerce | 127 | 9 |
| 7. Transportation | 50 | 4 |
| 8. Financial Institution | 43 | 3 |
| 9. Services | 43 | 3 |
| | 1,404 | 100 |

a/ Excludes Chinese workers at M^o Pourie.

...47...

Table 3.5
Modern Sector Female Employees by Employment

Level

| <u>Skill Level</u> | <u>Female Employees</u> | <u>% Distribution</u> |
|--------------------|-------------------------|-----------------------|
| Management | 9 | 1 |
| Professional Staff | 52 | 7 |
| Clerical Staff | 222 | 28 |
| Skilled Workers | 270 | 35 |
| Workers | 133 | 17 |
| Assistants | 76 | 10 |
| Laborers | 15 | 2 |
| Apprentices | 0 | 0 |
| | Total | 777 |
| | | 100 |

3.8 Contract Labor

The practice of contract labor seems to be widespread in urban areas, yet the survey only identified 43 employees as contract labor, a figure no doubt underreported. Table 3.6 provides the number of labor contractors by city.

3.9 Salary

Three questions were asked in the census about salaries. The response rate for this question was very low, including only 644 out of the 15,562 employees (ie., 4%). Therefore, little credence can be given to the figures in Table 3.7. The distribution illustrates, as expected, that the bulk of salaries is on the lower end of the scale: over 70% of the workers have a gross salary of 20,000 UM or less per month.^{1/} Even the lower end salaries are, however, much higher than the per worker earnings of those in traditional occupations. At the top, 24 workers were each earning more than 75,000 UM per month.^{2/} Generally, lower salaries are earned in small, rather than in large companies.

3.10 Apprentices

Only 11 firms completed the question which asked details about apprenticeship contracts. Of those who responded, 21 apprentices in six occupations were identified. The data, obviously a small proportion of the probable total, is presented in as Table 3.8

¹US \$ 433/month or US \$ 5,196/ year.

²US \$ 1,633/month or almost US \$ 20,000/ year.

Table 3.6
Contract Labor Employed
1980^{a/}

| City or Town | Contractor ^{b/} |
|--------------|--------------------------|
| Nouakchott | 17 |
| Nouadhibou | 16 |
| Kaedi | 0 |
| Zouerate | 9 |
| Rosso | 1 |
| Kiffa | 0 |
| Total | 43 |

^{a/} Data based on business establishments with five or more employees.

^{b/} Labor contractors are hired by intermediaries that supply labor to firms on a contract basis.

Source: 1980 RAMS Census of Business of the Modern Sector.

Table 3.7

Number of Workers by Gross Salary and Size of Firms 1980^{a/}

| Gross Salary (in Ouguiyas) | Number of Workers | | | | Total |
|-------------------------------|---------------------|----------------------|----------------------|--------------------------|--------------|
| | 5 - 14 Employees | 15 - 49 Employees | 50 - 99 Employees | 100 or More Employees | |
| 0 - 5,000 | 49 (21%) | 32 (16%) | 10 (10%) | 14 (12%) | 105 (16%) |
| 5,001 - 7,500 | 50 (21%) | 32 (16%) | 12 (12%) | 16 (14%) | 110 (17%) |
| 7,501 - 10,000 | 34 (14%) | 28 (15%) | 12 (12%) | 14 (12%) | 88 (14%) |
| 10,001 - 15,000 | 38 (16%) | 27 (14%) | 12 (14%) | 14 (12%) | 91 (14%) |
| 15,001 - 20,000 | 16 (7%) | 24 (12%) | 11 (11%) | 11 (10%) | 62 (10%) |
| 20,001 - 25,000 | 9 (4%) | 11 (6%) | 10 (10%) | 8 (7%) | 38 (6%) |
| 25,001 - 30,000 | 9 (4%) | 8 (4%) | 6 (6%) | 8 (7%) | 31 (5%) |
| 30,001 - 40,000 | 9 (4%) | 12 (6%) | 10 (10%) | 8 (7%) | 39 (6%) |
| 40,001 - 50,000 | 5 (2%) | 5 (3%) | 4 (4%) | 7 (6%) | 21 (3%) |
| 50,001 - 60,000 | 7 (3%) | 5 (3%) | 4 (4%) | 4 (4%) | 20 (3%) |
| 60,001 - 75,000 | 3 (1%) | 6 (3%) | 2 (2%) | 4 (4%) | 15 (2%) |
| Over 75,000 | 7 (3%) | 4 (2%) | 7 (7%) | 6 (5%) | 24 (4%) |
| Total | 236 | 194 | 100 | 114 | 644 |

^{a/} Based on establishments with five or more employees.

Source: 1980 RAMS Business Establishment Survey.

Table 3.8

Number of Apprentices by Trade and by Size of Firms 1980^{1/}

(Data Express Numbers of Workers)

| Trade | Workers in Firms with 5-14 Employees | Workers in Firms with 15-49 Employees | Workers in Firms with 50-59 Employees | Workers in Firm with 100 Employees or more | Workers in all Firms |
|--------------------|---|--|--|--|-------------------------|
| Laboratory | - | - | 3 | - | 3 |
| Chaffeur | - | 6 | - | - | 6 |
| Mechanic | - | 3 | - | - | 3 |
| Sheet metal worker | - | 3 | - | - | 3 |
| Electrician | - | 3 | - | - | 3 |
| Painters | - | 3 | - | - | 3 |
| Total | - | 18 | 3 | - | 21 |

...51...

^{1/}These data are based on establishments with five or more employees.

Source: 1980 RAMS Establishment Survey.

Table 3.9
Educational and Training of Workers by Occupational Group, as Reported by Business Establishments in Mauritania's Six Largest Cities and Towns in 1980

| Occupational Group | Less Than Primary School | Primary School | Secondary School | | Teacher Training | Technical School | | Higher Education | Professional Instruction | | | | | | | |
|--|--------------------------|----------------|------------------|--------|------------------|------------------|-------|------------------|--------------------------|--------|------|------|------|------|--------|--------|
| | | | b/ | c/ | | b/ | c/ | | b/ | c/ | d/ | e/ | b/ | c/ | d/ | e/ |
| Management | 8 | 9 | 23 | 36 | 2 | 3 | 3 | 10 | 35 | 19 | 15 | 17 | 4 | 4 | 1 | 2 |
| Management Staff | 3 | 46 | 80 | 83 | 4 | 17 | 43 | 64 | 60 | 42 | 7 | 26 | 7 | 9 | 5 | 7 |
| Master Craftsmen | 539 | 516 | 199 | 180 | 31 | 11 | 60 | 143 | - | 1 | - | 25 | 33 | 33 | 12 | - |
| Qualified Employees | 256 | 539 | 196 | 66 | 3 | - | 38 | - | - | - | - | 10 | 14 | 5 | 1 | 1 |
| Qualified Craftsmen | 266 | 174 | 16 | - | - | - | 672 | 2 | - | - | - | 20 | 12 | 12 | - | - |
| Special Assistants | 549 | 106 | 8 | 1 | - | - | 251 | - | - | - | - | 3 | 8 | 1 | 5 | - |
| Laborers | 1,795 | 11 | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Total | 3,416 | 1,401 | 522 | 366 | 40 | 31 | 1,067 | 219 | 95 | 62 | 22 | 101 | 78 | 64 | 31 | 10 |
| Distribution (45%) (100% equals 7,525) | (19%) | (7%) | (5%) | (0.5%) | (0.4%) | (14%) | (3%) | (1%) | (1%) | (0.3%) | (1%) | (1%) | (1%) | (1%) | (0.4%) | (0.1%) |

a/ Based on establishments with five or more employees.
b/ 1st cycle c/ 2nd cycle d/ 3rd cycle e/Other

Source : 1980 RANS Business Establishment Survey.

3.11 Educational Characteristics

The educational level and years of experience were reported for 7,525 of the 15,562 employees, a response rate of about 50%. As shown in Table 3.9, the biggest group of employees in the modern sector, i.e., 3,416 workers, or 45% of the total are those with less than primary education. Of those, about half (1,795) are working as laborers. About half of those with less than primary education however, are working in occupations requiring more skills than laborers, 539 clerical staff and 8 top-level managers. The second largest sample group comprises those with **primary** school education, numbering 1,401 or 19% of the total. Those with post-secondary education make up only 6% of the modern sector work force. Included are 280 with at least some university education and 183 with some professional education.

It is interesting to compare these distributions with those of the sedentary labor force as a whole. It is evident that there are dramatic differences between the total labor force and that part of it working in the modern sector in terms of formal education. Whereas the modern sector has less than half of its work force with "less than primary" education, the total labor force has 89% in the same group. Those categorized as "secondary and higher" represented only 3% of the total labor force, but "secondary school" represented 30% of the modern work force. The common assumption that levels of formal education are much higher in the modern sector than in the total labor force is supported by Table 3.10.

Another interesting observation is the wide distribution between education levels of occupational groups. In a personnel system where the primary criterion for entry into a given grade level is the formal education attained, it would be expected that a given education level would apply for a given occupational

Table 3.10

Comparison of Levels of Education Between the Sedentary Labor Force 1977 and the Modern Sector Work Force 1980

| Total Sedentary Labor Force 1977 | | | Modern Sector Work Force 1980 | | |
|----------------------------------|----------------|----------------------|-------------------------------|----------------|--------------------------|
| Level of Education | No. of Workers | Percent Distribution | Percent Distribution | No. of Workers | Level of Education |
| None | 230,690 | 76% | | | |
| Traditional: Family | 29,910 | 10% | 45% | 3,416 | Less than Primary |
| Traditional: Organized | 8,290 | 3% | | | |
| Primary | 20,190 | 7% | 19% | 1,401 | Primary |
| Secondary and Higher | 9,040 | 3% | 12% | 888 | Secondary general |
| | | 1% | 1% | 71 | Teacher training |
| | | | 17% | 1,286 | Technical |
| | | | 4% | 280 | Higher Education |
| Technical and Professional | 2,830 | 1% | 2% | 183 | Professional Instruction |
| Total | 300,950 | 100% | 100% | 7,525 | |

Source: National Census 1977 and Census of Modern Business Sector 1980

group. Yet, that is clearly not the case. Primary and less than primary education groups have members scattered from laborers to top management; secondary and professional education both include all occupation groups except laborers. Only higher education cycles 1 to 3 are confined (with one exception) to management, as expected, suggesting that formal education in the group surveyed was neither the sole criterion, nor apparently a prerequisite for access to a given occupational level. The implications for manpower planning are important. They suggest that significant numbers of current employees have been able to reach high levels of professional groups without having formal education and presumably by some combination of non-formal education and on-the-job training. If, in fact, such employees are successfully performing their assigned tasks, then others should also be able to perform the same job without extensive formal education. Information available from this survey is inadequate for any firm conclusions. The experience of the Centre de Formation Professionnelle (CFPP) should be followed closely in this regard.

This also suggests another line of inquiry. In other sections of this report, the increasing number of higher education level graduates and dropouts is addressed. Given the large number of current job holders with little or no formal education, it seems that they will gradually be replaced by younger entering workers with much higher levels of formal education but less experience or on-the-job training. As this occurs, what will be its impact? There is the possibility of serious tension as a "new breed" of workers moves in and threatens the status of older employees. It can be asked whether or not the existing modern sector is capable in the short term of absorbing not only the numbers but also the capacities of better educated workers.

3.12 Technical Skills

An attempt was made to find the current occupations of those who were graduates of specialized technical training schools, particularly the Mamadou Touré Center for Professional Training. The response (48%) to this question suggests underreporting. Of those reported there is a diversity of occupations, suggesting a flexible transferability of skills among even those with a specific technical training (Table 3.11).

Table 3.11

Number of Employee Graduates of the Mamadou Toure Center For
Professional Training and Other Training Centers 1980¹

| Trade | Employed Graduates |
|---------------------------------|--------------------|
| Metallurgical Engineer | 1 |
| Mining Engineer | 7 |
| Mechanic | 6 |
| Plumber | 1 |
| Chief of <u>Quart</u> (fishing) | 1 |
| Supervisors of Installations | 1 |
| Electro-Mechanic | 1 |
| Chief of Site - Masonry | 1 |
| Chief of Staff | 1 |
| Secretary | 1 |
| Masonry | 2 |
| Welder | 1 |
| Train Conductor | 1 |
| Electrician | 1 |
| Typist | 7 |
| Office Employee | 3 |
| Chief of <u>Exploitation</u> | 2 |
| Insurance Editor | 2 |
| Administrator | 2 |
| Accounting and Finance | 6 |
| Total | 48 |

¹ These data are based on establishments with five or more employees.

Source: 1980 RAMS Establishment Survey.

Chapter 4

The Civil Service

4.1 Introduction

The Government is the country's largest single employer. In 1980, the Civil Service included 9,570 employees (police and security forces not included). The trend has been rising as may be seen in the fact that employment was 7,939, in 1973, 8,345 in 1974, and 9,235 in 1975. The Civil Service, together with the private and para-statal modern sector firms, contains virtually all of the existing employed high level manpower and most of the mid-level manpower as well. This stock of manpower skills, including work experience, is essential to the development of the country and is particularly important because of its relatively high income per position, relatively high levels of education and skills, high costs to produce those skills, and the role which the government must play in economic development.

The main source of information for this analysis is a 1979 government computer printout of personnel by Ministry provided by the Ministry of Economy and Finance.

The 1977 census did not provide a separate category for the civil service but rather included them in the economic sector "Government and Financial Services" in which 28,899 employees were divided among a variety of occupations.

4.2 Current Employment Breakdown and Educational Levels

The 1979 computer printout lists each employee by grade level and occupation by the Ministry. There are several important omissions, viz:

All military, national guard, police and other security forces.

All ambassadorial staff abroad.

Several para-statal institutions including:

- The Office of Social Security
- The National Scientific Research Institute
- Mauritanian Red Crescent
- The National Hospital

All civil servants currently on leave of absence.

Cooperants (technical assistant personnel) particularly teachers who are paid by donating governments, but work directly for GIRM.

The lists provided were grouped by ~~the Ministry as it existed~~ before the latest government organization, eg., the Directorate of Studies and Program is listed as part of the former Ministry of Planning instead of the present Ministry of Economy and Finance. Table 4.1 summarizes the 9,570 government employees included in the 1979 printout.

One additional source is at least indicative. The Third Development Plan states that government employment grew from 4,100 in 1965 to about 9,100 in 1973^{1/}.

¹Page 53 of the Plan.

According to the 1979 printout, the largest number of employees are found in those Ministries which generally provide services directly to the people; in fact, two Ministries, Education (with 37%) and Health, Labor, and Social Affairs (with 18%) together provide over half of total non-security Government Employment. Finance and Commerce is the next largest with 12% of the total. By far the greatest number of workers in the country is in the rural sector, but the Ministry responsible for assistance to this sector, the Ministry of Rural Development, has only 7% of the total. The Ministry of Interior, excluding security, i.e., primarily regional staffs, constitute 6% of that work force, while Justice and Islamic Affairs has 5%. The other ten ministries and categories each have 3% or less of the civil servants.

Of the grade levels, Category A, with only 619 employees is by far the smallest in terms of number and makes up only 6% of the non-military part of the government work force. Category B has triple that number, with 1,772 (19%). Both Categories C and D each have 31% of the total, with 2,927 and 2,998 respectively. Finally, the "Other" category includes 1,254 personnel, about half (688) are persons hired under contract rather than as regular civil servants; chauffeurs (265) and servants (111) also make up a large segment.

Actual educational attainment of each employee was not provided, but an approximation can be made from the 1979 printout. In the civil service's level, the sole criterion was a given level and type of education specialty. Therefore, there is a direct one-to-one relationship between grade levels and education levels. The civil service has five categories: A, B, C, D and other. Within each category there

are three general "tracks": administration, technical and education. Each track has from 1 to 3 grades. The grades do not exactly correspond between tracks, there being differences of both entrance requirements and compensation. They are however, roughly similar. A hand tally was made of the employees listed by grade. Individual occupations were ignored. From the civil service personnel book of regulations^{1/}, the minimum education required for each category and each grade was extracted. Each category and grade correspond to specific minimum entry levels of educational attainment summarized as follows:

| <u>Category</u> | <u>Minimum Education</u> |
|-----------------|---|
| A | Baccalauréat (High School Diploma), usually combined with some advanced education such as B.A., MA., or PH. D. or equivalent, or graduation from the highest level of Mauritanian post-secondary (cycle A) education. |
| B | Brevet (Junior High School Diploma), usually with some additional secondary, advanced, or technical education, or graduation from the next highest level of Mauritanian post-secondary (cycle B) education. |
| C | C.E.F. (Grade School Diploma), usually with some additional secondary, advanced, or technical education of a lower level than in Category B. |
| D | Some primary education and/or additional technical or job experience. |
| Other | Varies according to position. No single educational level applies. |

^{1/} Textes Relatifs aux personnels et fonctionnaires et auxiliaires geres par la Fonction Publique, GIRM, (Text relating to personnel, civil servants and auxiliaries administered by the civil service)

The manpower skills stock is derived therefore by counting the number of employees at each grade/educational level as follows:

619 with a high school diploma and higher education up to Doctorate level.

1,772 with a junior high diploma and advanced education or training.

2,927 with a grade school diploma and additional education or technical training.

2,998 with some combination of primary education, technical training and job experience.

1,254 with a wide variety of educational experience and skills.

4.3 Future Employment

Governments as employers differ in an essential aspect from the private sector. In the private sector new employment depends directly upon growth of the economy, while the government's budget is only indirectly dependent on the growth of the economy (through taxes and profits from government owned enterprises). If a government's budget is large enough, it can hire increasing numbers of people, but this becomes increasingly risky as it will contribute to inflation and at the same time frighten and discourage private investors at home and abroad. The consequences of giving free rein to government spending are visible in many developing countries.

In Mauritania the Government has put a freeze on hiring new employees because of financial restrictions. At least for the foreseeable future only students graduating from advanced studies in Mauritania or abroad will be hired and presumably all of them who do not enter the private sector will be absorbed by the Government. During the 1979-1980 school year there were 2,745 students in higher education studying abroad. If it is assumed that growth will occur in the nonsecurity part of the Government, the distribution of current employment by Ministry (see Table 4.1) gives a general idea of the types of occupations that are likely to be most in demand in the future. The demand for teachers is the largest and most obvious. Other social service-related occupations also appear likely to be in demand, eg. health workers. If the role of the Ministry of Rural Development is to continue to grow, relatively large numbers of specialists in agriculture could be absorbed there. It can be assumed, that there will be a continuing need for administrator and office workers throughout the Ministries. It can also be postulated, based upon experience elsewhere, that there will be a continuing demand for a small but highly trained cadre of technicians and specialists.

Table 4.1

Number of Employees of the Government and Percent
Distribution by Ministry and Grade Level (1980)

| Ministry | Employees | | | | | | Total | % Distribution |
|--|-------------------------|--------------|--------------|--------------|--------------|--------------|------------|----------------|
| | Category or Grade Level | | | | | | | |
| | A | B | C | D | Other | | | |
| Fundamental and Secondary Education | 619 | 918 | 1,631 | 492 | 288 | 3,560 | 37 | |
| Industry and Mines | 11 | 17 | 28 | 35 | 18 | 109 | 1 | |
| Rural Development | 14 | 121 | 194 | 2,155 | 137 | 681 | 7 | |
| Youth, Sports, Artisan, and Tourism | 9 | 34 | 58 | 162 | 48 | 311 | 3 | |
| Civil Service and Staff Training | 17 | 21 | 33 | 38 | 49 | 158 | 2 | |
| Interior | 89 | 89 | 170 | 115 | 65 | 528 | 6 | |
| Equipment and Transport | 5 | 39 | 47 | 79 | 47 | 217 | 2 | |
| Culture, Information and Telecommunication | 8 | 7 | 9 | 45 | 13 | 82 | 1 | |
| Planning and Fishing | 7 | 12 | 7 | 23 | 11 | 60 | 1 | |
| Finance and Commerce | 135 | 174 | 157 | 556 | 132 | 1,154 | 12 | |
| Justice and Islamic Affairs | 11 | 47 | 117 | 147 | 121 | 443 | 5 | |
| Foreign Affairs | 17 | 9 | 11 | 22 | 11 | 70 | 1 | |
| Health, Labor and Social Affairs | 30 | 254 | 418 | 949 | 171 | 1,822 | 19 | |
| Headquarters of the Military Committee of National Salvation | 3 | 3 | 4 | 18 | 6 | 34 | 0.4 | |
| Presidency | 31 | 25 | 40 | 98 | 128 | 322 | 3 | |
| Community Expense | 2 | 2 | 3 | 4 | 8 | 19 | 0.2 | |
| Total | 619 | 1,772 | 2,927 | 2,998 | 1,154 | 9,570 | | |
| % Distribution | 6 | 19 | 31 | 31 | 13 | | 100 | |

Chapter 5

The Non-Structured(Informal) Business Sector

5.1 Introduction

As a large pool of mid-level technical and entrepreneurial manpower skills, the non-structured (or informal) business sector is most important. As the training ground for new entrants into the labor force, the contribution of this sector is underestimated.

Definitions of this sector differ among analysts. Generally, it includes economic activities other than agriculture performed by a single person or very small establishments in the traditional manner: artisans, small manufacturers, merchants, transport and construction workers. This "informal" sector (to use the term also used by the I.L.O.) is distinguished from the "formal" or modern sector by the lack of "structure" in its organization: the individual proprietor "does it all" unlike the separation of functions in the modern enterprise, it is also less subject to formal government regulations. It is also referred to as the intermediate sector and the urban artisanal sector. Sometimes it is equated with small industry. As in the case of traditional agriculture, it is considered to be a proper subject for a technology designed for its size and adapted to its uses ("appropriate technology").

In this report, the nonstructured sector refers to activities and enterprises which:

1. Are located in urban Nouakchott.
2. Have one to five persons working in the establishment.
3. Commonly use family workers or apprentices.
4. Have a very small capital investment.
5. Generally use traditional hand tools and labor intensive methods and processes.

The 199 businesses with 5 or more employees which were classified as "modern sector" were surveyed first. All other businesses in Nouakchott (down to street vendors and shoeshine boys) were surveyed and classified in the nonstructured sector.^{1/}

^{1/} Previous surveys touching on the subject are:

1. A survey of five market places, 1972-74, by Jean-Robert PITTE, found Nouakchott: Capital de la Mauritanie. Department de Geographie de l'Université de Paris-Sorbonne, No. 5 Paris 1977, pp. 130-147.
2. A study of 84 small and medium industries conducted in 1975 by Jean DAMICO found in Inventaire Industriel de la R.I.M., UNIDO 1975.
3. A study of modern and traditional artisans, conducted in 1975 for the Direction of Artisans, found in Etude Sectorielle Sur l'Artisanat Traditionnel en Mauritanie, Ministère de l'Artisanat et du Tourisme, 1975.
4. A census of 1,815 activities of the nonstructured sector and a survey of 214 selected establishments conducted by George NIHAN and Robert JOURDAIN in 1977 and found in Analyse Préliminaire de Résultats de Recensement du System Nonstructuré de Nouakchott, R.I.M., Bureau International du Travail, Programme Mondial de l'Emploi 1977.

The methodology used consisted of walking or driving slowly along every street and alley of Nouakchott and in the interior of the eleven markets; identifying each business activity directly or by conversation with the proprietor; using a coding system to mark the type of each activity, its size and location. All activities were then classified according to the following categories:

Activities

Ward^{1/}

Market Place

Central Areas

Kebas^{2/}

Personal Services

Commerce

Manufacturing

Construction

The census was conducted entirely by Mauritians.

¹A "ward" is a political district, sub-division of the city called "Arrondissement". There are six wards in Nouakchott.

²"Keba" is the Arab word used to designate that area of the city where new settlers live in temporary housing, usually tents or wooden shacks. It is similar to "bidonvilles" or shanty towns" of other countries.

In the Keba areas, because of the paucity of landmarks and the complexity of roads and paths, the census was conducted by three surveyors working as a team. A total of 11,747 activities and business enterprises were identified. They were divided into four categories: services, manufacturing, commerce and construction.

Wherever practical the International Industrial Classification of all Economic Activities (1977) was followed in classifying individual firms and activities.

Each sector was further divided by activity or product.

1. Services

Personal Services

Repairing

Signs

2. Manufacturing

Wood

Metal

Cloth

Straw

Leather

Flour

Jewelry

Upholstery

Brick

3. Commerce

- Food
- Hardware
- Books and paper
- Clothing, Cloth and Delux Items
- Miscellaneous

4. Construction

- General
- Electrical
- Plumbing
- Tile setting
- Painting

5.2 Location: Wards, Marketplaces, Central Areas, and Kebas

The nonstructured sector of Nouakchott is scattered throughout the entire city, from fruit stands and tire repair in the heart of the downtown area to small stores and industries at the very ends of the Keba areas. They are in virtually every neighborhood, as well as in residential areas of every socio-economic and ethnic group.

Some types of business are more concentrated in some areas than in others. Table 5.1 presents a distribution of the businesses by the six wards of the city. The ward which apparently contains the largest number is the Fourth. Both the main Central Market and the Fish Market and numerous other businesses are found in this area. Moreover, if the 1,700 businesses of the Keba areas beyond the boundary line, but adjoining the Fifth and Sixth wards were included, the Fifth ward would surely have contained the most businesses. The original northern part of the city has proportionately less because it does not contain a marketplace.

Table 5.1

Commercial Business in the Non-Structured Sector
of Nouakchott by Ward and by Product Sold, 1980

| Commerce | Ward I | | | | | | Ward II | | | | Ward III | Ward IV | | | | | Ward V | | | Ward VI | | Ward VII | Total | | |
|--|---------|-------------|--------------|------|-----------|-----|---------|-------------|--------------|-------------|-----------|---------|---------|----------------|-----------------|-------------|-----------|---------|-------------|-------------|------------|----------|-------|-------------|------------|
| | Central | Main Market | Small Market | Keba | Sub-total | | Central | Main Market | Market No. 2 | Taxi Market | Sub-total | Central | Central | Capitol Market | Charcoal Market | Fish Market | Sub-total | Central | Main Market | Salt Market | Sub-Sector | Central | | Keba Market | Sub-sector |
| Food (Sub-Total) | 270 | 96 | 53 | 156 | 573 | 358 | 69 | 71 | 38 | 536 | 257 | 357 | 187 | 66 | 217 | 827 | 463 | 502 | 65 | 1,030 | 399 | 378 | 777 | 725 | 4,725 |
| Wholesalers and Importers | 3 | - | - | - | 3 | 32 | 2 | - | - | 36 | 17 | 49 | 4 | - | - | 52 | - | - | - | 0 | - | - | - | - | 107 |
| Large retail general food stores | 16 | - | - | 18 | 34 | 37 | 7 | 3 | 3 | 50 | 36 | 42 | 26 | - | - | 68 | 26 | - | - | 26 | 48 | 21 | 69 | 17 | 300 |
| Small retail general food stores | 183 | 19 | - | - | 202 | 209 | 1 | - | 1 | 211 | 133 | 179 | 32 | 20 | 1 | 231 | 311 | 93 | 1 | 405 | 223 | 79 | 302 | 111 | 1,596 |
| Shops | 20 | 4 | - | 3 | 27 | 53 | - | - | 3 | 56 | 23 | 45 | - | 4 | - | 49 | 48 | - | - | 48 | 50 | 3 | 53 | 19 | 275 |
| Restaurants | - | 1 | 1 | - | 2 | - | - | 2 | - | 2 | - | 1 | - | - | - | 35 | - | 63 | - | 63 | - | - | 0 | 0 | 123 |
| Vegetable shops | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 16 | - | 4 | 63 | 67 | - | - | 0 | 0 | 126 |
| Local food product shops | - | 22 | - | - | 22 | 21 | - | - | - | 21 | - | - | 16 | - | - | 16 | - | 4 | 63 | 67 | - | - | 0 | 0 | 126 |
| Food shops attached to residence | 19 | - | - | 135 | 154 | 14 | 18 | 14 | 23 | 69 | 29 | 14 | - | - | - | 14 | 59 | - | - | 59 | 51 | 31 | 82 | 529 | 936 |
| Stands | - | - | - | - | 0 | - | - | - | 3 | 3 | - | - | 25 | - | - | 25 | - | - | - | 0 | - | - | 0 | 0 | 28 |
| Fruit stands | - | - | - | - | 0 | - | - | - | - | 9 | 6 | 10 | - | 1 | - | 11 | 10 | 1 | - | 11 | 14 | - | 14 | 4 | 56 |
| Grilled meat snack bar | 1 | - | - | - | 1 | 9 | - | - | - | 9 | 6 | 10 | - | 1 | - | 11 | 10 | 1 | - | 11 | 14 | - | 14 | 4 | 56 |
| Fresh, Frozen and dried fish stands | - | 13 | 14 | - | 27 | - | - | 22 | - | 22 | 1 | - | - | 8 | 62 | 70 | - | 88 | - | 88 | - | 61 | 61 | 7 | 276 |
| Ice Cream stands | - | - | - | - | 0 | - | - | 0 | - | 0 | - | - | - | - | - | 0 | - | - | - | 0 | - | - | - | - | 0 |
| Tables | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Sidewalk vegetable tables | 17 | 35 | 38 | - | 90 | 20 | 30 | - | - | 50 | 1 | - | 76 | 20 | 69 | 167 | 6 | 138 | - | 144 | - | 172 | 172 | 26 | 695 |
| Sidewalk tables of flour and cous-cous | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | 13 | 8 | 21 | - | 11 | - | 11 | - | 6 | 6 | 0 | 38 |
| Sidewalk date and fruit tables | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 8 | 8 | - | - | 1 | 1 | - | 2 | 2 | 9 | 20 |
| Sidewalk tables of cola nuts | 11 | - | - | - | 11 | 3 | - | - | - | 3 | 9 | 14 | 3 | - | 2 | 19 | 1 | 8 | - | 9 | 1 | - | 1 | 1 | 25 |

Table 5.1 (continued)

Commercial Businesses in the Non-Structured Sector of Southcott
by Ward and by Product Sold, 1980

| | Ward I | | | | Ward II | | | | Ward III | Ward IV | | | | Ward V | | | Ward VI | | Ward VII | Total | | | | | |
|---|---------|-------------|--------------|------|-----------|---------|-------------|--------------|-------------|-----------|---------|---------|----------------|-----------------|-------------|-----------|---------|-------------|-------------|-------|-----------|---------|-------------|-----------|------|
| | Central | Main Market | Small Market | Keba | Sub-total | Central | Main Market | Market No. 2 | Taxi Market | Sub-total | Central | Central | Capitol Market | Charcoal Market | Fish Market | Sub-total | Central | Main Market | Salt Market | | Sub-total | Central | Keba Market | Sub-total | Keba |
| <u>Vendors</u> | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 4 | 4 | - | 3 | - | 3 | - | 3 | 3 | - | 10 |
| Buttermilk vendors | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 4 | 4 | - | 3 | - | 3 | - | 3 | 3 | - | 10 |
| Vendors of traditional foods | - | - | - | - | 0 | - | - | - | 5 | 5 | - | 1 | - | - | 6 | 7 | - | 48 | - | 50 | 11 | 11 | 11 | - | 73 |
| Ice Cream vendors | - | - | - | - | 0 | 1 | - | - | - | 1 | 2 | 2 | 3 | - | 2 | 7 | - | - | - | 0 | 1 | 1 | 1 | - | 11 |
| Hardware (\$500-Total) | 3 | 5 | 0 | 0 | 8 | 22 | 2 | 0 | 11 | 35 | 1 | 39 | 28 | 1 | 0 | 68 | 15 | 41 | 0 | 56 | 21 | 6 | 27 | 0 | 195 |
| Large wholesale and retail of construction and kitchen hardware | - | - | - | - | 0 | 9 | - | - | - | 9 | 1 | 15 | 4 | 1 | - | 20 | - | - | - | 0 | - | - | 0 | - | 30 |
| Retail shop of small inexpensive utensil and hardware items | 1 | 5 | - | - | 6 | - | 2 | - | - | 2 | - | - | - | - | 0 | 0 | - | 23 | - | 23 | - | 5 | 5 | - | 36 |
| Sidewalk table of kitchen utensils | - | - | - | - | 0 | - | - | - | - | - | - | - | - | - | 0 | 0 | - | 6 | - | 6 | - | 1 | 1 | - | 7 |
| Vendor of traditional stoves | - | - | - | - | 0 | - | - | - | - | - | - | 24 | - | - | 24 | 24 | - | 1 | - | 1 | - | - | 0 | - | 25 |
| Retail shops of construction materials | - | - | - | - | 0 | - | - | - | - | - | - | - | - | - | 0 | 0 | - | 9 | - | 9 | - | - | 0 | - | 9 |
| Retail shops of material for wood-work | - | - | - | - | 0 | - | - | - | - | - | - | - | - | - | 0 | 0 | 1 | 1 | - | 2 | - | - | 0 | - | 2 |
| Mattress sales | - | - | - | - | 0 | - | - | - | - | - | - | - | - | - | 0 | 0 | - | 1 | - | 1 | - | - | 0 | - | 1 |
| Large stores selling primary construction materials | - | - | - | - | 0 | - | - | - | - | - | - | 21 | - | - | 21 | 21 | - | - | - | 0 | - | - | 0 | - | 21 |
| Automobile parts store | 2 | - | - | - | 2 | 13 | - | - | 11 | 24 | - | 3 | - | - | 3 | 3 | - | - | - | 14 | 21 | - | 21 | - | 64 |

Commercial Businesses in the Non-Structured Sector of Nouakchott
by Ward and by Product Sold, 1980

Table 5.1 (continued)

| | Ward I | | | | Ward II | | | | Ward III | Ward IV | | | | | Ward V | | | Ward VI | | Ward VII | Total | | | | | |
|--|---------|-------------|--------------|------|-----------|---------|-------------|--------------|-------------|-----------|---------|---------|----------------|-----------------|-------------|-----------|---------|-------------|-------------|-----------|-------|---------|-------------|-----------|------|-------|
| | Central | Main Market | Small Market | Keba | Sub-total | Central | Main Market | Market No. 2 | Taxi Market | Sub-total | Central | Central | Capitol Market | Charcoal Market | Fish Market | Sub-total | Central | Main Market | Salt Market | Sub-total | | Central | Keba Market | Sub-total | Keba | |
| Bookstore and Paper Supply (Sub-Total) | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 8 | 5 | 13 | 0 | 0 | 18 | 0 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 35 |
| Large store | - | - | - | - | 0 | - | - | - | - | 0 | 1 | - | 2 | - | - | 2 | - | - | - | 0 | - | 0 | - | - | - | 3 |
| Arabic books and religious articles | - | - | - | - | 0 | 4 | - | - | - | 4 | - | - | 9 | - | - | 9 | - | 5 | - | 5 | - | - | - | - | - | 18 |
| Magazine and used book stand | - | - | - | - | 0 | - | - | - | - | 0 | 7 | 5 | 2 | - | - | 2 | - | - | - | 0 | - | - | - | - | - | 14 |
| Clothing; De and Miscellaneous (Sub-Total) | 0 | 42 | 5 | 0 | 47 | 13 | 105 | 8 | 41 | 167 | 20 | 29 | 774 | 25 | 28 | 836 | 1 | 624 | 92 | 717 | 0 | 8 | 0 | 8 | 112 | 1,927 |
| Large store selling imports-importer, wholesale and retail | - | - | - | - | 0 | 4 | 3 | - | - | 7 | - | 16 | 19 | - | - | 35 | - | - | 34 | 34 | - | - | - | - | - | 76 |
| Small shop selling imports only | - | - | - | - | 0 | - | - | - | - | 0 | 14 | - | 16 | - | - | 16 | - | - | 54 | 54 | - | - | - | - | - | 84 |
| Large cloth store-importer/wholesale and retail | - | - | - | - | 0 | - | - | - | - | 0 | - | - | 45 | - | - | 45 | - | - | - | 0 | - | - | - | - | - | 45 |
| Small cloth shop-retail only | - | - | - | - | 0 | 4 | 33 | - | - | 37 | 1 | 2 | 43 | - | 4 | 45 | - | 37 | 3 | 40 | - | 1 | 1 | 1 | 1 | 129 |
| Shoe store | - | - | - | - | 0 | - | 1 | - | - | 1 | - | 1 | - | - | - | 1 | - | - | - | 0 | - | - | - | - | - | 2 |
| Record store | - | - | - | - | 0 | - | - | - | - | 0 | - | 1 | 1 | - | - | 2 | 1 | 1 | - | 2 | - | - | - | - | - | 4 |
| Shoe stand | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | 22 | - | 22 | - | - | - | - | - | 22 |
| Women's clothes stand(Melakfa) | - | - | - | - | 0 | - | - | - | - | 0 | - | - | 12 | 25 | - | 37 | - | - | - | 0 | - | - | - | - | - | 41 |
| Cloth stand | - | - | - | - | 0 | - | 34 | - | - | 34 | - | - | 153 | - | - | 153 | - | - | - | 20 | - | - | - | - | - | 223 |
| Sidewalk table for cloth | - | - | - | - | 0 | - | - | - | 3 | 3 | - | - | 7 | - | - | 7 | - | - | 1 | 168 | - | - | - | - | - | 178 |

Table 5.1 (continued)
Commercial Businesses in the Non-Structured Sector of Noukchott
by Ward and by Product Sold, 1980

| | Ward I | | | | Ward II | | | Ward III | Ward IV | | | | Ward V | | | Ward VI | Ward VII | Total | | | | | | | | |
|---|---------|-------------|--------------|------|---------|---------|-------------|--------------|-------------|-------|---------|---------|----------------|-----------------|-------------|---------|----------|-------|-------------|-------------|-------|---------|-------------|-------|-------|-----|
| | Central | Main Market | Small Market | Keba | Total | Central | Main Market | Market No. 2 | Taxi Market | Total | Central | Central | Capitol Market | Charcoal market | Fish Market | Total | Central | | Main Market | Salt Market | Total | Central | Keba Market | Total | Keba | |
| Sidewalk costume jewelry table | - | 41 | 5 | - | 46 | - | 20 | 2 | - | 22 | - | - | 225 | - | 5 | 230 | - | 190 | - | 190 | - | - | - | 0 | 90 | 578 |
| Jewelry store | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | 8 | - | 8 | - | - | - | 0 | 8 | |
| Sidewalk table of de-lux imported items | - | - | - | - | 0 | - | 4 | - | 1 | 5 | - | 114 | - | - | - | 114 | - | 58 | - | 58 | - | 6 | 6 | 6 | 184 | |
| Sidewalk table of used clothing | - | 1 | - | - | 1 | 5 | - | 6 | - | 11 | - | 9 | 18 | - | 19 | 46 | - | 59 | - | 59 | - | 1 | 1 | 1 | 118 | |
| Sidewalk table of shoes | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | 2 | - | 2 | - | - | - | 0 | 2 | |
| Vendors of watches and sunglasses | - | - | - | - | 0 | - | - | - | 0 | 0 | 5 | 11 | - | - | - | 11 | - | 2 | - | 2 | - | - | 0 | 0 | 18 | |
| Vendors of clothing | - | - | - | - | 0 | - | 10 | - | 37 | 47 | - | 110 | - | - | - | 110 | - | 58 | - | 58 | - | 0 | 0 | 0 | 215 | |
| Miscellaneous Products (Sub-Total) | 65 | 40 | 14 | 61 | 180 | 111 | 24 | 18 | 10 | 163 | 124 | 232 | 144 | 37 | 60 | 473 | 267 | 162 | 1 | 430 | 207 | 11 | 218 | 663 | 2,251 | |
| Stand of cigarettes, etc. | 45 | 11 | 8 | 20 | 84 | 91 | 5 | 5 | 5 | 106 | 111 | 181 | 11 | 8 | 27 | 227 | 158 | 109 | 1 | 268 | 153 | 3 | 156 | 277 | 1,229 | |
| Charcoal importer, wholesale & retail | - | - | 5 | 3 | 8 | - | - | 1 | - | 1 | - | 20 | - | 23 | - | 43 | 53 | - | - | 53 | - | 5 | 5 | - | 110 | |
| Charcoal-retail only | 20 | 5 | - | 34 | 59 | 20 | - | - | - | 20 | 13 | - | - | 4 | 4 | 36 | - | 2 | - | 38 | 53 | 3 | 56 | 318 | 508 | |
| Sidewalk sellers of skins and mats | - | 2 | - | - | 2 | - | 4 | - | - | 4 | - | - | 22 | - | - | 22 | - | 9 | - | 9 | - | - | - | - | 37 | |
| Salvage from the ocean | - | - | - | - | 0 | - | - | - | - | 0 | - | - | 62 | - | - | 62 | - | 7 | - | 7 | - | 7 | - | - | 69 | |
| Sidewalk tables of traditional Black African beuty products | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | 6 | 4 | 10 | - | 9 | - | 9 | - | - | - | - | 19 | |
| Sidewalk tables of local and imported traditional art objects | - | - | - | - | 0 | - | - | - | - | 0 | - | 17 | - | - | - | 17 | - | - | - | 0 | - | - | - | - | 17 | |
| Sidewalk tables of wooden tooth brush sticks | - | - | - | - | 0 | - | 1 | - | - | 1 | - | 7 | 5 | - | 3 | 15 | - | 5 | - | 5 | - | 5 | - | - | 21 | |
| Miscellaneous vendors | - | 22 | 1 | 4 | 27 | - | 14 | 12 | 5 | 11 | - | 7 | 44 | - | 22 | 73 | 20 | 31 | - | 1 | - | - | - | - | 241 | |
| Total Commerce Sector | 338 | 181 | 72 | 217 | 808 | 508 | 200 | 97 | 100 | 565 | 410 | 662 | 1,146 | 129 | 305 | 2,322 | 1,746 | 1,334 | 158 | 2,238 | 627 | 403 | 1,050 | 1,500 | 9,138 | |

Table B-1 (continued)

By Ward and by District 1950

| | Ward I | | | | | Ward II | | | | | Ward III | | | | | Ward IV | | | | | Ward V | | | | | Ward VI | | | | | Total | | | | | |
|-----------------------------------|--------|----|----|----|-----|---------|----|---|---|-----|----------|-----|-----|----|----|---------|-----|-----|----|-----|--------|----|-----|-----|-------|---------|----|----|----|----|-------|----|----|----|----|----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | | 31 | 32 | 33 | 34 | 35 |
| MANUFACTURING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hood | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Woodwork and carpentry | 10 | 5 | - | 4 | 19 | 15 | - | - | - | 15 | 4 | 18 | - | 5 | 1 | 24 | 23 | 23 | - | 46 | 15 | 4 | 19 | 14 | 141 | | | | | | | | | | | |
| Hood and metal work combined | 1 | - | - | - | 1 | 10 | - | - | - | 10 | 6 | 4 | - | - | - | 4 | - | - | - | 0 | - | - | - | - | 21 | | | | | | | | | | | |
| Metal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Metal work and welding | 2 | - | - | - | 2 | 14 | - | - | - | 1 | 15 | 1 | 7 | - | - | 7 | 3 | - | - | 3 | 1 | 1 | 1 | 1 | 29 | | | | | | | | | | | |
| Artisan metal work | 21 | 5 | - | - | 26 | 6 | 3 | - | - | 9 | 3 | 3 | 3 | 1 | - | 4 | 22 | - | - | 22 | 7 | 1 | 1 | 1 | 71 | | | | | | | | | | | |
| Artisan aluminum foundry | - | - | - | - | 0 | 5 | - | - | - | 5 | - | 2 | - | - | - | 4 | 9 | 3 | - | 12 | - | - | - | - | 31 | | | | | | | | | | | |
| Traditional stoves manufacture | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 5 | 5 | - | 5 | - | 5 | - | - | - | 10 | | | | | | | | | | | |
| Artisan workshop | - | - | - | 1 | 1 | - | - | - | - | 0 | - | - | - | - | - | - | - | - | - | 0 | - | - | - | 3 | 21 | | | | | | | | | | | |
| Cloth | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dyeing | - | - | - | - | 0 | 1 | 1 | - | - | 2 | 29 | 18 | - | - | - | 18 | 11 | - | - | 11 | 13 | - | - | - | 124 | | | | | | | | | | | |
| Machine embroidery | - | - | - | - | 0 | 2 | - | - | - | 2 | 2 | 3 | - | - | - | 3 | - | - | - | 0 | - | - | - | - | 5 | | | | | | | | | | | |
| Hand embroidery | - | - | - | - | 0 | - | - | - | - | 0 | - | 109 | - | - | - | 109 | - | - | - | 0 | - | - | - | - | 109 | | | | | | | | | | | |
| Tailor shop | - | - | - | - | 0 | 19 | - | - | - | 19 | 13 | - | - | - | - | 0 | 43 | - | - | 43 | - | - | - | - | 75 | | | | | | | | | | | |
| Sewing machine operator | 1 | 2 | - | 4 | 7 | 20 | 80 | - | - | 100 | 27 | 16 | 200 | 48 | 9 | 273 | 10 | 157 | 2 | 169 | 1 | 4 | 5 | 4 | 585 | | | | | | | | | | | |
| Traditional weaving | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | 0 | - | - | - | - | 2 | | | | | | | | | | | |
| Tent manufacture | - | - | - | 14 | 14 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | 0 | - | - | - | - | 28 | | | | | | | | | | | |
| Straw | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Straw mattress manufacture | - | - | - | - | 0 | 1 | - | - | - | 1 | - | - | - | - | - | 0 | 3 | - | - | 3 | - | - | - | - | 4 | | | | | | | | | | | |
| Straw mats manufacture | 2 | - | - | 2 | 4 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | 0 | 2 | - | - | - | 21 | | | | | | | | | | | |
| Leather | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leather products manufacture | - | - | - | 4 | 4 | 4 | 2 | 4 | - | 10 | 4 | 8 | 4 | 1 | 3 | 16 | 6 | 15 | 1 | 22 | - | - | - | - | 59 | | | | | | | | | | | |
| Tanning | - | - | - | 8 | 8 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0 | 1 | - | - | - | 17 | | | | | | | | | | | |
| Food | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Flour mill | 10 | - | - | 1 | 11 | 9 | 2 | - | - | 11 | 7 | 9 | - | 18 | 1 | 28 | 8 | 4 | - | 12 | 7 | - | - | - | 76 | | | | | | | | | | | |
| Cookie shops | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | 0 | - | - | - | - | 2 | | | | | | | | | | | |
| Bakeries | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | 0 | - | - | - | - | 2 | | | | | | | | | | | |
| Butcher shops | - | 17 | 11 | - | 28 | - | 9 | 5 | - | 14 | - | - | 19 | 6 | 14 | 39 | 5 | 56 | - | 61 | - | - | 30 | 8 | 180 | | | | | | | | | | | |
| Other | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Jeweler | - | - | - | - | 0 | 1 | - | - | - | 1 | 11 | 24 | - | 16 | - | 40 | 11 | 1 | - | 12 | 8 | - | - | - | 72 | | | | | | | | | | | |
| Lipolstery | - | - | - | - | 0 | 5 | - | - | - | 5 | 3 | 3 | - | - | - | 3 | 3 | - | - | 3 | 3 | - | - | - | 13 | | | | | | | | | | | |
| Brick manufacturing | - | - | - | - | 22 | - | - | - | - | 22 | 3 | 6 | - | - | - | 6 | 5 | - | - | 5 | 10 | - | - | - | 46 | | | | | | | | | | | |
| Total Manufacturing Sector | 47 | 29 | 11 | 38 | 125 | 136 | 97 | 9 | 1 | 241 | 109 | 230 | 225 | 95 | 35 | 585 | 163 | 264 | 3 | 430 | 66 | 41 | 107 | 144 | 1,741 | | | | | | | | | | | |

Construction Businesses in the Non-Structured Sector of Soukhehert by Ward and by Trade 1980

| CONSTRUCTION a/ General construction labor contractors | Ward I | | Ward II | | | | Ward III | Ward IV | | | | Ward V | | | Ward VI | Ward VII | Total | | | | | | | | |
|--|---------|-------------|--------------|------|-------|---------|-------------|--------------|-------------|-------|---------|---------|----------------|-----------------|-------------|-------------|-------|---------|-------------|-------------|-------|---------|-------------|-------|------|
| | Central | Main Market | Small Market | Keba | Total | Central | Main Market | Market No. 2 | Taxi Market | Total | Central | Central | Capitol Market | Charcoal Market | Fish Market | Total | | Central | Main Market | Salt Market | Total | Central | Keba Market | Total | Keba |
| Electricity contrac- tors | - | - | - | - | 0 | 1 | - | - | - | 1 | 1 | - | - | - | - | 0 | - | - | - | 0 | - | - | 0 | - | 1 |
| Plumbing contractors | - | - | - | - | 0 | 1 | - | - | - | 1 | 1 | - | - | - | - | 0 | - | - | - | 0 | - | - | 0 | - | 2 |
| Painting contractors | - | - | - | - | 0 | 1 | - | - | - | 1 | 0 | 5 | - | - | - | 5 | - | - | - | 0 | - | - | 0 | - | 6 |
| <u>Total Construction Sector</u> | | | | | 0 | 3 | | | | 3 | 2 | 5 | | | 5 | | | | | 0 | | | 0 | 1 | 11 |

a/Only shops and workyards with an exterior sign or other identification were counted. Many other independent workers with their own tool shops exists but could not be located.

Table 1. Business Services in the Metropolitan District of Washington, D.C., by Ward and by Activity, 1980

| Services | Ward I | | | | Ward II | | | Ward III | Ward IV | | | | Ward V | | | Ward VI | | | Ward VII | Ward Total | | | | | |
|-------------------------------------|---------|-------------|--------------|------|-----------|---------|--------------|-------------|-----------|---------|---------|----------------|-----------------|-------------|-----------|---------|-------------|-------------|-----------|------------|---------|-------------|-----------|------|-----|
| | Central | Main Market | Small Market | Keba | Sub-total | Central | Market No. 2 | Taxi Market | Sub-total | Central | Central | Capitol Market | Charcoal Market | Fish Market | Sub-total | Central | Main Market | Salt Market | Sub-total | | Central | Keba Market | Sub-total | Keba | |
| Personal | 29 | 1 | - | 3 | 33 | 71 | - | - | 1 | 72 | 48 | 56 | - | - | 56 | 78 | - | - | 78 | 74 | 5 | 79 | 25 | 391 | |
| Laundry | 1 | - | - | - | 1 | - | - | - | 0 | 0 | 5 | - | - | - | 5 | 1 | - | - | 1 | - | - | 0 | 0 | 7 | |
| Driving School | 2 | 3 | - | - | 5 | 9 | 1 | - | 10 | 9 | 21 | - | - | - | 21 | 2 | 19 | - | 21 | 1 | - | 1 | 3 | 70 | |
| Barber | 0 | 0 | - | - | 0 | 0 | - | - | 0 | 0 | 2 | 5 | 1 | - | 0 | 1 | - | - | 0 | 1 | 1 | 0 | 2 | 2 | |
| Beautician | 1 | - | - | - | 1 | 5 | - | - | 5 | 2 | 5 | 1 | - | - | 6 | 1 | - | - | 1 | 1 | 1 | 0 | 1 | 16 | |
| Photographer | - | - | - | - | 0 | - | - | - | 0 | 0 | 0 | - | - | - | 0 | 0 | 3 | 1 | 4 | - | 0 | 0 | 1 | 5 | |
| Photographer Framer | - | - | - | - | 0 | 1 | - | - | 1 | 1 | - | 9 | - | - | 3 | - | - | - | 0 | - | - | 0 | 0 | 10 | |
| Shoeshine Boy | - | - | - | - | 0 | - | - | - | 0 | 0 | 6 | - | - | - | 6 | - | - | - | 0 | - | - | 0 | 0 | 6 | |
| Traditional Dentist | - | - | - | - | 0 | - | - | - | 0 | 0 | - | - | - | - | 0 | - | - | - | 0 | - | - | 0 | 0 | 6 | |
| Repair | 2 | 4 | - | 1 | 7 | 5 | 3 | - | 8 | 13 | 3 | 1 | 3 | - | 7 | 16 | 4 | - | 20 | 15 | 3 | 18 | 9 | 82 | |
| Radio Repair | 1 | - | - | - | 1 | 1 | - | - | 2 | 2 | 2 | - | - | - | 2 | - | - | - | 0 | - | - | 0 | 0 | 5 | |
| Soldering | - | 1 | - | - | 1 | 2 | - | - | 3 | 1 | 4 | - | - | - | 4 | - | - | - | 0 | - | - | 0 | 0 | 9 | |
| Refrigerator and stove repair | - | - | - | - | 0 | 0 | - | - | 0 | 0 | 0 | - | - | - | 0 | - | - | - | 0 | - | - | 0 | 1 | 1 | |
| Gas refrigerator repair | - | - | - | - | 0 | 2 | - | - | 2 | 2 | 1 | - | - | - | 1 | - | - | - | 0 | - | - | 0 | 0 | 3 | |
| Business machine repair | - | - | - | - | 0 | 0 | - | - | 0 | 0 | 1 | - | - | - | 0 | 1 | - | - | 1 | - | - | 0 | 0 | 1 | |
| Sewing machine repair | - | - | - | - | 0 | - | - | - | 0 | 0 | 1 | - | - | - | 0 | 1 | - | - | 0 | - | - | 0 | 0 | 1 | |
| Electrical installations and repair | 16 | - | - | 4 | 20 | 57 | - | - | 57 | 4 | 5 | - | - | - | 1 | - | - | - | 0 | 0 | 0 | 0 | 0 | 1 | |
| Garage | - | - | - | - | 0 | - | - | - | 0 | 0 | 1 | - | - | - | 1 | - | - | - | 0 | - | - | 0 | 0 | 1 | |
| Car repair | - | - | - | - | 0 | - | - | - | 0 | 0 | 1 | 2 | - | - | 0 | 1 | - | - | 0 | - | - | 0 | 0 | 7 | |
| Motorbike repair | 1 | - | - | - | 1 | - | - | - | 0 | 1 | 2 | - | - | - | 2 | - | - | - | 0 | - | - | 0 | 3 | 7 | |
| Bicycle repair | - | - | - | 1 | 1 | - | - | - | 0 | 0 | 0 | - | - | - | 0 | - | - | - | 0 | - | - | 0 | 0 | 1 | |
| Tire repair | 4 | - | - | - | 4 | 25 | - | - | 26 | 2 | 3 | 2 | - | - | 5 | 9 | 1 | - | 10 | 6 | - | 6 | 4 | 57 | |
| Watch repair | - | - | - | - | 0 | 7 | - | - | 7 | 2 | 7 | 11 | 1 | - | 19 | 1 | 11 | - | 12 | - | - | 0 | 2 | 42 | |
| Eyelasses repair | - | - | - | - | 0 | 1 | - | - | 1 | - | - | 1 | - | - | 1 | - | 1 | - | 1 | - | - | 0 | 0 | 3 | |
| Signs | - | - | - | - | 0 | - | - | - | 0 | 1 | - | - | - | - | 0 | - | - | - | 0 | - | - | 0 | 0 | 1 | |
| Sign making and decoration | - | - | - | - | 0 | - | - | - | 0 | 1 | - | - | - | - | 0 | - | - | - | 0 | - | - | 0 | 0 | 1 | |
| Sign lettering | - | - | - | - | 0 | - | - | - | 2 | - | - | - | - | - | 0 | - | - | - | 0 | - | - | 0 | 0 | 2 | |
| Total Service Sector | 57 | 9 | 0 | 9 | 75 | 123 | 4 | 0 | 4 | 196 | 83 | 121 | 25 | 4 | 0 | 150 | 131 | 40 | 1 | 172 | 123 | 8 | 131 | 55 | 862 |

The city contains eleven marketplaces. Within them are found 5,030 businesses, 43% of the total non-structured sector. Table 5.2 shows the distribution of those enterprises among the markets and by types of businesses. The main market in the Fifth Ward and the Central Market next to the downtown area are by far the largest in the number of business.

The markets appear to be quite fluid in terms of the businesses located there. Major changes in individual proprietors and in the mix types of businesses and products sold, occur frequently. Although no statistics could be kept, one of the fascinations of the past year has been the personal observations of changes in the market places. A phenomenon which is more recent than the RAMS census and which is still occurring at the time of writing, is the major shift of businesses to several marketplaces including an open-air covered market with concrete stalls just east of the gardens which specializes in cloth and traditional jewelry, on the dunes area just south of the Moroccan mosque, and a new one on the dunes west of the Ksar. It appears that these are businesses relocations rather than new businesses.

The "central areas" are the main areas of the city. ie., those parts of the city outside the markets which consists of permanent family residential areas. As indicated in Table 5.3, 4,753 businesses are found throughout these area, 40% of the total. In many cases business and the home are part of the same building, with the store or workshop in the front opening onto the street with the family living in the back or upstairs.

In terms of distribution, there is a higher amount of services in the central areas and somewhat lower distribution of commerce. Ten of the eleven nonstructured sector construction firms identified were found in the central areas.

Table 5.2

Markets of Nouakchott by Number of Businesses, 1980.

| <u>Market</u> | <u>Number of Businesses</u> |
|---------------------------------------|-----------------------------|
| Main market: Fifth Ward | 1,590 |
| Capital market: downtown, Fourth Ward | 1,393 |
| Keba market: Sixth Ward shanty town | 499 |
| Fish market: Fourth Ward | 342 |
| Main market: Ksar, Ward 11 | 301 |
| Charcoal market: Fourth Ward | 228 |
| Main market: First Ward | 219 |
| Salt market: Fifth Ward | 162 |
| Market No. 2: Second Ward | 106 |
| Taxi market: First Ward | 83 |
| | <hr/> |
| Total | 5,023 |

Table 5.3

Type of Businesses of the Non-Structured Sector in the
Central Areas of Nouakchott 1980

| Sector | Wards | | | | | | Total |
|---------------|-------|-----|-----|-------|-------|-----|-------|
| | I | II | III | IV | V | VI | |
| Services | 37 | 188 | 83 | 121 | 131 | 123 | 703 |
| Manufacturing | 47 | 134 | 109 | 230 | 163 | 66 | 749 |
| Commerce | 338 | 508 | 410 | 662 | 746 | 627 | 3,291 |
| Construction | 0 | 3 | 2 | 5 | 0 | 0 | 10 |
| Total | 442 | 833 | 604 | 1,047 | 1,081 | 824 | 4,753 |

...79...

On the periphery of major parts of the city are vast shanty towns called Keba, consisting of tents and wooden shacks and inhabited by recent arrivals to the city and relatives of land speculators. No population figures are available for this area and guesses vary widely, but it is probably safe to say at least a third of the population of Nouakchott lives there.

At first glance, the area appears to be just a bedroom community, contributing unskilled workers and unemployed to the part of the city. Closer inspection reveals an extensive active internal economy of 2,416 enterprises. Of all the businesses of the non-structured sector, 20% of them are located in the keba area. Most of the businesses are quite small, usually with one person or part of a family involved. By far (80%) ~~the most establishments~~ are in commerce. There are also 223 manufacturing enterprises including, for example, cloth dyeing, tent manufacturing, and butcher shops. (See Table 5.4)

5.3 Economic Sectors

All of the businesses, enterprises, and economic activities were classified by economic sector. Of the 9 sectors classified in the 1977 population census, only 4 were included in RAMS non-structured sector census viz:

Table 5.4

Types of Businesses of the Non-Structured Sector of Nouakchott, by Economic Sector and by Central Market and Keba Sections of the City

| | Central | | Market ^{a/} | | Keba ^{a/} | | Total | | % Distribution |
|------------------------|---------|----|----------------------|----|--------------------|----|--------|-----|----------------|
| | No. | % | No. | % | No. | % | No. | % | |
| Services | 703 | 6 | 95 | b/ | 64 | b/ | 862 | 15 | |
| Manufacturing | 749 | 6 | 810 | 7 | 182 | 2 | 1,741 | 15 | |
| Commerce | 3,291 | 28 | 4,125 | 35 | 1,717 | 15 | 9,133 | 78 | |
| Construction | 10 | b/ | 0 | 0 | 1 | b/ | 11 | b/ | |
| Total and Distribution | 4,753 | 40 | 5,030 | 43 | 1,964 | 17 | 11,747 | 100 | |

a/ The keba market is included in the market column and excluded from the Keba column.

b/ Less than 1%.

Comparison of Economic Sectors used in the 1977 Census of Population
with the 1980 RAMS Census of the Non-Structured Sector

| <u>Population Census Classification of Economic Sectors</u> | <u>Economic Sector Included in Non- Structured Sector Census</u> |
|---|--|
| 1. Agriculture | -- |
| 2. Extractive Industries | -- |
| 3. Modern Manufacturing | -- |
| 4. Artisan/Craft Manufacturing | Manufacturing |
| 5. Construction and Public Works | Construction |
| 6. Commerce, Restaurants and Hotels | Commerce (including restaurants) |
| 7. Transport and Communications | -- |
| 8. Government and Financial Services | -- |
| 9. Household and Business Services | Personal and Business Services |

Of the five sectors not included in the nonstructured census, extractive, modern manufacturing and government and financial services are excluded by definition. Urban commercial gardens and ocean-going traditional fishermen were excluded because of the limitation of time and means and because agricultural production and fishing are the subjects of other RAMS studies.

In transportation, taxis and horse-drawn carriages could not be included. It was not possible to devise a method of counting them in the time available.

A total of 862 enterprises were located in the services sector. By far the largest single group were laundries (391). Other services with significant numbers of enterprises included barbers (70), radio repair (82), garages (133), tire repair (57) and watch repair (42). The detailed presentation of the services sector is found in Table 5.1. All occupations require a skill of some kind; some are rather simple (eg., cart repair), while others are much more sophisticated (eg., refrigeration or watch repair). No study of the method of skill acquisition was made but, given the almost total lack of any formal or even non-formal training program in these occupations, it can be supposed that skills were acquired primarily through on-the-job experience or perhaps some type of apprenticeship. This assumption strongly suggests the advisability of initiating training programs to up-grade the skills and productivity of these workers. This also demonstrates that there are workers with a minimum amount of training capable of learning such skills and making a living through them. This also suggests that there is a pool of workers with modern skills working under difficult conditions who apparently have the motivation and capacity to work in more technically complex industries.

It is also important to note that at least 862 people in this sector are small, independent businessmen or businesswomen who have been able to put together sufficient capital to start a business and have been able to keep it going. This spirit and skill of entrepreneurship should definitely be encouraged.

It is clear from the number and variety of enterprises, dynamic and variable, found in this sector that they contribute significantly to the economy. There is evidently a demand for these services. For the most part, capital requirements are low, consisting of tools and a shop. The major input is the skill and labor of the individual. As the economy grows and becomes more complex and sophisticated, the demand for most of these services will also grow. Although individual firms are insignificant in terms of employment potential, as a group they demand attention.

Given the size of the sector, its potential for growth of employment opportunities, and the low cost of providing inputs and encouragements, the non-structured sector is an area which should receive priority in a human resources strategy.

By far the largest number of enterprises identified were in the business of buying and selling -- some 9,133 commercial establishments representing 78% of the total were counted.

It is debatable whether some of the larger stores belonged in the modern sector. On the one hand, they had a large inventory, but on the other hand, they had very few employees. The final decision in each case was admittedly judgmental.

The commercial sector is so vast and varied that it was necessary to sub-divide it into categories for presentation purposes:

1. Food
2. Hardware
3. Bookstores and paper supply
4. Cloth and deluxe items
5. Miscellaneous

Since the food category itself was so large, it was further sub-divided into sub-categories by approximate size of firm,:

1. Stores
2. Small shops
3. Stands (waist-high with legs)
4. Sidewalk tables (sellers sitting on the ground with a small flat box in front of him/her.
5. Vendors (sellers moving from one location to another carrying merchandise).

In other categories, similar distinction by size were also made.

Of the various kinds of commercial establishments, one of the most frequently encountered is the small convenience store ("petite boutique") which primarily carries food items but also includes a variety of other small items frequently used in a household. There were 1,595 identified throughout the city except for market places. A similar but smaller shop, attached to or part of a residence was numerous (936) and were found particularly in the keba area. A large number (695) of sidewalk sellers of vegetables

are counted. These are readily identified as women who spread a variety of products over a smaller area on the ground in front of them.

Other numerically important types of food sales included larger retail general food stores (3000), traditional restaurants (275), fish seller (276), and shops usually found in marketplaces selling vegetables (123) or local food products (126).

It should be noted that butchers, bakers, and cookie shops were all included under manufacturing (food) processing rather than in commerce.

Besides food, there are a lesser but still significant number of stores carrying a variety of hardware items. Automobile parts, construction materials and assorted hardware items including kitchen utensils seem to predominate. In this category 195 stores and vendors were counted, Only 35 establishments were counted selling books, magazines, and assorted religious literature and articles. Sidewalk tables of assorted traditional articles such as bead and other jewelry, henna, pipes, etc., occupied 578 women, all of them in markets or the keba. Various kinds of cloth and clothing sales are also important. Vendors selling T-shirts on the street, stores of imported cloth, traditional and western clothing, even used western clothing, shoes, sunglasses, jewelry, all of these account for the major part of the 1,927 establishments in that category.

The miscellaneous category is larger with 2,251 stores and vendors. The roadside stands with a variety of goods such as cigarettes and matches, cookies, etc., make up 1,229 of this group. Another 618 merchants sell charcoal. Skins, mats, ocean salvage, traditional art, beauty products, and the wooden stick "tooth brushes" altogether add up to more than 150 sellers. Finally, 241 vendors of a variety

of products were counted walking along the streets.

It is obvious that commerce in the nonstructured sector is an important source of employment. Assuming conservatively two-employees-per-enterprise there are more people working as vendors in this one sector than there are in the entire modern sector. In the normal course of events, as the economy expands in terms of gross sales and variety of products, the need for additional vendors would increase. However, the limiting factor for commerce is not the supply of products but rather the demand for them; this in turn, depends on the amount of disposable income available with which to buy these additional products.

On the other hand, caution is needed with respect to "redundant" commerce. The situation in which one person buys a product, and then, without adding anything to its value in terms of convenience, availability, packaging, etc., resells it to another person at even higher price and so on. While this may appear to be "employment creation" because more people are involved, in reality it is merely a form of redistribution of income; it contributes little or nothing to production and detracts from the efficiency of the sector.

Despite its limitations, the nonstructured sector is large and should not be overlooked in employment planning. A significant proportion of the labor force is already engaged in this area, and the number is almost certain to increase. Not only does it represent existing employment, it also represents a pool of available human resources which has skills in selling and many also have experience in various aspects of the managements of their own business. These are skills which should be further enhanced and which should be utilized in the most effective manner possible.

The importance of artisanal manufacturing is frequently overlooked. One tends to think in terms of large, modern factories and dismiss as unimportant anything less than that. That artisan manufacture is extensive and dynamic is evident from this census. A total of 1,741 enterprises were identified. Artisans are working with wood, metal, cloth, straw, leather, food, precious metals, upholstery material, cement, etc., and producing, improving and selling variety of products using different techniques, processes and tools and employing a wide variety of skills. This represents an important labor supply and stock of human resources.

Numerically the most important occupations in this sector are the sewing machine operators (585) and tailors (75). Over a third are in these two occupations. Other important activities include woodwork and carpentry (41), cloth dyeing (124) hand embroidery (69) jewelers (72) various metal workers (156), tent manufacture (28), aluminum foundry (21) straw mats (21), leather products (59), brick manufacturing (46) etc. (Table 5.1).

One of the disappointments of the census was that only eleven construction businesses were located. This apparent under-reporting may be explained by two factors. It is probably true that most construction companies were large and have at least five employees, hence were included in the modern sector. Of the remainder, most of them are apparently independent craftsmen who work by job contract but do not have an identifiable shop or workplace. That being the case it was difficult to locate them by going up and down individual streets. It is worth noting that Jourdain^{1/} experienced the same

1/ Robert Jourdain, Analyse Préliminaire des Résultats du Recensement de Système Non-Structuré à Nouakchott B.I.T. 1977.

problem in attempting to count this group in 1977.

Those contractors identified included electricians, plumbers painters and general contractors.

Despite the paucity of information about this group, it is clear that there is an opportunity for a considerable amount of employment creation in this sector. The need for adequate, low-cost housing for the thousands of newly arrived residents is obvious. Because of the low income levels of those residents, the most inexpensive materials and methods would have to be used, suggesting nonstructured sector contractors, rather than large sophisticated and expensive modern contractors.

The need for urban public work infrastructure is also obvious. Water lines, sewage systems, roads, and electricity all need to be installed. Given budget limitations of the national government, low-cost nonstructured sector contractors, perhaps with volunteers of a neighborhood cooperative system, may be the best way to meet these needs.

The demand is obvious, as are the opportunities for expansion of employment; the biggest block is figuring out how to pay for such activities.

5.4 Existing Labor Supply

No attempt was made to measure the number of employees in each enterprise. Until a survey is conducted which specifically counts employees, no estimate of current employment in this sector can be provided.

Merely for the purpose of suggesting possible orders of magnitude, Table 5.5 shows simple calculations of five alternatives with assumed employee per enterprise ratios ranging from 1 to 5.

5.5. Educational Level and Apprenticeship Training

The International Labor Organization conducted a special survey of Nouakchott's informal business sector in 1977^{1/}. It concentrated on the trade of woodworking, metal working, electrical repair, refrigeration repair and construction which it saw as having a potential in respect to economic development and employment generation. The survey results contained interesting findings with respect to the educational and training background of these specific groups and of the method of formation and instruction of apprentices. It indicates that somewhat less than half (46.7%) had some experience with the formal school system (primary or secondary schools) while the rest had no instruction (22.1%) or had attended Koranic schools (31.2%). Specifically, 9.2% had 1-3 years of primary schooling, 17.6% had 4-6 years of primary schooling, and 7.6% had obtained the certificate from primary schools. (Table 5.6)

There were notable differences among the sub-sectors. Thus, "no instruction" was 32.1% in the production category. Secondary education was highest in construction at 24.3% and lowest in production at 7.2% and services at 8.2%

^{1/} "The "Modern" Non-Structured Sector of Nouakchott", Survey Findings and Analysis", by Georges Nihan with David Dvir and Robert Jourdain, Jan. 1978.

Table 5.5

Estimates of Numbers of Workers in the Non-Structured
Sector of Nouakchott, 1980

| <u>Assumed Number of Workers per</u> <u>Enterprise</u> | <u>Approximate Total Number of</u> <u>Workers in the 11,747</u> <u>Enterprises</u> |
|---|--|
| 1 | 12,000 |
| 2 | 23,000 |
| 3 | 35,000 |
| 4 | 47,000 |
| 5 | 58,000 |

Table 5.6

Level of Education of the Entrepreneurs in the
Informal Business Sector , by Activity 1977

| Level of Education | Activity | | | Total |
|---------------------------|----------|----------|--------------|-------|
| | Artisans | Services | Construction | |
| No instruction | 32.1 | 21.1 | 8.1 | 22.1 |
| Alpha. + Koranic School | 26.8 | 23.5 | 45.9 | 31.2 |
| 1-3 yrs. Primary School | 8.9 | 13.2 | 5.5 | 9.2 |
| 4-6 yrs. Primary School | 12.5 | 26.1 | 16.1 | 17.6 |
| Cert. Primary School | 12.5 | 7.9 | - | 7.6 |
| 1-4 yrs. Secondary School | 3.6 | 2.6 | 16.2 | 6.9 |
| Sec. Inf. Gen. Tech. | 3.6 | 5.6 | - | 3.1 |
| Sec. Sup. Gen. | - | - | 8.2 | 2.3 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Source: International Labor Office, The "Modern Non-Structured Sector of Nouakchott, Jan. 1978 . p. 124

...93...

The average duration of the instruction was 2.7 years among the entrepreneurs. For those who had gone through the formal school system (excluding those with no instruction and with Koranic education), the average duration was 5.8 years. It was highest in construction at 7.0 years and 5.3 years in services.

Still another interesting finding is the relative youth of these entrepreneurs when they started - 21.8 years. There was little difference between the sectors. They had an average of 11 years of being in business ranging from 8.5 years in the services, 11.3 years in production, and 13.2 years in construction.

The importance of the apprenticeship system in the informal business sector is indicated by the extent to which these entrepreneurs themselves had experienced apprenticeship training and the extent to which apprenticeship programs were installed in their own establishments. Most of the enterprises in the sample had themselves gone through an apprenticeship program in the informal sector and 25% had done the same in the modern sector. The balance had gone through a professional institute (5%) or had no training at all (12%). For those who had obtained their training in the modern sector, (12%) construction was highest (48.6%). This is evidently the other side of the coin - the relatively low figure for apprenticeship training in the construction sub-sector.

The importance of the apprenticeship system is indicated by the fact that 53.4% of the enterprises sampled had apprentices. The percentages was higher in production and services than in construction: 66.1%, 71.1% and 16.2%, respectively. More than 50% of the entrepreneurs had a personal hand in instructing the apprentices, and they spent about 10% of their time at it.

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It is clear that the apprenticeship system is the most common way of imparting knowledge and training in the non-structured sector. The average length of time of an apprenticeship program is 4.5 years in the informal sector and 3.0 years in the modern sector.

5.6 Traditional Rural Sector

By far the largest number of workers in the economy are engaged in rural/traditional occupations. In addition to the some 445,000 people who follow a nomadic way of life, there are almost 200,000 rural sedentary workers engaged in a variety of occupations: almost all of them in the traditional occupations of farming, herding, commerce, handicrafts, or fishing. Despite low levels of literacy among these workers, there is an extensive network of diverse skills at various levels of proficiency. Many of these workers have learned their skills through family instruction and observation and through direct participation in the work. This also includes working under the supervision of other artisans. The well-known system of on-the-job training (with its well-deserved reputation for achieving results in the modern sector) is indigenous and natural in the rural setting and in the traditional occupations.

The knowledge and skills of this group is one of the most important reservoirs of human resources available to the country. The development of this resource could be the key to the economic development of the country and to the improvement of social conditions.

The processes by which these workers obtain their skills, the type and extent of skills they have available, and the possibilities for transferring these skills to other economic endeavors are all issues which have not been well understood. In an effort to fill

this gap, a "skills and qualification survey" of these five occupations, plus housewives in the rural sector was conducted. The survey also obtained information on the effectiveness of the system in providing additional formal and nonformal education to these occupation groups. The findings of the survey are reported separately in Volume III.

The results of that survey present a picture of the available skills of this essential component of the manpower supply. In addition, the interested reader should refer to RAMS studies on the social organization of agriculture, irrigated agriculture, rain-fed agriculture, livestock, oasis agriculture, inland fishing, and coastal fishing. Each of these includes discussions of the manpower supply as it relates to the relevant agricultural occupation.

The situation with respect to level of education and training among artisans throughout the country is also not encouraging.

The crafts included in the survey sample of 181 artisans in 23 villages (excluding the 8th Region of Nouadhibou and the 11th Region of Inchiri) were smiths, jewelrymakers, shoemakers, carpenters, weavers, and woodworkers. The method by which they learned their craft was very informal indeed, about half indicating that they learned by observing their parents and/or by working with them. About 20% learned as apprentices. The prevalence of apprenticeships is uneven geographically and appears to be common in the following Regions: 1st (Eastern Hodh), 5th (Brakna), 10th (Guidimakha), and 12th (Tiris Zemmour) and less in the 4th (Gorgol), the 7th (Adrar) and the 9th (Tagant).

When apprenticeships exist, a test may be used by the master artisan for qualifying the apprentice.

On the whole, however, the traditional rural crafts are held back by an inability to obtain credit, tools and adequate raw materials. The survey also indicated that few artisans are members of cooperatives, or other organizations capable of assisting members through training, marketing or purchasing of material.

Chapter 6

Current School Population

This section deals with those who are currently in public school. By definition, students are inactive and outside of the labor force. The next section will project the current school populations to show the impact these students will have on the labor force as they become active members of it. The educational delivery systems, formal and non-formal, will be discussed in detail in Volumes II and III of this report. Complete statistical information on the formal school system is provided in the 46 Appendices to Volume II. The presentation of the present school population in this Volume is therefore limited to three summary tables.

As seen in the discussions of the rural/traditional occupations, most of the existing manpower supply was trained by traditional family practical training rather than in the formal public school system. That is still the case of the estimated 1980 school age population (6-12 years) of 299,800 children, only 85,000 (28%) were in school. Of the 189,100 youths (13-18 years) only 17,000 (9%) were in school. Thus there are 214,700 children age 6-12 and 172,000 youths age 13-18 who are not in school, and who constitute an important component of the existing labor force. Many are already apprentices, regular employees or family workers.

During the school year 1979-1980, approximately 85,000 students were enrolled in primary school. The distribution of enrolled students by grade level and by region is presented as Table 6.1.

During the same period over 17,000 students were enrolled in secondary school: 12,402 were in the first cycle and 4,742 are in the second cycle: 80% of them are male. Every region has secondary school students.

Only 5% of the 12 regions have a second cycle. 40% of all secondary students are in Nouakchott. Data are presented as Table 6.2.

The number of university students studying abroad is increasing rapidly. In the school year 1979-1980, 2,745 were reported studying in 31 different countries, an increase of over 300% since 1976-1977. The importance of this small, currently inactive component of the manpower supply, is obvious. A list of the number of students by country is presented as Table 6.3. Current information regarding subjects being studied was not made available. However, Volume II, Appendix 40, gives a breakdown to six fields of studies (and "others") for the 874 students abroad in the year 1977-1978.

Table 6.1

Estimated Primary School Enrollment for the School
Year 1979-1980 by Region and by Grade Level

(number = number of students)

| Region | 1st Year | 2nd Year | 3rd Year | 4th Year | 5th Year | 6th Year | Reported Total ¹ | Estimated Total |
|------------------|----------|----------|----------|----------|----------|----------|-----------------------------|-----------------|
| Hodh Charghi | 805 | 1,224 | 1,128 | 1,095 | 686 | 738 | 5,666 | 5,600 |
| Hodh Charbi | 794 | 1,119 | 931 | 851 | 605 | 711 | 5,011 | 5,309 |
| Assaba | 769 | 1,099 | 728 | 928 | 487 | 669 | 4,680 | 4,674 |
| Gorgol | 1,476 | 1,062 | 1,155 | 1,433 | 780 | 1,266 | 8,655 | 8,877 |
| Brakna | 1,419 | 1,596 | 1,696 | 1,491 | 1,266 | 1,167 | 8,655 | 8,877 |
| Taraka | 2,001 | 1,612 | 1,490 | 1,857 | 1,712 | 1,461 | 10,153 | 13,035 |
| Zouar | 664 | 726 | 931 | 893 | 700 | 522 | 4,436 | 4,898 |
| Bakel Nouadhibou | 737 | 856 | 659 | 506 | 401 | 509 | 3,668 | 3,839 |
| Togant | 577 | 812 | 809 | 601 | 681 | 487 | 3,967 | 3,781 |
| Galdimaka | 440 | 878 | 953 | 619 | 337 | 494 | 3,721 | 3,744 |
| Tiris Zemmour | 738 | 352 | 634 | 525 | 311 | 306 | 2,866 | 2,844 |
| Labiri | 311 | 256 | 307 | 207 | 230 | 227 | 1,558 | 1,550 |
| Labouchott | 3,769 | 3,231 | 3,151 | 3,054 | 2,534 | 3,266 | 19,005 | 18,865 |
| Total National | 14,518 | 14,823 | 14,572 | 14,060 | 10,730 | 11,624 | 80,327 | 85,141 |

Source: Aggregated from individual statistical questionnaire by individual schools.
Over 50 of the 543 school failed to submit a completed questionnaire.

Source: Estimate by the Technical Counselor to the Ministry of Primary and Secondary Education.

Table 6.2

Secondary School Enrollment for the School Year
1979 - 1980 by Region and by Class Level

| Region | First Cycle | | | | Second Cycle | | | | Total |
|-----------------------|--------------|--------------|--------------|-------------------|--------------|--------------|--------------|--------------------|---------------|
| | 1st Year | 2nd Year | 3rd Year | Total First Cycle | 4th Year | 5th Year | 6th Year | Total Second Cycle | Secondary |
| Hodh Chargi | 322 | 161 | 167 | 650 | - | - | - | - | 650 |
| Hodh Gharbi | 339 | 220 | 172 | 731 | 277 | 162 | 73 | 512 | 1,243 |
| Assaba | 335 | 174 | 111 | 620 | - | - | - | - | 620 |
| Gorrol | 495 | 252 | 212 | 959 | 191 | 154 | 224 | 569 | 1,528 |
| Brakna | 499 | 234 | 260 | 993 | - | - | - | - | 993 |
| Trarza | 1,001 | 549 | 433 | 1,983 | 312 | 188 | 137 | 637 | 2,620 |
| Adrar | 710 | 236 | 201 | 1,147 | 160 | 65 | 17 | 242 | 1,389 |
| Daklet Nouadhibou | 201 | 119 | 43 | 363 | - | - | - | - | 363 |
| Agant | 240 | 119 | 97 | 456 | - | - | - | - | 456 |
| Guidimaka | 123 | 65 | 42 | 230 | - | - | - | - | 230 |
| Fatick Senegale | - | - | - | - | - | - | - | - | - |
| Lochiri | 141 | 56 | - | 197 | - | - | - | - | 197 |
| Nouakchott | 1,918 | 1,158 | 947 | 4,023 | 1,072 | 821 | 889 | 2,782 | 6,805 |
| Total National | 6,374 | 3,343 | 2,685 | 12,402 | 2,012 | 1,390 | 1,340 | 4,742 | 17,144 |

Table 6.3

University Scholarship Students Studying Abroad During School Year 1979 - 1980 by Country in which Studying

| Arab Countries | :No. of Students: | Non-Arab African Countries | :No. of Students: | Europe | :No. of Students: |
|----------------|-------------------|----------------------------|-------------------|---------------------------|-------------------|
| Morocco | 870 | Senegal | 157 | France | 140 |
| Iraq | 634 | Ivory Coast | 36 | USSR | 233 |
| Tunisia | 74 | Mali | 5 | Romania | 45 |
| Saudi Arabia | 164 | Upper Volta | 3 | Bulgaria | 26 |
| Syria | 50 | Gabon | 6 | Spain | 22 |
| Libya | 75 | Cameroon | 1 | Poland | 6 |
| Kuwait | 60 | Zaire | 1 | Portugal | 20 |
| Egypt | 24 | Togo | 2 | Belgium | 4 |
| Qatar | 20 | Total | 211 | West Germany | 21 |
| Total | 1,971 | | | Great Britain | 1 |
| | | | | Yugoslavia | 1 |
| | | Americas | | Total | 519 |
| | | Canada | 40 | | |
| | | U.S.A | 3 | | |
| | | Total | 43 | Grand total all students: | 2,744 |

Chapter 7

Projected School Population

7.1 Projected School Outputs

Previous chapters have discussed in detail the existing educational levels of the population, and the labor force, and summarized the present school population.

This Chapter projects the primary and secondary school population to the year 2,000. See Annex A for the methodology employed.

7.2 Constraints

Three methodological problems need to be noted at the outset. First, the data base for public schools generally is accurate only for up to three years. That is too short a period from which to make adequate projections. Indications are furthermore that the education situation is changing and expanding rapidly. Initial projections, using the very high current rates of change, quickly ran out of school-age populations. The current rate of increase in enrollments, if continued unabated, means that before 1992 all school age children would be in school. Given constraints of costs, and lack of teachers, that is a very unlikely event. Therefore, lower and more realistic rates of growth were used. The result is an estimation based on our judgment of reasonable growth rates. It should be used as a basis for discussion rather than as blueprint of what will be.

The second matter involves labor force participation rates. No data exist to indicate the percentage of school dropouts and graduates which enter the labor force. Presumably some who exit from the

education system become inactive. That can be supposed to be the case, for example, of significant numbers of females and of younger males, and perhaps of some older males. The labor force participation rates found in the census are not sufficiently detailed to be indicative here. The assumption was made that 100% of those exiting the school system, as dropouts or as graduates (who do not continue their education) will immediately enter the labor force.

Thirdly, is the lack of adequate information and historical data for the technical/professional education and the university level education. The data base is so feeble that only general projection for university education were possible.

7.3 Primary School Graduates and Dropouts

It is estimated that the annual number of graduates entering the labor force from 1977 to 2000, from primary school, increase six-fold and those dropping out will increase seven-fold.

In absolute terms, annual dropouts increase from 1,522 to 11,245 while the graduates not going on to secondary school increase from 3,218 to 21,983. This corresponds with enrollment increases from 59,452 to 345,436 and with increases of graduates going on to secondary school from 1,486 to 12,050.

Whereas in 1977 somewhat less than 5,000 new entrants to the labor force came with some primary education (ranging from 1st grade dropout to primary graduate) by the year 2000 the number entering with at least some primary school education will have increased to over 33,000.

If these trends do in fact occur from 1977 to 2000, about 147,329 dropouts and 281,820 graduates, or a total of 428,000 former primary school students will enter the labor force. The data are presented Table 7.1.

7.4 Secondary General Education Graduates and Dropouts

The increase in the number of secondary graduates is even more dramatic because of the higher rates of increase used. From a negligible output of 189 BAC degree holders (high school graduates) in 1978, the projection indicates that the annual output will increase to 12,059 by the year 2000.

Whether or not funds can be, or will be, made available for such an increase is unknown. The lack of qualified teachers could be overcome by continuing to import expatriate teachers. A greater constraint is the lack of physical plant facilities and buildings and the lead time and money to construct them.

If in fact these projections were to materialize, 278,450 former secondary students entering the labor force (immediately or after further education) during that 23 year period, will have a major impact on the structure and characteristics of the labor force.

It should be noted that at the present time, almost all students who receive the BAC (including some unsuccessful candidates) do not immediately enter the labor force. They eventually enter programs of advanced education either in Mauritania or abroad. That of course does not lessen their impact on the labor force; it merely delays their entry into it.

Projections of the secondary enrollments and outputs are presented as Table 7.2

Table 7.1
Projections of Annual Primary School Enrollments, Dropouts, Graduates entering the Labor Force, and Graduates continuing on to Secondary School, by Grade Level, and by Year (1977-2000)

| Year | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Total Graduate but not going to se- condary | Total of grad- uate going on to second- | Total Primary School | Drop- outs | |
|---------------------------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|--|--|----------------------------|---------------|--|
| Class | 1st Grade | 2nd Grade | 3rd Grade | 4th Grade | 5th Grade | 6th Grade | | | | | | | | | | | | | | | |
| 76-77 | 15,674 | 44 | 13,840 | -226 | 8,775 | 525 | 7,714 | 309 | 7,920 | 301 | 5,519 | 423 | 569 | 3,216 | 1,486 | 59,452 | 1,522 | | | | |
| 77-78 | 17,241 | 48 | 15,290 | -299 | 13,544 | 810 | 18,506 | 341 | 7,602 | 289 | 6,455 | 423 | 666 | 3,488 | 1,878 | 72,183 | 1,855 | | | | |
| 78-79 | 18,966 | 53 | 16,827 | -318 | 15,460 | 925 | 12,525 | 502 | 8,153 | 310 | 6,277 | 494 | 847 | 3,338 | 1,798 | 78,208 | 2,119 | | | | |
| 79-80 | 20,862 | 58 | 18,511 | -350 | 17,086 | 1,022 | 14,808 | 594 | 11,993 | 433 | 6,683 | 481 | 689 | 3,583 | 1,930 | 89,343 | 2,446 | | | | |
| 80-81 | 22,948 | 64 | 20,362 | -385 | 18,806 | 1,125 | 16,540 | 665 | 13,823 | 525 | 9,179 | 512 | 946 | 5,149 | 2,772 | 101,658 | 2,928 | | | | |
| 81-82 | 25,243 | 71 | 22,397 | -423 | 20,689 | 1,237 | 18,249 | 732 | 15,661 | 595 | 11,218 | 703 | 1,157 | 6,083 | 3,275 | 113,457 | 3,369 | | | | |
| 82-83 | 27,136 | 76 | 24,637 | -466 | 22,756 | 1,361 | 20,086 | 805 | 17,962 | 660 | 12,772 | 859 | 1,317 | 6,887 | 3,977 | 124,749 | 3,753 | | | | |
| 83-84 | 29,171 | 82 | 28,319 | -535 | 24,932 | 1,491 | 22,095 | 886 | 19,134 | 727 | 14,175 | 978 | 1,461 | 7,628 | 4,108 | 137,826 | 4,112 | | | | |
| 84-85 | 31,359 | 88 | 28,769 | -544 | 28,615 | 1,711 | 24,322 | 975 | 21,055 | 800 | 15,461 | 1,086 | 1,613 | 8,412 | 4,530 | 149,761 | 4,643 | | | | |
| 85-86 | 33,711 | 94 | 30,722 | -581 | 29,494 | 1,764 | 27,614 | 1,107 | 23,175 | 881 | 17,215 | 1,198 | 1,775 | 9,258 | 4,985 | 161,931 | 5,040 | | | | |
| 86-87 | 36,239 | 101 | 33,001 | -624 | 31,359 | 1,875 | 28,923 | 1,106 | 26,165 | 994 | 18,948 | 1,319 | 1,454 | 10,189 | 10,189 | 174,635 | 5,460 | | | | |
| 87-88 | 38,051 | 107 | 35,473 | -670 | 33,644 | 2,012 | 30,673 | 1,230 | 27,786 | 1,056 | 21,355 | 1,451 | 2,202 | 11,506 | 5,665 | 186,982 | 5,937 | | | | |
| 88-89 | 39,954 | 112 | 37,347 | -706 | 36,155 | 2,162 | 32,843 | 1,317 | 29,475 | 1,120 | 22,773 | 1,636 | 2,348 | 12,213 | 6,012 | 198,547 | 6,353 | | | | |
| 89-90 | 41,952 | 117 | 39,228 | -741 | 38,160 | 2,282 | 35,272 | 1,414 | 31,505 | 1,197 | 24,166 | 1,744 | 2,492 | 12,955 | 6,976 | 210,613 | 6,761 | | | | |
| 90-91 | 44,05 | 123 | 41,191 | -779 | 39,106 | 2,339 | 37,339 | 1,497 | 33,805 | 1,285 | 25,817 | 1,851 | 2,662 | 13,848 | 7,456 | 221,308 | 7,127 | | | | |
| 91-92 | 46,253 | 130 | 43,250 | -817 | 41,998 | 2,510 | 38,481 | 1,543 | 35,877 | 1,363 | 27,693 | 1,978 | 2,855 | 14,859 | 8,001 | 233,542 | 7,584 | | | | |
| 92-93 | 48,565 | 136 | 45,613 | -858 | 44,087 | 2,635 | 40,405 | 1,620 | 37,671 | 1,431 | 29,354 | 2,121 | 3,026 | 15,724 | 8,483 | 254,495 | 7,990 | | | | |
| 93-94 | 50,993 | 143 | 47,684 | -901 | 46,292 | 2,767 | 42,425 | 1,701 | 39,554 | 1,503 | 30,821 | 2,243 | 3,178 | 16,403 | 8,992 | 257,788 | 8,391 | | | | |
| 94-95 | 53,543 | 150 | 50,068 | -946 | 48,606 | 2,906 | 44,546 | 1,786 | 41,532 | 1,578 | 32,363 | 2,360 | 3,337 | 17,225 | 9,441 | 270,658 | 8,811 | | | | |
| 95-96 | 56,220 | 158 | 52,571 | -993 | 51,037 | 3,051 | 46,774 | 1,876 | 43,609 | 1,657 | 33,981 | 2,479 | 3,503 | 18,085 | 9,914 | 284,192 | 9,252 | | | | |
| 96-97 | 59,031 | 165 | 55,200 | -1,043 | 53,588 | 3,203 | 49,112 | 1,969 | 45,789 | 1,740 | 35,680 | 2,602 | 3,679 | 18,990 | 10,409 | 298,400 | 9,713 | | | | |
| 97-98 | 61,982 | 174 | 57,960 | -1,095 | 56,268 | 3,364 | 51,568 | 2,068 | 48,079 | 1,826 | 37,464 | 2,809 | 3,862 | 19,863 | 10,930 | 313,321 | 10,199 | | | | |
| 98-99 | 65,081 | 183 | 60,858 | -1,150 | 59,081 | 3,532 | 54,147 | 2,171 | 50,482 | 1,918 | 39,337 | 2,869 | 4,056 | 20,936 | 11,476 | 328,986 | 10,709 | | | | |
| 99-2000 | 68,395 | 192 | 63,901 | -1,207 | 62,035 | 3,708 | 56,854 | 2,280 | 83,007 | 2,014 | 41,304 | 3,013 | 4,298 | 21,983 | 12,050 | 345,436 | 11,245 | | | | |
| Total entering the labor force: | | | | | | | | | | | | | | | | | 281,820 | 147,329 | | | |

Table 7.2

Projections of Annual Secondary General Education Enrollments, Dropouts and Graduates by School Grade and by Year (1980-2001)

| Year | Class | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | Enroll- ments | Drop- outs | BAC | Enroll- ments | Drop- outs |
|--------------------------------|---------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|---------|------------------|---------------|
| t + 1 | 77-78 | 3,145 | 260 | 2,262 | 113 | 1,919 | 131 | 1,469 | 47 | 487 | 10 | 378 | 164 | 189 | 9,660 | 725 |
| t + 2 | 78-79 | 3,900 | 322 | 2,818 | 114 | 2,146 | 146 | 1,717 | 55 | 1,370 | 29 | 489 | 213 | 245 | 12,450 | 905 |
| t + 3 | 79-80 | 4,836 | 399 | 3,453 | 172 | 2,656 | 181 | 1,924 | 61 | 1,623 | 34 | 1,338 | 582 | 669 | 15,830 | 1,429 |
| t + 4 | 80-81 | 5,996 | 495 | 4,280 | 213 | 3,256 | 222 | 2,371 | 76 | 1,820 | 38 | 1,635 | 710 | 816 | 19,358 | 1,754 |
| t + 5 | 81-82 | 7,435 | 614 | 5,305 | 264 | 4,033 | 275 | 2,908 | 93 | 2,238 | 47 | 1,796 | 778 | 850 | 23,709 | 2,071 |
| t + 6 | 82-83 | 8,551 | 706 | 6,579 | 328 | 5,000 | 341 | 3,600 | 115 | 2,746 | 58 | 2,186 | 950 | 1,093 | 28,662 | 2,498 |
| t + 7 | 83-84 | 9,833 | 812 | 7,595 | 378 | 6,200 | 423 | 4,463 | 143 | 3,398 | 71 | 2,682 | 1,166 | 1,341 | 34,171 | 2,993 |
| t + 8 | 84-85 | 11,308 | 934 | 8,737 | 435 | 7,187 | 490 | 5,535 | 177 | 4,213 | 88 | 3,317 | 1,442 | 1,653 | 40,279 | 3,566 |
| t + 9 | 85-86 | 12,439 | 1,027 | 10,047 | 500 | 8,271 | 564 | 6,432 | 206 | 5,224 | 110 | 4,113 | 1,788 | 2,057 | 46,526 | 4,192 |
| t + 10 | 86-87 | 13,683 | 1,130 | 11,078 | 552 | 9,512 | 649 | 7,404 | 236 | 6,080 | 128 | 5,255 | 2,412 | 2,625 | 53,007 | 5,107 |
| t + 11 | 87-88 | 15,051 | 1,243 | 12,187 | 607 | 10,516 | 717 | 8,522 | 271 | 7,000 | 148 | 6,141 | 2,669 | 3,071 | 59,417 | 5,655 |
| t + 12 | 88-89 | 16,556 | 1,367 | 13,406 | 668 | 11,572 | 789 | 9,374 | 298 | 8,056 | 170 | 7,062 | 3,065 | 3,538 | 66,020 | 6,361 |
| t + 13 | 89-90 | 18,212 | 1,504 | 14,747 | 734 | 12,729 | 868 | 10,311 | 328 | 9,257 | 196 | 8,121 | 3,529 | 4,069 | 73,377 | 7,159 |
| t + 14 | 89-90 | 20,033 | 1,655 | 16,222 | 808 | 14,004 | 955 | 11,343 | 361 | 10,646 | 225 | 9,346 | 4,059 | 4,679 | 81,588 | 8,063 |
| t + 15 | 91-92 | 22,036 | 1,820 | 17,844 | 889 | 15,404 | 1,050 | 12,477 | 397 | 11,711 | 248 | 10,741 | 4,668 | 5,381 | 90,213 | 9,072 |
| t + 16 | 92-93 | 24,240 | 2,002 | 19,628 | 978 | 16,945 | 1,155 | 13,725 | 436 | 12,882 | 272 | 11,815 | 5,135 | 6,188 | 99,225 | 9,733 |
| t + 17 | 93-94 | 26,664 | 2,202 | 21,591 | 1,075 | 18,639 | 1,271 | 15,097 | 480 | 14,170 | 299 | 12,997 | 5,648 | 6,807 | 109,158 | 10,975 |
| t + 18 | 94-95 | 29,331 | 2,422 | 23,750 | 1,183 | 20,503 | 1,398 | 16,607 | 528 | 15,587 | 329 | 14,296 | 6,213 | 7,487 | 120,074 | 12,073 |
| t + 19 | 95-96 | 32,263 | 2,664 | 26,126 | 1,301 | 22,553 | 1,538 | 18,268 | 581 | 17,145 | 362 | 15,726 | 6,814 | 8,236 | 132,081 | 13,280 |
| t + 20 | 96-97 | 35,490 | 2,931 | 28,738 | 1,491 | 24,809 | 1,691 | 20,094 | 639 | 18,860 | 399 | 17,298 | 7,518 | 9,060 | 145,289 | 14,609 |
| t + 21 | 97-98 | 39,039 | 3,224 | 31,612 | 1,574 | 27,290 | 1,860 | 22,104 | 703 | 20,746 | 438 | 19,028 | 8,270 | 9,966 | 159,819 | 16,069 |
| t + 22 | 98-99 | 42,943 | 3,546 | 34,773 | 1,732 | 30,019 | 2,047 | 24,314 | 773 | 22,821 | 482 | 20,931 | 9,097 | 10,962 | 175,801 | 17,677 |
| t + 23 | 99-2000 | 47,237 | 3,901 | 38,251 | 1,905 | 33,121 | 2,251 | 26,746 | 850 | 25,103 | 530 | 23,024 | 10,006 | 12,059 | 193,382 | 19,443 |
| Total entering the labor force | | | | | | | | | | | | | | 103,041 | 175,409 | |

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Table 7.4

Projected Outputs from the Public School System,
by Type of Institution and by Five Year Periods 1980 - 2000

(Thousands)

| | <u>1977-80</u> | <u>1981-85</u> | <u>1986-90</u> | <u>1991-95</u> | <u>1996-2000</u> | <u>Total 1977/79-2000</u> |
|----------------------------|------------------|----------------|----------------|----------------|------------------|---------------------------|
| Primary School | | | | | | |
| Dropouts | 7.9 | 18.8 | 29.5 | 39.9 | 51.1 | 147.2 |
| Graduates | 13.6 | 34.1 | 56.1 | 78.0 | 99.8 | 281.6 |
| | <u>1978/9-80</u> | | | | | |
| Secondary General | | | | | | |
| Dropouts | 3.0 | 12.8 | 28.4 | 49.9 | 81.0 | 175.1 |
| BAC Graduates | 1.1 | 5.7 | 15.3 | 30.5 | 50.2 | 102.8 |
| | <u>1979-80</u> | | | | | |
| Secondary Technical | | | | | | |
| Dropouts and Graduates | less than 1 | 1.2 | 1.9 | 2.8 | 4.3 | 10.2 |
| Total | 25.6 | 72.6 | 131.2 | 201.1 | 286.4 | 716.9 |

7.7 Projected School Enrollments

The previous sections have examined the outputs of the school system in order to assess its impact on the labor force. Until they exit from the school system and begin producing and earning income, students are one of the most expensive parts of the dependent population and must be maintained by those who are working.

Based on the previously assumed growth rates of initial enrollments and of population, it is projected that school enrollments in primary school will increase from 26% of the school age population to 65% by the year 2000, while the percentage enrolled in secondary education increases from 5% to 54%. These data are presented as Tables 7.5 and 7.6.

7.8 Other Technical and Professional Education and Training Graduates

In addition to the public general and vocational school systems, there are sixteen other educational institutions which are, or soon will be, training students at various levels in a variety of technical and professional subjects. These have been described in some detail in other chapters. In this section an attempt is made to project future outputs of this group.

Accurate records of drop-outs, repeating and even enrollments, in some cases, have not been kept. It is therefore somewhat risky to make projections of outputs from schools and training centers. Table 7.7 (derived from Table 7.8), gives projected numbers of graduates from the country's professional and technical schools. Table 7.8 gives a broader range of data, including teacher-student ratios and levels of instruction.

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Table 7.5

Projected School Age Population 6-12, by Sex, Primary
School Enrollment and Percentage School Age Population
Enrolled (1977-2000)

| Year | Projected School Age Population (6-12) (000's) | | | Projected Enrollment in Primary Schools (000's) | Projected Percentage of School Age Population Enrolled in School |
|------|--|--------|-------|---|--|
| | Male | Female | Total | | |
| 1977 | 141.4 | 133.4 | 274.8 | 72.1 | 26 |
| 1980 | 154.3 | 145.5 | 299.8 | 101.6 | 33 |
| 1985 | 178.4 | 168.3 | 346.7 | 140.7 | 43 |
| 1990 | 205.7 | 194.0 | 399.7 | 210.6 | 52 |
| 1995 | 236.6 | 223.2 | 459.8 | 270.6 | 58 |
| 2000 | 271.7 | 256.4 | 528.1 | 345.4 | 65 |

Table 7.6

Projected School Age Population 13-18 by Sex, Secondary
School Enrollment, and Percentage School Population
Enrolled (1977-2000)

| Year | : Projected School Age Population (13-18) (000's) | | | : Projected Enrollment: Projected Percent- in Secondary School age of School Age (General only) (000's) Population Enrolled in School | |
|------|---|--------|-------|--|----|
| | Male | Female | Total | | |
| 1977 | 88.1 | 83.2 | 171.3 | 9.6 | 5 |
| 1980 | 97.3 | 91.8 | 189.1 | 15.8 | 8 |
| 1985 | 114.7 | 108.2 | 222.9 | 40.2 | 18 |
| 1990 | 134.6 | 126.9 | 261.5 | 73.3 | 28 |
| 1995 | 157.4 | 148.5 | 305.9 | 120.0 | 39 |
| 2000 | 183.4 | 173.2 | 356.6 | 193.3 | 54 |

Table 7.7

Projected Technical
and Professional School Outputs (1977-2000)

to suppress (number of Graduates)

| Education or Training Institution | :1977-1982: | 1977-1987 | :1977-1992 | : 1977-2000 |
|--|-------------|-----------|------------|-------------|
| Mamadou Toure | 512 | 1,223 | 1,734 | - |
| SNIM: Professional Training Centers | 1,000 | 2,000 | 3,000 | - |
| SNIM: CAFM | 280 | 560 | 840 | - |
| SNIM: CAPAT | 225 | 550 | 675 | - |
| SONELEC | 100 | 200 | 300 | - |
| CFPP | - | 1,575 | 3,150 | - |
| ENFVA | 95 | 190 | 285 | - |
| CFAT | 250 | 500 | 750 | - |
| ENECOFAS | 240 | 480 | 720 | - |
| ENA | 400 | 800 | 1,200 | - |
| ENI | 820 | 1,640 | 2,460 | - |
| ENS | 150 | 300 | 450 | - |
| CNFCJS | - | 250 | 500 | - |
| CESC | 875 | 1,750 | 2,625 | - |
| ENISF | - | - | - | + |
| Institut Soumare | 500 | 1,000 | 1,500 | - |
| Total | 5,447 | 13,018 | 20,189 | 35,000 |

+ Data unavailable

As seen in Table 7.7, over 35,000 graduates with various kinds of technical and professional skill are projected to enter the labor force between 1977 and the year 2000 given current enrollment rates. Unlike the primary and secondary systems, it can be assumed that the labor force participation rate of these graduates will in fact closely approach 100% because many of them are already under a working contract for a specific job as a condition of having their schooling provided.

7.9 University Students

The data indicate that in 1980 there were 2,744 university students studying in 30 countries (Table 6.3). Until a manpower planning system which reflects the country's development needs has been instituted, projections of the number of students by field cannot be made. At present, the projections could only be based on the number of scholarships anticipated. This important issue is discussed in Chapter 8: Towards a Human Resources Planning System in Mauritania.

Table 7.8

Summary Data and Cumulative Projections of Sixteen Technical and Professional Education and Training Institutions (1977-1992)

| Type of School | Number of Schools | Enrollments: 1979-80 | Number Specialization or levels | Number of Teachers | | Ratio Students/Teacher | Average No. Annual Diplomas or Workers Produced | Projected Output of Diplomas or Workers | | |
|---|---------------------|----------------------|---------------------------------|--------------------|----------|------------------------|---|---|--------------------|--------------------|
| | | | | Foreign | National | | | 1977-78 to 1981-82 | 1977-78 to 1986-87 | 1977-78 to 1991-92 |
| Technical | 1 lower ("collega") | 437 | 4 | 40 | 0 | 11/1 | | 143 ⁺ | 575 ⁺ | 1,282 ⁺ |
| High School | | 242 | 4 | 38 | 0 | 6/1 | | 51 ⁺ | 191 ⁺ | 396 ⁺ |
| Centre Mamadou Touré | 1 | 96 | 22 | 11 | 3 | 7/1 | 102 | 512 | 1,223 | 1,734 |
| Societe Nationale Industrielle et Miniere (SNIM): | | | | | | | | | | |
| - 1) Professional Training Centers | 2 | 400 | various, 2 levels | 20 | 4 | 17/1 | 200 | 1,000 | 2,000 | 3,000 |
| - 2) Apprentice and Skilled Worker Training Center (CAFN) | 1 | 163 | various 2 levels | 24 | 2 | 6/1 | 56 | 280 | 560 | 840 |
| National Utilities Company School (SONELEC) | 1 | 20 | various | 2 | 0 | 10/1 | 20 | 100 | 200 | 300 |
| Professional Training and Skilled Improvement Center (CFPP) | 1 | 105 | 6 | 0 | 13 | 8/1 | 315 | - | 1,575 | 3,150 |
| National Agricultural Training and Extension School (ENFVA) | 1 | 120 | 4 | 0 | 6 | 10/1 | 19 | 95 | 190 | 285 |
| Center for Carpet Weaving (CFAT) | 1 | 100 | 1 | ? | ? | ? | 50 | 250 | 500 | 750 |

* Base year = 1979-80.

Towards a System for Human Resources

Development in Mauritania

8.1 The System Concept

National human resources development can be viewed as a system for effective improvement of the actual and potential human resources of a country, and their rational utilization in accordance with the politically determined national objectives of the country. The elements of the system are its objectives, policies, organizations, plans, procedures, programs, projects and evaluation/feedback mechanism.

It should be emphasized that the system should be a continuous process, not a one-time production of a "plan". Even though such a plan document should be produced and periodically up-dated, it is only one, albeit an important, input into a continuous process of data gathering, analysis, decision-making and implementation.

The human resources planning element must be comprehensive. The planning should not to be done within one organization, but should integrate the efforts of all the ministries, especially those concerned directly with economic development. The planning should not be limited to upper- and middle-level government civil servants, but assist in establishing government policies and programs which address the problems of urban and rural employment and development of employment-related skills. Solutions to manpower training problems should not focus only on the formal educational system but include non-formal education, training on-the-job, and improved utilization of personnel.

8.2 Human Resources Development Experience in Africa

The beginning of comprehensive human resources development in Africa was the manpower planning programs of the 1960's. By the mid-1970's, the majority of sub-Saharan African countries had a manpower plan, often as part of the national development plan. Many such countries also had an organization devoted to the manpower planning activity, usually as part of the Ministry of Planning. One country, Tanzania, now has a Ministry of Manpower Development.

Although their manpower plans and planning units were primarily concerned with upper and middle-level manpower, some of the lessons learned are applicable to a comprehensive system. Some examples are:

8.2.1 In the typical government setting, although all ministries are concerned, four are continuously involved: Planning, Education, Civil Service, and Labor. Effective coordination among these, and with the other ministries and the private sector in developing and implementing the manpower plan, is essential to its success. An interministerial human resources development committee at the operating level has been found useful.

8.2.2 Experience in a number of countries in Africa has demonstrated the need for both a professional human resources unit and a broadly-based, high level, human resources committee for proper functioning of a human resources development system. The committee is used to establish or change policy and to arbitrate jurisdictional problems. It may meet infrequently but it represents the high-level governmental support which is essential.

8.2.3 The most difficult policy area concerns implementation of the manpower plan. The fundamental issue is whether or not a "manpower approach" is to be taken to human resources planning. A "manpower approach" raises crucial issues such as:

- limiting investments in secondary and higher education when not required by development;
- channeling students to fields of need by tight control of scholarships;
- expanding instruction in science and mathematics and relating this to scholarships, since persistent skill shortages have occurred in science/math-based professions.

8.2.4 A special and complex relationship exists between educational planning and manpower planning. Education has other purposes than training for employment and the linkage between the two cannot exclude other considerations. Educational planning is a specialized professional field with its own ethos and methodologies. Yet, educational policy and philosophy are the foundations of a human resources development plan, and close and frequent coordination between educational and manpower planning is vital to the success of both.

The basic distinction is that the educational planner is responsible for detailed planning of the formal school system--numbers of students in the educational streams, teacher/student ratios, curriculum, school locations, etc.; and the manpower planner is responsible for making certain that the educational system will produce the numbers and types of graduates (science-based, for example) needed by the plan, that adequate attention has been paid to training the numbers of teachers needed, and other factors which will affect the accomplishment of the manpower plan objectives. Both planners are concerned with the accuracy and completeness of the educational statistics data base.

8.3 The Opportunity for Systematic Human Resources Development in Mauritania

The four RAMS volumes in this series could give the country a strong impetus towards developing the breadth and depth of data needed for creating and maintaining a comprehensive human resources development (HRD) system. A decision could be made on the organizational responsibility for human

resources planning. A high level policy committee could be established. The RAMS volumes could be reviewed and decisions made concerning which surveys and data would become a part of the system. The experience of the Mauritians who have participated in the RAMS surveys and studies could be tapped for staffing a human resources planning unit.

The situation is ripe for creating an innovative HRD system. The magnitude of the problem is probably manageable. The necessity of addressing the basic needs of the majority of the population is accepted. These needs center on improved productive activities and in increasing numerative employment. RAMS work in Phase II will suggest courses of action in the various productive sectors. The human resources consequences of these alternatives can be reasonably determined. When the policy decisions are made, human resource programs and projects can be formulated to help achieve the production and human objectives. Most important of all, these programs do not have to be imposed from the top. Experience in the last decade of economic development has demonstrated the validity of broad participation in planning and in the use of local organizations and institutions in implementation.

In drawing this visionary picture we are aware of the very real constraints to success at every level. Accordingly, it is appropriate to conclude by two quotations from the Strategy and Programme for Drought Control in the Sahel, OECD, May, 1977:

"The team designing the economic production program, after recognizing that training was a bottleneck restraining the pace of development, tend, quite understandably, to consider that training should be provided on demand and should be significantly accelerated to meet needs identified for staff. However, training occurs at its own pace and not only involves policy decision but also sociological evolution. It would be deceiving to think that training can be given on demand at an imposed speed.

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Population dispersal, low population density, various natural conditions, life style and languages all work against massive participation by the rural dwellers. Information and ideas are poorly disseminated and communicated; there are many obstacles that, because of inadequate channels of communications and relatively underdeveloped mass media, cannot be easily overcome".

Appendix A

Methodology Used For Projecting Primary and Secondary
School Graduates, 1977 to Year 2000

The Following steps were taken to project the number of persons entering the labor force during each year 1977-2000 from the primary and general secondary school system and from the collège and Lycée Technique of Nouakchott.

1. Establish a base year for each grade where the actual student population is known:

$t = 1976-77$ for primary school populations;

$t = 1977-78$ for general secondary school populations;

$t = 1979-80$ for Collège and Lycée Technique populations.

2. Derive from these figures three specific movements (tracks) as outlined in Volume II (report on Formal Education) of this report:

a. promotion to following grade

b. not promoted, staying back one grade

c. not promoted, dropping out of school

3. Apply the percentage rates for three movements derived for each grade. (See appendices 14-bis, 20, 29 of Volume II.)

4. Beginning with the base year enrollment figures, calculate the actual number of students following one of the three tracks. Repeat calculations for each class and for each year $t + 1, t + 2, t + 3$). etc.

ex. For Collège Technique:

$$\begin{aligned}
 \text{Enrollment for } t+1 : \quad E_1 &= .14 C_{t+1} .16808 \\
 &\quad (.8609 C_1^t + .0903 C_2^t) + \\
 &\quad .0619 (.7343 C_2^t + .0515 C_3^t) + \\
 &\quad .1333 (.2474 C_2^t) + .6392 (C_3^t)
 \end{aligned}$$

5. Total the dropout number of each class (for école fondamentale, école secondaire, collège technique and lycée technique) plus those graduating with diplomas but not continuing in secondary. The sum for one year equals the population entering the labor force from the school system.
6. The yearly growth rate of first year students entering the first class of each type of school system is calculated as follows:
 - a. For "Ecole fondamentale":

Actual growth 1976-77 through 1978-79 then projected rates of 10% through 1981-82, 3.5% from 1982-83 through 1986-87, and 5% between 1987-88 to the year 2000.
 - b. For "Secondaire Général"

A calculated growth rate of 24% for first year students from 1979-80 through 1980-82, 15% between 1982-83 to 1984-85 and 10% between 1984-85 to the year 2000.
 - c. For Secondary Technical (1st cycle, Collège)

A straight growth rate of 10% based on first year students between 1975-76 and 1979-80.
 - d. For Secondary Technical (2nd cycle, Lycée)

A growth rate of 5.24% base on first year students between 1975-76 and 1979-80.

The following assumptions were made when calculating the number of ex-students entering the labor force.

- a. All dropouts entered the labor force as of January.
- b. All students CAP (Certificat d'Aptitude Professionnelle) after Collège Technique entered the labor force the year of graduation.
- c. Of those in the sixth year of primary school, 10.31% dropped out and entered the labor force. Of those who remain, 7.66% repeat. The 82.03% which are left obtain diplomas. Sixty-five percent of these enter labor force, and 35% go on to secondary education.
- d. The labor force participation rate of dropouts and graduates is assumed to be 100%, i.e., all students including females who dropout or graduate are assumed to immediately start looking for work and enter the labor force. It is necessary to make this assumption until such time as actual data on labor force participation rates of existing students are established.