

BIBLIOGRAPHIC DATA SHEET

1. CONTROL NUMBER

2. SUBJECT CLASSIFICATION (G95)

PN-AAK-307

AE 30-0000-G324

3. TITLE AND SUBTITLE (240)

Land tenure, income, and employment in rural Haiti; a survey

4. PERSONAL AUTHORS (100)

Zwekas, Clarence

5. CORPORATE AUTHORS (101)

USDA/ERS

6. DOCUMENT DATE (110)

1976

7. NUMBER OF PAGES (120)

130p.

8. ARC NUMBER (170)

338.1Z96

9. REFERENCE ORGANIZATION (130)

USDA/ERS

10. SUPPLEMENTARY NOTES (500)

(In Working Document Series; Haiti, General Working Document # 2)

11. ABSTRACT (950)

BP

12. DESCRIPTORS (920)

Haiti  
rural areas  
land tenure  
employment

rural development

land distribution  
income distribution  
unemployment  
migrations  
government policies

13. PROJECT NUMBER (150)

—

14. CONTRACT NO. (140)

unknown

15. CONTRACT TYPE (140)

16. TYPE OF DOCUMENT (160)

*[Handwritten initials]*

338.1  
296

PN-AAK-307

WORKING DOCUMENT SERIES

HAITI

GENERAL WORKING DOCUMENT #2

LAND TENURE, INCOME, AND EMPLOYMENT  
IN RURAL HAITI: A SURVEY

Clarence Zuvekas, Jr.

Sector Analysis Internalization Group  
International Development Staff  
U.S. Department of Agriculture

March 1978 (Revised)

Rural Development Division  
Bureau for Latin America  
Agency for International Development

WORKING DOCUMENT SERIES: HAITI

GENERAL WORKING DOCUMENT #2

LAND TENURE, INCOME, AND EMPLOYMENT  
IN RURAL HAITI: A SURVEY

Clarence Zuvekas, Jr.

Sector Analysis Internalization Group  
International Development Staff  
U.S. Department of Agriculture

March 1978 (Revised)

Secretarial Assistance

Mary T. Carter  
María E. Reed

**BEST AVAILABLE DOCUMENT**

This document does not bear the approval (nor imply such) of the U.S. Department of Agriculture, the United States Agency for International Development, or any of their offices. In view of its nature as a working paper, it should not be quoted without permission of the originating office. Any comments would be appreciated, and can be addressed to the author at:

4112 Auditors Building  
14th & Independence Avenue, S.W.  
Washington, D.C. 20250

## TABLE OF CONTENTS

INTRODUCTION . . . . .	1
THE 1950 AND 1971 CENSUSES . . . . .	2
LAND TENURE . . . . .	7
Census and Survey Data: 1950, 1970, and 1971	
Other Evidence	
Tenure Insecurity as an Obstacle to Development	
LAND DISTRIBUTION . . . . .	21
LEVELS OF LIVING . . . . .	30
Per Capita Income Estimates	
Regional Income Differentials	
Other Level of Living Indicators	
INCOME DISTRIBUTION . . . . .	60
EMPLOYMENT AND LABOR FORCE DATA . . . . .	64
Unemployment and Underemployment as Welfare Indicators	
Labor Force, Employment, and Unemployment	
Underemployment	
Landless Labor	
Supplementary Employment and Income of Farmers	
Farmers' Use of Non-Family Labor	
Wage Rates	
Internal Migration	
External Migration	
GOVERNMENT POLICY . . . . .	101
General	
Land Tenure	
Rural Levels of Living and Income Distribution	
Employment	
DIRECTIONS FOR FUTURE RESEARCH . . . . .	111
REFERENCES . . . . .	118

## LIST OF TABLES

Table 1.	Urban and Rural Population by Arrondissement, 1950 and 1971 . . . . .	5
Table 2.	Land Tenure in 1950 . . . . .	8
Table 3.	Land Tenure in 1970 . . . . .	11
Table 4.	Percentage of Farmers Who Own at Least Part of Their Land: Results of Local and Regional Studies . . . . .	13
Table 5.	Average Number of Parcels per Farm Unit: Results of Local and Regional Studies . . . . .	17
Table 6.	Distribution of Agricultural Land, 1950 . . . . .	22
Table 7.	Distribution of Agricultural Land, 1971 . . . . .	23
Table 8.	Gini Coefficients for Land Distribution, by Department, 1950 and 1971 . . . . .	26
Table 9.	Income of Typical Farm Families in Five Areas, Various Years, 1950-1960 . . . . .	38
Table 10.	Livestock Holdings per Farm Household, by Department, 1950 . . . . .	42
Table 11.	Changes in Livestock Holdings per Household, 1950-1971 . . . . .	45
Table 12.	Summary of Nutrition Studies, 1951-1968 . . . . .	52
Table 13.	Health Care Indicators, by Department, 1970 . . . . .	56
Table 14.	Literacy and School Attendance Rates, by Department, 1971 .	59
Table 15.	Income Distribution for the Employed Population, 1970 . . . . .	61
Table 16.	Participation Rates of the Economically Active Population, 15+, by Age Group, 1950 and 1971 . . . . .	73

LIST OF TABLES (CONT'D.)

Table 17.	Economically Active Population, by Age, Sex and Employment Status, 1971 . . . . .	74
Table 18.	Open Unemployment Rates of the Economically Active Population, 15 Years and Over; 1950, 1970, and 1971 . . . . .	77
Table 19.	Nominal and Real Daily Wages in Specific Regions, Various Years, 1971-1976 . . . . .	91
Table 20.	Migration Status of the Population, by Department, 1950 . . . . .	95
Table 21.	Net Migration into Port-au-Prince, 1973 . . . . .	97
Table 22.	Estimates of Haitians Residing Overseas, Various Years, 1950-1976 . . . . .	100

LIST OF FIGURES

Figure 1. Distribution of Agricultural Land, 1950 and 1971 . . . . . 24

Figure 2. Income Distribution for the Employed  
Population, 1970 . . . . . 62

## INTRODUCTION

Haiti is the only country in the Western Hemisphere to appear on the United Nations' list of the world's poorest countries. Its per capita GNP in 1976 was \$180, <sup>1/</sup> and it was this high only because the exchange rate was maintained at 5 gourdes to the dollar in the face of rapid inflation during the 1970s. Had Haiti's rate of inflation matched that of the U.S. between 1970 and 1975 per capita GNP at the end of this period would have been only \$136. <sup>2/</sup>

Development planners and policymakers must be concerned not only with a country's level of GNP, but also with its distribution. Moreover, other indicators of well-being need to be examined, since GNP is widely recognized to be a most imperfect measure of welfare. Closely related to the issues of levels of living and income distribution are those of employment and, in rural areas, land tenure.

---

<sup>1/</sup> World Bank Atlas 1976.

<sup>2/</sup> Based on comparative trends in implicit price deflators for GNP.

In Haiti, much of the information on these subjects comes from the censuses of 1950 and 1971, and this paper will begin with some brief general remarks about the census data. (Additional comments will be made as specific types of data are discussed in subsequent sections). <sup>3/</sup> We will then turn to the subject of land tenure arrangements and the distribution of landholdings among Haitian farmers. Next, we will examine the data on per capita income and other level-of-living indicators, and review what little information is available on income distribution. Employment and labor force data will be reviewed, together with information on wages rates and on internal and external migration. Government policies regarding land tenure, rural income, and employment will be examined, and suggestions will be made for future research on these issues.

#### THE 1950 AND 1971 CENSUSES

Haiti has conducted two population censuses, one in 1950 and the second in 1971. In addition to demographic data (including labor force and migration statistics) the censuses also provide information on housing and agriculture.

Data from the 1950 census were published in 5 volumes, one for each of the country's Departments (Haiti, IHS, 1955). Much of the demographic data

---

<sup>3/</sup> These comments are drawn primarily from Zuvekas (1977).

is available at both the arrondissement and commune level. The quality of these data is questionable:

The participating officials lacked training and experience, and many of the persons enumerated lacked fixed places of residence. Women, in particular, tended to disguise their ages in the belief that certain ages were luckier than others, and some men were believed to have avoided enumeration in order to escape military service. Perhaps more important, there was a general suspicion of visiting strangers asking questions. The total number reported in 1950 (3,097,220) was later calculated by United Nations demographers to have represented an underenumeration of 8.3 percent; other estimates of the magnitude of the shortfall reached as high as 30 percent (Wei 1973:17).

Comments like these can be made for most censuses in developing countries, and the Haitian census of 1950 probably does not differ much from the norm. Still, it is good to bear in mind the possible underestimation of the population, for this has important implications for income and employment. As we shall see below, there is also reason to be concerned about the reliability of other data from the 1950 census.

The 1971 census was actually a census only in urban centers and a 10 percent sample survey in rural areas. The total population figure was calculated to be 4,314,628, considerably less than the 4,968,000 that had been projected. The implied population growth rate was thus only 1.6 percent (rather than 2.3 percent), well below the Latin American average of 2.8 percent. The modest rate of population growth indicated by the census is attributable both to a relatively low reported birth rate (35.0, compared with a death rate of 15.0)<sup>4/</sup> and to a high rate of external migration (estimated to be about 0.4 percent). Some observers, however, believe

---

<sup>4/</sup>

These are estimates for 1973, as reported by the Institut Haitien de Statistique to the IDB in December 1975 (IDB [1976]: 254-255).

that the birth rate is underestimated and maintain that the actual population in 1971 was 10-20 percent higher than the census figure (USDHEW 1976:1; Weil 1973:17).

The 1950 census showed that 87.8 percent of Haiti's population lived in rural areas. In 1971 the figure was reported to be 79.6 percent. <sup>5/</sup> Actually, the rural percentage was even higher, since the "urban" population included the chief towns in each commune (i.e. the county seats) as well as other communities of similar size. Many of these had fewer than 2,000 inhabitants, and if we transfer their total population (about 81,000) to the rural category--where normally they would be placed--the rural population in 1971 would rise to 81.5 percent of the total.

Urban and rural population figures by arrondissement are shown in Table 1. For the nation as a whole, the urban population increased by 4.1 percent annually between the two censuses. It is important, however, to distinguish between Port-au-Prince and other urban areas. In the arrondissement of Port-au-Prince, the urban growth rate was 5.9 percent, much faster than the 2.4 percent annual increase for all other urban areas. The rural population grew by 1.1 percent annually, with very little difference among the 5 Departments but considerable variation at the arrondissement level (from minus 0.7 percent in Limbé to 2.6 percent in Plaisance--both of which, interestingly, are located in the North).

Most of the results of the 1971 census, unfortunately, have not yet been published. However, a great deal of detail (probably too much) is

---

<sup>5/</sup> The Latin American average in 1971 was about 42 percent.

TABLE 1  
 URBAN AND RURAL POPULATION BY ARRONDISSEMENT, 1950 AND 1971  
 (in thousands and percentage change)

Department and Arrondissement	1950 <sup>a</sup>			1971			Percentage Change		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
<u>Northwest</u>	<u>13.5</u>	<u>154.7</u>	<u>168.3</u>	<u>26.1</u>	<u>190.4</u>	<u>216.5</u>	<u>93.3</u>	<u>23.1</u>	<u>28.6</u>
Port-de-Paix	10.8	105.0	115.8	21.7	114.7	136.4	101.0	9.2	17.8
Môle St.-Nicolas	2.7	49.8	52.5	4.4	75.7	80.1	63.7	52.0	52.6
<u>North</u>	<u>74.9</u>	<u>465.0</u>	<u>539.0</u>	<u>117.8</u>	<u>582.0</u>	<u>699.9</u>	<u>57.3</u>	<u>25.2</u>	<u>29.9</u>
Cap-Haitien	29.4	88.8	118.2	54.7	145.1	199.8	86.0	63.4	69.0
Trou-du-Nord	11.9	40.4	52.3	14.4	54.9	69.3	20.7	36.1	32.5
Grande-Riv.-du-Nord	9.3	97.1	106.5	16.1	84.3	100.4	72.8	-13.2	-5.7
Vallières	1.9	41.4	43.3	3.5	44.3	47.9	87.5	7.0	10.6
Fort Liberté	12.2	52.2	64.4	12.9	56.0	68.9	5.8	7.3	7.0
Plaisance	3.0	54.3	57.2	4.0	92.8	96.8	35.1	70.9	69.2
Limbé	3.9	35.7	39.6	6.5	30.0	36.5	66.3	-15.8	-7.8
Borgne	3.3	54.3	57.6	5.7	74.5	80.3	71.8	37.3	39.4
<u>Artibonite</u>	<u>48.9</u>	<u>518.3</u>	<u>567.2</u>	<u>90.6</u>	<u>665.3</u>	<u>755.9</u>	<u>85.3</u>	<u>28.4</u>	<u>33.3</u>
Gonaïves	17.9	147.9	165.7	36.7	150.1	186.7	105.7	1.5	12.7
St.-Marc	11.4	85.2	96.6	20.5	127.0	147.6	80.3	49.0	52.8
Marmelade	3.1	72.3	75.4	5.8	107.6	113.3	85.7	48.8	50.3
Hincha	7.6	96.7	104.3	14.2	119.3	133.5	86.6	23.4	28.0
Dessalines	8.9	111.2	120.1	13.3	161.3	174.6	49.1	45.1	45.4
<u>West</u>	<u>185.0</u>	<u>897.9</u>	<u>1,083.1</u>	<u>555.2</u>	<u>1,114.5</u>	<u>1,669.7</u>	<u>200.1</u>	<u>24.1</u>	<u>54.2</u>
Port-au-Prince	151.9	261.9	413.8	506.5	370.8	877.3	233.4	41.6	112.0
Léogane	10.8	200.1	211.0	16.7	257.8	274.5	54.1	28.8	30.1
Jacmel	12.5	233.2	245.7	16.4	282.6	299.1	31.8	21.2	21.7
Belle-Anse	2.2	54.7	56.9	3.0	49.2	52.2	39.0	-10.1	-8.3
Mirebalais	4.2	110.0	114.1	7.1	119.4	126.5	69.6	8.6	10.9
Lascahobas	3.4	38.2	41.6	5.3	34.8	40.1	57.0	-8.9	-3.6
<u>South</u>	<u>56.5</u>	<u>684.0</u>	<u>739.6</u>	<u>90.0</u>	<u>882.7</u>	<u>972.8</u>	<u>59.3</u>	<u>29.0</u>	<u>31.5</u>
Les Cayes	15.8	179.4	195.2	27.2	245.4	272.7	72.1	36.8	39.7
Aguin	5.7	118.2	123.9	5.3	155.4	160.6	-8.1	31.5	29.6
Coteau	7.7	48.5	56.2	9.7	76.7	86.4	25.9	58.0	53.7
Grand - Anse	15.7	159.6	175.4	25.1	215.7	240.9	59.8	35.1	37.3
Tiburón	5.5	41.5	47.1	13.0	48.9	61.9	135.3	17.8	31.4
Nippes	6.0	135.8	141.8	9.7	140.6	150.3	62.1	3.5	6.0
<u>NATIONAL TOTAL</u>	<u>378.8</u>	<u>2,713.3</u>	<u>3,092.1</u>	<u>879.7</u>	<u>3,434.9</u>	<u>4,314.6</u>	<u>132.2</u>	<u>26.6</u>	<u>39.5</u>

Sources: Haiti, IHS (1973:32-33).

<sup>a</sup>These figures differ from those initially reported for 1950, but only to a minor degree. The national total reported here is only 5,080 less than the original figure, and there are no major changes in the urban-rural breakdown of the population.

available on computer print-out sheets. The economically active population, for example, is broken down according to age, sex, literacy, years of schooling, branch of economic activity, occupational category, migration status, and length of residence. Published results of the agricultural survey, undertaken jointly with the population survey, are limited to information on the distribution of land by Department. Additional data are stored on computer cards which have not been processed because of inadequate equipment and the need for considerable editing to eliminate various types of errors. <sup>6/</sup> These data provide information on on-farm consumption vs. marketing; type of labor predominantly used (family, hired, combite, etc.); type of traction; use of fertilizers and other chemical inputs; use of irrigation; land use by parcel and by season (principal and associated crops); livestock numbers; production; and productivity. Though it is not possible to determine cost of production or any type of income measure from the survey results, <sup>7/</sup> processing the data would still provide useful information on cultural practices and crop yields.

---

<sup>6/</sup> A detailed description of the statistical problems surrounding the agricultural census is provided in the terminal report of FAO adviser G.R. Seth; this report has not yet been released.

<sup>7/</sup> Some questions call only for "yes" or "no" answers--e.g., "Have you used pesticides?"

## LAND TENURE

Census and Survey Data: 1950, 1970, and 1971

The census of 1950 showed that the great majority of Haitian farmers-- at least two-thirds and perhaps as many as 80 percent--were landowners. <sup>8/</sup> Table 2 shows that the percentage of owners was roughly the same in all 5 Departments. <sup>9/</sup> Those who did not own land rented from the State or from private owners, sharecropped, or were farm managers.

Unfortunately, the census document does not indicate how the data on land tenure, or the other agricultural sector statistics, were obtained.

---

<sup>8/</sup> The census divides farm households into 3 categories: those who farm land adjacent to their homesite as well as other plots; those who farm only land adjacent to their homesite; and those whose farm land is away from their homesite. For the first two categories the percentage of owners is 84.9 percent and 78.2 percent, respectively. No breakdown by tenure status is available for the third category, though one might expect the percentage of owners to be smaller. This category presumably includes landless laborers, whose number is not known. Landless labor will be discussed later in this paper.

<sup>9/</sup> Excluding those farming only land away from their homesite, for whom the percentage of owners is not known, the Departmental figures are as follows:

Northwest	79.6
North	83.1
Artibonite	83.4
West	79.9
South	84.3

TABLE 2  
LAND TENURE IN 1950

Tenure Category	North- west	North	Arti- bonite	West	South	National Total
Farm Households--Total	30,207	98,639	117,319	184,755	144,960	575,880
Farming land adja- cent to homesite plus other land-- Total	(14,326)	(48,182)	(51,878)	(86,224)	(76,936)	(277,546)
Owners	12,060	41,140	44,718	71,617	66,143	235,678
Renting from State	709	1,022	850	2,086	594	5,261
Renting from pri- vate owners	276	1,475	1,391	3,487	1,653	8,282
Managers	484	1,730	1,375	2,172	2,281	8,042
Sharecroppers	556	1,983	1,128	3,754	2,207	9,628
Tenure status un- known	241	832	2,416	3,108	4,058	10,655
Farm only land adja- cent to homesite-- Total	(10,063)	(27,795)	(32,848)	(73,602)	(44,992)	(189,300)
Owners	7,363	22,005	25,931	56,106	36,626	148,031
Renting from State	965	868	902	3,562	882	7,179
Renting from pri- vate owners	196	893	1,601	2,908	1,137	6,735
Managers	651	1,730	1,761	2,927	2,230	9,299
Sharecroppers	675	1,687	1,309	5,051	1,782	10,504
Tenure status un- known	213	612	1,344	3,048	2,335	7,552
Farming only land away from homesite	5,818	22,662	32,593	24,929	23,032	109,034

Source: Haiti, IHS (1955).

Apparently, though, the data are based on a complete enumeration of rural households. <sup>10/</sup> A number of limitations and problems of these data may be noted:

1. There is no indication of how many "owners" actually have clear legal title to their land. As we shall see below, relatively few seem to fall into this category.
2. Many landowners also rent or sharecrop. The 1950 census does not provide any information on mixed tenure patterns; nor does it indicate what percentage of land is owned.
3. The average number of parcels farmed is not indicated, though the data in Table 2 show that the minimum figure is 1.48. <sup>11/</sup>
4. There is little doubt that the 1950 census--and the 1971 census as well--undercounted large private landholdings as well as land owned by domestic and foreign corporations. Evidence on this point will be discussed below.
5. The average size of rural households suggested by the census data is somewhat less than 4.5, <sup>12/</sup> a figure which seems too low in view of

---

<sup>10/</sup>

A report by a U.S. government advisor (Swan 1951) on preparations for and the carrying out of the census is not particularly detailed or critically analytical.

<sup>11/</sup>

Forty-eight percent of farm operators farmed land away from their homesite as well as land adjacent to their homesite.

<sup>12/</sup>

Table 1 shows the total rural population in 1950 to be 2,713,300. Assuming that 5 percent of rural households were engaged in nonfarm activities, and ignoring the relatively few farm families living in urban areas, the farm household population would be 2,577,600.

evidence from other countries at similar levels of development as well as from several local and regional rural surveys in Haiti (see footnote 15 below).

6. The reported land area devoted to crop production is a minimum of 1,012,827 carreaux, or 1,306,547 hectares, a figure which seems too high in view of subsequent estimates. <sup>13/</sup>

7. There are no estimates of the number of landless laborers.

Published data from the 1971 census do not provide any information on land tenure patterns. However, information on land tenure was collected as part of a socio-economic survey conducted in 1970 (Haiti, IHS, 1975). This survey, based on a 2 percent sample of rural households (and a 10 percent sample in urban centers), shows that 60.2 percent of all parcels were owned; but there are no data on the percentage of land accounted for by each tenure category. These data, shown in Table 3, are available only for the nation as a whole. Departmental figures have not been published.

The 1970 data are subject to some of the same limitations as those from 1950: the percentage of landowners with clear legal titles is not indicated; there is no information on mixed tenure patterns; and there are no data on landless laborers. On the other hand, it is possible to calculate that the number of parcels per farm household is 2.2. This figure, however, differs

---

<sup>13/</sup>

The following crops are included in this estimate: bananas, coffee, sugarcane, cacao, sisal, cotton, sweet potatoes, corn, peas, plantain, sorghum, rice, tobacco, and peanuts. No land area estimates are provided for the following crops, though the percentage of farmers growing them is indicated: manioc, yams, malanga, coconuts, avocados, mangoes, citrus fruits, cabbage, eggplant, tomatoes, and potatoes. There is no mention at all of beans, one of the principal food crops. Neither is there an estimate of land devoted to livestock production.

TABLE 3  
LAND TENURE IN 1970

Tenure Category	Number of Parcels	% of Parcels
Owners	893,659	60.2
Renting from State	56,473	3.8
Renting from private owners	155,557	10.5
Sharecroppers	213,528	14.4
Other forms of tenure	165,168	11.1
Total	1,484,385	100.0

Source: Haiti, IHS (1975b).

from the estimate of 1.8 parcels per farm unit reported in the 1971 census. <sup>14/</sup> Moreover, the total number of parcels reported in 1971 (1,118,230) was 25 percent less than the number estimated for 1970 (1,484,385); this casts doubt on the reliability of both sets of data. The average farm household in 1971 was estimated to have 4.5 members, another figure that should be regarded with caution. <sup>15/</sup>

### Other Evidence

Studies of specific communities or regions confirm the findings of the 1950 census and 1970 survey that most Haitian farmers consider themselves landowners. <sup>16/</sup> The studies listed in Table 4 show the percentage of farmers owning at least part of their land to range from 56 to 100 percent.

Many farmers not only own land but also rent, sharecrop, or farm under other forms of tenure. The 1971 census showed that the average number of parcels per farm unit was 1.8. This, however, might be an underestimate,

---

<sup>14/</sup>

At the Departmental level, the 1971 figures were (Haiti, IHS, 1973:43):

Northwest	1.78
North	1.88
Artibonite	1.39
West	1.76
South	1.87

<sup>15/</sup>

This was the same figure calculated for farm households in the 1970 survey, and for all households in the 1950 census. A low figure is supported by Gerald Murray's research in a community in the Cul-de-Sac, where the average household size was closer to 4 than to 5 (personal communication, 11 November 1977). But studies in other communities have indicated an average farm household size of more than 6 persons (Desplechin 1971: 17 and Kulakow *et al.* 1976:1 for the Plaine des Cayes; and Pfrommer *et al.* 1976:39 for the Northwest). While the national average is unlikely to be that high, many observers would consider the true figure to be in the neighborhood of 5 persons per farm household.

<sup>16/</sup>

For a discussion of the historical origins of today's land tenure pattern, see Murray (1977:Ch. 2-3) and Palmer (1976:Ch. 4).

TABLE 4

PERCENTAGE OF FARMERS WHO OWN AT LEAST PART OF  
THEIR LAND: RESULTS OF LOCAL AND REGIONAL STUDIES

Authors <sup>a</sup>	Date/Pages <sup>a</sup>	Geographic Area	% Owning Land
Brown, Meidgerken, and Henderson	1976:16	Grande Rivière du Nord (North)	65-97 <sup>b</sup>
Desplechin	1971:23	Plaine des Cayes (South)	100 <sup>c</sup>
Dorville and Dauphin	1974:22	Arrondissement de Cap Haitien (North)	71 <sup>d</sup>
Guerra, Lay, and La Gra	1972:17	Artibonite Valley	76 <sup>e</sup>
Haiti, Bureau of Nutrition	1977:12	4 communities in several areas	56-81 <sup>f</sup>
La Gra	1972:Annex II, p. 5	Bas Boën, Plaine du Cul-de-Sac (West)	89 <sup>g</sup>
Murray	1977:208	Thomazeau, Plaine du Cul-de-Sac (West)	c. 90 <sup>h</sup>
Palmer	1976:146-148	Belladère (West)	92 <sup>i</sup>
Pfrommer <u>et al.</u>	1976:252	4 communities (Northwest)	58-73 <sup>j</sup>
Riaño-Serrano	1975:16	Desarmes (Artibonite)	100 <sup>k</sup>
St. Clair and Dauphin	1975:7	Arrondissement de Cap Haitien (North)	75 <sup>l</sup>
White, J. G. Engineering Corp.	1976:Exhibit 8.6-1, p. 4.	Dubreuil, Plaine des Cayes (South)	77 <sup>m</sup>

Sources: As indicated above.

<sup>a</sup>See Bibliography for complete references.

## Notes to Table 4 (continued)

<sup>b</sup>"Owned" and "inherited" categories combined; the "owned" percentage alone ranges from 36 to 76 percent in the 6 communities studied. The data seem to refer to land area. According to the authors, "land tenure and availability is [sic.] extremely difficult to determine. The peasants often are unwilling to admit how much land they own. Much of the land is undivided at the owner's death because of the high cost of surveying. As a result two generations of descendants may work a large block of land without knowing exactly how much they have" (p. 16).

<sup>c</sup>Of the 50 farmers interviewed only 4 owned all their land and did not lease any of it to others; 4 farmed part of their land and leased part to others; and 42 leased part of their land to others and rented from others. This was a very biased sample, farmers having been chosen in accordance with accessibility and ability to answer survey questions. The average amount of land owned was 3.5 hectares, well above the national (or Departmental) average.

<sup>d</sup>Percent of land "occupied by owners." This category is subject to several interpretations but presumably means percent of land owned. The figure is based on a survey of 150 farm units; there is no indication of how the sample was chosen.

<sup>e</sup>Percent of parcels owned. Based on a survey of 1,105 households with 2,472 parcels in an irrigation project area where land tenure information judged to be excellent is available (from a cadastral study based on aerial photographs and surveys carried out between 1950 and 1965). The project area is estimated to contain 14,434 households; about 90 percent of their land is covered by the cadastral study.

<sup>f</sup>Percent of parcels. Based on parcels with title, parcels considered owned without title, and undivided parcels worked by several families inheriting land considered to be owned (propietés indivis). The percentage of parcels for which a title was held ranged from 30 to 68 percent in the 4 communities studied. The study is based on interviews with 150 families in each community, but how the sample was determined is not made clear.

<sup>g</sup>Percent of parcels owned in the Bas Boën cooperative (100 percent sample of 102 members) and in 3 neighboring communities (50 percent sample). Of the 1,251 parcels in the sample, land tenure information was obtained on 1,172. Of this latter number, 970 parcels were owned outright, with the owners claiming to have legal paper titles; an additional 34 were propietés indivis farmed by several families. More than 90 percent of the land area was owned.

<sup>h</sup>Though most plots in the study community were sharecropped, fewer than 2 dozen of the 228 farmers were sharecroppers only. This excellent study of how tenure patterns have changed in response to population growth should be required reading for all students of rural Haiti.

## Notes to Table 4 (continued)

<sup>i</sup> A 1 percent sample of farm households in the Belladère area (N = 62) found that 92 percent own at least some of the land they farm; 71 percent own all their land, with most reported to have "some form of legal title." Many farmers are said to plant at least some of their crops on propriétés indivis.

<sup>j</sup> Based on a survey of 243 households. Of the 608 parcels farmed, 401 were owned. Legal titles were claimed by the owners of 370 parcels.

<sup>k</sup> Based on a survey of 10 percent of the households (N = 42). Sixty-two percent also farmed land under rental, sharecropping, or other arrangements. No information is provided on land titles.

<sup>l</sup> Based on a survey of 70 percent of the farm households in the Arrondissement du Cap Haitien (N = 7,355). The title situation is not clear.

<sup>m</sup> Based on a 10 percent sample survey in the Dubreuil irrigation area (N = 935). No information is provided on land titles.

since Haitian farmers are reported to be very reluctant to provide complete information on their landholdings (Brown, Heidgerken, and Jacobsen 1976:16; Murray 1977:212; Wesselman 1977:5-6). Support for a higher figure comes from the 1970 socio-economic survey, which indicates an average of 2.2 parcels, and from 7 of 9 local and regional surveys, which report figures ranging from 2.2 to 5.4 parcels (see Table 5).

Haitian farmers often deliberately seek to have fragmented landholdings, particularly in different ecological zones, because this provides some security against crop failure in any one area. Typically, the farmer will try to have both "cool" lands in the mountains, at an elevation of 2,200 feet or more, and "hot" lands in the plains (Brisson 1976:10).<sup>17/</sup> If land cannot be purchased, the farmer will seek to rent or to enter into a sharecropping agreement.

Table 3 shows that 14.4 percent of agricultural parcels were sharecropped in 1970. Under this form of land tenure, the farmer provides seeds, plants, labor, and other inputs and shares the output with the landowner in accordance with a pre-arranged agreement. This system is often referred to in Haiti as de moitié, which implies a 50-50 sharing of output. However, other percentage splits apparently take place.<sup>18/</sup>

Land may be rented either from private owners (10.5 percent of all farm parcels in 1970) or from the State (3.8 percent). If the contract is unwritten, the 1962 Rural Code (Haiti, Département de la Justice, 1962) provides for the following periods of contract validity:

annual crops or nurseries	3 years
pastures, bananas, cotton	5 years
coconuts, orchards, rubber	17 years
other crops needing 3 or more years before harvesting	10 years

---

<sup>17/</sup> "Cool" lands are distinguished not only by altitude but alternatively by the presence of natural subsoil moisture (Murray 1977:204).

<sup>18/</sup> In the community studied by Murray, farmers sharecropping land owned by a relative could claim up to two-thirds of the harvest (pp. 489-490).

TABLE 5

AVERAGE NUMBER OF PARCELS PER FARM UNIT:  
RESULTS OF LOCAL AND REGIONAL STUDIES

Authors	Date/Pages <sup>a</sup>	Geographic Area	Average No. of Parcels
Dorville and Dauphin	1974:22	Arrondissement du Cap Haitien (North)	2.8 <sup>b</sup>
Guerra, Lay, and La Gra	1972:17-19	Artibonite Valley	2.2 <sup>b</sup>
Kulakow <u>et al.</u>	1976:"Analyse" section, p. 16	Plaine des Cayes (South)	2.6 <sup>c</sup>
La Gra	1972:Annex II, p. 7	Bas Boën, Plaine du Cul-de-Sac (West)	2.4 - 3.3 <sup>b</sup>
Murray	1977:211	Thomazeau, Plaine du Cul-de-Sac (West)	5.4 <sup>b</sup>
Palmer	1976:149	Belladère (West)	2.6 <sup>b</sup>
Pfrommer <u>et al.</u>	1976:250-251	4 communities (Northwest)	2.6 - 3.4 <sup>b</sup>
St. Clair and Dauphin	1975:7	Arrondissement du Cap Haitien	1.2 <sup>b</sup>
White, J. G., Engineering Corp.	1976:Exhibit 8.6-1, pp. 2-3	Dubreuil, Plaine des Cayes (South)	1.7 <sup>b</sup>

Sources: As indicated above.

<sup>a</sup>See Bibliography for complete references.

<sup>b</sup>For comments on these studies, see the footnotes to Table 4.

<sup>c</sup>Based on a non-random survey of 122 farm units.

For leased land already under cultivation, the lease terms for the last 3 categories were fixed at 3, 9, and 5 years, respectively ("New Rural Code" 1962). Written contracts (and perhaps, in practice, unwritten ones) are sometimes limited to one year, thus encouraging overworking of the soil and contributing to the country's severe erosion problem (Desplechin 1971:24; Engineering Consultants 1975:37; Keogh 1960).

Although one recent observer argues that there is very little State-owned land in Haiti (Palmer 1976:146), the great majority believe otherwise. Just how much the State does own--particularly land suitable for crops or livestock--is not at all clear. One observer, writing before the 1950 census results were published, argued that "the State is without question the greatest landowner (Folsom 1954). This seems very likely if the statement refers to all land, not just to agricultural land. If it refers to the latter, then the 1950 census provided no information to verify or contradict Folsom's judgment; neither did the 1970 socio-economic survey or the 1971 census. Comments on the State's landholdings thus are often vague, referring to "a number of lands," "large areas," "many farmers leasing from the State," etc. (Haiti, DTPTC, 1977:Vol. VI (Draft), Appendix 4F, p. 2; IDB 1974:77-91; Métraux and collabs. 1951; Rotberg 1971:17; USOM/Haiti 1959:1).

Occasionally, however, one does find some figures on state-owned lands in specific areas:

1. Dorville (1975:12) reports that the state owns 40,000 hectares, "almost uninhabited," in the Central Plateau. Qualitative judgments about state-owned land in this relatively underpopulated area make this figure plausible.

2. Dorville and Dauphin (1974:6) report that the State is the largest landowner in the Arrondissement du Cap Haïtien. Officially, it is reported to rent 2,500 hectares to the Caldos Sugar Company; but the authors argue that the actual figure is higher.

3. Steverlynck (1976:19) mentions state-owned lands in the Vallée des Trois Rivières totalling at least 298 hectares.

Finally, a few intensive studies of specific regions have reported that the State owns very little land there (Métraux and collabs. 1951, for the Marbial Valley near Jacmel in the South; and Palmer 1976:146, for the Belladère area near the Dominican Republic border in the West).

An interesting aspect of the land tenure situation is reported by Palmer (1976:190) for the Belladère area, where "many" plots (not quantified) are said to be lying idle because they were so small that their owners abandoned them and permanently migrated. The lack of a cadastral survey, and thus of clear land titles, make land transfers in this area difficult; farmers remaining in the area, it is said, have not utilized these plots because of their traditional respect for property rights. Table 1 shows that the Arrondissement de Lascahobas, in which Belladère is located, experienced a rural population loss of about 9 percent between 1970 and 1971. Three other Arrondissements—Grand-Rivière-du-Nord and Limbé in the North and Belle-Anse in the West—have experienced similar losses of population, but reports of idle, abandoned land were not found for these areas. This matter should be explored further to determine to what extent private farm land is lying idle because of land tenure problems, and to what extent these lands might be unexploited for other reasons, such as loss of soil fertility. In contrast to Palmer's findings, Murray (1977:320) found that persons abandoning land in the Thomazeau area forfeited ownership rights, which passed to those who would have inherited the land.

### Tenure Insecurity as an Obstacle to Development

Although a relatively high proportion of Haitian farmers are reported to have their own land, there is good reason to be concerned about tenure insecurity. The lack of a national cadastral study and of a uniform system of land registration and titling means that written titles—where they exist—are of dubious legal validity. Moreover, probably the great majority of those who consider themselves owners have no written title at all. <sup>19/</sup>

A number of writers have argued that land tenure insecurity is a serious problem in Haiti (Bauman 1960; Casimir 1964; Courlander 1960:110-121; Engineering Consultants 1975:37; Estimé 1972:32; Franklin and Snyder 1975; García Zamor 1966; Keogh 1960:23; Métraux and collabs. 1951; Moure 1972; Mosher 1957:74; Mouton 1960; Rotberg 1971:279; Schaedel 1962:78; US-IIAA 1949; US-ICA 1958). Most of them explicitly mention it as an obstacle to agricultural development because it discourages investment in more productive inputs. Land disputes reportedly are common (Courlander 1960:110-121; Engineering Consultants 1975:37; Estimé 1972:32; Métraux 1960; and US-IIAA 1949)<sup>20/</sup>, and it is said that farmers are sometimes forced to part with some of their land as payment for the legal services of lawyers, judges, and notaries (Casimir 1964; Courlander 1960:110-121). Legal problems are said to discourage the subdivision of land upon an owner's death, resulting in unclear land-use rights among the various heirs. There are rumors of land-grabbing, of judges being bribed to issue competing land titles, and of extortion by locally powerful quasi-governmental authorities.

---

<sup>19/</sup>

The percentage of owners with written titles is difficult to determine. Some studies of land tenure do not even discuss titles; others refer to "some form of title" or make similar imprecise statements. Murray (1977:351) believes that fewer than 1 percent of Haitian farmers have valid, individualized titles to all the plots they claim to own.

<sup>20/</sup>

Murray (1977:143), however, found few land disputes in the Thomazeau area.

Very rarely does one find explicit statements that peasants in a particular area regard their tenure as secure. La Gra (1972:Annex II, p.5) seems to say this for farmers in the Bas-Boën area in the Plaine du Cul-de-Sac near Port-au-Prince, and this was confirmed to the present writer by an observer intimately acquainted with this area. Murray (1977:351-354) reports a high degree of security in the Thomazeau area, but notes that security would be threatened if land were to acquire greater economic value. Tenure also may be relatively secure in that part of the Artibonite Valley where a cadastral survey has been made (see Guerra, Lay, and La Gra 1972). Elsewhere, however, the picture is so unclear that major investments in land improvement—or even in production inputs—should not be made until the land tenure situation in proposed project areas has been carefully studied. We shall return to this matter in the concluding section of this paper.

#### LAND DISTRIBUTION

Both the 1950 and 1971 censuses show that the distribution of land in Haiti is not nearly so unequal as in most Latin American countries. <sup>21/</sup> The census data (see Tables 6 and 7) yield the Lorenz curves shown in Figure 1. The Gini coefficients derived from these curves are .49 and .51,

---

<sup>21/</sup>

These figures may be compared, for example, with Gini coefficients for land distribution of 0.87 in Bolivia and 0.82 in Ecuador. (The figure for Bolivia, though, is not very reliable, as explained in my paper, Rural Income Distribution in Bolivia: A Summary and Evaluation of Quantitative and Qualitative Information, Working Document Series: Bolivia, General Working Document No. 2 (Washington, D.C.: Rural Development Division, Bureau for Latin America, AID, July 1977). The figure for Ecuador is from Américo Sánchez Cárdenas, "La reforma agraria en Ecuador: Una prioridad desatendida," Comercio Exterior [México] 20 [May 1970]: 402.)

TABLE 6  
DISTRIBUTION OF AGRICULTURAL LAND, 1950

Farm Size (carreaux)	Assumed Mean <sup>a</sup>	No. of Farms	% of Farms	Cumula- tive %	Estimated Area	% of Area	Cumula- tive %
Less than 0.25	0.18	17,784	3.2	3.2	3,201	0.3	0.3
0.25- 0.49	0.37	68,003	12.0	15.2	25,172	2.2	2.5
0.50- 0.74	0.62	90,680	16.0	31.2	56,222	5.0	7.5
0.75- 0.99	0.87	46,235	8.2	39.4	40,224	3.5	11.0
1.00- 1.99	1.50	171,171	30.3	69.7	256,757	22.7	33.7
2.00- 2.99	2.50	80,568	14.3	84.0	201,420	17.8	51.5
3.00- 3.99	3.50	37,552	6.6	90.6	131,431	11.6	63.1
4.00- 4.99	4.50	18,853	3.3	93.9	84,839	7.5	70.6
5.00- 5.99	7.50	27,586	4.9	98.8	206,895	18.3	88.9
10.00-19.99	15.00	5,671	1.0	99.8	85,065	7.5	96.4
20.00 & More	30.00	1,362	0.2	100.0	40,860	3.6	100.0
Unknown <sup>b</sup>	-	10,385	-	-	-	-	-
Total	-	575,880	-	-	-	-	-
Total exclud- ing Unknown	-	565,495	100.0	100.0	1,132,086	100.0	100.0

Source: Haiti, IHS (1955).

<sup>a</sup>Data necessary to calculate the actual mean are not available.

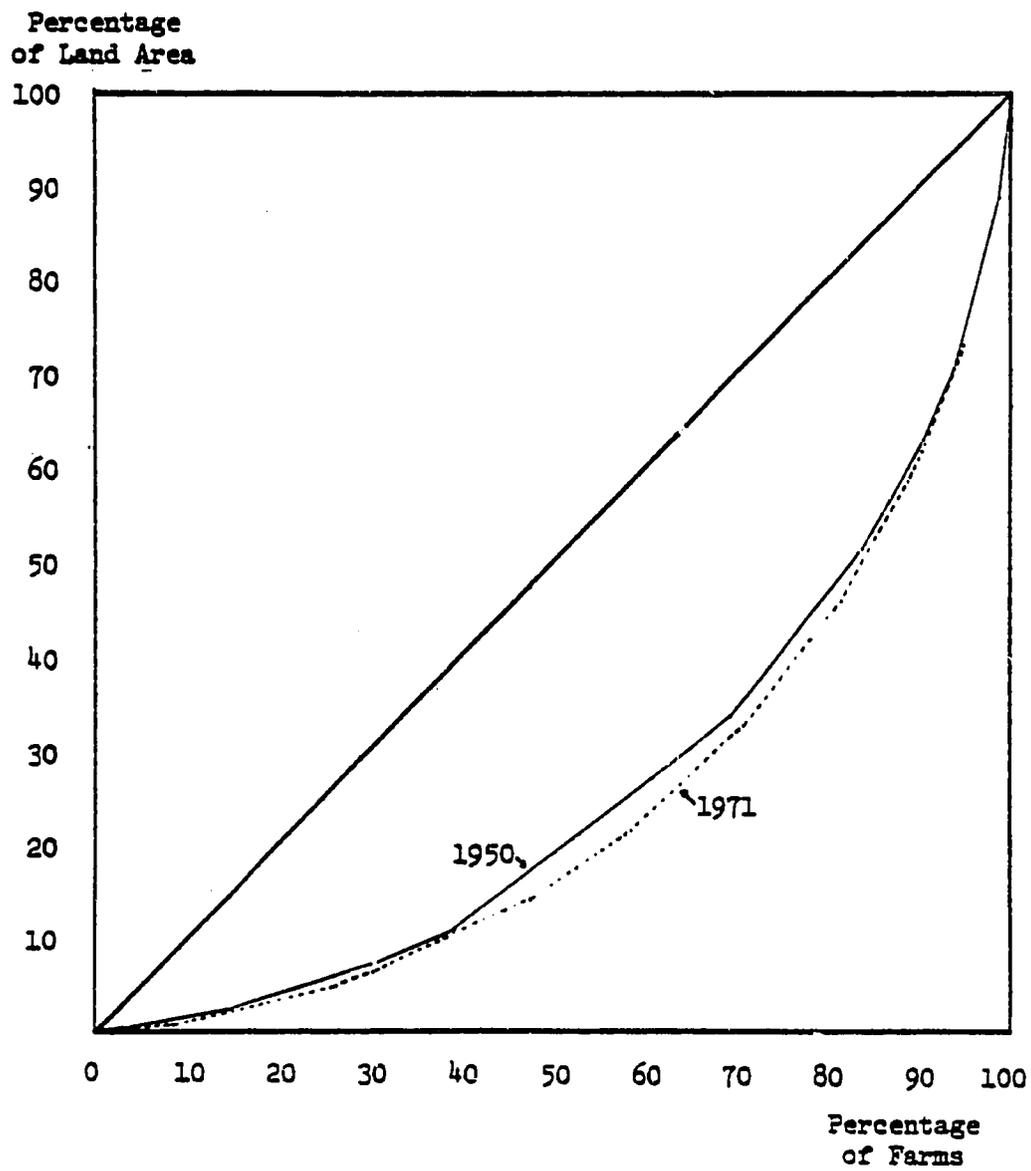
<sup>b</sup>Not included in calculating the Gini coefficients in Table 8.

TABLE 7  
DISTRIBUTION OF AGRICULTURAL LAND, 1971

Farm Size (carreaux)	No. of Farms	% of Farms	Cumula- tive %	Area in Farms	% of Area	Cumula- tive %
0.01- 0.08	16,820	2.7	2.7	850	0.1	0.1
0.09- 0.16	36,050	5.9	8.6	4,495	0.7	0.8
0.17- 0.25	107,480	17.4	26.0	27,410	4.1	4.9
0.26- 0.38	28,485	4.6	30.6	10,220	1.5	6.4
0.39- 0.50	104,890	17.0	47.6	51,045	7.6	14.0
0.51- 0.78	68,260	11.1	58.7	49,270	7.4	21.4
0.79- 1.00	76,010	12.3	71.0	74,585	11.1	32.5
1.01- 1.55	65,920	10.7	81.7	89,710	13.4	45.9
1.56- 2.00	44,340	7.2	88.9	85,320	12.7	58.6
2.01- 2.33	9,260	1.5	90.4	21,160	3.2	61.8
2.34- 3.00	27,370	4.4	94.8	75,010	11.2	73.0
3.01- 3.87	8,440	1.4	96.2	30,070	4.5	77.5
3.88- 4.00	4,300	0.7	96.9	17,150	2.6	80.1
4.01- 5.00	7,810	1.3	98.2	37,200	5.6	85.7
5.01- 7.75	6,440	1.0	99.2	39,310	5.9	91.6
7.76-10.00	2,660	0.4	99.6	22,610	3.4	95.0
10.01-15.00	1,285	0.2	99.8	15,480	2.3	97.3
15.01-20.00	590	0.1	99.9	10,260	1.5	98.8
More than 20.00	300	0.1	100.0	8,240	1.2	100.0
Total	616,710	100.0	100.0	669,395	100.0	100.0

Source: Haiti, IHS (1973:38-41).

FIGURE 1  
DISTRIBUTION OF AGRICULTURAL LAND, 1950 AND 1971



Sources: Haiti, IHS (1955; 1973).

indicating a slight tendency toward greater inequality. Table 8 shows little variation in the degree of land concentration by Department. Land is shown to be most equally distributed in the Artibonite, and most unequally distributed in the Northwest.

Given the poor quality of the data, however, it would be hazardous to make any definitive conclusions about the rankings of the 5 Departments or about trends in the equality of land distribution. Although the increase in the rural population has definitely caused some land to be subdivided, the effect of subdivision on the Gini coefficient cannot be determined unless we know which farm units have been most affected--the relatively small ones or the relatively large ones. The information needed to make this determination is not available. <sup>22/</sup>

The Gini coefficients derived from Tables 6 and 7 almost surely underestimate the degree of inequality in the distribution of land. While the argument of some writers (Casimir 1964; Pierre-Charles 1967:67, 72-75, 77) that Haitian agriculture is dominated by latifundia is too strong a reaction to the conventional wisdom that most agricultural land is in smallholdings, <sup>23/</sup> there is little doubt that the 1950 and 1971 data understate the number of large landholdings and the area they occupy. The 1971 census, for example, shows no farms of more than 15.50 carreaux (20 hectares)

---

<sup>22/</sup> Also, insufficient data are available to adjust the data on land distribution for differences in land quality.

<sup>23/</sup> Equally extreme is the statement in a recent ILO report (1976:9) that "there may be hardly any latifundia" in Haiti.

TABLE 8  
GINI COEFFICIENTS FOR LAND DISTRIBUTION,  
BY DEPARTMENT, 1950 AND 1971

	1950	1971
<u>National</u>	<u>.49</u>	<u>.51</u>
Northwest	.49	.55
North	.45	.50
Artibonite	.47	.48
West	.51	.53
South	.49	.53

Source: Tables 6 and 7.

in the West; but one does not have to drive very far out of Port-au-Prince to see visible evidence to the contrary. In the North, one sisal company was reported in the late 1950s to own 100,000 acres (31,385 carreaux) and another sisal company, 39,174 acres (12,295 carreaux); two families reportedly held 3,000 carreaux each (US-ICA 1958). The 1950 census, however, showed that the total land area in the North in farms of more than 20 carreaux was just 5,010 carreaux, divided among 167 landholdings. Some large sisal and sugar plantations clearly were not counted. If we add to the 1950 census figure just the land in the 4 properties mentioned above (49,680 carreaux), the 1950 Gini coefficient for the North rises from .45 to .56. <sup>24/</sup> To what extent an additional upward (or offsetting downward) adjustment should be made is not possible to determine. Nor is it clear how much of an adjustment should be made in the Gini coefficients for the other Departments. <sup>25/</sup> Even if such adjustments could be made, however, they would probably still show the distribution of land in Haiti to be less unequal than in most of Latin America.

---

<sup>24/</sup>

The 1971 census showed no farm units in the North of more than 20 carreaux. While it is true that sisal production had fallen sharply by this time, sugar plantations of larger than 20 carreaux may still be found in the north.

<sup>25/</sup>

According to Pierre-Charles (1967:87-88) concessions to companies for the growing of sisal and rubber during World War II totalled 150,000 hectares, but the Departmental breakdown is not provided. Buck (1969:3) reports that the Haitian-American Sugar Company owned 11,000 hectares as of 1969. Mosher (1957:75) reports the general belief that the Haitian elite own little land, but he adds in a footnote that some observers believe the elite hold some land for speculative purposes; specific figures are not provided.

In addition to examining overall measures of land concentration, it is useful also to see what proportion of farmers operate what sometimes have been called microfundia--which in Haiti might be defined as farms of 1.00 carreau (1.29 hectare) or less. Tables 6 and 7 show that the proportion of farmers with microfundia rose from 39 percent in 1950 to 71 percent in 1971. <sup>26/</sup> Only 5 percent of all Haitian farmers in 1971 had more than 3 carreaux,<sup>27/</sup> compared with 16 percent in 1950. The average farm in 1971 was just 1.1 carreaux, and the average parcel was a mere 0.60 carreau.

A comparison of Tables 6 and 7 leads one to be quite skeptical of the data on farm size in Haiti. The 1950 census shows the land in farms to be much greater than in 1971, even though, like the 1971 census, it does not count many very large landholdings. While some farm land was undoubtedly lost to soil erosion, this is unlikely to account for the entire reported decline of 463,000 carreaux between 1950 and 1971. Another possible explanation of this large discrepancy is that the 1950 census included all land

---

<sup>26/</sup> Forty-eight percent in 1971 had no more than 0.5 carreau.

<sup>27/</sup> At the Departmental level, the figures were as follows (in percent):

Northwest	11.9
North	5.6
Artibonite	4.2
West	3.9
South	5.2

held by farmers, arable or otherwise, and regardless of whether it was cultivated or in fallow. However, the 1950 census data show 1,012,827 carreaux under cultivation, excluding fruits and vegetables. This implies that a minimum of 89.5 percent of all farm land was devoted to crop production, a suspiciously high figure even in a country like Haiti where there is extreme pressure on the land and fallow periods have become shorter, in some cases having been eliminated entirely. This suggests that either the figure for total farm area, or for land devoted to crops—or, very likely, both figures—is grossly inaccurate. On the other hand, perhaps the 1971 data are just as inaccurate.

Still another conceivable explanation of the discrepancy between the 2 sets of data is that the 1950 census includes more State-owned land, either rented or occupied without payment of rent (at least to the State), than does the 1971 census. As we have noted earlier, the State's landholdings are reputedly extensive. However, a glance at Tables 2 and 3 quickly leads us to dismiss this as an important factor, even if farmers with unknown tenure status in 1950 are considered to be occupying State-owned land.

Another indication of the uncertainty about land use is provided by a comparison of estimates for 1970 contained in 3 successive FAO Production

Yearbooks (1974-76):

	1974 Yearbook	1975 Yearbook	1976 Yearbook
Total area	2,775	2,775	2,775
Land area	2,700	2,700	2,756
Arable and permanent crops	370	872	810
Arable land	n.a.	500	505
Permanent crops	n.a.	372	305
Permanent pastures	500	510	635
Forests and woodlands	700	70	270
Other areas	1,205	1,323	1,041

The figures (in thousands of hectares) speak for themselves.

In summary, the data on total farm land and its distribution are very unreliable. Any statement about changes in land under cultivation, or in the distribution of landholdings, must be regarded with skepticism. Nevertheless, it is still possible to make 3 broad generalizations. First, the overwhelming majority of Haitian farmers have very little land, and much of it is of poor quality. Secondly, the distribution of private (including company-owned) land is not so unequal as to constitute the kind of serious social problem that exists, say, in the Andean countries. There seems to be more scope for transferring State lands to small farmers than for redistributing private land. Finally, even if available private and State-owned lands were redistributed to smallholders, the average increase in the arable land available to them would be quite modest.

#### LEVELS OF LIVING

##### Per Capita Income Estimates

National accounts data in Haiti, as might be expected, are very weak. In calculating the output of the agricultural sector, for example, the Institut Haitien de Statistique (IHS) assumes that crop production consumed by humans and animals has been constant in per capita terms since the mid-1950s. The value of crop production in 1954/55 prices is obtained each year simply by multiplying that year's figure by the index of total population (1954/55 = 100). The great bulk of sector output is thus assumed to be growing at a steady rate, when in fact it is subject to significant annual fluctuation in accordance with variations in weather and climate. Most other sector activities--crop production for processing, livestock production,

apiculture, forestry, hunting, and fishing--are estimated in a similar fashion; only with exports is there any true attempt to measure output.

The assumption that per capita crop production for human and animal consumption is constant not only is unrealistic in the short run but also may not accurately reflect long-run trends. Some observers believe that it is declining. The USDA's per capita food production index for Haiti, for example, falls from 100 in 1961-65 to 84 in 1975-76 (USDA-ERS 1977:23). <sup>28/</sup>

The statistical base for computing the national accounts is weak not only for agriculture but also for other sectors of the economy. The IHS, which is in charge of the national accounts, has only an incomplete record of public sector transactions because other government agencies are unable or unwilling to provide the necessary information (IBRD 1976: Vol. I, pp. 24-25). Measurement of the output of the remaining sectors of the economy is plagued by other problems. <sup>29/</sup>

The rate of growth of total output in Haiti has increased in recent years, though on a per capita basis the true rate of increase is probably quite modest. The IHS reported a GDP growth rate of 4.6 annually during 1971-75 (2.9 percent per capita); but the IBRD points out that 43 percent of the increase in aggregate output was accounted for by presumed real growth

---

<sup>28/</sup>

This reported decline is somewhat exaggerated if one accepts the results of the 1971 census, which indicated a long-term population growth rate of 1.6 percent, compared with the USDA's assumption of 1.9 percent. However, this does not change the general picture presented by the USDA data. The FAO index of agricultural production, which has greater coverage than the USDA index but makes fewer adjustments to government figures, shows a rise in per capita food production from 100 in 1961-65 to 105 in 1975-76.

<sup>29/</sup>

For a description of the methodology used to calculate output of the various sectors of the economy, see Haiti, IHS (1974:71-116).

in the government sector, for which there is little evidence. <sup>30/</sup> A more realistic growth rate for this period was thought to be 2.5 percent, or 0.9 percent per capita (IBRD 1976: Vol. I, p. 25). Even this more modest rate of growth, however, is a significant improvement over the 0.1 percent (minus 1.5 percent per capita) recorded between 1960 and 1967.

Because of the decline in GNP per capita between 1960 and 1967, recent economic growth has only enabled Haiti to recover its 1960 level of per capita GNP. <sup>31/</sup> In current dollars, per capita GNP in 1975 was estimated to be \$180; but as we pointed out at the beginning of this paper, the figure is this high only because the exchange rate has been maintained at G5 = \$1 in the face of rapid inflation in Haiti since 1970. <sup>32/</sup>

In comparing the World Bank's figures with other estimates of per capita income in Haiti, one must be careful to distinguish between GNP and other measures of income. Sometimes, the gap between rural incomes and the national average is exaggerated because estimates of the former tend to be based

---

<sup>30/</sup>

The increase in real government product was attributed simply to an increase in expenditures. However, no increase in government employment was evident (nor presumably, was there any evidence of an increase in the productivity of public sector employment)

<sup>31/</sup>

For 1960-74, the World Bank Atlas 1976 reports an annual growth rate of -0.1 percent. Positive per capita growth in 1975, and, presumably in 1976, would make per capita GNP in 1976 almost exactly equal to that in 1960.

<sup>32/</sup>

Between 1970 and 1975 consumer prices increased by 86 percent; the rise in the GNP deflator was 84 percent.

on personal income (or disposable income), while the national figure used for purposes of comparison is that of GNP. <sup>33/</sup> It is also necessary to take into account the year for which a particular estimate is made, since current dollar figures have been rising rapidly with inflation.

Bearing in mind these warnings, let us now look at some other estimates of per capita income in Haiti, particularly those which refer only to rural areas or which make comparisons between urban and rural areas. The World Bank itself (IBRD 1976:Vol. II, Table 1.4) makes the following calculations of labor income per capita, based on unpublished data from the 1970 socio-economic survey (Haiti, IHS, 1975-76):

National average	\$63
Rural areas	55
Urban areas	90
Port-au-Prince	118

The national average of \$63 is only 59 percent of the estimated GNP per capita in 1970 (\$107), a figure lower than might be expected. <sup>34/</sup> The ratio of urban income to rural income, 1.64:1, is significantly lower than the average for Latin America, which in the late 1960s was about 2.5:1. If all

---

<sup>33/</sup>

The difference between GNP and personal income in Haiti is difficult to determine. The World Bank (1976: Vol. I, p. 9) estimates that labor income accounts for 70 percent of the GNP, while depreciation accounts for 20 percent and profits, 10 percent. Only profits from private enterprises, though, are received as income. These data suggest that personal income might be approximately 75 percent of GNP. The depreciation estimate, however, seems too high, and even after also deducting indirect business taxes from GNP, personal income might well be approximately 85-90 percent of GNP.

<sup>34/</sup>

As noted in the previous footnote, the World Bank estimated that labor income alone accounted for 70 percent of the GNP.

property income were included in the total, <sup>35/</sup> the ratio would undoubtedly be higher, but not a great deal so.

A very different picture is presented in the Ministry of Agriculture's 5-Year Plan for 1976-81, which reports a ratio of urban to rural income of 4.43:1 (Haiti, DARNDR, 1976:22):

National average	\$165
Rural areas	60
Urban areas	266

These data presumably refer to fiscal year <sup>36/</sup> 1975 or 1976; the precise income measure used is not clear, but the figures are not too much lower than the World Bank's 1975 GNP estimate of \$180. The source of the data is not clear. The Plan also reports rural income figures obtained from a study in the Dubreuil irrigation district in the Plaine des Cayes in the South. These data show per capita income to be \$80 in the irrigated areas but only \$30-40 in the contiguous hillside areas. Again, there is no information on the source, year, or income measure used.

DARNDR's estimate of an average rural income of \$60 for (roughly) 1975 is significantly lower than that of the World Bank, which--using Haitian government data--calculates a 1975 (?) figure of about \$80 for the poorest 90 percent of the population [and, by implication, about \$95 for the entire

---

<sup>35/</sup>

Income from professional services is included, but profits on capital or on intermediation are not (IBRD 1976: Vol. I, p. 8).

<sup>36/</sup>

October 1 - September 30.

rural population] (IBRD 1976: Vol. I, p. 1). <sup>37/</sup> When one considers that the income measure the World Bank uses is a lower percentage of GNP than that used by DARNDR, the gap between the 2 estimates--nominally, \$95 and \$60, respectively--widens to a ratio of approximately 2:1.

As if this gap between different rural income estimates were not wide enough, the Haitian government's National Transport Study (Haiti, DTPTC, (1977) uses a per capita income figure of only \$40, presumably for 1975 or 1976 (Haiti, DTPTC, [1977]: Vol. VI [Draft version], p. 12). The source of this estimate is not indicated, nor is it clear what measure of income is being used.

We thus find that 3 units of the Haitian government--the IHS, DARNDR, and DTPTC--use widely different estimates of rural per capita income for 1975. One is tempted to add the 3 figures and then divide by 3, but we are probably dealing here with different measures of income; moreover, it is not entirely clear that all 3 figures refer to the same year. To put some order into this situation, it is useful to make the following assumptions:

1. The World Bank's estimate of 1975 GNP per capita--\$180--will be accepted.
2. The rural-urban population split in 1975 is 77 percent-23 percent.

---

<sup>37/</sup>

The \$80 figure seems to be based on the 1970 socio-economic survey, which as indicated above yielded a rural per capita income figure in that year of \$55 (in 1970 prices). The lowest 90 percent of rural income earners are estimated to have had a per capita income of \$45 in 1970; this was assumed to be unchanged in real terms in 1975, but because of inflation the figure in 1975 prices is about \$80.

3. Average income in urban areas is 4 times average income in rural areas. <sup>38/</sup>

4. Personal income is 90 percent of the GNP.

On the basis of these assumptions, we can obtain the following estimates of GNP and personal income, in rural and urban areas, for 1975:

	Per capita GNP	Per capita personal income
National average	\$180	\$162
Rural areas	107	96
Urban areas	428	385

The \$96 figure can be considered a good estimate of rural personal income per capita in 1975, expressed in terms of that year's price level and based on a conversion of gourdes to dollars at the official exchange rate. Estimates of rural income distribution will be considered below. But first, it is useful to examine evidence on regional income differentials and then to consider level-of-living indicators other than income.

#### Regional Income Differentials

Evidence on regional income differentials is sketchy and largely qualitative. There is a consensus that Haiti's poorest regions are the islands and the Northwest, the latter region defined broadly to include not only the (old) Northwest Department but also the arrondissements of Gonaives in the Artibonite and Le Borgne in the North. The wealthiest areas are said to be the Plaine du Cul-de-Sac, immediately to the north and east of Port-au-Prince; the fertile Plaine de Léogane, also favorably situated with respect

---

<sup>38/</sup> This is a reasonable assumption if one accepts the estimate that labor productivity in agriculture was approximately one-fourth that in non-agricultural activities in 1975 (though it had been nearly 40 percent in 1971).

to the country's principal market; and the Plaine des Cayes in the extreme southwestern part of the country. Also relatively well off are said to be the irrigated rice-growing areas of the Artibonite Valley, the sugar-growing areas in the Plaine du Nord, the Anse-d'Hainault area at the western tip of the southern peninsula, the Plaine de la Grande Anse (Jérémie), and the fruit-and-vegetable growing area centered on Kenscoff in the mountains near Port-au-Prince. In general, the coffee-growing areas—found in many parts of the country—are considered to have above average income. Other areas are at or below the average because of poor soils, lack of irrigation water, poor access to markets, or other factors.

A study by Richard Schaedel (1962) provides some evidence of relative income levels in various parts of the country during the period 1950-60. Unfortunately, Schaedel was unable to complete the study before departing Haiti, and the editing by USAID/Haiti leaves some important questions unanswered regarding methodology and sources. It appears, though, that Schaedel relied both on existing studies and on the field research he and his collaborators conducted. Table 9 presents information for communities in 4 of Haiti's 5 Departments. These data show net cash income and cash expenditures for typical farm units in the communities studied. No estimate is made of the value of food produced and consumed on the farm, and in the absence of information on family size the data cannot be converted to per capita income figures. Schaedel's own interviews led him to conclude that the income and expenditures reported in the studies summarized in Table 9 were "a little higher than a true country average" (p. 73).

TABLE 9  
 INCOME OF TYPICAL FARM FAMILIES IN FIVE AREAS,  
 VARIOUS YEARS, 1950-1960<sup>a</sup>  
 (U. S. dollars)

Area:	Fond Parisien	Villard	St. Raphael Plain <sup>d</sup>		Camp Perrin Valley	Mersan and Laborde
			Before Irrigation	After Irrigation		
Department:	West	Artibonite	-----North-----		South	South
Farm size (has.):	0.66 <sup>b</sup>	0.66	-----2.80-----		0.45	1.10
Date of Study:	1950 <sup>b</sup>	1960 <sup>c</sup>	1951	1953	?	?
Cash Income	\$388	\$636	\$505	\$867	\$310	\$486
Crops	(179)	(623)	(429)	(828)	(113)	(309)
Livestock	( 74)	( 8)	( 66)	( 29)	(131)	(132)
Supplementary	(135)	( 5)	( 10)	( 10)	( 66)	( 45)
Less: Farm Costs (Cash)	92	76	170	338	31	130
Net Cash Income	296	560	335	529	279	355
Family Cash Expenditures	238	321	302	296	276	270
"Net Profit"	58	239	33	233	3	86

Source: Schaedel (1962:82-87).

<sup>a</sup>The presentation of the data has been rearranged and the figures converted to the nearest dollar.

<sup>b</sup>Based on a survey of 574 low income families conducted by the IHS.

<sup>c</sup>Based on a survey of 130 families between Port Soudé and Deschapelles.

<sup>d</sup>This area is said to be not typical of the Northern Plain; the average farm size assumed here is actually above-average for the area.

If we assume an average family size of 5, net cash incomes per capita in the 5 areas would be as follows:

	Date	Current year prices	1975 prices
Fond Parisien	1950	59	139
Villard	1960	112	206
St. Raphael (before irrigation)	1951	67	148
St. Raphael (after irrigation)	1953	106	227
Camp Perrin Valley	1955?	56	116
Mersau and Laborde	1955?	71	147

These figures, which do not even take into account non-cash income, are considerably higher in real terms than what we have assumed for 1975. There are several possible explanations for this discrepancy, each of which may well be valid to a certain degree: (1) The areas surveyed in the various studies may be even less typical of their regions than Schaedel assumes. (2) Per capita income in rural areas may have declined since the 1950s. This is almost certainly true: for the country as a whole, real per capita income in 1975 was no higher than in 1960 and probably lower than in the mid-1950s; at the same time, per capita income in Port-au-Prince has clearly increased, implying a decline in the rest of the country, though not to the extent implied by the figures. <sup>39/</sup> (3) Income was overestimated

---

39/

Several researchers have asked farmers to compare past and present living standards. In the Northwest, 88 percent of the 243 families interviewed reported lower production from their plots compared with 5 years earlier, and 76 percent reported lower living standards (Gow 1976:13, 15). Gerald Murray (in LaGra 1972: Annex 4, p.6) reports that members of the Bas Boën cooperative felt they had not recovered the living standards they enjoyed prior to 1954 when Hurricane Hazel destroyed the area's mountain dam. Palmer (1976:77) reported that most people in Belladère felt that their living standards were declining and saw little hope for improvement. The IDB (1974:2) maintains that the gains from agriculture have been shifting from farmers to processors, intermediaries, and exporters. Earlier, Courlander had reported, on the basis of observations throughout the country, that living standards of the families he visited in 1932 and again in 1955 had declined almost without exception (1960:110-121). Schaedel (1962:59-60) found that farmers in Plaisance, in the North, regarded the 1920s as the high point of economic activity in that area.

in the earlier studies and/or underestimated in recent studies. (4) The earlier studies may have been conducted in unusually favorable farm years. (5) Finally, average family size in the communities studied by Schaedel may have been greater than 5.

There are some surprises in the relative ranking of the various communities in Table 9. The communities in what reputedly are the wealthiest areas (Fond Parisien, in the Cul de Sac; the Camp Perrin Valley, Mersan, and Laborde in the Plaine des Cayes) have the lowest per capita income figures. <sup>40/</sup> Still, Schaedel's own research found similar figures in the Torbeck area in the Plaine des Cayes, which he regarded as relatively prosperous. Moreover, he found that farmers in the Camp Perrin Valley, Mersan, and Laborde produced more of their own food than those in Torbeck. <sup>41/</sup> Both Villard and St. Raphael, which have the highest figures, are also located in what are said to be relatively prosperous areas, though in the opinion of some observers less so than the Cul-de-Sac or Les Cayes areas. The high figure for St. Raphael is admittedly atypical of its region and the same is probably true of Villard.

In summary, the studies reviewed by Schaedel tend to confirm the conventional wisdom about which are Haiti's more prosperous regions; but they raise some questions--difficult to answer--about their relative ranking and the degree to which this might have changed since the 1950s.

---

<sup>40/</sup> Fond Parisien, though, is not in the most fertile part of the Cul-de-Sac.

<sup>41/</sup> This "income," of course, does not appear in Table 9, where the data are restricted to cash income.

Before examining other local and regional studies, it is worth commenting on the surprisingly high "net profit" or savings rates indicated in Table 9. With the exception of the Camp Perrin Valley, where it is only 1 percent, the savings rate ranges from 10 percent in St. Raphael (before irrigation) to 43-44 percent in Villard and in St. Raphael (after irrigation). Though one would not expect to see savings rates consistently this high, such figures are quite plausible in good years and are needed to offset losses in bad years. On the other hand, they could also be due to an overestimate of income and/or an incomplete accounting of cash expenditures.

It is widely agreed that Haitian farmers hold their savings principally in the form of livestock. A livestock inventory was taken as part of the 1950 census, and the results, by Department, are presented in Table 10. While these figures conceal considerable variation within each Department--and are now 28 years old--they are nevertheless worth examining. The Northwest, it can be seen, ranked lowest in both cattle and swine holdings per household in 1950, and next-to-lowest in poultry. The cattle and swine figures are probably the most significant for providing evidence of rural savings, and lend support to the belief that the Northwest is Haiti's poorest Department. Although the Northwest tied the Artibonite for first place in transport animals (horses, mules, and donkeys), these animals probably were not held so much for sale in the marketplace as to provide a means for carrying food, water, and people in an area where few alternative modes of transport are available. Similarly, the Northwest's top ranking in sheep and goats is not so much evidence of savings as of the inability of much of the land to support crops.

TABLE 10  
LIVESTOCK HOLDINGS PER FARM HOUSEHOLD,  
BY DEPARTMENT, 1950

	Northwest	North	Artibonite	West	South
Horses	0.32	0.38	0.57	0.40	0.46
Mules	0.08	0.02	0.08	0.10	0.16
Donkeys	0.60	0.28	0.37	0.21	0.25
Cows	0.40	0.59	0.48	0.40	0.66
Heifers	0.16	0.25	0.24	0.84	0.30
Calves & Bulls	0.12	0.23	0.21	0.16	0.24
Sheep	0.34	0.10	0.10	0.03	0.09
Goats	3.25	1.12	1.70	1.26	1.72
Swine	1.41	1.74	2.33	1.92	2.03
Poultry	5.96	6.47	8.01	4.98	7.44

Source: Haiti, IHS (1955).

The Artibonite was the second lowest ranking Department in numbers of cattle per household, but it ranked first in both swine and poultry, as well as in transport animals, while occupying an intermediate position in sheep and goats. The West, which held first place in cattle production by a comfortable margin, had a low or intermediate ranking for other types of livestock. The South, on the whole, ranked relatively high in livestock holdings, while the North's ranking was relatively low.

In summary, the differences in livestock holdings among the 5 Departments are not, on the whole, particularly great; but if the data could be disaggregated to the arrondissement or commune level, considerable variation would undoubtedly appear. It would be useful to have recent data on livestock numbers at the Departmental level to compare with the 1950 figures, but unfortunately the livestock information obtained in the 1971 census is stored on computer cards which still have not been processed. Data on livestock numbers were obtained in the 1970 socio-economic survey, but only the national totals have been published. These figures are nevertheless of interest because they show a decline in average household holdings of most types of livestock (see Table 11). The two exceptions--mules and sheep--are both of relatively minor importance. For cattle, horses, donkeys, goats, and swine, the decline per household ranges from 11 to 24 percent; for poultry, it is a more modest 5 percent. If we regard livestock holdings as a proxy for savings (and turn a blind eye to problems with both the 1950 and 1970 data) these figures suggest that rural savings--and, by implication, rural income--have been declining.

Returning from our digression on savings, we may examine several other estimates of rural income in specific areas. A study of 50 farm families

in the Plaine des Cayes (Desplechin 1971) found "net per capita income" (presumably a measure of personal income) to be \$68, apparently for 1970. This figure includes an imputed value for food produced and consumed on the farm, and in 1975 prices it amounts to \$125. However, as indicated in the notes to Table 4, this study is biased in favor of higher income farmers, and the actual average for the Plaine des Cayes would have been lower.

A study of 243 households in the Northwest estimated that per capita income in 1976 was a mere \$55; and for about 70 percent of the households it was less than \$45 (Gow 1976:14; also reported in Pfrommer et al. 1976:2, 39).<sup>42/</sup> There was considerable variation, however, in per capita income in the 4 areas studied (Pfrommer 1976:248):

	Per Capita Income	Percent Derived from Agriculture
Jean Rabel	\$58	69
Bombarde	39	32
Anse Rouge	75	27
Terre Neuve	48	46.

The low proportion of total income derived from agriculture dramatically illustrates the poverty of agricultural resources in the Northwest. Even more striking than the variations among the 4 areas studied were the differences in per capita income by degree of participation in Community

---

<sup>42/</sup>

In the latter reference the \$55 figure is erroneously compared with Haiti's per capita GNP; a more appropriate comparison would be with per capita personal income.

TABLE 11  
CHANGES IN LIVESTOCK HOLDINGS PER HOUSEHOLD, 1950-1971

Type of Livestock	<u>Livestock Numbers</u>		<u>Percentage Change</u>	
	1950	1971	Numbers	Per Farm Household
Horses	254,982	221,100	- 13.3	- 24.0
Mules	55,705	71,715	+ 28.7	+ 10.3
Donkeys	163,032	170,787	+ 4.8	- 11.4
Cattle	669,272	636,737	- 4.9	- 18.3
Sheep	51,783	105,503	+ 103.7	+ 74.4
Goats	890,056	842,602	- 5.3	- 18.8
Swine	1,136,057	1,140,643	+ 0.4	- 13.8
Poultry	3,758,519	4,164,120	+ 10.8	- 4.9

Sources: Haiti, IHS (1955; 1975b).

Councils (CCs): \$152 for households headed by CC committee members, \$62 for households headed by rank-and-file CC members, and \$38 for non-member households (Cov 1976:14). <sup>43/</sup>

Another area for which recent income data are available, at least on a partial basis, is the Vallée des Trois Rivières in the North. Surveys there found that farm income of the smallholders targeted by a proposed FAO project averaged only \$80, or less than \$20 per capita, a figure which rivals that of the poorest areas in the Northwest (Steverlynck 1976: x). <sup>44/</sup> Total family income of these households was not indicated but undoubtedly was very low.

Finally, data are available for the Bas-Boën area in the Plaine du Cul-de-Sac, where considerable technical assistance has been provided since 1969 by the OAS, DARNDR, and the governments of West Germany, Israel, and the United States. A project report in 1975 (Haiti, DARNDR; OAS; and Mission Israéli 1975) reported a rise in incomes from \$70-90 per capita to \$150-200 per capita. <sup>45/</sup> More recent data, supplied by one of the advisors to this program, show that gross income per hectare from the groundwater-irrigated land in the program (187.5 has in 1976-77) rose from \$235 in 1974-75 to \$615 in 1976-77. Farm units in the area average 0.8 ha., but farmers typically do not have all their land in the program. It must be

---

<sup>43/</sup>

The average household size of 6.9 persons is assumed to apply to all 3 groups.

<sup>44/</sup>

The \$80 figure presumably refers to 1975.

<sup>45/</sup>

It is not clear whether this is a nominal or a real increase.

remembered, too, that these are gross income figures. On the other hand, input costs are low (they are partially subsidized) and nonfarm-income is excluded. Personal income per capita is probably well over \$100 for project participants.

In summarizing this section, it may be concluded that the impressionistic views concerning regional income differentials in Haiti are basically correct. Even in the relatively prosperous areas, however, personal income per capita is still very low in absolute terms. At the arrondissement or even the commune level, per capita income for the great majority of farmers is probably well under \$200 in all cases, and usually under \$100. Moreover, in most rural areas there is good reason to believe that real per capita income has been declining.

#### Other Level-of-Living Indicators

The weaknesses of GNP or personal income per capita measures as welfare indicators are too well known to require repetition here. Suffice it to say that they can give a misleading impression of actual living standards, either by under- or overestimating them. In Haiti, as we shall see, the low income figure does not mask a level of living that belies Haiti's classification as a "poorest of the poor" country. Indeed, Haiti's place in this category is confirmed by other level-of-living indicators.

These indicators are also useful for shedding more light on urban-rural disparities and on regional level-of-living differences. Unfortunately, data on regional differences are scarce, and sometimes we are forced to compare individual communities which may not be representative of their respective regions. These caveats notwithstanding, other level-of-living

indicators broadly confirm some of the regional patterns suggested by the income data, though some uncertainty remains about relative levels of living in the Departments other than the Northwest. <sup>46/</sup>

Consumption data. Estimates of consumption were obtained in the 1970 socio-economic survey and have been reported by the World Bank. The figures are suspect, since for both urban and rural areas consumption expenditures per capita were estimated to exceed labor income (by 45 percent in rural areas and 58 percent in urban centers). A low savings rate--even some dissaving--is of course to be expected in a country like Haiti; but dissaving of this magnitude is not plausible. These curious figures can be explained partly by the incomplete recording of income, but there remains a discrepancy between income and consumption that is best attributed simply to poor data.

Notwithstanding these problems, the consumption data are useful for showing relative consumption patterns in rural and urban areas. For several key items, per capita expenditure in rural areas, as a fraction of that in urban centers, was estimated to be as follows:

Food (including coffee)	.70
Medical care	.62
Clothing	.45
Education	.12
Rent and fuel	.33

These figures exaggerate urban-rural disparities in food and housing, both of which are less costly in rural areas. Still, as we shall see below,

---

<sup>46/</sup>

Our review of other level-of-living indicators is by no means exhaustive. Time constraints have limited the data search to readily accessible materials, and no disaggregation of census data is made below the Department level.

real per capita food consumption (in terms of calories, protein, etc.) is probably somewhat higher among urban dwellers than among rural residents. Urban housing, except for a tiny segment of the population, is probably on the whole no better than rural housing (see below). <sup>47/</sup>

On the other hand, the reported differentials for medical care, clothing, and education are probably fairly good indicators of relative differences in per capita consumption between urban and rural areas. Rural residents simply have less to spare beyond subsistence food outlays than urban dwellers, and education and medical care are not as available.

From all indications, rural consumption has at best been stagnant in real terms. If the agricultural sector growth rate of 1.2 percent annually is accepted as a proxy for rural income growth during 1971-75--and this very unreliable figure is taken on faith--then per capita consumption in rural areas would have increased by only 0.1 percent annually. If--as has been alleged--the domestic terms of trade have been turning against farmers (IDB 1974:2), then per capita income in rural areas has been declining. In smaller urban areas income trends seem to have been slightly more favorable (or less worse); but in Port-au-Prince per capita consumption during this period is estimated to have been rising by as much as 10 percent a year (IBRD 1976: Vol. I, pp. 13-14). If these figures are reasonably accurate, the gap between urban and rural

---

<sup>47/</sup>

A housing survey found that an average of 4.7 persons lived in each rural dwelling, the same as in urban areas. Urban households were actually more crowded, though, with 2.5 persons per room in the Port-au-Prince area compared with a national average of 2.3 (IBRD 1976: Vol. I, p. 3).

living standards has significantly widened during the 1970s. This could well be accelerating the already high rate of migration into Port-au-Prince. <sup>48/</sup>

Housing. The socio-economic survey of 1970 found that an average of 4.7 persons occupied each rural housing unit, the same as in urban areas. Urban households were actually more crowded, though, with 2.5 persons per room in the Port-au-Prince area, compared with a 2.3 in rural areas. On the other hand, urban dwellings were much more likely to have potable water connections than rural dwellings (20 percent, compared with only 0.1 percent). Neither urban nor rural households have access to sanitary sewerage systems, though some families in Port-au-Prince and Cap Haitien have illegal connections to piped drainage systems (IBRD 1976: Vol. I, pp. 74-75).

The 1970 survey showed that the average rural dwelling unit had 2.1 rooms and, as reported earlier, each room had an average of 2.3 occupants. The Departmental figures were as follows:

	Average Number of Rooms	Average Size of Household	Average Number of Persons per Room
Northwest	2.00	5.23	2.61
North	2.46	4.94	2.00
Artibonite	1.71	4.41	2.57
West	1.96	4.62	2.36
South	2.20	4.58	2.08

Not surprisingly, the Northwest had the most crowded rural housing, though conditions were almost as bad in the Artibonite. Housing in

---

<sup>48/</sup>

Between 1950 and 1971, as we saw earlier in this paper, the Arrondissement de Port-au-Prince gained population at an annual rate of 5.9 percent.

The West was more crowded than might have been expected, but it must be remembered that this Department includes some relatively poor areas as well as the comparatively prosperous ones. Moreover, relatively high incomes in the Cul-de-Sac, Léogane, and Kenscoff areas are probably to a large extent of fairly recent vintage, coinciding with the rapid rise of urban incomes in the nearby Port-au-Prince market after the socio-economic survey was conducted in 1970. One would expect the South to have among the least crowded rural housing conditions, but the first-place position of the North is surprising.

These data, of course, say nothing about types of housing construction, or the amount of space per person; but considering that virtually all rural housing is of simple construction, built with native materials, and lacking in water or sewer connections, the number of persons per room constitutes a reasonable satisfactory indicator of housing quality.

Nutrition. An estimated 20-25 percent of Haitian children are afflicted with second and third degree malnutrition, and if first degree malnutrition is included the figure rises to perhaps 60 percent. Average daily caloric intake is generally thought to be about 1,700, though this writer has received verbal reports of estimates that are both considerably higher and much lower. The 1,700 figure is a rough average of the findings of various nutrition studies since 1950 (see Table 12). Estimates of per capita protein consumption have varied from 27 to 82 grams daily, with the unweighted average being about 45.

Malnutrition and diseases associated with malnutrition are major causes of death, particularly among infants and children. If average

TABLE 12  
SUMMARY OF NUTRITION STUDIES, 1951-1968

Authors and Date of Study <sup>a</sup>	Location	Urban or Rural	Average Calories	Average Proteins <sup>g</sup>
IHS, 1951	Various	Both	1,491-2,450 <sup>b</sup>	70-82 <sup>b</sup>
Boulos, 1954	Port-au-Prince <sup>c</sup>	Urban	2,096	45
César, 1955	Port-au-Prince <sup>d</sup>	Urban	2,236	n.e.
Grant & Groom, 1956	Port-au-Prince <sup>c</sup>	Urban	1,383	40
Sebrall <u>et al.</u> , 1955	National	Both	1,580	37
Beghin <u>et al.</u> , 1962 <sup>e</sup>	Port Margot (North)	Rural	1,105	27
Dominique <u>et al.</u> , August 1964 <sup>e</sup>	Fond Parisien (West)	Rural	1,360	32
Dominique <u>et al.</u> , December 1964 <sup>e</sup>	Fond Parisien (West)	Rural	1,580	40
Dominique <u>et al.</u> , August 1965 <sup>e</sup>	Fond Parisien (West)	Rural	1,552	42
Dominique <u>et al.</u> , August 1964 <sup>e</sup>	Ganthier (West)	Rural	1,524	36
Dominique <u>et al.</u> , August 1965 <sup>e</sup>	Ganthier (West)	Rural	1,420	41
Dominique <u>et al.</u> , 1965 <sup>e</sup>	Guerin (West)	Rural	2,203	56
King <u>et al.</u> , 1965 <sup>e</sup>	Les Cayes (South)	Rural	1,857	48
FAO Standard			2,200 <sup>f</sup>	55-60 <sup>f</sup>

Sources: King et al. (1968) and USDHEW (1976:67-68).

<sup>a</sup>For authors, complete references, and a discussion of some of the survey results, see the two sources. A more comprehensive survey is Beghin, Fougère, and King (1970).

<sup>b</sup>It is not clear if the lower figures refer to rural areas and the higher figures to urban areas, or if this is simply the range for the various communities studied.

<sup>c</sup>La Saline neighborhood.

<sup>d</sup>Portail Leogane neighborhood.

<sup>e</sup>These surveys used the same research design.

<sup>f</sup>King et al. (1968) use adjusted FAO standards of 2,214 calories and 43 g. of protein.

n.e. No estimate.

caloric intake is indeed about 1,700, then very few persons would consume more than the 2,200 regarded as a minimum standard for the country. The protein deficit looks less severe if we look at average figures, particularly if the minimum standard is regarded as being 43 (King et al. 1968). However, the distribution of protein consumption is probably skewed, and the majority of Haitians probably fall below the standard. Seasonal deficiencies in vitamin A are among the other nutritional problems faced by both rural and urban dwellers.

It is difficult to determine comparative nutritional levels in the 5 Departments, since most of the data in Table 12 are for the West. Of the 2 nationwide studies, Sebrell et al. (1955) do not provide disaggregated figures, and the IHS's 1951 study was not located. Caloric consumption in Port-au-Prince appears to be higher than in most rural areas, but the very different findings of two studies for the same neighborhood in the capital <sup>49/</sup> suggest that urban-rural comparisons should be made cautiously. Another reason to be cautious is that caloric consumption can vary significantly from month to month: for example, an average of 1,360 calories was estimated for the Fond Parisien area in August 1964, but 4 months later the same researchers found average consumption to be 1,580 calories.

Of the 3 rural communities in the West for which data are available, Fond Parisien and Ganthier have quite low caloric consumption figures.

---

<sup>49/</sup> See Table 12, footnote c. On the other hand, since this neighborhood is a relatively low-income one, the average for all of Port-au-Prince could be expected to be higher than suggested by the data in Table 12.

On the other hand, the average in Guerin, in the fertile Plaine de Léogane, approximates the FAO standard. Moreover, protein consumption is higher in Guerin than in any other community studied since 1951. <sup>50/</sup> Apart from the West, Table 12 provides data for rural communities in the Plaine des Cayes in the South and in the Port Margot area in the North. Caloric intake in Les Cayes is above average for Haiti; so is consumption of proteins, particularly those of animal origin. <sup>51/</sup> In Port Margot, on the other hand, the average caloric intake was found to be a grim 1,105 calories, and there was a serious protein deficit as well.

Unfortunately, we know little about Departmental averages, since most nutrition studies have been restricted to a small number of communities. It is widely believed, though, that nutritional deficiencies in the Northwest are greater than in any other Department, and there is enough circumstantial evidence to justify this claim.

Health Status and Health Care. Data on health status are limited, but Haitians most likely have poorer health than citizens of any other Latin American or Caribbean country. Infant mortality is officially reported to be 149 per 1,000, the highest in the region. This is only a rough estimate,

---

<sup>50/</sup> The IHS figures for protein consumption in 1951 are so far out of line with other estimates that, even taking into account a probable decline in nutritional levels since then, the 1951 data are probably not very reliable.

<sup>51/</sup> Animal protein consumption in Les Cayes averaged 16 grams daily. In no other study since 1951 did it exceed 10 grams (King et al. 1968)

and some observers believe the true figure is significantly higher. The crude death rate is reported to be 15 per 1,000, exceeded in the region only by Bolivia, and it is more than twice as high in rural areas (16) as in Port-au-Prince (7); provincial towns occupy an intermediate position (11). <sup>52/</sup> Life expectancy at birth is estimated to be 52 years-- the lowest in the Western Hemisphere except for Bolivia.

Malnutrition and its indirect effects have already been mentioned as major health problems. Other causes of high mortality and morbidity include tuberculosis (affecting 1.8-3.0 percent of the population), influenza, and bronchopneumonia. The slide positivity rate for malaria, which had been brought down to 0.2 percent by 1968, rose to 8.0 percent in 1972. Personal and environmental sanitation are poor, and government policy has generally neglected preventive measures. <sup>53/</sup>

There appear to be no meaningful data on health status at the Departmental level or below. However, data are available on facilities, beds, and medical personnel for the 9 newly-constituted Departments (Table 13). The heavy concentration of medical personnel in Port-au-Prince, located in the now-smaller West, is clearly evident. All other Departments have far lower ratios of medical personnel (other than nurse aides) per 10,000 inhabitants. Data on facilities have little meaning, since these include

---

<sup>52/</sup> Reported in IBRD (1976: Vol, I, p. 76-77). Departmental figures were not provided.

<sup>53/</sup> These brief paragraphs on health status are based on information in USAID/Haiti (1977:117-121).

TABLE 13  
 HEALTH CARE INDICATORS, BY DEPARTMENT, 1970  
 (per 10,000 inhabitants)<sup>a</sup>

Department <sup>b</sup>	Facilities	Beds	Physicians	Dentists	Nurses	Nurse Aides
Center	0.50	4.14	0.12	0.09	0.34	1.15
West	0.51	13.78	2.04	0.27	2.28	2.79
South	0.50	4.90	0.17	0.04	0.48	1.12
Southeast	0.71	3.26	0.23	-	0.28	0.85
North	0.53	5.37	0.35	0.06	0.51	0.53
Northwest	0.89	21.78	0.58	-	0.89	2.76
Northeast	1.85	1.68	0.29	-	0.67	2.61
Artibonite	0.35	6.99	0.52	0.08	0.78	1.82
Grande-Anse	0.53	2.47	0.20	0.04	0.39	1.35
National	0.56	7.91	0.76	0.11	1.00	1.94

Source: Beckles (1975:13-15).

<sup>a</sup>Actual figures are probably somewhat higher, since the 1970 census counted fewer people than the numbers used to prepare this table.

<sup>b</sup>These are the 9 new Departments recently established by an administrative reorganization. Port-au-Prince is in the West, which ranks first in all health personnel categories and second in beds.

dispensaries as well as hospitals. More meaningful are the data on hospital beds per 10,000 inhabitants; again, the West is highly favored. The most favorable ratio of all, however, is in the Northwest, which very likely is the poorest Department in health status as well as in many other aspects of well-being. Presumably a large proportion of the beds is provided by private voluntary agencies.

The data in Table 13 are not disaggregated according to urban and rural location, but the great majority of medical personnel, and probably also of hospital beds, are in the larger urban centers. One major exception may be the Artibonite, where the Albert Schweitzer hospital in Deschappelles serves a large rural population.

Education. The literacy rate in Haiti is variously reported to be 10-25 percent, with the lower figure probably a truer indicator of functional literacy. Literacy in Haiti usually means the ability to read and write French, a language spoken fluently only by an estimated 5 percent of the population and with some facility by perhaps no more than 15 percent. The remainder of the population speaks only Creole, the 4-5 written versions of which are known only to a small number of persons who have taken public adult education classes or have studied in private schools. All formal public education at the primary, secondary, and post-secondary levels is conducted in French. The ability of the great majority of the population effectively to participate in national life is thus severely restricted.

Unpublished data from the 1971 census (Table 14) provide information on comparative educational and literacy levels at the Department level. These data show that the literacy rate for the population 10 years old and above was 28 percent in the more urbanized West but differed little (17-22 percent) among the other Departments. The national average was 22 percent, compared with 10 percent in 1950. Functional literacy, however,

is much lower. If we consider this to require completion of 4 years of primary school, then only 12 percent of the adult population (20+) met this criterion. In rural areas the figure was only 5 percent, with little variation among Departments. Rural school attendance rates were highest in the South and Northwest and lowest in the Artibonite.

Since 1971 the educational picture has improved, but urban-rural disparities are still great. The primary enrollment ratio in 1973-74 was estimated to be 89 percent in urban centers but only 26 percent in rural areas. Only 17 of 100 children entering rural primary school achieve literacy, and just 3.4 percent finish the primary curriculum (compared with 50 percent in urban centers) (USAID/Haiti 1977:123-124). <sup>54/</sup> Class size is estimated to average 53 in rural areas (73 in public schools), compared with 32 in urban centers (IBRD 1976: Vol. I, pp. 77-78). Rural areas also are at a disadvantage in terms of facilities, competence of instruction, and (pardon the expression) relevance of the curriculum to the students' environment.

Summary. This brief review of non-income measures of well-being has confirmed the picture presented by the income data: that of considerable urban-rural differentials and of the great absolute poverty of probably 95 percent or more of the rural population. Little additional light, however, has been shed on relative levels of living in various parts of the country. It is clear, though, that data at the Departmental level are much less useful than disaggregations by arrondissement or commune. Some data at these levels are available, usually in unpublished form; but even more are stored on computer cards or questionnaire forms, where they are much less accessible.

---

<sup>54/</sup>

Actually, urban-rural differences are somewhat less than these figures imply, since children of some rural families are sent to urban areas to finish primary school. Still, the disparity is great.

TABLE 14  
LITERACY AND SCHOOL ATTENDANCE RATES, BY DEPARTMENT, 1971  
(percent)

	Elementary Literacy <sup>a</sup>	Functional Literacy <sup>b</sup>	School Attendance Rates, by Age Group		
			6-11	12-18	19-24
National	<u>22</u>	<u>12</u>	<u>24</u>	<u>29</u>	<u>8</u>
Urban		37	62	57	15
Rural		5	14	20	5
Metro Area	} <u>28</u>	<u>42</u>	<u>64</u>	<u>59</u>	<u>17</u>
Other West		<u>6</u>	<u>17</u>	<u>21</u>	<u>6</u>
Urban		31	58	55	16
Rural		5	15	19	5
North	<u>22</u>	<u>10</u>	<u>21</u>	<u>29</u>	<u>8</u>
Urban		36	59	60	20
Rural		5	13	22	5
Artibonite	<u>17</u>	<u>7</u>	<u>17</u>	<u>23</u>	<u>6</u>
Urban		30	63	60	18
Rural		4	11	17	4
South	<u>18</u>	<u>8</u>	<u>21</u>	<u>25</u>	<u>7</u>
Urban		23	61	55	17
Rural		6	17	21	6
Northwest	<u>20</u>	<u>8</u>	<u>24</u>	<u>30</u>	<u>8</u>
Urban		31	65	59	19
Rural		6	18	26	4

Source: Haiti, IHS, unpublished data from the 1971 census.

<sup>a</sup>Reported ability to read and write.

<sup>b</sup>Completion of at least 4 grades of primary school.

## INCOME DISTRIBUTION

Extremes of considerable wealth and grinding poverty are clearly visible in Port-au-Prince; but on the whole the distribution of income in Haiti does not appear to be as concentrated as in most of Central and South America. Given Haiti's very low level of development, this is not surprising. <sup>55/</sup>

Table 15 shows statistics on income distribution computed by the World Bank from unpublished data from the socio-economic survey of 1970. These data, as noted earlier, measure labor income, including earnings from professional and similar services, but they exclude profits, which in Haiti are thought to be of relatively minor importance. Note that the data refer to individuals, not to families. The distribution of family income is likely to be somewhat different, since 1 in 3 rural residents is considered employed, compared with only 1 in 5 in urban areas.

The data in Table 15 show that 87 percent of the employed population received less than \$240 annually, with a presumed mean of \$120. Together, they received 56 percent of measured income in 1970. At the other extreme, 0.3 percent of the population--3,900 persons--had incomes of \$5,160 or more annually, accounting for less than 5 percent of total income. Figure 2 shows the Lorenz curve based on this distribution (Curve A), which yields a very low Gini coefficient of .32. However, this figure is artificially low because the vast majority of income earners is placed in a single category, and no information is provided on income distribution within that category. If we replace the long straight line in Figure 2 with a curve, the resulting Gini coefficient

---

<sup>55/</sup>

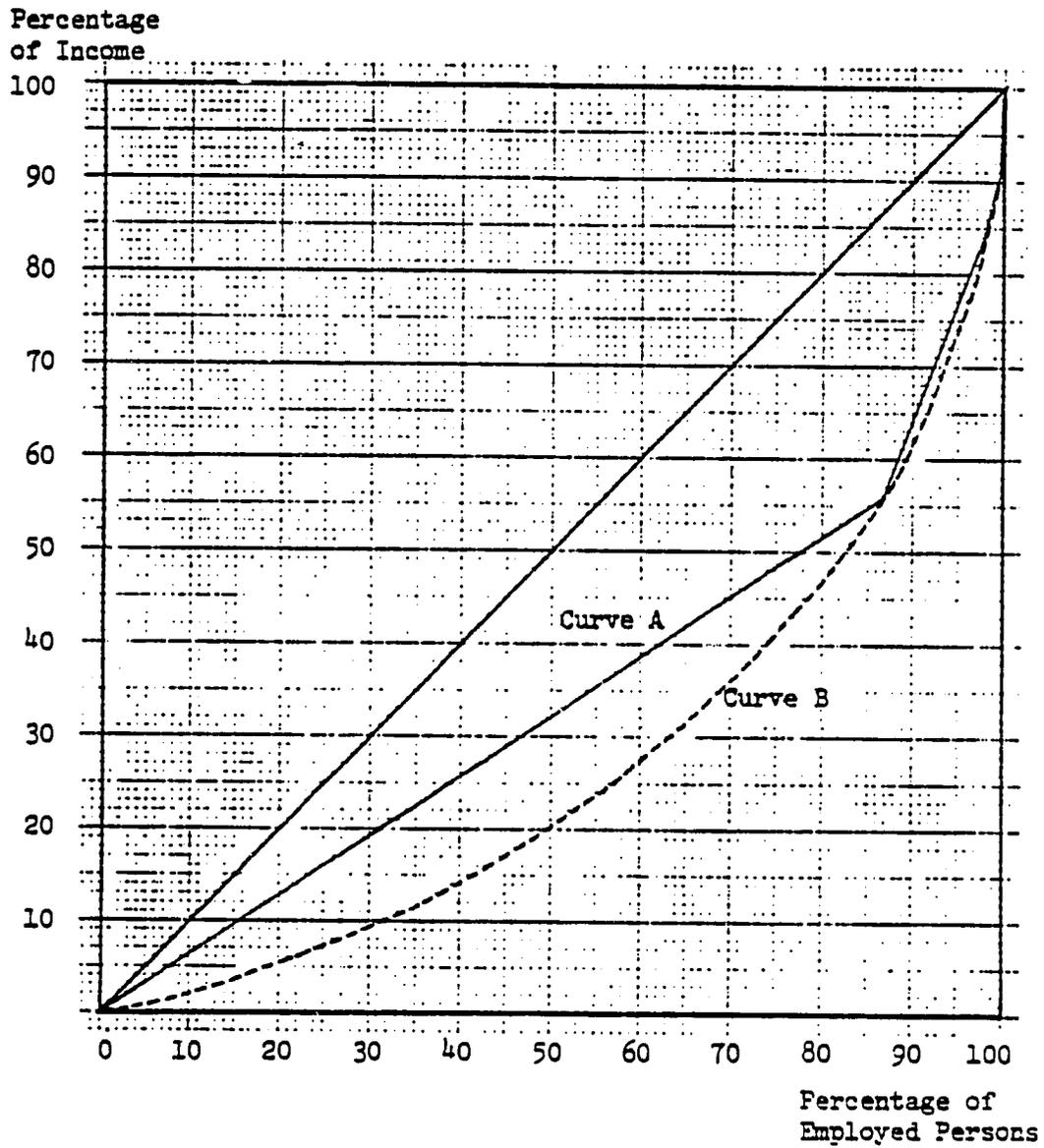
Historically, income inequality has tended to widen after economic growth begins. Over time, however, the degree of inequality ceases to increase and then begins to decline.

**TABLE 15**  
**INCOME DISTRIBUTION FOR THE EMPLOYED POPULATION, 1970<sup>a</sup>**  
**(U. S. dollars; percent)**

Income Category	Average for Category	National Total		Rural Areas		All Urban Areas		Port-au-Prince	
		Percent Employed	Percent of Income						
Less than 240	120	86.9	55.8	92.0	72.1	58.0	18.4	53.8	14.8
240 - 720	480	10.9	28.0	7.4	23.3	30.6	38.8	31.6	34.6
720 - 1,200	960	1.3	6.9	0.4	2.3	6.9	17.5	8.2	18.1
1,200 - 1,680	1,440	0.4	2.9	0.1	0.7	2.1	8.0	2.6	8.6
1,680 - 2,160	1,920	0.2	1.6	0.0	0.5	0.8	4.2	1.3	5.5
2,160 and above	3,240	0.3	4.8	0.1	1.1	1.6	13.1	2.5	18.4
Totals	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: IBRD (1970:Vol. II, Table 1.4), based on unpublished data from the 1970 socio-economic survey conducted by the IHS.

FIGURE 2  
INCOME DISTRIBUTION FOR THE EMPLOYED POPULATION, 1970<sup>a</sup>



Source: Table 14.

would be considerable higher. The curve we have drawn, for example (Curve B) yields a Gini coefficient of about .46. <sup>56/</sup>

For rural areas, income is less concentrated than in urban centers; but because an even greater percentage of the population (92 percent) is lumped into the lowest income category, the Gini coefficient is even more meaningless than that for the nation as a whole. Moreover, the data in Table 15 understate rural income differentials because large farm properties were underreported in the survey. Still, income inequality in rural areas does not seem to be as extreme as in most Latin American countries. <sup>57/</sup>

As might be expected, income in urban centers--particularly in Port-au-Prince--is more concentrated than in rural areas. In the metropolitan area of Port-au-Prince, for example, the highest 2.5 percent of income earners was found to receive 18.4 percent of total metropolitan income. The rapid economic growth in the capital since 1970 may well have made income distribution there even more unequal than in 1970.

---

<sup>56/</sup>

This curve is drawn for illustrative purposes only: it is not based on any underlying data, which are not available. Alternative curves, of course, could be drawn, showing either a higher or a somewhat lower degree of concentration. It seems reasonable to conclude, however, that the Gini coefficient is closer to .46 than to .32.

<sup>57/</sup>

A study of 8 Latin American countries by UN-ECLA (1970:6) found Gini coefficients ranging from .48 to .575.

One other estimate of rural income distribution is available (Gow 1976:16), but it is limited in geographic coverage to farmers living near 4 villages in the Northwest, and the sample on which it is based is not a representative one. The data show the distribution of family income, including an imputation for food produced and consumed on the farm. The sample of 243 farmers was not chosen to reflect the total population but rather to examine differences among Community Council (CC) members, CC leaders, and non-members. CC leaders, who as noted above have significantly higher incomes than members of the other 2 groups, are over-represented in proportion to their share of the total area population. The Gini coefficient calculated from these data—.54--thus overstates the degree of rural income concentration in this part of the country. <sup>58/</sup>

#### EMPLOYMENT AND LABOR FORCE DATA

##### Unemployment and Underemployment as Welfare Indicators

Before reviewing labor force and employment data in Haiti, this writer believes it worthwhile to discuss at some length the serious limitations of unemployment and underemployment rates as indicators of well-being. As is well-known, employment data for developing countries, if

---

<sup>58/</sup>

The mean income of the various income categories is assumed to be at the mid-point, except for the lowest category (0-200), where the assumed mean is 150, and the open-ended category, where it is assumed to be \$,000.

available at all, are generally poor or incomplete even at the highly-aggregated level. But the problems are not just statistical; they are also conceptual.

These statistical and conceptual problems have been ably summarized by David Turnham (1971). <sup>59/</sup> In reviewing the evidence on various aspects of the employment problem (labor force growth, employment prospects, income distribution, unemployment, and urbanization), Turnham concludes that "very much empirical work remains to be done before anything like settled conclusions or even systematic appraisal can be hoped for" (p. 7). He takes pains to emphasize the poor quality of the data and uses specific cases to demonstrate how different conceptual and methodological bases make it difficult to carry out cross-sectional comparisons among countries. Even time series data for a single country or cross section data for different economic sectors within a country can lead to unwarranted conclusions if taken only at face value.

Turnham also warns against uncritical use of statistics like the underemployment rate. Statements such as "30 percent of the labor force is underemployed," for example, are "very misleading without reference to the amount of extra work which is wanted and to the circumstances in which it is wanted" (p. 59). Where attempts have been made to express this "visible underemployment" as a percentage equivalent of full-time

---

<sup>59/</sup>

Some of the following paragraphs are taken, with adaptations, from this writer's review of Turnham's study in the Journal of Developing Areas 6 (July 1972): 603-605.

employment, the result has often been an increase in unemployment rates of only 2-3 percentage points. Even here methodological problems abound: What is a "normal" work week? How does one account for the apparent lack of correlation between average hours worked and desire for additional work? Attempts to measure other types of underemployment--"disguised unemployment" in agriculture, street vending and shoe shining, M.A.'s selling apples, etc.--are fraught with even more difficulties. Turnham does not directly discuss this last type of "invisible underemployment"--people working full-time but at less productive tasks than they are capable of performing--suggesting that no attempts had yet been made to measure it.

Open unemployment is likewise difficult to quantify. Problems arise, for example, in defining such basic concepts as "labor force," "economically active population," and "participation rates." Technical and financial resource limitations make accurate data collection difficult, especially on a regular basis. Turnham believes that published unemployment rates understate the true extent of the problem; but he found no good evidence to support the view that unemployment rates in urban areas rose during the 1960s, though it was clear that the numbers of unemployed persons had increased. Data on open unemployment in rural areas were scarce (especially on a time-series basis), but generally and not surprisingly they indicated lower rates than in urban areas. This means that national unemployment rates may have been rising as population grew faster in urban than in rural areas.

Measures of rural underemployment are particularly troublesome, especially if it is implied that vast numbers of people could leave the countryside without affecting agricultural production. If technology is held constant, the physical removal of people might indeed cause production to decline, since all available hands may be needed for planting, harvesting, and certain other activities. True, these hands may appear to be idle much of the year, or the available work may be divided among all those present (leaving each one underemployed in a very real sense). <sup>60/</sup> But it is not at all clear just how much underemployment exists under these circumstances. Many estimates of rural underemployment fail to take fully into account such activities as time spent on general farm management, small livestock operations, garden plots, marketing, acquisition of credit, community public works projects, food processing (both for market and for home consumption), maintenance and repairs, household management, and production of clothing and other items which cannot be bought in the marketplace for lack of cash.

Another issue concerns the definition of a "normal" work year (in terms of days), particularly when only single cropping is possible—either for climatic reasons or for technological reasons (e.g., the absence of irrigation water)—and no alternative employment opportunities are available. In the United States, we do not consider as "unemployed" a Minnesota farmer who spends 3 months of the year in Florida because

---

<sup>60/</sup>

I.e., in the sense that slack-time tasks could be performed by fewer people.

there is little he can do on his farm during the winter. Instead, we say in effect that his normal vacation time is long. A comparable view might be taken in research on LDC employment, though this should not be seized upon as an excuse to brush rural unemployment problems under the carpet.

Available labor time in LDCs may also be overestimated by failing to take into account the fact that some rural residents considered as potential workers may not want to work on a full-time basis or may not even be in the labor force. In addition, malnutrition and illness probably limit significantly the ability of workers to do sustained work for long periods (Turnham 1971: Ch. 4; Yudelman, Butler, and Banerji 1971: 19-21). Survey evidence in Bolivia, for example, suggests to this writer that 5-10 percent of potential labor time in that country might be lost because of health problems. Since general health conditions probably are similar in Haiti, the proportion of labor time lost to illness can be expected to be in the same range.

Emphasis on unemployment and underemployment indicators fails to take into account the fact that many people counted as fully employed are working at such low-productivity tasks that they are no better off (in terms of nutrition, health, housing, etc.) than the openly unemployed or visibly underemployed. Indeed, they may be worse off. It can be argued, nevertheless, that "invisible underemployment" exists under such circumstances because of "abnormally low" productivity and/or income received (Bouvier and Maturana 1973). But this begs the question of what constitutes an adequate income, and in effect shifts the focus of the problem from employment to productivity and income.

Because of productivity considerations, as well as measurement problems relating to unemployment and underemployment, Turnham advocates an "income" or "poverty" approach to the employment problem. "Sample inquiries could, for example, focus on the economic circumstances of potential or actual full-time workers with earnings below some reference level" (p. 19). "A practical yardstick of employment situation (sic.) is then the percentage of the low paid workers in the total and a worsening (or) improvement in the situation would be judged by reference to increases or falls in the proportion over time" (p. 69). Turnham argues that the technical difficulties of such surveys are no greater than those of endeavors to measure unemployment and underemployment. What convinces him that such an approach is needed is his belief that a continuation of present trends will result in an even more skewed distribution of income, thus increasing social and political tensions. Such tensions, of course, could have adverse effects on economic growth and development. At the same time, recent research (summarized in Zuvekas 1975) has discredited the "old conventional wisdom" that a more equal distribution of income would have negative effects on rates of productive investment or income growth.

Hollis Chenery and his collaborators at the World Bank and the University of Sussex share Turnham's view that the employment problems in developing countries is more appropriately viewed as an income problem: "The recognition that 80 percent or more of the low-end poverty group are employed in some fashion has shifted the focus of policy from

increasing the quantity to improving the quality of employment" (Chenery et al. 1974: xvii). L.S. Jarvis, in a Ford Foundation symposium on employment problems in developing countries (1974: 166), argues that

employment, although an important subsidiary issue, is not the proper focus of policy concern in the less developed countries. . . . If . . . the primary issue is one of income distribution or, more broadly stated, equality of opportunity, it seems better to focus attention explicitly on this objective rather than on an issue which is only indirectly related, such as employment and which may not result in the desired solution.

The importance of the income aspect of the employment problem is also emphasized by Yudelman, Butler, and Banerji (1971), who question the fruitfulness of research for better measures of agricultural unemployment:

Our consideration of employment has been of the factors limiting agricultural incomes and the provision of more opportunities for productive, remunerative employment in the agricultural sectors of developing countries. The question of how much involuntary unemployment there may be in traditional agriculture has been set aside, largely because when involuntary agricultural unemployment is properly defined (and defined in such a way as to be comparable with involuntary industrial unemployment) it becomes almost impossible to measure.

A number of other economists have recommended that employment, per-capita GNP, and income inequality coefficients be de-emphasized if we want to obtain a better idea of changes in living standards among the poorest elements of society in LDCs. John Adler (1972: 366), for example, suggests that international agencies

collect, analyze and publish data which measure and compare for a number of countries the rate of growth of income of the lower half (or the lowest third, or 40%) of the population. Information of this sort would constitute a salutary

beginning in the move away from the preoccupation with aggregate growth--the international pastime of growthmanship--and substitute for it the more meaningful idea of growth with social justice.

Montek Ahluwalia (1974: 5) has calculated, for 44 countries, the percentage of the population with incomes below a "poverty line," which is defined rather crudely in terms of a per capita dollar income figure (\$50, or alternately \$75) applied to all 44 countries. As we have seen, with a more realistic conversion of gourdes into dollars, all but a tiny percentage of rural residents in Haiti would fall below the \$75 figure.

Another proposal, by Ahluwalia and Chenery, is that

the income growth of different groups in society be given weights either in proportion to their numbers ("one man, one vote") or inversely proportional to their initial income levels ("poverty weights"). The equal weights imply that an increase of \$10 in a family having an income of \$1,000 would be valued equally with an increase of \$1 to a family with an income of \$100, since each produces a one-percent advance. The methodology is politically neutral, since the weights can be chosen to fit the preferences of a given society (Chenery *et al.* 1974: xvi; see also pp. 38-42).

This writer would prefer to see, eventually, an abandonment of the income measure in favor of a multi-dimensional level-of-living indicator. In spirit, this approach follows a suggestion made by Rainer Schickele (1972), who reminds us that "the Lorenz method reveals nothing about income levels, and hence cannot measure the extent of poverty" (emphasis added). Schickele proposes a "necessities of life" concept, with quantity and quality dimensions that would vary from country to country. While it is beyond the scope of this paper to develop and justify a multi-dimensional indicator for Haiti, it is important to note that such

an indicator can be more useful than employment indicators--however improved--in measuring changes in welfare.

At the same time, employment data cannot be ignored. From the standpoint of the individual, as we are frequently reminded now in the United States, open unemployment can be a very demeaning experience. In addition, it probably causes more social and political unrest than an equivalent amount of disguised unemployment. Furthermore, employment data can provide valuable information on macroeconomic behavior and on resource allocation between and within sectors (or geographic regions). There is still a case, then, for improving the employment data base.

#### Labor Force, Employment, and Underemployment

A very high percentage of the Haitian population was reported as economically active in both 1950 (55.0 percent) and 1971 (54.4 percent). The 1971 figure, however, includes children in the 5-9 and 10-14 age groups. Excluding these groups, to make the 1971 figure comparable with that of 1950, the overall participation rate is a still-high 47.3 percent. If we take only the adult (15+) population as the denominator, the participation rates rise to 88.6 percent and 79.3 percent, respectively. Table 16 shows participation rates by age group for 1950 and 1971, and also by sex for 1971, while Table 17 shows absolute numbers of persons in the economically active population by age, sex, and employment status.

Another estimate of the participation rate is that found in the 1970 socioeconomic survey (Haiti, IHS, 1975), which shows that 77.7 percent of

TABLE 16

PARTICIPATION RATES OF THE ECONOMICALLY ACTIVE  
POPULATION, 15+, BY AGE GROUP, 1950 AND 1971  
(percent)

Age Group	1950			1971		
	Male <sup>a</sup>	Female <sup>a</sup>	Total	Male	Female	Total
15-19			82.4	65.3	63.9	64.2
20-24			90.3	89.3	74.7	81.4
25-29			91.2	97.5	74.0	84.5
30-34			91.5	98.8	73.4	84.7
35-39			92.3	99.2	74.7	85.7
40-44			93.1	99.0	76.8	87.8
45-49			93.1	98.7	76.8	88.0
50-54			91.9	98.1	76.6	87.7
55-59			90.5	97.5	75.1	86.4
60-64			87.9	95.4	69.3	81.8
65+			71.5	81.6	44.8	60.3
15+	96.3 <sup>a</sup>	81.8 <sup>a</sup>	88.6	89.5	70.3	79.3

Source: ILO (1976:46-47), based on 1950 and 1971 census results.

<sup>a</sup>Not indicated in the source. However, total employment by sex is indicated for those 14 and over, and the total very closely approximates that for the economically active population (employed and unemployed) 15 and over. If we use the 14+ employment data, and further assume that the ratio of females to males (15+) was the same in 1950 as in 1971, the overall participation rates, by sex, can be estimated.

TABLE 17

**ECONOMICALLY ACTIVE POPULATION, BY AGE, SEX, AND  
EMPLOYMENT STATUS, 1971  
(thousands)**

Age Group	Total Population			Economically Active Population			Employed Population			Total Unemployment
	Male	Female	Total	Male	Female	Total	Male	Female	Total	
0- 4	273.1	275.0	548.1	-	-	-	-	-	-	-
5- 9	295.5	300.4	595.9	30.8	32.1	62.9	29.8	31.2	61.0	1.9
10-14	295.8	290.4	586.2	122.5	120.0	242.5	85.5	82.7	168.3	74.2
15-19	230.8	244.5	475.4	150.8	156.2	305.0	119.2	108.8	228.0	77.1
20-24	159.3	187.9	347.2	142.3	140.4	282.8	119.3	103.4	222.7	60.0
25-29	135.2	167.6	302.8	131.8	124.0	255.9	118.7	104.3	223.0	32.9
30-34	106.1	132.3	238.4	104.8	97.1	201.9	97.1	86.7	183.8	18.1
35-39	120.7	146.4	267.1	119.7	109.3	229.0	113.2	100.9	214.1	14.9
40-44	106.5	107.2	213.7	105.4	82.3	187.7	99.9	76.4	176.3	11.4
45-49	95.5	91.3	186.8	94.3	70.1	164.4	90.1	65.4	155.5	8.9
50-54	69.7	65.8	135.4	68.4	50.4	118.8	65.3	46.4	111.8	7.1
55-59	48.0	46.5	94.5	46.8	34.9	81.7	44.7	31.7	76.4	5.3
60-64	45.3	48.9	94.3	43.2	33.9	77.1	41.1	30.6	71.8	5.3
65+	84.1	110.6	195.6	68.6	49.5	118.1	66.4	45.6	112.0	6.1
<b>Total</b>	<b>2,066.6</b>	<b>2,214.9</b>	<b>4,281.5</b>	<b>1,229.4</b>	<b>1,100.2</b>	<b>2,329.6</b>	<b>1,090.4</b>	<b>914.3</b>	<b>2,004.6</b>	<b>325.0</b>
<b>Total, 15+</b>	<b>1,202.2</b>	<b>1,349.1</b>	<b>2,551.3</b>	<b>1,076.1</b>	<b>948.1</b>	<b>2,024.2</b>	<b>975.1</b>	<b>800.4</b>	<b>1,775.3</b>	<b>248.9</b>

Source: ILO (1976:46), based on 1971 census data.

all persons 14 years and over were economically active. Adjusted for the 14-year olds, this figure is very close to the 1971 <sup>61/</sup> census figure.

These very high rates, of course, are attributable to the fact that most women are considered—correctly, in this writer's view—to be in the economically active population. In many Central and South American countries, by contrast, participation rates for women are reported to be 20-25 percent.

The reported decline in the overall participation rate between 1950 and 1971 is a significant one. The rates fall for both men and women, and the decline is particularly sharp in the 15-19 age group. To what extent these figures reflect actual changes, and to what extent they are due to statistical problems, is difficult to say. Only a small part of the drop for the 15-19 age group can be attributed to increased secondary school enrollment, which remains very low. The census data, as we have already indicated, have serious deficiencies.

The 1950 census showed that 85.3 percent of the employed population (14+) worked in the agricultural sector, while an occupational breakdown showed 85.7 percent to be farmers, farmworkers, hunters and fishers, etc. For 1971 the respective figures (this time for those 10 years and older) were 73.3 percent and 72.9 percent. These are the highest in Latin America and the Caribbean. <sup>62/</sup> The fact that only 27 percent of the working

---

<sup>61/</sup> The participation rates for men and women were 87.9 percent and 68.4 percent, respectively.

<sup>62/</sup> They may be even higher than reported. The ILO (1976:7) notes that, because of definitional problems, some agricultural workers may have been classified as non-agricultural.

population is available to produce non-agricultural goods and services constitutes a good indicator of Haiti's very low degree of development.

Open unemployment rates for the population 15 years and over are shown in Table 18. The 1950 estimate was a modest 2.4 percent, not an unusual figure in a country where 85 percent of the population was employed in agriculture. No data were provided on sectoral unemployment rates, or on rural-urban differentials, but open unemployment rates typically are lower in agriculture than in urban-based sectors of the economy.

This is indeed what we find in the 1970 socio-economic survey results, which show a 9.1 percent open unemployment rate in rural areas, but a startlingly high 39.6 percent in urban areas. The overall open unemployment rate (14.7 percent) is much higher than that reported for 1950.

A slightly lower but still high open unemployment rate (12.3 percent) is reported in the 1971 census; no rural-urban breakdown, though, is available. A very different picture is found in the results of a survey conducted in 1972, which estimated that the national unemployment rate in 1971 was only 4.0 percent.

To evaluate the reliability of these data--some if not all of which have to be very inaccurate--would require a detailed study of the various survey methodologies, the definitions of employment and unemployment used, and the accuracy of the tabulations. It has not been possible to do that kind of evaluation. This writer would guess, however, that the lower estimates of open unemployment are closer to the mark. No evidence to support either the higher or lower figures was found, but the lack of

TABLE 18

OPEN UNEMPLOYMENT RATES OF THE ECONOMICALLY ACTIVE POPULATION,  
15 YEARS AND OVER, 1950, 1970, AND 1971  
(employment data in thousands)

	1950	1970 <sup>a</sup>					1971 <sup>c</sup>	1971 <sup>d</sup>
		National	Urban	Port-au-Prince <sup>b</sup>	Other Urban	Rural		
Economically Active Population	1,704.6	1965.7	362.1	230.9	131.2	1,603.6	2,024.2	2,003.1
Employed	1,664.4	1676.7	218.7	117.0	101.7	1,458.0	1,775.3	1,923.0
Unemployed	40.2	289.0	143.4	113.9	29.5	145.6	248.9	80.1
Unemployment Rates:								
National	2.4	14.7	39.6	49.3	22.5	9.1	12.3	4.0
Northwest	2.2					8.3	11.9	
North	1.4					13.3	12.6	
Artibonite	1.1					13.7	6.5	
West	4.1					4.1	16.2	
South	1.5					13.1	9.9	

Source: Haiti, IHS (1975b), for 1970; ILO (1976:3), for 1950 and 1971.

<sup>a</sup>14 and over.

<sup>b</sup>Metropolitan area.

<sup>c</sup>1971 census.

<sup>d</sup>1972 survey.

comments on open unemployment in studies at the local or regional level is itself an indication that it may not be particularly high.

Table 18 also shows open unemployment rates by Department. Both the 1950 and the (high) 1971 estimate show the West to have the highest unemployment rate. Since this is the Department which contains the country's principal urban center, where open unemployment can be expected to be relatively high, the West's unfavorable ranking is not surprising. An open unemployment rate in 1971 of 16.2 percent, however, could be too high an estimate. At the other end of the rankings, the Artibonite had the lowest open unemployment rate in both 1950 (1.1 percent) and 1971 (6.5 percent). The rankings of the other 3 Departments shifted between the 2 years in question.

The 1970 data are not entirely consistent with the Departmental patterns shown by the 1950 and 1971 figures. In particular, the Artibonite is shown to have the highest rural open unemployment rate. Even though urban data are not available at the Departmental level, the Artibonite clearly would not enjoy the favorable ranking it has in the other 2 years. The West is shown to have the lowest rural open unemployment rate, but this favorable figure is offset by a 49 percent open unemployment rate reported for Port-au-Prince. The latter figure, however, is improbable.

#### Underemployment

Underemployment in Haiti is widely reported to be a serious problem. One (unidentified) source mentioned by USAID/Haiti (1974:14) has argued that the existing level of agricultural output could be produced by only

30 percent of the agricultural labor force, working full time. But as the USAID report noted, this estimate failed to take into account heavy seasonal labor requirements. In other words, removal of 70 percent of the economically active population in agriculture would cause a significant decline in agricultural output given the prevailing labor-intensive technology employed. Even now, labor shortages are reported in some areas during times of peak labor demand. <sup>63/</sup>

Even higher estimates of rural underemployment are made by Haiti's Ministry of Agriculture (Haiti, DARNDR, 1976). First, it is said that the economically active population is 70 percent underemployed because the average number of days worked is "less than 120" per year (pp. 2-6). Later, the average number of days worked is placed at 100, including non-agricultural activities (p. 21); using the denominator apparently selected by the Ministry, this translates into an unemployment-equivalent rate of 73 percent. Finally, the Ministry settles upon an unemployment-equivalent rate of 78 percent, which, it is expected, will be lowered to 63 percent during the course of the 1976-81 Plan (p. 66).

There are a number of problems with the Ministry's estimates:

- (1) no account is taken of the seasonality of labor requirements, and

---

<sup>63/</sup>

Even the Ministry of Agriculture, whose own unrealistically high underemployment estimates we are about to discuss, notes that surveys in Cap Haitien and in the Cul-de-Sac have identified seasonal labor shortages. Seasonal shortages are also reported by Desplechin (1971:56), for the Plaine des Cayes; Dorville (1975: 19-20), for the country generally; Dorville and Dauphin (1974: 24-25), for the Arrondissement du Cap Haitien; and the FAO (1975), for the Vallée des Trois Rivières in the North, an area where another FAO report (Steverlynck 1976:57) estimates the unemployment equivalent to be 78 percent.

it is thus not possible to determine how many individuals could be considered surplus laborers in the sense that they could be transferred to other economic activities without affecting agricultural production;

(2) all members of the economically active population 10 years of age and over are assumed to have the same capacity for work; <sup>64/</sup> (3) some persons reported to be in the economically active population in rural areas are not really in the labor force--i.e., not actively seeking work; (4) the unemployment-equivalent rate refers to the entire economically active population in rural areas (including the 10.7 percent who work outside agriculture), so it is not clear what the unemployment-equivalent rate in agriculture alone might be assumed to be; (5) no allowance is made for potential labor time not available because of poor health; (6) even if the economically active population were in perfect health, a "normal" work year of 365 days is a rather extreme assumption; (7) time spent in off-farm employment (including marketing) is almost certainly underestimated; <sup>65/</sup> and (8) time spent in general farm management and household management is very likely underestimated.

---

<sup>64/</sup>

We suggest below (see footnote 80) that the full-time adult male (15-54) equivalent is in the neighborhood of 81 percent of the total economically active population.

<sup>65/</sup>

Schaedel (1962:77) estimated that the average woman in rural areas (not the professional intermediaries) spent 100 days a year in marketing activities in the early 1960s. This estimate may be too high, but there is no doubt that marketing is a very time-consuming activity. The marketing system today seems to be essentially the same as when Schaedel made his estimate.

Taking just points (2), (3), and (6) into account, the unemployment-equivalent estimate can be reduced initially to 58 percent. <sup>66/</sup> Further reductions, by considering points (5), (7), and (8), might also be substantial. (Taking (1) into account in making this kind of adjustment is conceptually awkward; and it is not clear how (4) would affect the unemployment-equivalent rate in agriculture).

Another estimate of the unemployment-equivalent rate, in this case specifically for agriculture, may be made by determining labor requirements per hectare for each crop and then multiplying these figures (in work-days) by area under cultivation to yield total labor requirements. The results are then compared with labor supply figures. A comparison of the total labor requirements figure (362,700 work-years), as determined by the Instituto Interamericano de Ciencias Agrícolas (IICA), with agricultural employment in 1971 (1,433,202) yields an unemployment-equivalent rate of 74.7 percent (ILO 1976:8-9). <sup>67/</sup> (Actually, the calculated unemployment-equivalent rate should be 72.4 percent; because of an error in addition, labor requirements were underestimated by 33,300 work-years). As the ILO points out, this procedure regards all of the economically active population as having

---

<sup>66/</sup>

The labor supply figure is first lowered by 19 percent to cover point (2); the resulting figure is then reduced by 2 percent to cover point (3). Finally, the second adjusted figure is multiplied by .658, to reduce the "normal" work year from 365 days to 240 days, which this writer considers appropriate under the prevailing technology.

<sup>67/</sup>

The overall unemployment-equivalent rate would actually be even higher, since open unemployment is not taken into account in this calculation.

the same work capacity; does not take into account non-agricultural work activity by 10-20 percent of the employed population; and ignores livestock, forestry, and fishing, which probably account for 10-15 percent of sector employment. Another problem is that the normal work-year assumed in making these calculations is 300 days, which this writer regards as too high. Finally, the IICA's estimate of land in crops is considerably higher (1,170,000 hectares) than the 1971 census figure for total land area in farms (863,520 hectares, which, admittedly, is too low). The ILO's own adjustments bring the unemployment-equivalent rate down to 48.8 percent (p. 16), <sup>68/</sup> and a case can be made for reducing it further by lowering the number of days in the work-year and by taking a skeptical view of the reported land area in crops (and hence labor requirements).

It is useful to compare these global estimates of rural or agricultural underemployment with evidence from studies of specific communities or regions. The following studies are helpful in this respect:

1. Desplachin (1973:14) estimated that farmers in the Arrondissement des Cayes worked an average of just 3 hours a day, or half of what is generally considered in Haiti to be a journée. It is not clear, however, whether this estimate includes time spent on general farm management and off-farm work. Nor is it clear whether periods of slack time are included in computing the average. These problems notwithstanding, there is reason to believe that labor is idle for substantial periods of time in the

---

<sup>68/</sup> Taking into account the error explained above, the figure would be 46.5 percent.

Plaine des Cayes. At the same time, it will be recalled, this area is reputed to have above average income.

2. Dorville (1975:10-11) points out that the agricultural season in most of the country is only 6 months long. The major exceptions are said to be the northern part of the Massif du Nord and the northern part of the Southern Peninsula (from Anse-à-Veau to Dame-Marie). In the absence of irrigation, labor in other areas has no opportunity for agricultural work during half the year, except to the extent that time must be spent on general farm management and care of livestock, or opportunities are available for employment elsewhere in the country. Dorville criticizes unemployment-equivalent estimates of 75-80 percent for failing to account for seasonal variations in the demand for labor; but he offers no alternative estimate.

On the basis of surveys in the Cul-de-Sac and the South, Dorville (1975: Annex 7) estimates that labor requirements per carreau for 13 crops, with traditional methods of cultivation, range from 77 work-days for coffee and cacao to 258 for rice. It should be noted that there are some large discrepancies between these figures and the IICA figures referred to above). <sup>69/</sup> Taking the unweighted average of 155 and multiplying it by

---

<sup>69/</sup>

Converting Dorville's figures to a per-hectare basis, we find that they exceed, or fall short of, IICA's estimates by the following percentages:

Beans	+53
Corn	+19
Bananas	+40
Rice	+90
Coffee	-40
Cacao	-40
Sugar	-31

IICA's estimates are national averages, while those reported by Dorville are more restricted in coverage.

the average farm size of 1.1 carreaux, we can very crudely estimate that labor required for crop production averages 170 work-days per farm household. In 1971 an average farm household had 2.04 full-time adult male-equivalent workers; <sup>70/</sup> each, we can assume, devoted 83 days ( $170 \div 2.04$ ) to crop production. If we assume a normal work year of 240 days, this implies an unemployment-equivalent rate of 35 percent. However, no consideration has yet been given to livestock, other crops interplanted with the major crops, general farm and household management, and non-farm employment. How much time should be allowed for these activities is not at all clear, but again there is reason to believe that a substantial amount of labor time is idle. This does not mean, of course, that significant numbers of workers could leave agriculture without affecting production adversely.

On irrigated land, where multiple-cropping is possible, labor time spent on crops will of course be higher. Dorville (1975:30) cites a study in the Plaine des Gonaives which shows labor requirements for several rotation patterns ranging from 222 to 364 work-days per hectare (or 286-470 per carreau). If we assume an average of 340 work-days per carreau, the procedure described above would yield an average of 167 work-days per full-time adult male equivalent worker, just taking crop production into account.

---

<sup>70/</sup>

Assuming an 8 percent unemployment rate in agriculture, the employment figure of 1,433,202 implies an economically active population in agriculture of 1,557,828. Multiplying this figure by .809 (as explained in footnote 75) yields a full-time adult male-equivalent of 1,260,283. Since there were an estimated 616,710 farm households in 1971, the average household had 2.04 full-time adult male-equivalent workers.

However, Bulle (1968) reports that there are 4 members of the economically active population per arable hectare in the Plaine des Gonaves, which suggests that the average number of work-days for crop production in this area is well under 167.

3. Garnier (1976) provides some data for the fisheries sub-sector, which has been studied very little. He estimates that 10,000 full-time and 5,000 part-time workers are engaged in this activity, and that those who are employed full-time work an average of 200 days a year.

4. Riaño-Serrano (1975:22) found very little underemployment in the community of Desarmes in the Artibonite. Heads of household worked an average of 268 days annually on their own plots, and their spouses averaged 236 days. Some had off-farm employment as well (see below). The Desarmes area has irrigation, and the fact that two-thirds or more of those interviewed used fertilizer, insecticides, and improved seeds suggests that they are relatively prosperous.

5. Steverlynck (1976:57) estimated that the unemployment-equivalent rate in the Vallée des Trois Rivières in the North was a very high 78 percent, even assuming a modest work-year of 250 days. The FAO irrigation program proposed for this area was expected to reduce the unemployment-equivalent rate to 23 percent, mainly by taking land out of fallow and sharply increasing the production of plantains.

In summary, the micro-level evidence regarding underemployment shows considerable variation among areas. In those parts of the country where only one crop can be grown annually, much of the labor force is either idle or working only a small number of hours for perhaps half the

year. Labor shortages, however, may occur in the very same areas at harvest time. Given this particular pattern of rural underemployment, one cannot argue that a high percentage of the rural labor force is "redundant," since the removal of significant numbers of workers would cause production to decline unless there were a shift to a less labor-intensive technology. On the other hand, it should not be concluded that underemployment is only a minor problem. There do indeed seem to be large blocks of labor time which could be put to productive seasonal use. The proper focus of government policy, however, should not be a reduction in underemployment rates but rather an increase in income.

#### Landless Labor

Very little is known about landless labor in Haiti. Pierre-Charles (1967:67-68), using the 1950 census data, estimated that 282,454 families were landless in that year; but this figure results from a misinterpretation of the census results, which provide no information on landless laborers but suggest that their numbers are very small. <sup>71/</sup>

A restricted report by one of the international agencies mentions an (unidentified) 1972 survey showing that 1 million Haitians were landless. This is doubtful, even if the figure includes family members, as

---

<sup>71/</sup>

Specifically, Pierre-Charles assumes that only 277,546 families held land under various forms of tenure, when in fact this is only the figure for the first of the 3 categories of farmers shown in Table 2. (Apparently relying on secondary sources, he assumed that the total number of farm families was 560,000; the census figure is actually 575,880). Some landless farmers may be included in the last of the 3 categories in Table 2, but most observers believe that these figures refer to farmers with land.

probably it is meant to do. More likely, the figure refers to farmers who did not own their land but occupied it under other forms of tenure.

Gow (1977:6) notes that 89.3 percent of the rural population were shown by the 1971 census to be engaged in agriculture, while 80.9 percent were living on farms. He then raises the possibility that the difference (a total of about 288,000 persons, or 64,000 families) might be accounted for by landless families; but given the uncertainties involved he does not make a firm conclusion to this effect.

Wage labor is widely used in some parts of Haiti, as indicated elsewhere in this paper, but it is not at all clear whether most of the workers hired are landless. Indeed, Métraux et al. (1951), writing about conditions in the Marbial Valley around 1950, stated that most day laborers were also landowners. Murray found the same to be true in a community in the Cul-de-Sac (personal communication, 11 November 1977). <sup>72/</sup> While the weight of the evidence suggests that the number of landless laborers is relatively low, <sup>73/</sup> it is clear that many of those who do occupy land have so little that they must supplement their farm earnings with income from other sources.

#### Supplementary Employment and Income of Farmers

Many rural Haitian families depend on non-farm income--in cash or in kind--for survival. Some rely mainly on food and services provided by private voluntary agencies. A relatively small number produce handicrafts in their homes. Some farmers obtain employment as day laborers during the slack season. As noted above, Schaedel (1962:77) estimated that women in rural areas spent an average of 100 work-days a year in marketing; their earnings often make a significant contribution to family income.

---

<sup>72/</sup> Murray also found that individuals were reluctant to seek wage employment in their own communities, generally preferring to seek work elsewhere.

<sup>73/</sup> See also the section below on wage rates.

For the country as a whole, the World Bank recently estimated (IBRD 1976: Vol. I, p. 4) that 10-20 percent of Haiti's farmers had other jobs. Evidence to support these figures, though, is difficult to find. <sup>74/</sup>

It is somewhat easier to find evidence on income earned from non-farm activities. For various years between 1950 and 1960, Schaedel (1962: 82-87) found that 'non-farm family income in 5 communities ranged from a mere \$5 in Villard (Artibonite) to \$135 in Fond Parisien (West) (see Table 9). As a percentage of net cash income, non-farm income accounted for as little as 1 percent and as much as 46 percent. In 1976, as noted earlier, Pfrommer et al. (1976:248) found that income from non-agricultural activities accounted for 49 percent of the total income of 243 farm families in the Northwest. Little is known, however, about the types of jobs which contribute most to this supplementary income.

#### Farmers' Use of Non-Family Labor

Particularly in the coffee- and rice-growing areas, family members cannot supply all of the labor required at certain times of the crop cycle because of the very labor-intensive production methods employed. Non-family labor is also utilized on the sugar and sisal plantations, as well as on small farms producing these and other crops. Dorville (1975:25) estimates that the Haytian American Sugar Company (HASCO) has a seasonal

---

<sup>74/</sup>

A survey of 42 farmers in the Desarmes area in the Artibonite found that 22 percent also had non-agricultural employment; some worked as day laborers in agriculture, but it is not clear how many. In addition, 4 percent of the women had outside agricultural employment, while 22 percent were engaged in marketing (Riaño-Serrano 1975:23).

demand for 5,000 laborers, while for the entire sugar industry an estimated 20,000 workers are said to be hired at harvest time (USAID/Haiti 1974:13). <sup>75/</sup>

Desplechin (1971:56), Kulakow et al. (1976:9), and the J. G. White Engineering Corporation (1976: Exhibit 8.6-1, p. 7) report that wage labor is widely used in the Plaine des Cayes. Desplechin's survey (which covered only 50 farm units and as noted in Table 4 is biased in favor of higher-income farmers' determined that labor costs per farm unit in 1971 were as follows:

Coffee zone	\$116
Sugar zone	138
Vanilla zone	154
Basic foods zone	153
Rice zone	51

Kulakow et al. found that 73 percent of the farmers in the area used wage labor, and the White Corporation reported that wage labor was likely to be hired for parcels of more than 1/8 (!) carreau.

A survey of 42 farmers near Desarmes in the Artibonite found that all but one used wage labor during January-June 1975, with some also relying on various forms of exchange labor (Riño-Serrano 1975:25). The major crops in this community, in order of importance, were corn, peas, rice, and sweet potatoes--all basic food crops.

This evidence, though admittedly fragmentary, leads us to question the statement in USAID/Haiti's 1974 agricultural sector assessment that

---

<sup>75/</sup>

The number of full-time workers in sugar is estimated to be about 1,000.

little hired labor is used in agriculture and that greater reliance is placed on exchange labor during periods when family members cannot do all the work required (USAID/Haiti 1974:13). While exchange labor definitely seems to be more important in some areas, <sup>76/</sup> the evidence above, plus that of several studies which argue that farmers actually prefer wage labor to exchange labor, <sup>77/</sup> suggests that the importance of wage labor in Haitian agriculture has been underestimated.

### Wage Rates

Wages are paid by the day, and they rarely come close to the daily minimum of ₣6.50, or \$1.30. The standard ournée is 6 hours in most areas (7:00 AM - 1:00 PM), though in the Plaine des Cayes it is reported to be 5 hours by tradition and 4 hours in practice (White Corp. 1976: Exhibit 8.6-1, pp. 7-8).

Table 19 shows nominal wage rates reported in various areas for different years during the 1970s. Since the price level doubled between

---

<sup>76/</sup> La Gra (1972:3, 15-16) reports that exchange labor was more important than wage labor in the Bas Boën area in the Cul-de-Sac. Though wage labor was used by 56 percent of the farmers in the relatively prosperous first cooperative in the project being reviewed, only 5 percent of the farmers in the control group employed wage labor. Murray (1977:235-236) reports that sugarcane near Thomazeau in the Cul-de-Sac is harvested exclusively with exchange labor, though some wage labor is used for other crops, especially by older farmers. An FAO study in the Vallée des Trois Rivières reports that seasonal labor shortages were met by forming combites, escouades and other types of exchange labor arrangements.

<sup>77/</sup> This is reported by Bauman (1960) and Erasmus (1956), presumably for the nation as a whole, and by Palmer (1976: 162-163) for the Belladère area.

TABLE 19  
 NOMINAL AND REAL DAILY WAGES IN SPECIFIC  
 REGIONS, VARIOUS YEARS, 1971-1976  
 (U. S. dollars)

Source	Year of Estimate	Location	Nominal Daily Wage	Daily Real Wage (1976 prices)
Desplechin (1971:56)	1971(?)	Plaine des Cayes (South)	\$0.15-0.20	\$0.27-0.37
Palmer (1976:139-140)	1974	Dominican Republic	0.50 <sup>a</sup>	0.63 <sup>a</sup>
Dorville and Dauphin (1974:26)	1974	Arrondissement de Cap Haitien (North)	0.40-0.50	0.50-0.63
Dorville (1975:19-20)	1975	Arrondissement de Cap Haitien (North)	0.40-0.50 1.20 <sup>b</sup>	0.43-0.54 1.29 <sup>b</sup>
Murray (1977:281)	1973	Cul-de-Sac (West)	0.60 <sup>c</sup>	0.86 <sup>c</sup>
Riaño-Serrano (1975:25)	1975	Desarmes (Artibonite)	0.35	0.38
ILO (1976:26)	1976	National Average	0.40	0.40
J. G. White Engineering Corp. (1976, Exhibit 8.6-1, pp.7-8)	1976	Dubreuil, Plaine des Cayes (South)	0.30-0.50 <sup>d</sup>	0.30-0.50 <sup>d</sup>
Haiti, DTPTC (1977:Vol. VI (Draft), Appendix 4F, p. 24)	1976	Plateau Central (mainly in the Artibonite)	0.80 <sup>e</sup> 4.25 <sup>b,e</sup>	0.80 4.25 <sup>b,e</sup>

Sources: As indicated above.

<sup>a</sup>Dominicans received \$0.00 per day.

<sup>b</sup>For tractor drivers.

<sup>c</sup>Actually reported as \$0.30 for 3 hours, which we assume to be a half day.

<sup>d</sup>Based on a 5-hour day by custom and 4-hour day in practice.

<sup>e</sup>Wage rates assumed in the economic analysis were on an hourly basis: \$0.13/hour for laborers and \$0.71/hour for tractor drivers. A 6-hour day was assumed.

1970 and 1976, it is important to convert the nominal data to real wage data in order to provide a reasonable basis for comparison. Even having done this, however, it would be hazardous, given the limited nature of the data, to make any statements about wage differentials by region or real wage trends over time. Nevertheless, it seems clear that in real terms wage rates are extremely low. <sup>78/</sup>

Low wage rates are a reflection of low productivity. Agricultural output per worker in 1971 was estimated to have been \$148 in current dollars (ILO 1976:5), <sup>79/</sup> and if one assumes a 240-day work year this amounts to \$0.62 per day. However, the employment figure used in these calculations includes all workers 10 years of age or more; if one uses instead a full-time adult male equivalent, daily productivity rises to about \$0.76. <sup>80/</sup> Other adjustments, however, are also necessary. First, the agricultural product in recent years is overestimated in the national

<sup>78/</sup> Much earlier, Métraux and his collaborators (1951) reported that daily wages in the Marbial Valley ranged from \$0.12-0.15 per day, figures that are roughly the same in real terms as the average of those in Table 18. Dorville (1975), who reported real daily wages in the Arrondissement de Cap Haitien to be \$0.40-0.50 in 1975, notes that previously they had been \$0.25. The earlier date is not indicated, but it is evident that the nominal increase did no more than recover real wages lost to inflation.

<sup>79/</sup> The figure in the source is reported in gourdes at 1955 prices.

<sup>80/</sup> We have roughly estimated full-time adult male equivalents by applying the following weights:

Males, 15-54	1.00
Females, 15-54	0.80
All others	0.50

The percentages in each group are those for total, rather than agricultural employment (ILO 1976:46). The resulting conversion factor is .809

accounts,<sup>81/</sup> and this gives an upward bias to productivity estimates. Secondly, however, the average number of days worked is probably well under 240, and to this extent productivity per day actually worked is understated in the above calculations.

When all of these factors are considered together, one is left with the impression that wage rates in agriculture are substantially below average productivity. They may, of course, reflect marginal productivity at planting or harvest time. If the figures in Table 19 can be believed, and we assume a daily wage rate of \$0.50, the plight of landless laborers is serious indeed. A laborer working 240 days a year would earn only \$120, or only \$27 per capita for an average family of 4.5 persons. Unless another family member were earning a similar amount, it is doubtful that the laborer's family could survive. The very low daily wage rates, and the unlikelihood that many laborers could find close to 240 days of work a year, is reason to believe that the number of landless laborers may be quite small. Migration to Port-au-Prince--or to another country--would seem to be a more attractive option than staying in rural areas looking for work.

In general, we know very little about rural labor markets in Haiti. Is there a national market, or rather do we find geographically segmented markets? Are these markets always competitive, or are wages sometimes affected by monopsony power? Just how much wage labor is used relative

---

<sup>81/</sup>

See the discussion of the national accounts earlier in this paper.

to exchange labor? In the concluding section of this paper we shall suggest how these and other labor-market questions might be answered.

#### Internal Migration

The 1950 census showed that internal migration in Haiti was rather modest (see Table 20). Most migration occurred within Departments, and in no instance did as much as 4 percent of a Department's population come from outside its borders. The Artibonite and the West came closest, with 3.8 and 3.7 percent, while the figure for the South was just 0.7 percent. Most of those coming into the West presumably went to Port-au-Prince, while migration to the Artibonite probably was concentrated in the irrigated rice-growing areas.

For the early 1960s, Schaedel (1962:11) reported that internal migration was still quite modest. His information presumably is impressionistic, since he does not provide quantitative data, but nevertheless it is worth noting. It appeared to Schaedel that Port-au-Prince and the large towns were receiving migrants from nearby rural areas, but that small towns generally were not. Seasonal migration was said to be centered on the Artibonite (presumably the irrigated areas) with workers coming there from the Central Plateau,<sup>82/</sup> the North, and, especially, the Northwest.

---

#### 82/

Most of the Central Plateau is in the Artibonite; the remainder is in the North and the West. The Central Plateau is thought to have good agricultural potential, but it is isolated from the rest of the country because of poor transportation and communications facilities.

TABLE 20  
 MIGRATION STATUS OF THE POPULATION, BY DEPARTMENT, 1950  
 (numbers of inhabitants)

	Northwest	North	Artibonite	West	South
Type of Migration					
Change of <u>commune</u> within an <u>arrondissement</u>	9,873	19,624	8,083	23,922	20,253
Change of <u>arrondissement</u> within a Department	3,111	29,507	10,460	63,532	19,590
Migration from other Departments	3,679	8,017	21,826	40,256	5,442
Migrants from other countries	130	7,883	2,242	5,891	2,797
Total Migration	16,793	65,031	42,611	133,601	48,082
Departmental Population	168,279	539,049	567,221	1,083,069	739,602
Total Migration/Total Population	10.0	12.1	7.5	12.3	6.5
Inter-Departmental Migra- tion/Total Population	2.2	1.5	3.8	3.7	0.7

Source: Haiti, IHS (1955).

The 1971 census results suggest that internal migratory flows had increased during the 1960s. As we saw at the beginning of this paper, the population of Port-au-Prince grew by 5.9 annually between 1950 and 1971. Detailed information on the migrant status of the 1971 population is available on computer print-out sheets, but time constraints precluded an examination of these data.

Finally, a demographic survey in 1973 estimated that net migration into Port-au-Prince in that year amounted to 19,671. Net movements between Port-au-Prince and the 5 Departments are indicated in Table 21. Not surprisingly, a high percentage of the net migration into Port-au-Prince (38.4 percent) comes from elsewhere in the West. But the South, unexpectedly, ranks first with 43.3 percent, leaving only 18.3 percent for the other 3 Departments. The South's contribution to the migratory stream is large even after adjusting the above figures for size of Departmental population. Proximity may play a factor; but the Artibonite is just as close as the South, and transportation difficulties from the North and Northwest would not seem to constitute too formidable a barrier for those determined to escape from rural poverty. This suggests that rural levels of living in the South—or at least parts of it—may not be relatively as high as suggested by evidence cited earlier in this paper. An alternative explanation, though, is that a significant proportion of rural-urban migration which in other Departments is directed towards Departmental or arrondissement capitals, is in the case of the South directed toward Port-au-Prince. <sup>83/</sup>

---

<sup>83/</sup> Table 1 shows that the urban population in the South grew considerably less rapidly between 1950 and 1971 than elsewhere in the country, except for the North. The rural population, meanwhile, grew faster than in the other Departments; but since the differences among Departments are small and the data are shaky, this is not necessarily an indication of relative affluence.

TABLE 21  
NET MIGRATION INTO PORT-AU-PRINCE, 1973

Department of Origin or Destination	Port-au-Prince		Net In- Migration
	Arrivals	Departures	
West	16,315	8,757	7,558
North	2,760	1,639	1,121
Artibonite	3,890	2,044	1,846
South	16,633	8,106	8,527
Northwest	1,165	546	619
Total	40,763	21,092	19,671

Source: Haiti, IHS (1975a:27).

### External Migration

The annual rate of external migration is usually estimated to be 0.4 percent of the population,<sup>84/</sup> though the actual figure could well be much higher. <sup>85/</sup> This is a major reason for the country's rather modest population growth rate. Migration seems to have been particularly high among professionals. Rotberg (1971:243) estimates that 80 percent of all Haitian professionals were living abroad in the mid-1960s, not only in developed countries but also in French-speaking developing countries like Zaire and Guinea. <sup>86/</sup> Migration of professionals has been prompted by: (1) an oversupply of high-level manpower relative to the number of professional jobs that a stagnant and low-income society has been capable of effectively demanding; (2) a decline in real salaries from low to abysmally low levels (see Bertrand et al. 1976); and (3) professionally unattractive political conditions.

Since 1971, however, all 3 of these contributing factors have changed: the sharp rise in foreign economic assistance has increased the demand for Haitian "counterpart" personnel; overseas donors have provided salary supplements to Haitians working on donor-financed projects; and the political environment has become professionally less inhibiting.

---

<sup>84/</sup> E.g. a demographic survey showed that 18,557 Haitians--out of a total population of 4,439,600--left the country in 1973 (Haiti, IHS, 1975a:28).

<sup>85/</sup> Segal (1975:199), whose research is quite detailed, estimates that emigration has averaged 35,000 annually since 1970.

<sup>86/</sup> For the early 1960s Rotberg reports an estimated 1,000 Haitians in Zaire and 300 in Guinea.

Haitian professionals have been returning to their homeland, both to work in government and to take advantage of private business opportunities in a rapidly expanding urban market. <sup>87/</sup> The extent of this inflow, however, is not yet clear; the numbers may well be quite small.

Most Haitians who migrate are not professionals. Many are farmers who have been pushed off the land by population pressure or who simply believe that life must be better someplace else. Most observers believe that the principal destination of Haitian emigrés has been the Dominican Republic, though sizeable numbers of Haitians are also said to be residing in the Bahamas, Cuba, the United States, and Canada. <sup>88/</sup> Some of the estimates of Haitians residing overseas are presented in Table 22. Given the wide range of these estimates--particularly for the Dominican Republic--it is difficult to say what reality is; 200,000-300,000 Haitians in the Dominican Republic, however, is a plausible range. In the United States, the number of illegal Haitian residents may be several times that of those whose residence is legal (Segal 1975:215).

---

<sup>87/</sup> The World Bank estimates that private consumption per capita in Port-au-Prince may have increased by 10 percent annually between 1971 and 1975 (IBRD 1976:Vol. I, pp. 13-14).

<sup>88/</sup> In recent years, however, migration to Cuba and the Bahamas seems to have diminished. Dorville (1975:28), in fact, says that migration to the Bahamas has stopped. According to USAID/Haiti (1974:14), Haitians may account for 20 percent of the Bahamas' population.

TABLE 22

ESTIMATES OF HAITIANS RESIDING OVERSEAS,  
VARIOUS YEARS, 1950-1976

Source of Estimate	Country and Year				
	Dominican Republic	Bahamas	Cuba	United States	Canada
Schaedel (1962):12	18,772 <sup>a</sup> (1950)	-	27,543 <sup>a</sup> (1953)	-	-
Rotberg (1971):249	300,000 (1968)	11,000- 20,000 <sup>b</sup> (1968)	50,000 (1968)	75,000 (1968)	10,000 (1968)
Díaz Santana (1972)	42,142 200,000 <sup>c</sup> (1970)	-	-	-	-
Dorville (1975:28)	-	38,000 (197?)	-	-	-
Segal (1975:198) <sup>d</sup>	100,000 (1975)	20,000 (1975)	e	200,000 (1975)	15,000 (1975)
Palmer (1976:137)	-	-	-	21,466 <sup>f</sup>	-
Joseph (1976)	300,000- 500,000 <sup>g</sup> (1976)	-	-	-	-

Sources: As indicated above.

<sup>a</sup>Census data.

<sup>b</sup>The official Bahamian figure is 11,000.

<sup>c</sup>The Dominican Republic census figure is 42,142. Estimates ranging from 87,000 to 200,000 are attributed to various Dominican Republic agencies.

<sup>d</sup>Estimated number who have migrated since 1960.

<sup>e</sup>The number is said to be small.

<sup>f</sup>New York City only (1970 census).

<sup>g</sup>Attributed to Dominican Republic officials.

In addition to these permanent migratory flows, there is also considerable seasonal migration to the Dominican Republic, where Haitians are said to account for two-thirds or more of those employed as cane cutters by the sugar mills. <sup>89/</sup>

## GOVERNMENT POLICY

### General

Little imagination has been exercised in the use of government policy to promote rural development, particularly for the great majority of farmers whose levels of living are very low. Moreover, budget allocations to the agricultural sector have been modest and have consisted overwhelmingly of salary payments. Salaries have been very low, making it difficult for the Ministry of Agriculture to retain qualified technicians. Periodic bursts of activity have occurred, but they have left few if any lasting improvements.

---

<sup>39/</sup>

Palmer (1976:138) cites newspaper reports in the Dominican Republic of a survey showing that the 7 largest sugar mills employed 16,228 Haitians. Díaz Santana (1972), referring probably to the same study, says that two-thirds of those employed by the sugar mills were Haitians. Joseph (1976) estimates that the figure is between 60 and 80 percent. Dorville (1975:27) estimates the number of seasonal migrants to be 20,000. Joseph alleges that the governments of François Duvalier and Joaquín Balaguer agreed in 1966 to permit 12,000-15,000 Haitians to seasonally migrate each year; the Dominican Republic thus got cheap labor, while Duvalier, it is said, received a fee of \$10 per worker annually. Five percent of the Haitians' wages were said to have been deposited in Haiti to ensure their return, but this was not always effective. The recent fall in sugar prices is said to have resulted in the repatriation of some Haitians.

The latest burst of activity began, slowly at first, around 1970, when government interest in agriculture revived after having fallen to very low levels during most of the 1960s. The 5-Year Plan for 1971-76 gave agriculture second priority behind transportation and allocated to it 27 percent of the development budget (but far less than 27 percent of total government revenues). International development agencies began to show an interest in resuming or increasing their programs of assistance to the Haitian government. Implementation of the agricultural programs in the Plan, however, got off to a disappointing start when actual investment in the first year amounted only to about 25 percent of what had been planned. In fact, investment remained at about the same level as in the previous 4 years (USAID/Haiti 1974:59-62). Only toward the end of the Plan period did the situation show signs of improving. Even then, the Ministry of Agriculture admitted that achievement of the Plan objectives for agriculture was less complete than for other sectors of the economy. This was attributed not only to relatively uncontrollable factors such as drought and inflation, but also to problems on which the government could have exercised some influence: the poor state of irrigation facilities and other infrastructure, weak institutions, poor data, price fluctuations, a low level of investment, and a lack of coordination and integration of socio-economic development actions (Haiti, DARNDR, 1976:1).

In a presidential address on 17 July 1975 agriculture was assigned first priority in the country's future development planning and was

promised at least 20 percent of government development expenditures. The sector strategy in the 1976-81 Agricultural Plan calls for:

1. Improving socio-economic conditions in rural areas and slowing rural-urban migration.
2. Increasing production and productivity.
3. Promoting economic growth in rural areas and narrowing income disparities.
4. Upgrading human resources, providing more employment opportunities, and stimulating private-sector participation in rural development.

The agricultural sector growth rate was to be raised from about 1.5 percent to 5.0 percent (Haiti, DARNDR, 1976:1-6). <sup>90/</sup> Yields in 1980/81 were targeted to be an unrealistic 61 percent higher than the average during 1971-74 (p. 63).

#### Land Tenure

Small plots and a relatively low concentration of landholdings have characterized Haitian agriculture since independence, when the government broke up large plantations and distributed land to former slaves and soldiers. Inheritance laws encouraged further subdivision, a process

---

<sup>90/</sup> Later, (pp. 61-63) the planned sector growth rate is said to be 11.5 percent, in order to raise food consumption per capita from 425 kg. during FY 1972-74 to 600 kg. by FY 1981. (Actually, the growth rate—which is based not only on food consumption per capita—is miscalculated; the data in the Plan actually show a growth rate of 6.3 percent).

that accelerated with population growth. At the same time, government policy permitted fairly large plantations--mainly in sugar and sisal--to operate. Though the number of such holdings has been underreported, it seems clear that they do not dominate Haitian agriculture to the same degree as large farms in other Latin American countries.

The Haitian government itself is also a major landholder; some of its land is leased by private farmers or companies, while other State land reportedly is occupied without payment of rent. During the late 1940s a government agricultural colony was established at Baptiste, close to the border with the Dominican Republic; but the colony received little support, and the government eventually abandoned it (Palmer 1976:96-97). While the State probably owns a great deal of land in rural Haiti, it is not clear how much of this land is suitable for farming and thus available for distribution to or colonization by small farmers now living in areas where there is great pressure on the land.

A cadastral survey would help clarify the nature and extent of the State's landholdings, and the extent and tenure status of private landholdings. As we have already indicated, a good cadastral survey exists only for the irrigated lands in the Artibonite. At present, the government seems to have no plans for a nationwide cadastral survey, or even a regional one. Given the problems caused by insecure tenure, however, there is reason to be concerned about who will ultimately benefit from the rural investments that the government and international donor agencies are interested in financing. On the other hand, it should not be automatically assumed that a cadastral survey will be a good thing for

small farmers. It might only pave the way for land-grabbing by the relatively wealthy under a cloak of legality. Brisson (1976:8) has warned that peasants are suspicious of any government action affecting land tenure, and this suggests that preliminary research to clarify the pros and cons of a cadastral survey in Haiti should precede any attempt to start one. Suggestions for research on this subject are offered in the concluding section of this paper.

Little serious consideration has been given, apparently, to consolidation of small landholdings into larger individual, cooperative, or communal farms. <sup>91/</sup> The case for cooperative or communal farming in Haiti is strong, since technological options would be increased and a vehicle provided for the dissemination of technical assistance and the provision of credit at much lower administrative costs per farmer than is now possible. This need not involve an end to private ownership of land, nor does it imply a displacement of labor. While increased use of capital inputs certainly is desirable, a shift to more intensive farming and an increase in irrigated land area should actually increase the demand for labor.

Most knowledgeable social scientists believe that there is no strong historical basis for cooperative or communal farming in Haiti. Cooperative work arrangements--the combite and the escouade, for example--do exist,

---

91/

Suggestions along these lines have been made by the authors of the National Transport Study (Haiti, DTPTC, 1977:Vol. VI (Draft), Appendix 4F, p. 2) for the Central Plateau: Pierre-Charles (1967:230-239); and Steverlynck (1976:67-68).

but they are very short-term arrangements and seem to lack any kind of permanent structure. Moreover, Haitian farmers are said to cherish the independence hard-won by their ancestors. Notwithstanding these unpromising conditions, this writer believes that the potential benefits of cooperative or communal farming in Haiti are so great that additional research should be undertaken to see if the (admittedly formidable) barriers can be overcome. This, too, will be discussed below.

#### Rural Levels of Living and Income Distribution

The "fundamental objective" of the current 5-Year Agricultural Plan is said to be an "improvement in the level of living of the rural population" (Haiti, DARNDR, 1976:98). In addition, as we have seen, the Plan calls for a narrowing of income discrepancies. But the connection between policies and programs, on the one hand, and objectives, on the other, is tenuous. This is particularly true for income redistribution, for it is not at all clear that the government's proposed agricultural and rural development programs will always favor the most disadvantaged individuals, groups, or regions. The "Îlots de Développement" strategy--based on integrated rural development programs in "mini" growth poles and constituting an important part of the Ministry's of Agriculture's strategy--actually favors communities which are relatively well endowed with basic infrastructure (Riaño-Serrano 1975:3). In addition, it has been determined that the programs of HACHO (Haitian American Community Help Organization) provide more benefits the greater is the prior income level of program recipients (Pfrommer et al. 1976:135-137). Members of the Community Councils, which the government supports and says it would like to

see develop into agricultural production cooperatives (Haiti, DARNDR, 1976:116-119), tend to be among the more affluent members of their communities (Gow 1977:18). (Most are still poor enough, though, to be included in AID's target population).

These trends are not particularly surprising; nor should they necessarily be criticized. Indeed, it makes a good deal of sense to begin rural development programs in those communities or among those individuals in the targeted low-income population who are most likely to be receptive. To begin where problems are the most intractable is to court failure and to diminish the chances of expanding the scope of rural development programs to communities where change is more easily accomplished. If programs are started instead in the latter communities, there is a better chance that unforeseen obstacles can be overcome. A program that is successful in relatively prosperous (but still poor) communities then has a good chance of being extended to even poorer communities, either directly or indirectly through demonstration effects.

This does not mean that the "poorest of the poor" should be entirely neglected. Expenditures on education, public health, and transportation, for example, if designed carefully to benefit specifically these individuals, can play an important role in making levels of living more equal, even though there might be no short-run effects on the distribution of per capita incomes. In theory, a more progressive tax structure could help narrow rural income disparities, but administrative and other difficulties limit the options open to policymakers. Further reductions in

transactions taxes on domestic foodstuffs would seem to favor small farmers, but the gains from additional export tax relief might not. Still, consideration might be given to lowering both export and transactions taxes and to replacing the lost revenues with additional taxes on goods and services consumed by upper- and middle-income groups.

Returning to the expenditure side of the budget, the road construction projects now underway have potentially significant effects on rural incomes (but not necessarily income distribution) because they should lower the costs of marketing. Current efforts in education are much less promising for improving rural levels of living (USAID/Haiti 1977:122-129). Programs in health, nutrition, and family planning lack direction, and per capita spending in these areas amounts to only about \$1.20 annually (USAID/Haiti 1977:103-121).

In summary, there is little likelihood in the near future of a general increase in rural levels of living. Some communities will benefit from government programs or from world market prices for export crops, but these gains will be offset by deteriorating living standards in areas where the productivity of agricultural land is declining because of soil erosion. A general rise in rural levels of living will require increased food consumption and better nutrition, and until the soil erosion problem is tackled on a large scale it is difficult to see how this can occur.

#### Employment

To the limited extent that the Haitian government has a policy toward rural unemployment and underemployment, it consists of

(1) expanding irrigation and promoting more intensive farming in lowland areas, in cooperation with foreign donor agencies, <sup>92/</sup> and (2) transferring "surplus" rural labor to other sectors of the economy, particularly industry. <sup>93/</sup> Since little is being done to colonize idle State lands in the Central Plateau, <sup>94/</sup> to promote rural handicrafts, or to encourage industrial development in Cap Haitien, Gonaives, and other smaller cities, government policy implicitly is encouraging continued rapid migration from rural areas to Port-au-Prince.

The lack of focus on employment, as we have argued above, is not necessarily to be lamented. Many of the employed have no higher incomes or levels of living than the unemployed; to reach both groups

---

92/

Several studies have suggested that very substantial employment gains are possible. In the Vallée des Trois Rivières, as already noted, a potential reduction in the underemployment-equivalent rate from 78 percent to 23 percent has been claimed (Steverlynck 1976:57). Bulle and Da Cunha (1967) claim that irrigation of 5,500 hectares in the Plaine des Gonaives would increase labor requirements from 508,900 work-days to 2,175,250.

93/

Sensibly, agro-industries are stressed in the Agricultural Plan (Haiti, DARNDR, 1976:51-53), together with transportation and communications investments whose priority is determined mainly by agricultural programs. The suggestion that fertilizer plants be established, however, seems premature given the very low effective demand (Brummit and Culp 1973).

94/

It has been argued that 50,000 jobs could be created by opening up the Central Plateau. Curiously, it is proposed that agricultural production in that area be based on large farms and relatively capital-intensive technology (Haiti, DTPTC, 1977:Vol. I, p. 82).

an emphasis on income (or a more comprehensive measure of well-being) is more appropriate.

Nevertheless, the lack of good data on rural employment and unemployment is disturbing. A large-scale attack on the soil erosion problem will require very substantial inputs of labor; but at present too little is known about what these labor requirements will be and at what times of the year labor will be available. The government will also have to decide how workers on erosion control projects are to be paid--in cash, in kind, or in a combination of the two--and from what sources of funding.

More research is badly needed on the employment implications of erosion control projects, not just during the construction stage but also for ongoing maintenance and repair work. Construction, maintenance and repair of roads and irrigation systems also can provide a substantial number of jobs in rural areas. The ILO has estimated that erosion control, irrigation, and road projects together could create up to 100,000 jobs annually: assuming a 200-day work-year, labor costs (only) would be about \$20 million. <sup>95/</sup> But benefits as well as costs need to be considered, and even if social benefits are defined liberally it could well be that many technically and financially feasible projects are inadvisable. <sup>96/</sup>

---

<sup>95/</sup>

Based on an estimated average agricultural wage of \$0.40 per day.

<sup>96/</sup>

One of the dangers of a policy focusing on employment is that benefit-cost considerations can be ignored.

## DIRECTIONS FOR FUTURE RESEARCH

Given the lack of good socio-economic data for rural Haiti, it is tempting to present a laundry list of "high priority" research needs. Such an agenda, however, would be a standardized prescription that could be submitted for most any developing country, and it would be utopian to think that more than a few proposals could be acted upon in the near future. Moreover, the outlines of rural poverty in Haiti are clear enough to determine appropriate rural development strategies. Too often, additional research becomes a substitute for action.

At the same time, of course, action on the basis of faulty and unclear information can be dangerous. We have identified in this paper several important areas of uncertainty regarding land tenure, rural income and levels of living, and rural employment. It is time now to offer some suggestions for resolving some of these uncertainties, particularly as they pertain to major rural development projects now being considered.

1. A decision should be made about the advisability of a cadastral survey, the pros and cons of which were discussed above. Some type of nationwide survey should be undertaken to determine the attitudes toward on-farm investments of farmers who lack secure titles to the land they are said to own. This writer will not claim any competence to design what will have to be a very delicately worded and administered questionnaire. The point to make here is that this survey should have a very limited purpose. Technical assistance from outside Haiti would probably be necessary for sample selection and survey design, but the active participation of Haitians knowledgeable about the issues is essential. In

addition to this survey, which would not be very costly or time-consuming, more detailed information should be collected for the irrigated lands in the Artibonite where a cadastral survey has long existed. It would be particularly valuable to know what kind of land disputes occurred at the time of the survey, and how they were resolved.

2. There is ample evidence that it is difficult to organize Haitian farmers into production or marketing cooperatives or similar groups requiring a formal, permanent, and relatively complex organizational structure. It is even more difficult for such groups to achieve their objectives. The recently-formed agricultural credit societies have more limited objectives and are less structured than true cooperatives, though perhaps they may evolve into this more complex form. There appear to be, however, some successful cooperatives in Haiti, and an examination of their operations may provide some clues about the reasons (literacy? outside leadership?) for their success and their likelihood of survival without outside assistance. Given the small number of cases, such a study would be inexpensive; the payoff could be high.

3. Per capita income leaves much to be desired as a measure of well-being, particularly in countries like Haiti where many goods and services do not pass through the marketplace. While it is common practice to impute the value of food produced and consumed on the farm, no imputation typically is made for owner-built housing, exchange labor, and non-market personal services such as those provided by traditional medical practitioners. It is not clear how much these non-measured components of "income" vary from one part of Haiti to another. We do not even have uniform data on measured income by region. Especially lacking is

information on changes in regional income or levels of living over time.

Since it is clear that almost all rural Haitians are included in AID's target population, there might seem to be no compelling reason to obtain comparative income or other socio-economic data for the country's various regions. A good case can be made, however, for institutionalizing the collection of time series data on a uniform basis in order to provide a means for determining project effectiveness. Base data are already being collected in many rural areas where projects are under consideration or are being implemented. Collected by a number of different Haitian government agencies and international organizations, many of these statistics are not available on a uniform basis. While each project has its own set of objectives and thus should collect data not necessarily needed by others, a case can be made for attempting to collect an agreed-upon core of data for all project areas. This is a decision that would have to be made by the Haitian government and agreed to by the various international organizations. These organizations are probably better equipped to undertake the data collection than any alternative group(s). Given the local or regional focus of many development projects in Haiti, this kind of non-random sampling over time, it can be argued, in many respects provides a more meaningful indication of change than a periodic nationwide sample survey, the results of which would give a less clear picture of the reasons for changes over time. The common core of data should be obtained also for some communities not participating in

any government-assisted project. <sup>97/</sup>

Rather than collecting time series data on income, we would propose instead that other indicators of well-being be utilized. A comprehensive, single indicator derived from a series of separate indicators would be useful but not necessary. The individual indicators would be valuable in themselves for focusing on such dimensions of well-being as housing, nutrition, health, education, transportation and communications, potable water, sewage disposal, electric power, farm implements and machinery, and consumer durables. Consumption items of less direct interest for public policymakers (e.g. clothing and personal services), could be ignored in the early stages of such research.

Agreement on a uniform core of regional development indicators, collected on a regular schedule--e.g., every 4 years--would not be easy to reach. But without such a reporting system it will continue to be difficult to make comparisons among communities or to determine what happens in a particular community over time. The method suggested for collecting the data may not be the most appropriate--data collection, for example, could also be done by the Institut Haitien de Statistique (IHS)--but the importance of uniformity should not be underestimated.

4. Little is known about the functioning of rural labor markets. Information on the amount of labor hired indicates considerable variation among communities, but it is difficult to make any conclusions on

---

<sup>97/</sup> Selection as a control-group community, of course, would not forever disqualify that group from assistance.

the basis of data from just a small number of communities. Evidence on wage rates and their regional variation is likewise scant. The number of landless rural laborers is a mystery, and knowledge of seasonal labor migration is limited. Information on these and other labor market characteristics is important in planning for labor-intensive rural projects involving construction, erosion control, maintenance, and repair. Knowledge of farmers' dependence on hired labor is important in determining their potential demand for credit. Special programs might be considered for landless laborers if their numbers are found to be large.

A specialized labor-market survey would be useful for providing the above information. Such a study could probably be conducted by the IHS, with some outside assistance, but the IHS is busy enough trying to process the results of several previous surveys. A survey like this might also be contracted to Haitian social scientists operating out of the national university or a private research firm, if a suitable one is found to exist. The cost would be modest.

5. As we have already indicated, it is important to determine the manpower implications of erosion control projects. USAID/Haiti (1977:101) has recently estimated that these are likely to vary from less than 100 to more than 200 work-days per hectare on steep eroded hillsides. Terrace construction in the Jean-Rabel and Acul watershed areas is estimated to require 230 work-days per hectare (Franklin and Snyder 1975). These estimates span a wide range, but perhaps labor requirements will indeed vary by this much and can be determined only after the required engineering studies have been made in each watershed area.

Several erosion control projects are now underway, and it should be possible at this time to check the above estimates with actual experience. If some projects already have been completed, it would also be important to see what the experience has been with maintenance requirements. This is not really a "research project," since only a few simple inquiries are needed. But given the high degree of uncertainty regarding labor requirements for erosion control projects, this is an important task for project planning and budgeting purposes.

With one exception, the research suggested above is quite modest in scope. One might also argue, however, that a detailed, comprehensive, nationwide farm-level survey should be undertaken to obtain information not only on land tenure, income, and employment but also on technical production coefficients, credit, marketing, etc. Such a survey would be difficult to justify, though, unless the resulting data could be analyzed by agricultural economists, statisticians, and other technicians capable of defining and interpreting complex interrelationships among the variables. Neither the IHS, the Planning Unit in the Ministry of Agriculture, or the Planning Board (CONADEP), is now capable of this kind of technical sector analysis. It could, of course, be done entirely by outside consultants; but if the Haitian government has no effective input into such a project, it is questionable whether it will be willing, or able, to use the output effectively.

An alternative to a comprehensive farm-level survey would be a less ambitious agriculture census or survey similar to those conducted in 1950,

1970, 1971, and 1975-76. <sup>98/</sup> Indeed, this is what the government plans to do in connection with the next population census, planned for 1980. This may well be the more desirable alternative, but a good case can be made for postponing the next census until about 1983. In the first place, existing aerial photographs are not suitable for developing a good sample frame. An aerial photography project using a 1:40,000 scale has been proposed, and it would seem worthwhile waiting until this is completed to avoid the errors resulting from what otherwise would have to be a very crudely determined sample frame. Secondly, given the delays in processing census and survey data in the past, and the time needed to prepare the Third 5-Year Plan (1981-86), it is unrealistic to think that 1980 census data could be used as the statistical base for the Third Plan. If the Plan is to be more analytical and project-oriented than its predecessors, CONADEP, IHS, DARNDR, and other government agencies will have to devote a major proportion of their efforts during 1979-81 to its preparation. If a census unusable for the Plan is also undertaken during this period, there will be severe strains on the government's limited resources, thus threatening the quality of the Plan.

---

<sup>98/</sup>

The 1975-76 survey covered some 1,800 rural households. The tabulations have not been completed, and it is believed that they will contain some serious errors (Zuvekas 1977:5-6).

REFERENCES

- AHLUWALIA, Montek. "Income Inequality: Some Dimensions of the Problem." Finance and Development 11, No. 3 (September 1974), 2-3, 41.
- BAUMAN, Harold. "A Typical Farm Family and Farm Unit in the Artibonite Valley of Haiti." Port-au-Prince: USOM/Haiti, May 1960.
- BECKLES, Frank N. et al. Haiti: Health Sector Analysis. Document No. LA/DR-DAEC/P-75-81. Port-au-Prince: USAID/Haiti, April 1975.
- BEGHIN, Ivan; FOUGÈRE, William; and KING, Kendall W. L'alimentation et la nutrition en Haiti. Publications de l'I.E.D.E.S. Paris: Presses Universitaires de France, 1970.
- BERTRAND, Alvin L. et al. Analysis of Institutional Capability of Haitian Ministry of Agriculture (DARNDR, Government of Haiti). Performed for U.S. AID under Contract AID/A/R-C-1149, Work Order No. 4. Washington, D.C.: Multinational Agribusiness Systems Inc., 1976 (?).
- BOUVIER, Michel. and MATURANA, Sergio. "Die Beschäftigungslage in der lateinamerikanischen Landwirtschaft." In Gewalt und Ausbeutung, Lateinamerikas Landwirtschaft, ed. Ernest FEDER, Hamburg: Hoffmann und Campe, 1973.
- BRISSON, Pierre J. "A Look at the Poor Majority." Port-au-Prince: [USAID/Haiti, 1976].
- BROWN, Hamilton B.; HEIDGERKEN, Joan; and JACOBSEN, Marnie. "Public Health and Agricultural Survey of the Grande Rivière Valley: Haiti." N.p.: Hôpital Grande Rivière du Nord, 1976 (?).
- BRUMMIT, W.C., and CULP, J.E. Fertilizer Use in Haiti. Muscle Shoals, Ala.: Tennessee Valley Authority, [1973].
- BUCK, Wilbur F. Haiti's Agriculture and Trade. ERS-Foreign 283. Washington, D.C.: USDA, 1970.
- BULLE, Emile. Enquêtes sur les terres et les eaux dans la plaine des Gonaïves et le Département du Nord-Ouest, Haiti: Rapport final. 5 vols. FAO/SF Report No. 45/HAI/3. Rome: FAO, 1968.
- , and DA CUNHA, A.F. Projet de mise en valeur agricole de la vallée des Trois-Rivières, la rive droite de la vallée de l'Estère, la plaine des Gonaïves. FAO/SF Report No. WS/67454. Preliminary draft. Rome: FAO, 1967.
- CASIMIR, Jean. "Aperçu sur la structure économique d'Haiti." América Latina 7, No. 3 (July-September 1964): 37-56.

- CHEENERY, Hollis B. et al. Redistribution with Growth. New York: Oxford University Press for the World Bank and the Institute of Development Studies, University of Sussex, 1974.
- COURLANDER, Harold. The Drum and the Hoe: Life and Lore of the Haitian People. Berkeley: University of California Press, 1960.
- DESPLECHIN, Jacques. "Analyse de la situation socio-économique des exploitations agricoles situées dans la zone du projet FAO/F5/513, péninsule sud d'Haiti." Typewritten. [Port-au-Prince: FAO], December 1971.
- Enquêtes et démonstrations agricoles dans la péninsule du sud, Haiti: Situation économique et perspectives de développement. Technical Report No. 1. Rome: FAO, 1972.
- DÍAZ SANTANA, Arismendi. "The Role of Haitian Braceros in Dominican Sugar Production." Latin American Perspectives 3, No. 1 (Winter 1972): 120-132.
- DORVILLE, René. Perspectives d'une politique de l'emploi dans le secteur rural d'Haiti. Document No. 16. Port-au-Prince: Unité de Programmation, DARNDR, November 1975.
- , and DAUPHIN, Franklin. Enquête sur la production agricole de l'Arrondissement de Cap-Haitien. Document No. 7. Port-au-Prince: Unité de Programmation, DARNDR, November 1974.
- Engineering Consultants, Inc. Feasibility Study and Preliminary Implementation Report for Dubreuil Irrigation Project, Republic of Haiti. Denver, 1975.
- ERASMUS, Charles J. "Culture Structure and Process: The Occurrence and Disappearance of Reciprocal Farm Labor." Southwestern Journal of Anthropology 12 (Winter 1956): 444-470.
- ESTIMÉ, Jean-Robert. "Contribution à l'élaboration d'une politique agricole en Haiti." Thesis for Special Certificat. in Rural Economy and Sociology, Faculté des Sciences Agronomiques de Gembloux, Chaire d' Economie Rural, May 1972.
- FOLSOM, Robert S. "Haitian Economy." Unpublished manuscript. N.p.: n. publ., 1954.
- Food and Agriculture Organization of the United Nations. Aménagement agricole de la vallée des Trois Rivières--Haiti. Based on the work of J. LAMBRECHTS et al. Project No. AGOL: SF/HAI 72/006, Technical Report No. 1. Port-de-Paix, 1975.
- FRANKLIN, Alex W., and SNYDER, Stanley E. Conservation Recommendations for Haitian Watershed Erosion Control. Washington, D.C.: U.S. AID, October 1975.

- GARCÍA ZAMOR, Jean-Claude. La administración pública en Haití. Guatemala: Editorial Landívar, 1966.
- GARNIER, Raymond. "De la pêche et des problèmes de la pêche en Haiti." Exposé donné au Séminaire National de Science et Technologie, 29 novembre-2 décembre 1976. [Port-au-Prince, November 1976].
- GOW, David D. "Report on the Establishment of a Baseline Data-Gathering System for HACHO." Port-au-Prince: USAID/Haiti, 16 August 1976.
- . "The Rural Poor in Haiti: A Social Analysis." Port-au-Prince: USAID/Haiti, 22 March 1977.
- GUERRA, Ramiro; LAY, Gunter M.; and LA GRA, Jerry. Prefeasibility Study for the Renovation of the Artibonite Valley Irrigation and Drainage System. Port-au-Prince: OAS, 1972.
- Haiti. Bureau de Nutrition. Rapport Trimestriel. Submitted to USAID/Haiti. Port-au-Prince, May 1977.
- . Département de l'Agriculture, des Ressources Naturelles et du Développement Rural [DARNDR]. Plan quinquennal du secteur agriculture, 1976-1981. Port-au-Prince, September 1976.
- . ----; Organization of American States; and Mission Israélienne de Coopération Technique. Projet intégré de développement agricole de la plaine du Cul-de-Sac: Plan d'opération, exercice 1975-1976. Port-au-Prince, 4 August 1975.
- . Département de la Justice. Code Rural Dr. François Duvalier. Port-au-Prince, 1962.
- . Département des Travaux Publiques, des Transports et des Communications [DTPTC]. Republic of Haiti: National Transport Study. 7 vols. Prepared by Louis Berger International, Inc. (UNDP-IBRD Program). Port-au-Prince, [1977].
- . Institut Haitien de Statistique [IHS]. Comptes nationaux et projections macro-économiques. Port-au-Prince, December 1974.
- . ----. Données chiffrées pour le VIIIème séminaire de la nutrition de l'enfant et de la famille. Port-au-Prince, May 1975.
- . ----. Enquête socio-économique (avril 1970): Premiers résultats. Port-au-Prince, May 1975.
- . ----. Recensement général de la République d'Haiti, août 1950. 5 vols. Port-au-Prince, 1955.
- . ----. Résultats préliminaires du recensement général de la population, du logement et de l'agriculture (Septembre 1971). Port-au-Prince, September 1973.

- Inter-American Development Bank [IDB]. FAO-IDB Cooperative Program. Possibilités d'investissement et développement du secteur rural en Haïti. Document sur le Développement Agricole No. 1<sup>e</sup>. Washington, D.C., February 1974.
- Economic and Social Progress in Latin America: Annual Report 1975. Washington, D.C., [1976].
- International Bank for Reconstruction and Development [IBRD]. Current Economic Position and Prospects of Haiti. Report No. 1243-HA. 2 vols. Washington, D.C., 7 December 1976.
- International Labour Organization [ILO]. Problèmes de main-d'oeuvre et de l'emploi: Haïti. Technical Report No. 1, Project No. HAI/74/014. Geneva, 1976.
- JARVIS, L.S. "The Limited Value of Employment Policies for Income Inequality." In Employment in Developing Nations, Report on a Ford Foundation Study, ed. Edgar O. EDWARDS. New York: Columbia University Press, 1974.
- JOSEPH, Raymond A. "Haitian Peons and Dominican Sugar: Border Strife in Hispaniola." The Nation 223 (November 27, 1976): 558-562.
- KEOGH, David J. Haiti. Port-au-Prince: USOM/Haiti, March 1960.
- KING, Kendall W. et al. "Food Patterns from Dietary Surveys in Rural Haiti." Journal of the American Dietetic Association 53 (August 1968): 114-118.
- KULAKOW, Allan et al. "Enquête socio-économique--Flaine des Cayes et Jean Rabel." Report submitted to USAID/Haiti. Port-au-Prince, 1976.
- LA GRA, Jerry. Feasibility of Expanding the Integrated Cooperative Project of Bas-Boen. A Study prepared for the OAS in Haiti. [Port-au-Prince (?), July 1972].
- MÉTRAUX, Alfred. Haiti: Black Peasants and Their Religion. [trans. Peter LENGYEL]. London: George G. Harrap & Co., Ltd., 1960.
- and collabs. Making a Living in the Marbial Valley, Haiti. Occasional Papers in Education No. 10. Paris: UNESCO, 1951.
- MOORE, O. Ernest. Haiti: Its Stagnant Society and Shackled Economy. New York: Exposition Press, 1972.
- MOSHER, Arthur T. Technical Cooperation in Latin-American Agriculture. Chicago: University of Chicago Press, 1957.
- MOULTON, Georges. Crédit agricole et coopération en Haïti. Report No. TAO/HAI/12. Port-au-Prince: United Nations, 1960.
- "New Rural Code in Haiti." International Labour Review 86 (December 1962): 576-577.
- MURRAY, Gerald F. "The Evolution of Haitian Peasant Land Tenure: A Case Study in Agrarian Adaptation to Population Growth." Ph.D. Dissertation Columbia University, New York, 1977.

- PALMER, Ernest Charles. "Land Use and Landscape Change along the Dominican-Haitian Borderlands." Ph.D. Dissertation, University of Florida, Gainesville, 1976.
- PFROMMER, Carol V. et al. Evaluation of the Haitian American Community Help Organization, Phase II. Port-au-Prince: USAID/Haiti, October 1976.
- PIERRE-CHARLES, Gérard. La economía haitiana y su vía de desarrollo. [trans. María Teresa TORAL]. México: Cuadernos Americanos, 1965.
- RIANO-SERRANO, Fernando. Diagnostic socio-économique de l'flot de développement de Desarmes, Artibonite, Haiti. Document No. 30 LH/75. Port-au-Prince: IICA-DARNDR, September 1975.
- ROTBURG, Robert I., with CLAGUE, Christopher K. Haiti: The Politics of Squalor. A Twentieth Century Fund Study. Boston: Houghton Mifflin Company, 1971.
- SAINT CLAIR, Paul and DAUPHIN, Franklin. Résultats de l'enquête sur les exploitations agricoles de l'Arrondissement du Cap-Haitien. Document No. 13. Port-au-Prince: Unité de Programmation, DARNDR, March 1975.
- SCHAEDEL, Richard P. An Essay on the Human Resources of Haiti. Port-au-Prince: USAID/Haiti, May 1962.
- SCHICKELE, Rainer. "Improving Income Distribution as a Development Goal: An Operational Approach." Staff Paper P71-17. St. Paul: Department of Agricultural and Applied Economics, University of Minnesota, 1972.
- SEBRELL, W.H. et al. "Appraisal of Nutrition in Haiti." American Journal of Clinical Nutrition 7, No. 5 (September-October 1950): 1-18.
- SEGAL, Aaron. "Haiti." In Population Policies in the Caribbean, ed. Aaron SEGAL. Lexington, Mass.: D.C. Heath and Company, Lexington Books, 1975.
- STEVERLYNCK, Jan. Aménagement agricole de la vallée des Trois Rivières, Haiti: Etude de factibilité. Rome: FAO, 1965.
- SWAN, Edward P. Assignment to Haiti: A Special Report. Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, 1951.
- TURNHAM, David, assisted by JAEGER, Ingrid. The Employment Problem in Less Developed Countries: A Review of Experience. Employment Series No. 1. Paris: Organization for Economic Co-operation and Development, 1971.
- United Nations. Economic Commission for Latin America (ECLA). La distribución del ingreso en América Latina. New York, 1970.
- United States. Agency for International Development. Mission to Haiti (USAID/Haiti). Development Assistance Program: FY 1972. Washington, D.C., June 1977.

- Rural Sector Assessment of the Republic of Haiti.  
Prepared by Francis J. Le BEAU. Port-au-Prince, June 1974.
- Department of Agriculture. Economic Research Service [USDA-ERS].  
Indices of Agricultural Production for the Western Hemisphere, Excluding  
the United States and Cuba, 1967 through 1976. Statistical Bulletin 569.  
Washington, D.C., May 1977.
- Department of Health, Education, and Welfare [USDHEW]. Public  
Health Service. Office of International Health. Syncrisis: The  
Dynamics of Health--Vol. VI: Haiti (Revised). An Analytical Series  
on the Interactions of Health and Socio-economic Development. Washington,  
D.C., 1975.
- Institute of Inter-American Affairs [US-IIAA]. Agricultural Progress  
in Haiti. Washington, D.C., July 1949.
- International Cooperation Administration [US-ICA]. Agricultural  
Development Plan for the Northern Department--Poté Colé. [Port-au-Prince],  
1958 (?).
- Operations Mission to Haiti [USOM/Haiti]. Aspects of Agriculture in  
Haiti. Port-au-Prince, May 1959.
- WEIL, Thomas E. et al. Area Handbook for Haiti. Washington, D.C.: U.S.  
Government Printing Office, 1973.
- WESSELMAN, Robert A. "Observations of Extension and Related Activities in  
Small Coffee Growers Project." Consultant's Report for the Period March-  
April 1977.
- White, J.G., Engineering Corporation. Review of Accomplishments in Haiti,  
July 6th, 1938 to May 15, 1942. New York, [1942].
- YUDELMAN, Montague; BUTLER, Gavan; and TANASJI, Ranaiev. Technological  
Change in Agriculture and Employment in Developing Countries. Employment  
Series No. 4. Paris: Organization for Economic Co-operation and Develop-  
ment, 1971.
- ZUVEKAS, Clarence, Jr. "Agricultural Statistics in Haiti: Review and  
Recommendations." Report Prepared for USAID/Haiti. Port-au-Prince,  
6 June 1977.
- Income Distribution in Latin America: A Survey of Recent Research.  
Essay Series No. 6. Milwaukee: Center for Latin America, University of  
Wisconsin--Milwaukee, 1975.