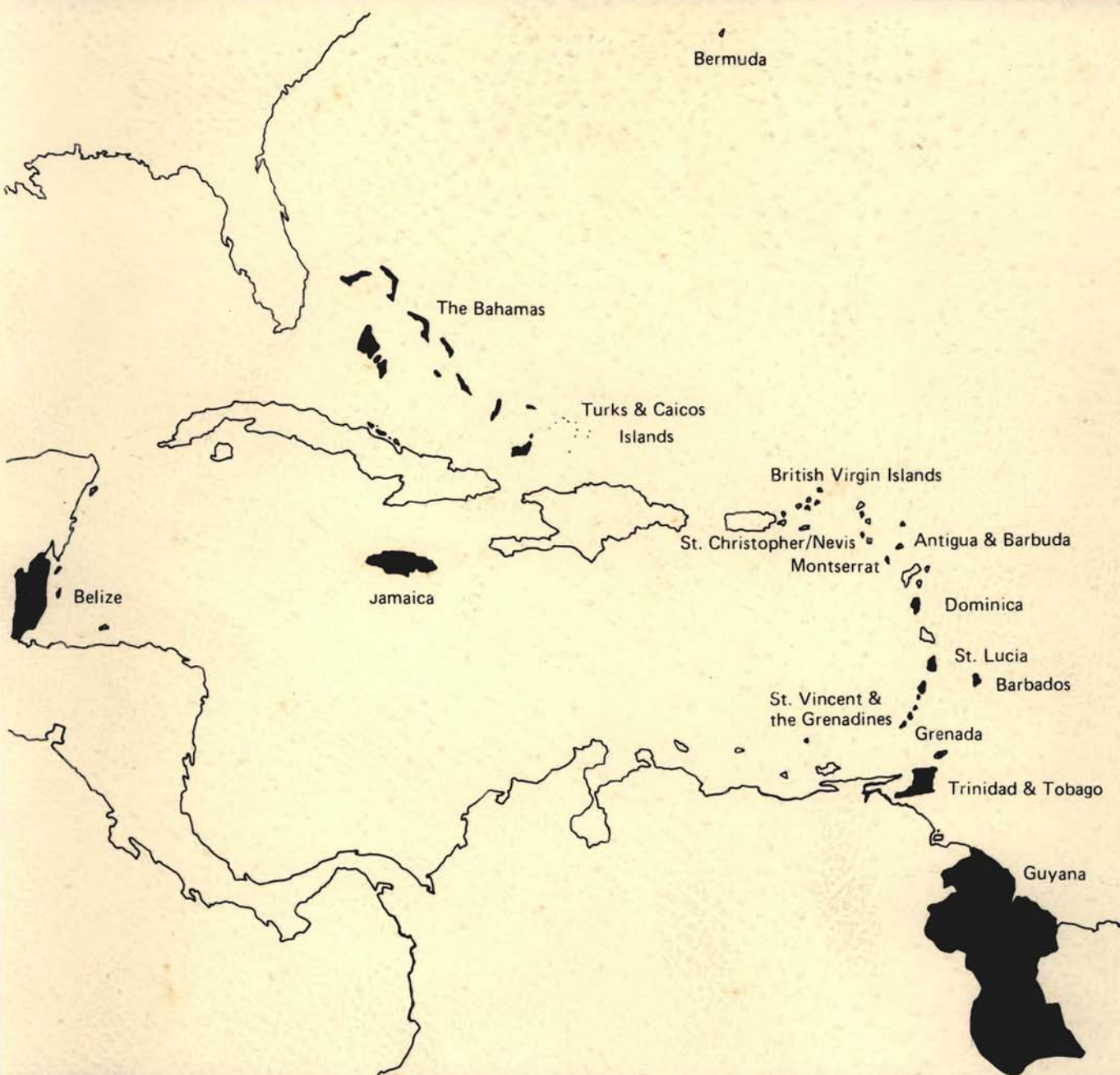




1990-1991 POPULATION AND HOUSING CENSUS of the COMMONWEALTH CARIBBEAN



**NATIONAL CENSUS REPORT
DOMINICA**

**1990-1991 POPULATION AND HOUSING
CENSUS
of the
COMMONWEALTH CARIBBEAN**

**NATIONAL CENSUS REPORT
DOMINICA**

**Prepared by
Kenneth Heath**

FOREWORD

Pursuant to a mandate from the Standing Committee of Caribbean Statisticians (SCCS), analyses of the 1990/91 Population and Housing Censuses have been undertaken. Support for these analyses has been provided by a project, *CAR/94/P06 - Analysis of the 1990/91 Census Data*, which was sponsored by the United Nations Population Fund (UNFPA), with the Caribbean Community (CARICOM) Secretariat as the executing and implementing agency, and Mr. Desmond Hunte as Regional Census Coordinator.

Under the project, studies were commissioned of the demographic situation in each of thirteen (13) CARICOM Member States, namely, *Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines and Trinidad and Tobago*, as well as in *Bermuda, the British Virgin Islands and the Turks and Caicos Islands*. These studies were based on the results of the censuses and other related statistical data.

The project resulted in the preparation and publication of a **National Census Report** for each country and six (6) **Special-Topic Regional Census Monographs** dealing with issues of regional significance. The special-topics analysed were:-

- *The Employment Problem in the Region: The Role of the Education and Training Sectors in its Existence and its Solution;*
- *The Caribbean Region in this World - Preparing for the 21st Century;*
- *Intra and Extra Regional Mobility of the Caribbean Population;*
- *Gender and Development;*
- *Children and Youth; and*
- *The Elderly.*

Topics covered in the National Census Reports include:- *National Population Trends: Size, Distribution, Growth and Age Composition; National Population Trends: Social and Economic Composition; Living Arrangements, Fertility and Infant Mortality; Migration and Population Redistribution; Education; Employment and Unemployment; Housing; Children, Youth and the Elderly; and The Role and Status of Women.*

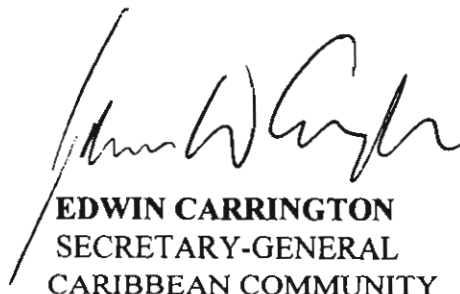
Each study was undertaken either by a demographer or statistician from the Caribbean with experience in population studies of the Region, or by a group of such researchers under a senior editor in consultation with the government statistical department in the country concerned. The first draft of the report was submitted for technical review by a demographer of international repute. On the basis of this review and comments from government officials of the country, the report was completed by the author or editor.

The studies are intended to aid and encourage each government of the Region to decide on its own policies and devise its own programme of action for dealing with the problems of population and economic and social progress facing the particular country. Authors were therefore urged to write the reports with the non-technical administrator, planner and policy-maker in view, and to pay especial attention to the relationships between population and the social and economic problems of particular concern to each country.

It is hoped then, that the studies will be of benefit to administrators and policy-makers as well as to researchers, students and general readers with an interest in the field of population.

The Caribbean Community (CARICOM) wishes to thank Mr. Desmond Hunte, the Regional Census Coordinator, who managed the production of the analyses, some of which he did himself, and Professor David Sly of the University of Tallahassee, Florida, for his substantial input in reviewing the reports and monographs and for providing advice to the census data analysis exercise. The valuable contribution of Mr. Osmond Gordon, Chief Statistician, and the staff of the CARICOM Secretariat Statistics Section is highly appreciated.

The Caribbean Community takes this opportunity to record its gratitude to UNFPA for its financial and technical support to the exercise, and to thank the Author for writing this Report.



EDWIN CARRINGTON
SECRETARY-GENERAL
CARIBBEAN COMMUNITY

TABLE OF CONTENTS

FOREWORD	i
TABLE OF CONTENTS	iii
CHAPTER 1 The Background	1
CHAPTER 2 The Size, Growth and Composition Of Population	3
Population Size and Changes in Population Size 1981 - 1991	4
The Age and Sex Structure of Dominica 1981 - 1991	6
CHAPTER 3 Social and Economic Composition	10
Ethnicity	10
Religion	12
CHAPTER 4 Living Arrangements, Housing and Fertility	26
The Number and Composition Of Households	26
The Stock and Characteristics Of Housing	30
CHAPTER 5 Educational Attainment and School Attendance	35
Educational Attainment of the Population 15 years and over	35
School Attendance	42
CHAPTER 6 Major Activities of the Population 15 and over	45
Highest Level of Education Attained and Major Activity	46
Education and Jobs	51
CHAPTER 7 Women in Dominica	59
Education	59
Main Activity in the Year Preceding the Census	62
CHAPTER 8 Children Youth and Elderly	84
The Size and Distribution of Dependent Populations	85
Household Relationships of Children and the Elderly	86
CHAPTER 9 The Future Population of Dominica	90
Population Projections and Methods of Arriving at Them	90
Recent Trends in Net Migration & Fertility	91
Assumptions Made for Population Projections: 1996 - 2021	93
Population Projections	94

CHAPTER 1

Background

The first census was conducted in Dominica in 1871. Following this, censuses were conducted every ten years through 1921, when the census routine was interrupted by the economic depression of the late 1920's and early 1930's, and again by World War II. Thus, after a 25-year gap the Census was resumed in 1946, and the routine of a decennial census was firmly reestablished in 1960 and 1970. The next two censuses were conducted in 1981 and 1991. This report will focus on the results of the 1991 Census, the official date for which was established as 12 May, 1991.

The 1991 Census was conducted under the auspices of the Dominica Statistical Office, and as part of the CARICOM Regional Census Program. As such it made use of the many resources available through the Regional Census Coordinator's Office including the use of a common census questionnaire developed under the direction of the Regional Office and approved by the Regional Census Committee. The assistance of the Regional Office was not confined to the questionnaire, but included pre-fieldwork activity beginning with mapping, coordination and publicity and concluding with editing and coding assistance, the development of a tabulation program, and the publication of results census results including this volume.

Dominica is a relatively small country of only 750 square kilometers located in the eastern Caribbean. It is divided into ten administrative districts, all of which border coast line. It embraces two mountain ranges which restrict the use of the land area, and some parts of the country receive as much as 250 inches of rain annually. The country is not blessed with natural resources, and agriculture has traditionally served as the corner stone of the economy. Within the agricultural industry the principle product has traditionally been bananas, the value of which has fluctuated on the international market, and in more recent years bananas have become an increasingly unstable product because of international trade agreements. Unlike many of its neighbors Dominica has not been in a position to develop a strong tourism sector because of the lack of an airport which can land large planes from North America and Europe. In 1989 it had an estimated per capita gross domestic product of \$1,690 U.S.

Because Dominica is not a wealthy country, and like many countries in its economic position, it lacks both the finances and human resources to develop and maintain a broad based, all inclusive and systematic statistical system, the census is particularly important. Indeed, it is the single most important source of information for many of the social, economic, and demographic structures of the country as well as the sole source of data on processes which lead to change in these

structures. A great deal of information, which is needed for administrative, service development and delivery, needs assessment and planning, must come from the census. For example, data on education can come from some school records, but these provide information on a current and period base and tell us little about the educational qualifications of the population. Similarly, there is no other data source, which can be tapped to provide comprehensive information to plan for, and deliver services to, many vulnerable populations.

In the Chapters that follow we have made use of all available data from the census. As in any census or other large-scale data collection project, not all individuals canvassed provided responses for each individual to each of the items in the questionnaire. In the case of the census an adult individual within each household was asked to provide information for each person who resided in their household. In some cases the responding individual did not know the information for some members of their household and in some cases individuals probably simply refused to give the information. In most cases the number of individuals for whom a particular piece of information is missing is relatively small (for example, data on age are not available for 408 persons or only seven-tenths of one percent of the total population), and can produce no bias in the statistical representation of the population. Where this is the case we use data for all individuals for whom information is available. This practice makes the numbers used vary from table to table, but should not produce misleading results. In other cases, such as reports of income, the number of persons we do not have information for is considerably larger. In instances such as this, special note of the number of missing cases is provided to caution the reader of this problem, and some data analysis to evaluate its likely effects on the interpretation is provided.

CHAPTER 2

The Size, Growth And Composition Of Population

Introduction

In this Chapter we focus explicitly on the size and growth of the population of Dominica between 1981 and 1991 giving particular attention to 1) the components (fertility, mortality, and international migration) of population change and 2) the age and sex structure of the population. Size, and changes in the size, of population are important because population size is both a direct measure of the demand for goods and services as well as the demand a population will make on its environment, and physical and social resources, and a direct measure of the supply of human resources and the human resource potential of a society. On a global scale much attention is given to the former set of factors because of their perceived importance for economic production and environmental degradation. In smaller countries, however, particularly those where populations are declining, the latter set of factors may be of equal or greater significance. In order to survive, national populations must have the demographic potential to replace themselves, and the human resource potential to find ways to sustain itself socially, economically, and politically using whatever cultural, including technological, tools it has at its disposal.

In this sense it is extremely important for governments to develop demographic, social, and economic policies which regulate population size and sustain a rate of growth which allows for a maximization of its human resources. For example, by regulating fertility at a low level, a government can minimize its cost of providing for and educating the young; it can make maximum use of the resources available for the young and it will regulate the number of future labor force entrants. If the resources available are used wisely, it can even raise the quality of the future labor force. Similarly, if capital investments can be, and are, wisely made in the economic and social sectors, the rising quality of human resources will be fully absorbed and the quality of life of the population can be enhanced. Such directions can be far easier given than attained, and it is the imbalance between these considerations, which create situations where the supply of human resources exceeds the demand. When this happens in the context of sustained "high fertility" a country spends its resources to educate and socialize its young only to frequently lose them through the selective process of emigration. In this sense it is important for policy makers to not only be aware of population size and changes in the magnitude of size, but it is equally important for them to know and appreciate both the short and the long term consequences of how the components of population change are contributing to changes in size.

Just as the components of population change determine population size, they are also the sole determinants of the age and sex structure of a population. Moreover, it is equally important to realize that the age and sex structure of a population is the principal determinants of a population's potential for growth. A population with a large percent of its people in the reproductive ages is likely to produce more children, and a population with a large number of persons in the young ages has a high potential for growth as these people represent the future stock of potential child producers. Age structure, however, is important for a vast array of other reasons as well. From age structure alone we can estimate the demand for a vast number of goods and services both at present and in the short and long term; these range from basic goods such as food, water, and housing to less basic goods such as furniture, appliances and cosmetics. Similarly, age structure plays a key role in determining the demand for a range of services from child and elderly care education, and health care to recreation, hair styling, and policing.

Population Size and Changes in Population Size 1981 - 1991

The 1991 Census enumerated a total population of 71,183 persons, 1,717 (2.4%) of which were resident in institutions. The Census of 1981 yielded a total count of 73,795 which means that over the interval from 1981 to 1991 the population of Dominica decreased by 2,612 persons or by -3.5 percent (See Table 1.2). The population decrease was nearly equally divided between the male (-1,283) and the female (-1,329) population, and the available data clearly indicates that the loss of population resulted primarily from a massive out-migration over the decade.

The magnitude of this depopulation can be assessed in two ways. First, we can estimate it by means of the vital registration approach. This will provide us with an estimate of the overall net effect of migration, but it will not inform us about the age or sex structure of migration or its net effects on age and sex structure. For example, over the intercensal interval there was a total of 17,179 registered births in Dominica and 4,466 registered deaths which yielded a total addition to the population from natural increase of 12,713 persons and an implied 1991 total population of 86,508 in the absence of any international migration. These figures are significant for two reasons. First, they suggest that in the absence of migration the population of Dominica would have increased by at least 12,713 persons or 17.2 percent, a rate of growth, which would result in a doubling of the population in less than 50 years. Second, the figures also suggest that the net loss to the population through emigration was 15,325 persons, which yields an implied emigration rate of nearly 21 percent. This is significant because it means that more than one person in five was lost to the country over the decade, and if migration from Dominica was typical of migration generally it means that the country suffered a marked loss of some of its most valuable human resources.

The second approach involves comparing successive cohorts from the 1981 and 1991 censuses. For example, if we compare the number of persons 10 - 14 in 1981 with the number of persons 20 - 24 in 1991 we are comparing the number of persons in the same cohort over the ten-year period. Assuming no errors in enumeration, or even a constant error in enumeration, this number can change for only two reasons: it can decrease by the number of people in the cohort who die over the period, or it can increase or decrease as a result of net migration of people of the same age as the observed cohort. If we sum the figures for all cohorts, and take account of mortality across all age groups we are left with an estimate of net migration. This procedure has been used as a second approach to estimating the effects of international migration in Dominica primarily because in addition to giving us an overall estimate of the number of persons lost to the country, it provides us with some information about the age composition of the population lost through this migration.

The data in Table 2.1 show the population loss to each cohort alive in 1981 over the period from 1981 to 1991. Let us look first at the total estimate derived from this approach. The estimate of total loss due to net international migration (-16,731) derived from this procedure is about nine percent higher than the estimate derived using the vital statistics approach (-15,325). Rather than emphasizing the difference in the estimates, it is more important to emphasize that both procedures strongly suggest that a net loss of population due to emigration was in the range of 15,500 to 16,500 with an implied rate of between 21 and 22 per 100 population. That is, no matter which technique is used the data clearly indicate that Dominica is sustaining a significant loss of population through international migration, and equally important, if it were not for a relatively high level of fertility (and estimated annual average crude birth rate approaching 24 per 1,000 population) and low mortality, the population decline would have been significantly greater than what it was.

Table 2.1

**Estimate Of Net Loss of Population Due to International Migration
To/From Dominica During the Intercensal Period 1981 - 1991
Using Cohort Successions.**

Age in 1981	Number In Cohort	Age in 1991	Number In Cohort	Absolute Change	Rate Per 100
0 - 4	8,196	10 - 14	7,111	-1,085	-13.2
5 - 9	10,127	15 - 19	7,261	-2,866	-28.3
10 - 14	11,083	20 - 24	6,771	-4,312	-38.9
15 - 19	9,390	25 - 29	5,645	-3,745	-39.9
20 - 24	7,008	30 - 34	4,700	-2,308	-32.9
25 - 29	4,741	35 - 39	3,693	-1,048	-22.1
30 - 34	3,519	40 - 44	2,949	- 570	-16.2
35 - 39	2,820	45 - 49	2,490	- 330	-11.7
40 - 44	2,461	50 - 54	2,116	- 345	-14.0
45 - 49	2,350	55 - 59	2,117	- 233	- 9.9
50 - 54	2,362	60 - 64	2,097	- 265	-11.2
55+	9,487	65+	6,080	-3,407	-35.9
Total Inter-Cohort Change				-20,514	
Minus Mortality*				3,783	
Estimated Net Migration				-16,731	

*There were a total number of registered deaths of 4,466 in Dominica during the intercensal interval. In this Table we have included only deaths estimated to have occurred to persons already alive at the beginning of the interval since these are the only persons included in this estimate.

The second point we need to emphasize from the data contained in Table 2.1 centers around the implied age composition of the net international migration loss of population. The change measured for each cohort and the reported rates of change in size for each cohort are not net migration rates since we have made no attempt to account for mortality for each specific cohort. Nevertheless, the data are particularly useful for depicting the age pattern of mortality because we do that mortality is quite negligible for the cohorts 5 - 34 at the beginning of the census decade. Under this assumption we can assume that the vast majority of population decline in each of the specific cohorts within this range can be attributed to migration. Given this, these data show quite clearly that a majority of the international net migration loss of population is occurring to young persons as they

approach and move into the productive ages. For example, the rate of cohort decline for the cohort 5 - 9 in 1981 (15 - 19 in 1991) already exceeds 28 persons per 100 population, and this rate jumps to nearly 40 persons per 100 population for those cohorts 10 - 14 and 15 - 19 before it declines to nearly 33 per 100 population for the cohort 20 - 24 in 1981. Losses of this size must be viewed with concern not merely because of their magnitude, but also because at the ages where they are occurring they imply a tremendous loss of human capital investment.

This can be illustrated by using the cohort 5 - 9 in 1981 as an example. We already know that during the period 1981 - 1991 this cohort declined by 2,866. It can be assumed that over the period from 1991 to 2001 it experiences the same rate of cohort loss experienced by the cohort 15 - 19 in 1981, and that during the period 2001 - 2011 it experiences the same rate as the cohort 25 - 29 in 1981. That is, it is assumed that this cohort will follow the same pattern as the cohorts, which have preceded it until it reaches the age 35 - 39. The resulting losses to the cohort would be 2,897 during the period-1991 - 2001 and additional 964 during the period 2001 - 2011. Thus, by the time the cohort reached the age 35 - 39 it will have lost 2.98 persons for each person who was in the cohort in 1981 and still in it and in the country in 2011. Indeed, by the time the cohort reaches 25 -29, the age by which we would expect it to be totally educated, nurtured, and prepared for total economic independence, Dominica will have used its resources to prepare 2.32 persons for each single person it retains as a resident. In short, losses of this magnitude must be viewed as serious and as extremely taxing on the economic, social and human resources of the country.

The Age and Sex Structure Of Dominica 1981 - 1991

In the previous section we established that the population of Dominica decreased between 1981 and 1991, and that this decrease was the product of a substantial net loss of population due to international migration. Indeed, the loss from net migration was sufficient enough to more than off-set a relatively high rate (17.2 per 1,000 population) of natural increase, and there was solid evidence to indicate that much of the migration loss was concentrated in the cohorts 5 - 25 years of age at the beginning of the intercensal period and 15 - 35 at the end of the intercensal period. In this section we will assess the effects of these processes on the age and sex composition of the population of Dominica.

Table 2.2
Population of Dominica by Age and Sex: 1981 & 1991

Age	Total		1981 Male		Female		Total		1991 Male		Female	
	N	%	N	%	N	%	N	%	N	%	N	%
0 - 4	8,196	11.1	4,202	11.4	3,994	10.8	7,711	11.1	3,820	11.0	3,891	11.1
5 - 9	10,127	13.7	5,277	14.4	4,850	13.1	8,317	12.0	4,085	11.8	4,232	12.1
10 - 14	11,083	15.0	5,595	15.2	5,488	14.8	7,111	10.2	3,695	10.7	3,416	9.8
15 - 19	9,390	12.7	4,779	13.0	4,611	12.4	7,261	10.4	3,742	10.8	3,518	10.1
20 - 24	7,008	9.5	3,722	10.1	3,286	8.9	6,771	9.7	3,433	9.9	3,338	9.6
25 - 29	4,711	6.4	2,521	6.9	2,190	5.9	5,645	8.1	2,943	8.5	2,702	7.7
30 - 34	3,519	4.8	1,764	4.8	1,755	4.7	4,700	6.8	2,461	7.1	2,239	6.4
35 - 39	2,820	3.8	1,404	3.8	1,416	3.8	3,693	5.3	1,934	5.6	1,759	5.0
40 - 44	2,461	3.3	1,133	3.1	1,328	3.6	2,949	4.2	1,508	4.4	1,441	4.1
45 - 49	2,350	3.2	1,058	2.9	1,292	3.5	2,490	3.6	1,241	3.6	1,249	3.6
50 - 54	2,362	3.2	1,051	2.9	1,311	3.5	2,116	3.1	980	2.8	1,136	3.3
55 - 59	2,047	2.8	950	2.6	1,097	3.0	2,117	3.1	925	2.7	1,192	3.4
60 - 64	2,149	2.9	959	2.6	1,190	3.2	2,097	3.0	967	2.8	1,130	3.2
65 >	5,291	7.2	2,184	5.9	3,107	8.4	6,080	8.7	2,604	7.5	3,476	10.0
Age not stated	281	.4	155	.4	126	.4	408	.7	242	.8	166	.6
Total	73,795	100.0	36,754	100.0	37,041	100.0	69,644	100.0	34,581	100.0	34,885	100.0

The age and sex composition of the population in 1981 and 1991 are shown above in Table 2.2. Over this interval the sex ratio of the population remained virtually unchanged at .99. Despite the lack of change in the sex ratio for the total population, there were substantial changes in the sex ratios for specific ages between 1981 and 1991. Although these are not shown, their most salient features were two. First, at each age there was a clear tendency for the sex ratios to move toward unity between the censuses, and second, despite this shift there continued to be an excess of males at each age from 10 - 14 through 40 - 44. This excess is not what one would theoretically expect given sex differences in mortality and could only have resulted from net emigration patterns or undercounts of females at these ages. Given our observations in the previous section, it is most likely that the excess of males at these ages reflects patterns of emigration during both the last and earlier intercensal periods while the movement of the age specific sex ratios toward unity reflects current patterns of net emigration.

Over the intercensal interval the median age of the population of Dominica increased by a dramatic 5.2 years (29%) from 17.9 in 1981 to 23.1 in 1991. In order to understand the dynamics contributing to this change we must examine both the changes in absolute numbers at each age as well as the changes in the percent of population at each age between censuses. For example, perhaps the most significant observation to be made from Table 2.2 is that with one minor exception (see the number 50 - 54) all of the total population decrease which occurred in the country was absorbed by the number of persons under the age of 25. That is, the number of persons in each age group under the age of 25 declined, and there was a net decline of 8,633 persons. In contrast, (with the one exception noted above), the number of persons in each age group over 25 increased between Censuses, but the net gain for these age groups (4,177) was less than one half the loss at the younger ages.

The second significant set of observations to be derived from the Table relate to how these changes in absolute numbers influenced the composition (or percent distribution) of population between Censuses. Here we want first to note that the percent of population at the youngest age (11.1) did not change, and that the percent of persons 20 - 24 was also relatively stable over the intercensal interval. That is, the entire decline (8.8 percentage point difference) in the relative number of persons was concentrated in the relatively narrow range of ages from 5 - 19 years. Similarly, even though the relative number of persons in the population increased at all ages above 20, nearly all of this increase (6.1 percentage points or about 70%) occurred to the age groups 25 - 44. The only other group to increase its share of the total population significantly was the 65 and over group which increased by 1.6 percentage points. In short, demographic dynamics over the decade had the effect of reducing both the absolute and relative number of young persons in the population while simultaneously significantly increasing the absolute and relative number of persons at the early productive (but not the late productive) ages and the oldest ages.

Conclusions

The demographic context of Dominica is very unstable. On the one hand the population is declining, but this is occurring within a national demographic context where there is a constant and relatively high supply of infants coming into the population. Note for example, that the percent of the population 0 - 4 did not change between 1981 and 1991. At the same time the data presented suggest there is a reduced burden in terms of the number of children who must be provided for economically, socially and psychologically. At the same time the productive potential of the population, as measured by the proportion of persons in the productive ages, has increased. Particularly important in this sense, however, is that the vast majority of this increase is concentrated in the young productive and reproductive ages. Thus, not only will there be greater pressure to create new jobs to absorb the flow of young adults into the labor force ages, but there will also be a continuous and increasingly important pressure to reduce childbearing if the pressure to reduce job creation, emigration, and the increasing reproductive potential of the population is going to be relieved. There should be no question that young adults, as both a resource and as a group, whose problems must be confronted to maintain social stability, are going to become an increasingly important force shaping the future of the country. For example, between the intercensal interval the population 20 - 44 increased from less than 28 to more than 34 percent while the percent of the adult population 45 - 64 remained nearly constant in the 12.0 to 12.5 percent range. Of particular importance in this sense is the fact that the absolute number of persons in the population 45 - 64 actually declined while the number of persons 25 - 44 increased by over 25 percent. .

Most countries rely upon a stable adult population, particularly older and more experienced adults, for their political, social, business and economic leaders. The data presented here suggests that Dominica is losing many of its young adults (and children) through emigration, and in this sense many of its potential leaders. So long as the supply of young persons remains higher than the demand for them many will continue to leave the country before they reach their economically and socially most productive years. Reducing the supply of young persons and making proportionately larger per capita investments in the smaller supply is a much wiser and more productive medium to long term strategy than relying upon emigration.

Finally, it is important to note that in addition to the increase at the young adult ages, the only other significant shift in age composition showing an increased concentration occurs at the oldest ages. This shift is likely to create even more pressure to enhance the productivity of the young adult population.

CHAPTER 3

Social And Economic Composition

Introduction

While the number of people in a population, its age and sex composition and how these are changing are important pieces of information in so far as they inform policy makers about how a population has evolved under past social and economic conditions and circumstances, and what its current demographic potential and limits are, they tell us remarkably little about how the population is organized to provide and care for itself and how effective this organization is. For example, it is important to know how many young people there are in a country, but knowing this tells us nothing about how the country is preparing these young people to become independent adults. It tells us nothing about how the economy is organized and is evolving to provide jobs for those young people who will be moving into the labor force ages, and it tells us nothing directly about how well the economy is providing for those persons already in the labor force ages.

In this Chapter we *begin* to address some of these types of issues. The first two sections of the Chapter will examine recent trends and structures of a more cultural nature. The first section examines the ethnic composition of the country and the second focuses on the religious/denominational composition of the country. The central questions to be taken up in these sections are 1) to determine if these cultural structures of Dominica are changing, and 2) whether or not the demographic changes discussed in Chapter 2 can account for observed changes in the ethnic and religious structure. In the remaining sections of the Chapter we consider the human resource potential and limits of the population, the organization of economic activity, and the organization of living arrangements. In each of these cases particular attention will be given to the extent to which these basic structures are changing and the extent to which changes in them can be accounted for by changes in demographic decline and the structure of population outlined in Chapter 2. In this sense it is important to realize that the largely descriptive data presented in this Chapter are intended to describe certain states of existence in Dominica, and to provide us with some clues about what the cultural, social and economic structure of the country is evolving toward. That is, the data presented in this Chapter will tell us what is happening, it will not tell us why it is happening nor will it tell us anything about what might be done to direct change and guide change.

Ethnicity

Reflecting its colonial/agricultural history and the role of slavery during the early colonial period, Dominica has had a population numerically dominated by

African/Black persons. It is important to bear in mind, however, that questions on the Census ask persons to self identify their ethnic/racial stock. This has advantages and disadvantages. The major advantages to "self identification" are that through time we have learned, race has its origins in cultural and ethnic differences rather than biological differences. In this sense there is only one race, but there are several cultural groups and persons of different or the same color may identify with the same or different cultural groups at different points in time. Similarly, persons from different cultural groups marry, have off-spring, and their children are frequently nurtured and raised in homes where there is a mix of cultures and individuals identify with more than one or a mixture of different ones. By affording an individual in each household the opportunity to identify ethnicity for each member of the household there is a greater likelihood of capturing the cultural dimensions of ethnicity, as opposed to an interviewers perception and assignment of ethnicity. The major disadvantages of the procedure used are that one individual within the household does the assignment, and is given no objective and measurable criteria upon which to do this. This means that ethnicity is not measured by a criteria which can be clearly stated and may vary from individual to individual and from census to census.

The data in Table 3.1 shows the percentage distribution of population by ethnicity for the period 1960 - 1991, and the number of persons identified with each ethnic group for 1981 and 1991. It also shows the percent change in the number in each ethnic group for the last intercensal interval. We show the data over this four-decade period because they are important for three reasons. First, they make clear that the ethnic structure of Dominica has been extremely stable over the forty-year period. During this interval more than 96 percent of the population has identified with one of the two dominant groups. Second, despite this stability, there has been a great deal of ethnic shifting between these two groups. Over the period from 1960 to 1981 the percent of the population identifying as African/Black increased from just 66 percent to over 91 percent while the percent identifying as Mixed decreased from nearly one-third to only six percent. Third, between 1981 and 1991 these 30 year trends appear to have reversed, and with this there has been a concomitant increase in preference to identify with each of the lesser minority populations.

In line with the decrease in total population discussed in the previous chapter, not only did the percent of persons identifying as African/Black and White decline, but so too did their absolute numbers. The rate of decline was greatest for the small population identifying as White, but the largest decline in absolute numbers occurred for the majority African/Black population. Each of the other ethnic minorities gained in both their absolute number and their proportion of the total population. What is significant about these shifts and the rising numbers of most ethnic minorities in the face of total population decline is that while the decline among African/Blacks and Whites may be explained (at least in part, or potentially largely) as a consequence of emigration, the increase in numbers among the remaining ethnic minorities cannot. The increasing numbers among these

groups (Mixed, Amerindians, and other) could have only resulted from fertility, a net immigration, and/or persons shifting their ethnic identity to one of these minorities. The data do not permit proportional allocation of change to each of these possibilities, but the data do indicate that ethnic diversity is increasing, and that this is most likely a consequence of both the net emigration of the dominant ethnic minority and of fundamental social changes which make some segments of the population feel they are better off identifying with a minority than with the dominant group.

Table 3.1

The Ethnic Composition of Dominica 1960 - 1991

Ethnic Group	Percent				Number		% Change 1981 - 1991
	1960	1970	1981	1991	1981	1991	
African/Black	66.1	79.8	91.2	89.1	67,272	61,867	- 8.0
Mixed	32.7	17.7	6.0	7.3	4,433	5,037	13.6
Amerindian	.7	1.8	1.5	2.3	1,111	1,634	47.1
White	.4	.5	.5	.5	341	285	-19.6
Other	.1	.2	.3	.7	219	504	130.1
Not Stated	0	0	.6	.2	419	139	66.8

Religion

Within all societies religion has been an important historical force acting to shape the culture and values of the population, and it is both a binding source for social cohesion within groups sharing similar values and a splintering source for social conflict between groups having different values. In this sense religion provides the philosophical foundations and justifications for rationalizing a great deal of individual (and group) behavior, and it is a major source for the justification of social and economic structure in societies and the individuals place or status within this structure. Accordingly societies with relatively stable social structures and populations, which are content to accept their place in society and the justification for this, tend to have relatively stable religious structures. Similarly, societies with social structures that are undergoing relatively rapid or dramatic change tend to have religious structures, which change as individuals question their place in society and/or the rationalization for this.

In the 1981 and 1991 Censuses persons were asked to self identify their religious/ denominational preference in a similar way as they were asked to identify their ethnicity. In this sense it is important to bear in mind that the individual responding for a household provided the religious preference for all individuals in that household so that the data provided below represents the reports for and not by many individuals. For example, it is likely that the adult household member who provided the census enumerator with data for household members provided the religious preference for children. Similarly, if a couple was present in a household, one spouse more than likely provided the religious preference for the other. With this caveat in mind we can examine the data in Table 3.2.

Table 3.2

Religious Composition of Dominica 1981 - 1991

Self-identified Religion	1981 N	1981 Percent	1991 N	1991 Percent	Change 1981 - 1991	% Change 1980/1990
Roman Catholic	56,770	76.9	48,690	70.1	-8,080	-14.2
Methodist	3,663	5.1	2,895	4.2	- 768	-21.0
7th Day Advent	2,379	3.2	3,209	4.6	830	34.9
Pentecostal	2,115	2.9	3,013	4.3	898	42.5
Baptist	1,722	2.3	1,912	2.8	190	11.0
Anglican	572	.8	501	.7	- 71	-12.4
Church of God	533	.7	436	.6	- 97	-18.2
Other	3,866	5.2	6,151	8.9	2,285	59.1
None/Not stated	2,145	2.9	2,659	3.8	514	24.0
Total	73,795	100.0	69,466	100.0		

Historically, Dominica has had a religious structure dominated by Roman Catholics, and this continued to be the case in 1991 when this group numbered 48,690 persons and accounted for just over 70 percent of all people in the country. Despite its numerical supremacy, the Roman Catholic population of the country declined by over 8,000 persons during the decade or by 14.2 percent. This represents a continuation of a trend, which began in earnest during the 1970's. In 1970 the number of Roman Catholics was 61,239 and they made-up over 88 percent of the total population; thus over the 20 year period the number of Catholics in the country has declined by over 20 percent in relative terms and by over 12,500 in absolute terms. Perhaps more important, the data for 1981 to 1991 period suggests that the rate of departure from the Catholic Church in Dominica is increasing; from 1970 to 1980 the Catholic population declined by 7.3 percent vs. 14.2 percent during the latest intercensal period. It is important, however, for this decline to be

evaluated within the context of the total population decline in the country and the substantial net loss of population resulting from migration, which accounted for the decline. That is, migration, and not people leaving the Catholic Church may account for a large share of the decline in the number of Catholics.

While the Catholic population of the country suffered the largest numerical decline, two Protestant denominations experienced the most rapid rates of decline; these were Methodists (an 21% decrease) and persons affiliated with the Church of God (an 18.4% decrease). The Anglican population also decreased over the period, but at a somewhat more moderate pace (12.4%). Each of the remaining denominations listed in Table 3.2 experienced an increase in their population size over the decade, and growth was most dramatic in the Pentecostal and Seventh Day Adventist populations which increased by more than 42 and nearly 35 percent respectively. Even with these rapid rates of increase however, neither of these groups accounted for a full five percent of the population by 1991, and their combined share of the total population amounted to no more (8.9%) than the share of the total population which was accounted for by a residual, "other," category which included a range of nontraditional Christian sects and non Christian groups. Indeed, this "other" category experienced both the largest numerical (2,285) and relative increase (59.1%) over the decade.

In order to better understand how and why the religious composition of the country is changing so dramatically we examined the age-sex composition of the aggregate of traditional religions (Anglican, Baptist, Methodist & Roman Catholic) and the non-traditional religions (Jehovah Witness, Pentecostal, Seventh Day Adventist & "Other") and compared these to the age composition of the total population. A portion of this analysis is summarized below in Table 3.3 where we show the percent of persons 15 - 34 and 50 and over who belong to the traditional religions, the non-traditional religions and the percent of all persons in the country who are in these age groups. If the traditional and non traditional groupings are attracting and retaining persons equally from the total population we would expect that the share of persons in these ages in each group would be equal to the share of all persons in these ages in the total population. Moreover, we want to bear in mind that the vast majority of persons still belong to the traditional group so that smaller differences between the percents for these categories represent numerically large numbers.

Table 3.3**Percent of Persons in Selected Age Groups for Traditional and Non Traditional Religious Denominations: 1991**

Age Group	Traditional Denominations	Non Traditional Denominations	Total Population
15 - 34	33.5	37.9	35.0
50>	19.9	11.1	18.4

What these data show quite clearly is that compared to the total population young adults are under-represented in the traditional denominations and older adults are over-represented. The opposite situation exists in the non-traditional denominations. In the latter young adults are over represented and older adults are markedly under-represented. Although the data are not shown, these differences are even more pronounced if females are examined separately, and this is significant when considered in the context of the fact that by 1991 the number of persons reporting no religious affiliation had increased to 2,022 and that for each female reporting no religious affiliation, three males reported no religious affiliation. Moreover, whereas 36 percent of males in Dominica are 15 - 34, over 61 percent of males reporting no religious affiliation are in this age group. In short, the data overwhelmingly suggest that the traditional religious denominations (and by inference, their teachings) are increasingly being rejected by the young people of Dominica, and that a substantial proportion who leave these denominations, particularly females, are opting for one of the sectarian nontraditional religious groups. While many young males are also following this path, it would appear that an increasing number of them are rejecting religious affiliation all together; young males 15 - 34 are nearly twice as prevalent in this group as they are in the population of the country.

Educational Attainment

It is generally believed that education is an important prerequisite for functioning in a modern world, and it is increasingly realized that investments in education for the young represent an investment in a country's future. It is primarily for these reasons most governments spend a large portion of their budget educating the young. Education of the adult population is also considered one of the best indicators of the quality of human resources in a country. Although education is extremely important, it is also extremely difficult to measure and quantify. For example, two people can complete the same amount of education in

the same country and not know the same things; people generally can be educated to the same level at different points in time and be exposed to different things that they are expected to know; and there are many things important for life functioning which are not learned in schools or other formal educational settings. Nevertheless, there is a large body of research, which clearly demonstrates that there are individual and societal benefits related to education as conventionally measured.

In most countries education is measured in two ways: in terms of the number of years completed and in terms of the highest degree or qualification attained. In this section we focus on the highest level of education attended and the highest qualification attained in the adult population to assess human resource potential of the population. Data related to the highest level of education attended by the adult population (persons 20 and over) are presented in Table 3.4. For example, in 1991 there were only 271 adults age 20 and over who were attending school as their primary activity and these people represented less than seven-tenths of one percent of all adults 20 and over. These data show quite clearly that the level of education in Dominica is relatively low. Overall, fewer than four percent of adults have no education; however, less than two percent of adults have attended a university level of education and fewer than one in five Dominicans have attended even a secondary or higher level of education. There is a difference in the overall education level attended between males and females.

Adult males and females were equally likely to have not attended school, but overall males were more likely than females (79 vs 75%) to have attended primary school. The data would suggest, however, that this difference is a function of males dropping-out or of the selective nature of migration from the country because females are more likely than males (16.6 vs 11.1%) to have attended secondary school and they are about equally likely to have some pre-university or post secondary education. Males who stay in the system, however, appear to have a better chance of advancing since more males than females (3.2 vs 1.8%) have attended a university level institution. Thus, on balance one can say that the female population on average is somewhat better educated than the male, but that the better educated males are more likely to get to attend universities than better educated females.

The age specific data on attendance by level of education show that the younger age groups are markedly more educated than the older age groups, and that there is a general trend for the average level of attendance to have improved for successively younger age groups. For example, among persons 60 - 64 fewer than five percent had attended secondary schools, but this improved to more than 11 percent for persons 40 - 44, and to over 28 percent among persons 20 - 24. Similarly, the percent of an age groups population with no attendance declines from over 7 percent for those 60 - 64 to only 1.1 percent among those 20 - 24 and 25 - 29. At the upper end of the education scale, however, improvements are not as pronounced; the percent who attended a university level institution was 2.1 percent for those 60 - 64 and only 2.4 percent for those 25 - 29.

The most dramatic feature of Table 3.4 is revealed by an examination of the age-sex specific data. These data show very clearly that the general trend discussed above for improvements in education holds for both males and females, but that it is markedly more pronounced for females than males. Even more significant is the fact that the accelerated rate of improvement of females over males has produced such large differentials among the youngest age groups. For example, among the youngest age group females were more than twice as likely as males (38.3 vs 18.2%) to have attained a secondary level of education. Males were more than twice as likely (1.5 vs .6%) as females to have no education. At age 25 - 29 the former held as well as 28.5 percent of females attended a secondary school compared to only 13.6 percent of males. In fact, close examination of these data will show that the sex differential reversed from males being more educated at age 45 - 49 to females being more educated than males at age 40 - 44 and that the gap has increased with successively younger ages. While one could argue that this represents the combined effects of sex differences in mortality and international migration, the data for pre university/post secondary and university attendance do not suggest that these factors have played a significant role in establishing or influencing this trend. What the data so strongly suggest is that if this trend is allowed to persist, socioeconomic status, to the extent that it is influenced by education, will increasingly be determined along gender based lines.

Table 3.4

**Percent of the Total Population by Age and Highest Level of Education
Attended and Percent of Males and Females by Age and Highest Level of
Education Attended: 1991**

Age - Sex Groups	Total	None	Primary	Pre University		
				Secondary	Post Second	University
All Persons	38,198	3.6	77.1	14.1	2.7	2.5
20 - 24	6,714	1.1	65.4	28.1	4.5	.9
25 - 29	5,608	1.1	72.1	20.8	3.6	2.4
30 - 34	4,647	1.3	75.6	16.0	3.5	3.6
35 - 39	3,649	.8	76.1	15.3	3.7	4.1
40 - 44	2,916	1.5	79.8	11.4	2.8	4.5
45 - 49	2,472	2.6	83.2	8.9	1.9	3.4
50 - 54	2,088	5.6	85.9	4.4	1.5	2.7
55 - 59	2,086	6.2	84.7	4.7	1.4	3.0
60 - 64	2,070	7.4	85.1	4.8	.6	2.1
65>	5,948	11.1	84.0	3.5	.4	1.0
Males	18,797	3.7	79.3	11.1	2.7	3.2
20 - 24	3,407	1.5	75.0	18.2	4.2	1.1
25 - 29	2,925	1.2	78.6	13.6	3.4	3.1
30 - 34	2,444	1.6	79.0	12.1	3.1	4.2
35 - 39	1,917	.9	78.0	13.6	3.2	4.2
40 - 44	1,491	1.9	79.7	10.2	2.7	5.5
45 - 49	1,431	2.5	69.2	8.7	1.7	3.9
50 - 54	965	5.8	84.8	4.3	1.6	3.6
55 - 59	915	7.0	80.7	5.9	2.1	4.4
60 - 64	952	8.4	82.9	4.9	.6	3.2
65>	2,545	11.1	85.8	3.7	.6	1.8
Females	19,321	3.6	75.3	16.6	2.7	1.8
20 - 24	3,307	.6	55.6	38.3	4.8	.6
25 - 29	2,683	.9	65.0	28.5	3.8	1.8
30 - 34	2,221	.9	72.0	20.2	4.0	2.9
35 - 39	1,732	.7	74.0	17.2	4.2	3.9
40 - 44	1,425	1.1	79.7	12.7	2.9	3.5
45 - 49	1,241	2.3	85.9	7.7	1.8	2.3
50 - 54	1,123	5.3	86.8	4.5	1.4	2.0
55 - 59	1,171	5.6	87.8	3.8	.9	1.9
60 - 64	1,118	6.6	86.9	4.7	.6	1.3
65>	3,418	11.2	84.6	3.3	.2	.4

Economic Activity of the Population 15 Years and Over

One of the most important functions for any government is the development and perpetuation of a vibrant economy; an economy which can provide jobs for the population; an economy which can provide jobs which produce sufficient income for families and individuals to live at a comfortable level. Ideally, every government would like to have an economy which achieves full employment; that is, an economy which can provide a job for every person who wants to work. In reality this is never achieved, and most governments define "full employment" in terms of some minimally acceptable level of unemployment. However, even this approach seldom produces a true measure of the level of employment (or unemployment) because determining who "wants to work" is a difficult and subjective undertaking. The approach taken in the Censuses of Dominica is the standard approach used in most countries of the world. It involves identifying the "Economically Active Population" defined as those persons above some minimum age (in this case 14) who are either working or looking for work during some specified period (12 months is used here). Persons who are not working or looking for work are a residual category referred to as the "Economically Inactive Population." The level of unemployment is then defined as a ratio of those looking for work in the economically active population to those working.

There are a number of problems associated with this approach, but for our purposes it is not important to review all of these. The major problems which we need to be aware of center around the time interval and the determination of who wants to work. If a person indicates that their main activity during a 12-month period was work, we never know how long that person did work. Similarly, if a person says that their main activity was looking for work, we do not know how long that person looked for work or anything about the vigor with which they did this. More important, however, is that there may be many people who looked for work and wanted to work who did not report looking for work as their main activity. Some persons may want to work, may have looked for a job, not found one, and given up looking. Other persons who would like to work may never look for a job because, for any number of reasons, they feel they will never get a job. It is primarily for reasons such as these that most economists and demographers believe that it is quite insufficient to only look at rates of unemployment to determine how well an economy is performing its function of providing employment opportunities for a population. In this section we examine changes in economic activity giving particular attention to the demographic context within which these changes are occurring.

The data presented in Table 3.5 shows the economic activity status of the total, male and female population 15 and over in 1981 and 1991. Depending upon the perspective one takes, it is possible to arrive at quite different pictures about the ability of the economy of Dominica to provide employment for the population, and whether or not the economy's ability to provide jobs is improving. For example,

on the positive side these data show quite clearly that the employment absorption of the economically active population improved dramatically between 1981 and 1991. In 1981 the economy was providing employment for 81.7 percent (20,706/25,333) of the economically active population, and by 1991 this had improved to just over 90 percent (23,768/26,388). The situation in this respect was not markedly different for females and males, but the former had a lower rate of employment than the latter in 1981 (77.6 83.9%) and a nearly equal rate in 1991 (89.5 vs 90.4%).

Table 3.5

**Economic Activity Status of the Total, Male and Female
Population 15 and over: 1981 and 1991**

Main Economic Activity	Total		Male		Female	
	1981	1991	1981	1991	1981	1991
Economically Active	25,333	26,388	16,698	17,380	8,635	9,008
Worked	20,706	23,768	14,008	15,704	6,698	8,064
Looked for Work	4,627	2,620	2,690	1,676	1,937	944
Economically Inactive	14,044	19,004	2,385	4,983	11,659	14,021
Home Duties	9,385	11,063	361	1,150	9,024	9,913
Student	452	3,241	224	1,420	228	1,821
Retired	1,710	1,965	749	1,156	961	809
Disabled	2,497	2,735	1,051	1,257	1,446	1,478
Other/not stated	2,092	935	1,372	618	720	317
Total	41,469	46,327	20,455	22,981	21,014	23,346

The decline in unemployment (from 18.3% in 1981 to 9.6% in 1991) can be attributed to an increase in the number of jobs over the period rather than a decline in the economically active population. The number of persons economically active increased by a very modest 4.2 percent while the number of jobs increased by more than three-and-a-half times this, or by 14.8 percent as represented by the difference in the number of persons who reported their main activity as work between the two censuses. This would appear to be a notable achievement, and one might be inclined to argue that it has been facilitated by the decline in total population discussed in Chapter 2 except for the fact that we also noted in that discussion that while the total population decreased between Censuses the number of persons in the working ages increased.

This increase in population in the working ages can be observed in the last row of Table 3.5; over the intercensal period the population in the working ages increased by 11.7 percent. If we compare the increase in persons in the working

ages (4,858) to the increase in the number of jobs (3,062), we find that for each increment in the number of jobs added during the decade there was 1.59 persons added to the population in the working ages. That is, the number of persons in the working ages increased at a considerably faster rate than did the economically active population, and significantly more persons were added to the working age population than jobs were added to the economy. Therefore, the data suggest that within the context of the total population in the working ages the supply of potential labor was higher in 1991 than 1981 when compared to the demand being generated by the economy. This situation raises the possibility for a bleak job seeker's environment within which many persons wanting work may, in fact, not even bother seeking it figuring that the chances of employment are too low. The potential for this is also clearly reflected in the data where we can see that even though the total number of persons in the working ages increased by 4,858, the number of persons working increased by 3,062, and the number of persons who looked for work decreased by 2,620, while the number of persons economically inactive increased by 4,960. Ignoring the "other/not stated" figures the total increase in labor supply over the interval increased by 6,015 (the difference between the sums of the economically active and inactive populations), and 82.5 percent or 4,960 persons of this increase was absorbed in the economically inactive sector.

Within the context of the economically inactive population, however, there has been a substantial restructuring in the main activity engaged in. Ninety percent of the increase in the economically inactive population is accounted for by the increase occurring in the number of persons who reported their main activity as a student and the increase in the number reporting home duties (56.2 and 33.8% respectively). Of the 3,241 persons who reported attending school as their main activity nearly 92 percent (2,970) were between the ages of 15 - 19 while the increase in the total population 20 - 64 was 3,456. Thus, retaining students in school longer relieved the additional pressure on the labor market which these persons would have created. Overall it was not sufficient enough to relieve the pressures occurring from younger cohorts succeeding into the working ages of 20 and over. In effect, cohort succession more than offset what was gained in this sense.

Gender differences in economic activity and employment will be examined in detail in a later chapter. There are however, a number of points which should be noted here as preliminary observations giving some insight into how the economy is differentially impacting the opportunities available to males and females. Table 3.6 reports sex ratios showing the number of males for each females in the economically active and economically inactive population in 1981 and 1991. These ratios show that over this interval there was very little difference in the gender gap within the economically active population. At the start of the decade there was only about one woman in the economically active population for each two men. Over the intercensal period the total increase in the economically active population was 1,055 and the increase in females accounted for only 35 percent of this, or 373

persons. There was, however, a substantial decline in the male to female sex ratio among the economically inactive population. In 1981 there were 4.9 females in this population for each male, but by 1991 this ratio had decreased to 2.8. The dynamics which have led to this change are complex and cannot be explored in detail here, but it is sufficient to point out that they are masked by the simple fact that 52 percent (or 2,598) of the increase in the total economically active population (4,960) is accounted for by males, and are directly tied to the sex differential in rates of net emigration, particularly at the younger ages. From age 15 - 19 through age 40 - 44 there are more males than females in the population and the imbalance sex ratio increases at each successive age through 35 - 39. As more younger females than males leave Dominica there are relatively fewer females left to enter either the economically active or the economically inactive population.

Table 3.6

Ratio of Males to Females Among all Persons 15 and Over and Among the Economically Active and Economically In-Active Population: 1981 and 1991.

Population	1981	1991
All Persons 15 and over	1.027	1.015
Economically Active Persons	.517	.518
Economically Inactive Persons	4.888	2.813

Marital and Union Status

In all societies there are organizational forms that are socially and/or legally sanctioned for the purpose of establishing sexual relationships, rearing and providing for children and basic economic functions. The most common form that this organization takes is the family, and in Dominica this organization is established either through the legal process of marriage or through the more informal process of common law union. Data from the census allow us to describe the marital status of all persons 15 and over, and the union status of women 15 and over. When considering marital status persons in common law unions are reported as single, and persons in dissolved relationships are reported by reason for dissolution.

The data in Table 3.7 shows that marriage is not a common form of family formation in Dominica. Overall, only about 28 percent of persons 15 and over are married, and even though the percent married is positively related to age, the percent married at any age never surpasses 57 and does not reach 50 until age 40 - 44. The data show, however, that there are very large differences in the age

distribution of married persons by sex. There are more younger married women than men, and more older married men than women. More specifically, the data suggest that women marry younger than men do. For example, between the ages of 15 - 24 only about one-half of one percent of men are married, but 2.7 percent of women are married, and by age 25 - 29 when nearly 20 percent of women are

Table 3.7

**Percent of the Total, Male and Female Population 15 and over
by Age and Marital Status: 1991**

Age	Total	Single	Married	Widowed	Divorced	Separated
All Persons	45,920	64.8	28.5	5.2	.8	.7
<24	13,855	98.3	1.6	--	--	--
25 - 29	5,596	86.0	13.7	--	--	--
30 - 39	8,348	63.5	35.2	.3	.5	.5
40 - 44	2,935	45.5	50.9	1.2	1.4	1.0
45 - 49	2,479	38.4	55.6	1.7	2.8	1.5
50 - 54	2,105	34.6	56.7	4.7	2.5	1.5
55 - 59	2,101	32.9	54.7	7.8	2.3	2.3
60 - 64	2,085	29.0	55.3	12.1	2.0	1.5
65>	6,038	24.7	44.1	28.3	1.3	1.6
Males	22,770	67.2	28.5	2.7	.9	.7
<24	7,083	99.3	.6	--	--	--
25 - 29	2,921	91.6	8.3	--	--	--
30 - 39	4,367	69.0	30.1	--	.5	.4
40 - 44	1,501	44.8	52.2	.5	1.5	1.0
45 - 49	1,235	36.6	57.9	.5	3.2	1.8
50 - 54	977	31.8	61.3	3.1	2.6	1.2
55 - 59	917	30.1	60.9	3.5	3.1	2.5
60 - 64	962	25.1	64.0	7.0	2.5	1.4
65>	2,583	18.9	59.4	17.7	1.9	2.1
Females	23,150	62.4	28.6	7.6	.7	.7
<24	6,772	97.3	2.7	--	--	--
25 - 29	2,675	79.8	19.7	.2	.1	.2
30 - 39	3,981	57.4	40.7	.6	.6	.7
40 - 44	1,434	46.0	49.7	2.0	1.3	1.0
45 - 49	1,244	40.3	53.2	3.0	2.4	1.1
50 - 54	1,128	37.1	52.7	6.0	2.5	1.7
55 - 59	1,184	35.1	50.0	11.1	1.7	2.1
60 - 64	1,123	32.3	47.9	16.5	1.6	1.7
65>	3,455	29.0	32.8	36.2	.9	1.1

married only 8.3 percent of men are married. Even by age 30 - 39 the differential is substantially (10%) in favor of women. By age 40 - 44 the differential reverses to show higher percentages of men married than women, and with each advancing age the differential increases reaching 16 percent by age 40 - 44 and nearly 27 percent by age 65 and over.

While it is difficult to speculate about the factors behind the sex differential in marital status by age, there are three general observations which need to be discussed. First, it is obvious that women marry younger than men, but the data also suggest that the age differential between marrying partners may be substantial. This is not only suggested by the differential in the percent married at the younger ages, but also by the sex differential in widowhood, particularly at the younger and middle ages where one would expect a relatively narrow gap in the mortality rate between men and women of nearly equal age. Second, the sex differential in mortality at the older ages accounts for a substantial proportion of the sex differential in the percent married at the older ages. For example, at ages 60 - 64 and 65 and over, the percent of widows is more than double the percent of widowers. Finally, to a limited extent the data also suggest that males who divorce are less likely to remarry than females. At each age the percent of females who are divorced is lower than the percent of males who are divorced. In most countries males are more likely to remarry than females, and emigration and/or immigration may influence this observation. That is, it is possible that more divorced women than men elect to leave the country and resettle elsewhere or that men who are involved in a divorce abroad are more likely to return to Dominica.

Table 3.8

Union Status of Females 15 and Over by Age: 1991

Age	Total	Single Never Married No Partner	Never Married Spouse	No Longer With Union	Common Law Partner	No Longer With Partner	In a Union
All Women	23,334	45.7	25.5	11.2	12.2	5.4	37.7
<25	6,856	83.5	2.6	.2	11.3	2.4	13.9
25 - 29	2,701	50.6	18.3	1.6	22.0	7.5	40.3
30 - 39	3,996	31.2	37.9	3.7	20.6	6.6	58.5
40 - 44	1,441	28.0	44.8	8.2	11.3	7.7	56.1
45 - 49	1,249	22.3	48.5	9.5	12.5	7.1	61.0
50 - 54	1,133	22.5	47.0	14.2	8.2	8.1	55.2
55 - 59	1,191	21.8	43.4	19.3	8.9	6.6	52.8
60 - 64	1,128	22.6	41.8	23.7	5.3	6.6	47.1
65>	3,473	23.7	27.4	42.3	2.0	4.5	29.4

The data in Table 3.8 show union status for women 15 and over, and offer the advantage of taking account of forms of relationships other than only marital status. Unfortunately, the Census only asked union status of females. Nevertheless these data are informative. First, they show that the percent of women who are single and never have entered a relationship is lower than that based solely on marital status (46 vs. 62%). More importantly, from the last column of the Table we can see that the percent of women in a relationship at the time of the Census was considerably higher than the percent suggested by only considering marital status (28.6 vs. 37.7%). Second, it is also apparent that the age pattern of unions differs significantly by type of union. The percent of women in marriage unions at the younger ages is less than the percent of women in common law unions. This increases far more dramatically as age increases so that by age 30 - 39 the percent of women in marital unions is nearly double the percent of women in common law unions. The percent of women in marriage unions peaks at age 45 - 49 and declines moderately through age 60 - 64 when it is still 86 percent of its peak level. The percent of women in common law unions, on the other hand peaks at age 30 - 39 after which it drops precipitously to only 37 percent of its peak at age 50 - 54 and 24 percent of its peak at age 60 - 64. While these patterns and the differences in them can be described here, it is important to note that we can not determine the extent to which the data are capturing a relatively stable structure of unions or the extent to which the structure depicted here is affected by cohort phenomena. What is clear however, is that currently young women are considerably more likely to enter common law than marital unions.

Finally, in Table 3.9 we show age specific rates of dissolved relationships for women by type of union. These rates were obtained by summing the number of women in each type of union and the number of women no longer with their respective partner or spouse and dividing this total into the latter figure and multiplying by 100. The rates do not tell us anything about the reason for the dissolved relationship, and the absolute levels of the rates are effected by reentry into a union and emigration, and the relative differences in the rates are affected by differences in each of these factors by type of union.

Table 3.9
Age Specific Rates of Dissolved Relationships
By Type of Union: 1991

Age	Marital Union	Common Law
All women	30.5	30.5
<25	5.9	18.4
25 - 29	7.8	25.3
30 - 39	8.8	24.4
40 - 44	15.5	40.5
45 - 49	16.4	36.3
50 - 54	23.2	49.7
55 - 59	30.8	42.7
60 - 64	36.1	55.2
65>	60.6	69.6

The overall rate of a woman being involved in a relationship that ends up being dissolved (30.5) is no different for women in common law unions than women in marital unions. However, the rate of dissolution is higher for women in common law unions than women in marital unions at each specific age. The reason this can happen is because there is an inverse relationship between age and the probability that a woman will enter (be in) a common law union and a positive relationship between age and the probability that a woman will enter (be in) a marital union, and yet within each type of union the probability of dissolution increases with age. One would expect that the primary reason for dissolved unions at the youngest ages is incompatibility and that as age increases the role of male mortality increases. With these caveats in mind, and remembering that many more women enter common law unions at the younger ages, it is particularly striking that the probability of dissolution in common law unions is three times higher than for women in marital unions under the age of 30. This differential decreases steadily with age, but does not drop below being double until age 55 - 59. Quite clearly common law unions are considerably more risky than marital unions, and they appear far more prevalent at the youngest ages where the risk of dissolution is highest.

CHAPTER 4

Living Arrangements, Housing and Fertility

Introduction

In the previous Chapter we provided essential background information describing a number of demographic, social and economic structural characteristics and properties of Dominica. In this Chapter we will focus on one of these, living arrangement, and expand our analysis beyond what was presented in Chapter 3. In that Chapter we only concerned ourselves with two types of family formation relationships, their prevalence and relative stability. The relationships discussed in that Chapter, however, were basically socio-legal ones that inform us about the family formation process. In this Chapter we will focus on other forms of relationships which inform us about how people in and out of these socio-legal relationships live and organize themselves to function collectively for social, economic and emotional support. Thus, we begin the chapter asking some fundamental questions about the composition of these organizational units. Who heads them, how large are they and how are the individuals who live in them related to one another? In examining these data we will give particular attention to the issue of the role of the household of origin in determining current single parenting. A number of demographers, sociologists and anthropologists have recently suggested that in many countries there is a sub-culture of single parenting which leads to the practice being passed from one generation of mothers to the next. After addressing this issue we will proceed to ask questions about the types of facilities households have access to. Particular attention will be given to those factors which are generally taken as indicators of the quality of living and those factors which are likely to influence public and community health risks.

The Number and Composition of Households

Households are the most basic organizational unit in societies. Households may be composed of one or more persons living together and sharing the same living quarters and its facilities. If a household contains more than one person, these persons may be related (by blood, marriage or adoption) in which case they are a family; they may be related or unrelated and family members may live together. It is even possible for more than one family to live in the same household; in fact, in many societies this is common. It is usually assumed that households function as a single unit sharing economic and social resources with some agreed upon division of labor which serves the interests of all persons living in the household. Households can be characterized from census data in terms of the sex of their head, their size, and the relationship of individuals living in them to the head.

In 1991 there were 19,374 households in the country. Most households were headed by males (63.1%), and households had an average size of 3.59 persons. Data in Table 4.1 summarize some essential information highlighting basic differences between households headed by males and females. These data show that on average female headed households were over two persons larger than male headed households (2.83 vs. 4.88 persons per household), that among male-headed households one person households were more common than among female-headed households (28.4 vs. 18.2%), and that this factor does not account for the difference in average household size between male and female headed households. That is, the difference in average size between multi-person households headed by males and females is actually larger than the difference in average household size between all households headed by males and females. Looking at the data from a slightly different perspective, it is significant to note that although female's head 37 percent of the country's households, female-headed households contain more than 50 percent of the total population.

Table 4.1

**Number of Households and Average Household Size of all Households,
Multi-person Households and Male and Female Headed Households**

Sex of Head	Number of Households	Persons in Households	Avg HH Size	Single Person HH		Multi-Person HH		
				N	%	N	Persons	Avg Size
Total	19,374	69,466	3.59	4,770	24.6	14,604	64,696	4.43
Male	12,231	34,581	2.83	3,472	28.4	8,759	31,109	3.55
Female	7,143	34,885	4.88	1,298	18.2	5,845	33,587	5.75

In addition to varying in size, households can also vary in terms of the composition of the individuals who make them up. Many sociologists, psychologists and economists believe that the composition of households have important implications for the number of children people have and the quality of child rearing practices. For example, households containing multiple adults are generally believed to provide better environments for children because the burdens of child rearing and child supervision can be shared among adults. Moreover, the presence of multiple adults tends to mitigate against older siblings having to take responsibility for monitoring the behavior of younger children, and the presence of multiple adults is usually associated with fewer work demands on children freeing them to be able to continue their education. Similarly, other things equal, most specialists are at the view that a household containing at least both a female and male adult is generally a more healthy environment for child rearing than a

household containing a single adult. The latter creates a situation where the single adult must not only be responsible for generating household economic resources, but is also the sole source for child rearing responsibility.

With these considerations in mind we have classified households by aggregating types of adults by their relationship to the head by the presence or absence of children under the age of 15. In this classification we have not attempted to separate union partners by marital status. That is, a partner can be either a married spouse or the common law partner of the head. Similarly, there is no way for us to be able to tell if the child (children) in a household is the biological and/or legal child of both partners. In Table 4.2 these data are shown for all households and for households headed by males and females separately. There are some general observations to be made from the information in this Table prior to discussing the specific types of households identified in it. First, nearly 36 percent (6,941) of all households in the country contain at least a head and a partner. This number does not equal the number of household heads who identified themselves as either married and/or in a common law relationship (8,548; not shown in the Table). This is significant because it indicates that 1,607, or nearly one in five, household heads that is currently either married or in a common law relationship is not living with their partner. This could result from a number of different reasons that range from legal separation to common law/marital relationships that are visiting rather than shared residence relationships, to a partner being abroad. What is significant about these data are their magnitude and the fact that they clearly indicate that caution must be exercised when using *either* marital status or union status data and to not make living arrangements assumptions from them.

Second, only 9,834 households contain children under the age of 15. Thus, the average household with children under 15 has 2.35 children in it, and only 36 percent of the households with children are made-up of only a head/partner and children. Third, it is frequently assumed that households containing partners are headed by the male partner and/or that female-headed households do not contain a male partner. These data show that this is not the case; 8.7 percent of all female-headed households and 10.6 percent of all multi-person female-headed households contain a partner.

The two most common types of multi-person households in the country are those composed of 1) a head living with one or more other adults who are not partners, children or grandchildren of the head and 2) nuclear structured families made-up of a head, partner and children. The former accounts for 24 percent of all multi-person households and clearly suggests that one common way for adults not in unions (and some in unions) to reduce living expenses is to share living quarters. This type of household includes unrelated persons sharing living quarters as well as related persons such as a child, head and their parent(s) many of who may be elderly or disabled.

Although the most common type of household containing children under the age of 15 is the simple nuclear family (head, partner, child [ren]), simple nuclear

families account for only 35 percent of all the households which do contain children. Nevertheless, the vast majority of households with children are composed of multiple adults and children; about 22 percent of all households containing children under the age of 15 are composed of only the head and their child (ren).

Table 4.2
Household Types by the Presence of Children Under the age of 15 for all
Households and for Households by sex of Head, 1991

House-hold Type	Both Sexes			Male-Headed Households			Female-Headed Households		
	All HH		Multi- Person	All HH		Multi- Person	All HH		Multi- Person
	N	%	%	N	%	%	N	%	%
Head Only	4769	24.6		3471	28.4		1298	18.2	
Head & Partner	1216	6.3	8.3	1110	9.1	12.7	106	1.5	1.8
Head, & Other Adult	3552	18.3	24.3	1861	15.2	21.2	1691	23.7	28.9
Head, Partner & Child	3498	18.1	23.9	3208	26.2	36.6	290	4.1	5.0
Head, Partner, Child & Grandchild	959	5.0	6.6	855	7.0	9.8	104	1.5	1.8
Head, Partner, Child & Other Adult	1268	6.5	8.8	1154	9.4	13.2	114	1.6	2.0
Head & Child	2715	11.2	14.9	322	2.6	3.7	1853	25.9	31.7
Head, Child & Grandchild	1095	5.7	7.5	143	1.2	1.6	952	13.3	16.3
Head, Child & Other Adult	839	4.3	5.7	105	.9	1.2	734	10.2	12.5

There are, however, substantial differences in the composition of male and female-headed households. For example, nearly 32 percent of all multi-person female-headed households are composed of only a head and her child (ren) compared to 15 percent of all comparable multi-person male-headed households. That is, 85 percent of all households composed of only a head and child (ren) are female headed.

Similarly, all of the household composition types, which involve the absence of a partner and the presence of children, are about twice as likely to be female-headed as male headed. Female-headed households account for the vast majority of all households of each of these types (see the last three rows of Table 4.2); 87 percent of each of all households composed of a head, child and grandchild or head, child and other adult. This bias in the sex of heads is reversed if we look at households

containing children where at least two partners are present; about 90 percent of the household types containing a head, partner and child (ren), a head, partner, child and grandchild and/or a head, partner, child and other adult are male-headed households.

In this sense it is particularly interesting to compare the household composition types where a head, partner, child and grandchild are present with those where a head, child and grandchild are present. The former implies that an adult child with an own child is living in a household where both grandparents are present and the head of the household is the male grandparent. The latter, on the other hand, implies that an adult child with an own child is living in a household where only one grandparent (the female head) is present. It has been fairly common to assume that single parents are overwhelmingly from single parent households, and that when the children of single parents have children they either return with their child or children to live with their single parent or establish a household of their own. These data, though not unequivocally, tend to cast doubt on this belief. First, if we make the assumption that the vast majority of the children (of heads) in each of the household types identified in this paragraph are female, it is clear that nearly as many single parent females live with their child (ren) in extended family living arrangements (2,054) as live in nuclear family living arrangements (2,175) with only one parent and a child. The data do show that single parents are about equally likely to live with their parent or parents as they are to live alone with their child (ren).

Second, although we know nothing directly about the living arrangements of single parents' households of origin at the time they were growing-up, it is safe to assume that the current living arrangements of their households of origin are largely reflective of these. Where there are not mortality and union dissolutions, assumptions would lead one to expect that some current female-headed households with children and grandchildren present result in an overestimation of the number of single parents from female-headed single parent families and an underestimation of single parents with children who came from households where both parents were present. It can be noted here that 47 percent or 959 of the 2,054 single parents who are currently living in their household of origin are living in a household where both of their parents are present. Thus, despite the fact that when a single parent lives with their child(ren) in a household where only one parent is present the parent is likely to be a female head (87%), there is no evidence to be derived from these data which suggest that current single parents are much more likely to come from households where their mother was a single parent.

The Stock and Characteristics of Housing

There were 19,374 occupied housing units in Dominica in 1991. These varied in size, age, type of structure, structural materials, tenure of occupants, and types of facilities available. In this section we will describe the stock of housing units in

the country giving particular attention to the characteristics of units which have broad implications for their quality and durability and their implications for the quality of life of their occupants. The data presented in Table 4.3 shows the variation in unit size measured in terms of the number of rooms per unit. These data show that 59 percent of all units in the country have only 3 or fewer rooms and that only 17.5 percent of the country's housing units have 5 or more rooms. The average number of persons occupying units by number of rooms is also shown in this Table. In general there is a strong tendency for the average number of persons in a unit to increase as the number of rooms in a unit increases, but what is significant in these figures is that the average number of occupants is greater than the number of rooms per unit until units are composed of at least five rooms. This implies that even though average number of occupants increases as the number of rooms in a unit increases, "crowded" units are more prevalent among smaller units. This is further verified by the data in the last column of the Table showing the percent of units which have at least two more occupants than the number of rooms in the unit. These data show this to be the case in at least one-in-five units with five rooms or less and this is highest in units with three rooms where one-in-three have at least five persons occupying them. In short, the majority of housing units in the country are relatively small, and the smaller housing units are most densely utilized on a per room basis.

Table 4.3

Number of Housing Units by Number of Rooms and Mean Number of Occupants of Units by Number of Rooms in a Unit, 1991

Number of Rooms	Number of Units	Percent	Mean Number of Persons	Percent of Units with 2 or more Persons Than Rooms
1	980	5.1	1.81	19.8
2	6,074	31.4	2.76	30.7
3	4,340	22.5	3.73	33.9
4	4,543	23.5	4.09	26.0
5	2,031	10.5	4.47	19.5
6	854	4.4	4.90	16.4
7	275	1.4	5.45	14.5
8	137	.7	5.12	6.6
9	52	.3	5.44	7.7
10>	42	.2	4.19	2.4

Nearly 84 percent of the housing units in the country are single undivided structures and another 8 percent of the units are contained in private structures which have been divided to accommodate more than one unit; only about 5.5 percent of the units are flats, apartments, condominiums, townhouses or duplexes and nearly 40 percent of the units were built in the 10 years prior to the Census. While this suggests that a relatively substantial proportion of the available housing units are "new," 42 percent of the available units are more than 20 years old, and nearly 30 percent are at least 30 years old. Thus, even though the housing stock contains a substantial number of new units, it also contains a relatively large number of "old" units.

Moreover, with 84 percent of the housing units being of a single type (private undivided homes) choice in the housing market is relatively constrained. This undoubtedly reflects demand and the fact that many Dominicans live in areas which are more conducive to single unit homes which are constructed on demand. Nearly 90 percent of all new units constructed between 1980 and 1991 were private undivided homes. Compared to the 1970's this also clearly suggests that the demand for new housing escalated during the 1980's. According to the 1980 Census 4,149 new units were constructed during the 1970's. This yields an annual average of 461 new units (during the 1970's) compared to an annual average of 625 new units between the 1980 and the 1991 Censuses, an increase of 36 percent. In this sense, however, it is interesting to note that in the 1980 Census there were 902 more units (4,149) reported as constructed between 1970 and 1979 than in the 1991 Census suggesting that more than one-in-five of the units constructed during the 1970's were taken out of the housing stock during the 1980's. This compares with only about one-in-ten that were constructed during the 1960's (2,516 according to the 1980 Census) that were taken out of the stock during the 1980's. This indicates that older units that survive have a higher probability of surviving longer than all new units, but it tells us nothing about the reasons for this. In this context it is worth noting that within the Caribbean region the environmental threats to housing can play a major role in the turnover of units.

Table 4.4

Type of Housing Units by Year of Construction

Built	Year All Units		Private		Private Flats, Apartments		Condos,		Town		N	%
					Houses	Undivided	Duplexes	Divided	Other			
	N	%	N	%	N	%	N	%	N	%	N	%
Total	17,486	100.0	14,673	83.9	1,398	8.0	521	3.0	453	2.6	441	2.5

					1980 -							
1991	6,871	39.3	6,158	42.0	297	21.2	199	38.2	56	12.4	161	36.5
					1970 -							
1979	3,247	18.6	2,487	16.9	258	18.5	136	26.1	302	66.6	64	14.5
					1960 -							
1969	2,245	12.8	1,888	12.9	211	15.1	56	10.8	28	6.2	62	14.1
Pre 1960	5,123	29.3	4,140	28.2	632	45.2	130	24.9	67	14.8	154	34.9

The data presented in Table 4.5 shows some selected characteristics of the housing stock by type of unit: that among all units nearly 80 percent have electrical lighting, and about 60 percent have gas fueled cooking facilities. The data also show, however, that other modern facilities exist in fewer than half the occupied units. For example, less than 40 percent of the units have piped water, and the number that have piped water is not markedly more than the number which obtain their water from a public stand pipe. Similarly, the number of units housing a water closet is not substantially different from the number (about 35%) of units dependent on a pit latrine for depositing and disposing of human waste. There are variations in the percent of units with each facility by type of unit such that modern facilities are least prevalent in the most dominant types of units (undivided and divided private structures). The most modern form of each facility is most prevalent in duplexes followed by flats/apartments/condominiums and townhouses, and combined business and dwelling structures. These are unit structures more common in more densely settled areas suggesting that undivided private units are more prevalent in the less densely settled areas where the infrastructures to support modern facilities are most lacking.

Table 4.5
Percent of Housing Units With Selected Characteristics
by Type of Unit, 1991

Type of Unit	Number	Water Source			Toilet Facility			Cooking Facility			Lighting	
		Pub Pvt	Stand	Other	Water Closet	Pit Latrine	Other	Coal/ Wood	Gas	Kero- sene	Other	Elect
All Unit	19,374	39.6	37.2	23.2	36.8	35.4	27.8	34.0	59.0	5.1	1.9	79.2
1	15,961	36.3	39.2	24.5	33.4	39.5	27.1	36.8	56.8	4.7	1.7	78.4
2	1,760	41.9	38.5	19.6	38.5	17.6	43.9	23.2	65.3	9.0	2.5	77.9
3	653	61.7	21.0	17.3	61.1	16.8	22.1	20.4	73.8	3.5	2.3	86.7
4	481	89.2	5.0	5.8	88.8	5.0	6.2	13.1	79.8	6.0	1.1	96.9
5	519	59.0	22.9	18.1	58.6	18.9	22.5	22.2	69.0	5.0	3.8	81.5

1 = Undivided Private House; 2 = Part of a Private House; 3 = Flat/Apartment/Condo/Townhouse;
 4 = Duplex; 5 = Combined Business and Dwelling/Barracks/Other

The situations portrayed by these data are not unusual for countries roughly at the stage of development of Dominica, and they clearly indicate the continuation of public health risks for large segments of the population. Extending modern water and human waste disposal facilities to less densely settled areas is an expensive but essential priority not only for public health reasons, but also increasingly for environmental reasons. With a large proportion of the housing stock in single family units and with a high proportion of units being taken out of the stock, the cost and complexity of bringing piped water to more units is heightened and suggests that a strategy to bring more longer lasting units into the stock may have to be pursued before modern water facilities can be extended.

Nearly all units in the housing stock of the island have roofs which are covered by sheet metal; this tends to be the case regardless of type of unit. There is, however, more variation in the use of materials for constructing the outer walls of units. Overall, about one-half of the units have outer walls constructed of wood, and another one-third of the units have outer walls constructed of concrete. Fifteen percent have outer walls composed of a mixture of wood and concrete. Undivided units and divided units are most likely to have outer walls constructed exclusively of wood and each of the other types of units are most likely to have outer walls constructed only of concrete. Given the durability of the two materials and the differential ability of the two materials to tolerate tropical climate and storms this might help to explain why such a large proportion of undivided units appear to turn over in such a short period of time.

Finally, the data also show that there is variation in the tenure status of units by type. As one would expect the undivided private units are most likely (79%) to be owned followed by duplexes (70%). Divided private units (58%) and flats /apartments/condominiums and townhouses (49%) are most likely to be rented. Indeed, these two types of tenure status account for over 80 percent of each type of unit except the combined business and residential and barracks.

Table 4.6

Construction Materials and Type of Tenure by Type of Unit, 1991

Type of Unit*	Number	Sheet Metal Roof	Construction Material for Outer Walls				Type of Tenure		
			Wood	Concrete	Wood & Concrete	Other	Private Owned	Rent	Other
All Units	19,374	95.2	50.5	33.6	14.6	1.3	71.8	19.2	9.0
1	15,961	96.1	53.6	30.5	14.7	1.2	79.0	13.6	7.4
2	1,760	90.9	44.3	43.1	11.9	.7	23.7	57.6	18.7
3	653	85.0	28.8	60.8	10.1	.3	39.7	48.7	11.6
4	481	96.0	26.6	55.5	17.5	.4	69.7	26.2	4.1
5	519	92.5	30.0	42.8	25.4	1.8	57.8	19.3	22.9

*See Table 4.5 for identification of unit types.

CHAPTER 5

Educational Attainment and School Attendance

Introduction

Education is frequently viewed as one of the key components of development, and is one of the most important services which governments are expected to provide to its citizens; particularly its young citizens. To this end all governments have set up systems of education which are intended to prepare individuals to productively contribute to their society. These contributions range from being economically independent and productive to being good parents, perpetrators and preservers of their culture and environment, to law obeying and civil participants in their government. In this Chapter we consider education from two different perspectives. In the first section below we focus on the output of Dominica's educational system giving particular attention to how much education it has provided to persons who have passed through it (or had the opportunity to be in it) and how this has changed. Two measures of output (highest grade attended, and highest qualification) are used for this purpose, change is inferred from age specific data assuming that persons of different ages passed through the system at different points in time. Particular attention will be given to how sex, ethnicity and national origin have influenced the output of the system.

In the second section of the Chapter we will examine the current inputs and structure of the system of education giving particular attention to the population it is serving. In particular we will look at the extent of participation in the system by level of education and how participation varies by age and sex.

Educational Attainment of the Population 15 years and over

There are two basic measures of the educational attainment of the population which are traditionally used as indicators of the human resource quality of a population. One of these is the highest level of education attended by persons 15 and over and the other is the highest educational qualification received by persons 15 and over. The former is a good indicator of the relative number of years spent in education while the second is a good indicator of the relative level of knowledge gained during those years as measured by some universalistic and standardized criteria. Data on the highest level of attendance are presented in Table 5.1. Basically, these data show that the level of education as measured by highest level attended for the population 15 and over is low; indeed, 76 percent of the population attended no more than primary school and only two percent of the population have any exposure to university level education. Less than one person in 5 has attained a secondary education.

Table 5.1

**Percent of Persons 15 and over by Highest Level of Education
Attended for the
Total, Male and Female Population by Age: 1991**

Highest Level Attended	All Persons 15>	15-19	20-24	25-34	35-39	40-44	45>
Total							
Below Primary	3.2	.9	1.1	1.1	.8	1.5	7.7
Primary	72.8	52.0	65.0	73.5	75.6	79.3	84.1
Secondary	18.8	43.8	27.9	18.5	15.2	11.4	4.8
Other	.4	.3	.6	.4	.8	.5	.3
Pre university	2.7	2.9	4.5	3.6	3.6	2.8	1.0
University	2.1	.1	.9	2.9	4.0	4.5	2.1
Male							
Below Primary	3.2	.9	1.5	1.4	.9	1.9	7.8
Primary	76.2	62.4	74.6	78.5	77.7	79.3	82.1
Secondary	14.8	33.4	18.1	12.9	13.6	10.2	5.5
Other	.4	.4	.6	.4	.4	.5	.3
Pre university	2.7	2.9	4.1	3.3	3.2	2.7	1.2
University	2.7	.1	1.1	3.6	4.2	5.5	3.1
Female							
Below Primary	3.2	1.0	.6	.9	.7	1.1	7.6
Primary	69.3	40.9	55.2	67.9	73.3	79.3	85.8
Secondary	22.8	54.8	38.0	24.6	17.1	12.6	4.4
Other	.5	.3	.7	.5	.9	.5	.2
Pre university	2.7	2.9	4.8	3.9	4.1	2.9	.8
University	1.5	.1	.6	2.2	3.9	3.5	1.2

The data do suggest, however, that there has been a substantial upgrading in the level of attendance in recent years. This upgrading is reflected in the dramatic shift in the percent of the population that has attended the secondary level versus that which has attended only the primary level (or less). For example, among persons 45 and over nearly eight percent of the population had not even attended primary level and 84 percent had attended only the primary level while less than five percent had attended secondary school but no more. The percent stopping at the primary level decreases at successively younger ages reaching 52 percent by age 15 - 19 while the percent which attended secondary level increases at successively younger ages reaching nearly 44 by age 15 - 19. Similarly, the percent attending pre-university increases at successively younger ages reaching nearly five by age 20 - 24. Thus, while the quality of human resources measured in this way are low in the aggregate, there are signs that the level of education as measured by highest

level of school attended is increasing.

Moreover, a comparison of the data by sex clearly shows that the upgrading described above is not occurring evenly among males and females. Among persons 45 and over, 40 - 44 and 35 - 39 there is a minimum differential between males and females in the percent who attended primary and secondary level institutions, but at ages lower than 35 - 39 the differential increases substantially showing higher levels of female attendance for secondary schools than male. For example, at ages 20 - 24 and 25 - 34 the percent of females who attended secondary school is about double the percent of males, and even though the figure is not double at age 15 - 19, the absolute differential increases. If we look at those who attended at higher levels (particularly university) however, the pattern is less clear. At each age above 15 - 19 the percent of males who attended university is higher than females, and for both males and females the percent who attended university increases at successively lower ages, but only through age 35 - 39 after which it declines. Given that one would expect individuals who are going to attend university would do so by age 35 this suggests that university attendees at younger ages (20 - 34) are either being lost to emigration or that university opportunities are decreasing as secondary opportunities are increasing.

Data on highest qualification (See Table 5.2) to a large extent reinforce the observations made above, but highlight even more the relatively low level of educational achievement in the population, and the emergence of an increasingly more educated female than male population. Overall 78 percent of the population hold no formal qualification, and only slightly more than 12 percent of the population hold an O or an A Level certificate or a degree. This contrasts with nearly 24 percent who reported they attend secondary, pre-university or university level institutions. Even allowing for the fact that some of the latter have not yet sat for qualifications, the data clearly suggest many persons attending secondary and higher institutions are not qualifying. The sex differential is also clearly evident in the data for all persons 15 and over. Here we see that substantially more males than females possess no qualification, and that even though substantially more females than males have passed their O level exams, males are about equally likely as females to have their A level certificate and nearly twice as likely as females to have a degree. In short, these data indicate that data on highest level of school attended overstate the educational achievement of the population, and that when qualifications are employed as a criteria no more than about 12 percent of the population have O level or higher qualifications.

Nevertheless, it is particularly important to emphasize the pattern revealed in the age specific data which shows even more clearly than the data on highest level attended, the upgrading in the educational achievement of the population. Among persons 45 and over about 86 percent of males and 89 percent of females had no educational qualification. for both sexes this percent declined with each successively younger age through persons 20 - 24 when the percent with no educational qualification reached 73 for males dropped below 60 for females. While

both of these declines are significant, it is notable that the decline in the percent of females with no qualification (28.7 percentage points) was more than double that which occurred among males (13.2 percentage points). Most of the decline in the percent with no qualification has been shifted to an equally dramatic increase in the percent of persons with O level qualifications. For example, among females at ages 45 and over only 1.7 percent had attained O level qualifications, but among persons 20 - 24 this was the case for 26.3 percent of females. Among males the comparable change was from 2.1 to 13.4 percent. The percent of persons with A level qualifications increased nearly four fold for both females and males between these same age groups, but in each case remained less than three percent of the populations.

Table 5.2

**Percent of Persons 15 and over by Highest Educational Qualification
Passed For the Total, Male and Female Population by Age, 1991**

Highest Qualification	Persons 15>			15 - 19		20 - 24		25 - 34		35 - 44		45>	
	Total	Males	Females	M	F	M	F	M	F	M	F	M	F
None	78.0	80.7	75.3	84.6	76.4	73.3	59.9	78.0	67.4	77.6	70.4	86.5	88.6
Sch. Leaving	7.9	6.9	9.1	6.8	8.4	8.4	9.8	5.8	9.7	7.3	13.3	6.1	6.9
O Level	9.4	7.2	11.6	7.6	13.5	13.4	26.3	9.6	17.1	6.1	8.8	2.1	1.7
A Level	1.3	1.3	1.4	.6	1.1	2.8	2.9	1.5	1.7	1.4	1.3	.6	.7
Degree	1.5	1.9	1.0	0	0	.8	.4	2.8	1.7	3.4	2.6	2.1	.6
Other	1.9	2.2	1.6	.4	.6	1.3	.7	2.3	2.4	4.2	3.6	2.6	1.5

While there can be no doubt that these figures at the older ages have been more influenced by emigration than at the younger ages, there can also be no doubt that the vast majority of this change is attributable to greater educational opportunities for young people than were available to older persons when they were at comparable ages. If, in fact, the educational opportunities of today's young people are improving as dramatically as the data suggest there are clearly two issues which require deeper inquiry than can be afforded here. First, can the level of improvement documented here be sustained, and even more important, improved upon? If we compare the data for persons 15 - 19 with those for persons 20 - 24 we see in the earlier age that only about one half the percent have reached O level qualifications who report this in the older age, and less than this have reached A level qualifications. In part this reflects the fact that all of the older persons have passed the stage when we would expect them to set for exams, but many persons in the younger group have not yet done this (particularly A levels). What seems clear, however, is that with so few persons in the younger age group having qualified at

the O level by age 15 - 19 it will be difficult for the educational system to prepare them for A level exams while they are still in an age when participation in the educational system is a priority in their and their parent's lives. That is, if improvements in the educational qualifications of the population are going to be sustained and further improved upon, it appears that one issue which will have to be addressed is the pace at which students are moved through it and successfully prepared to take qualifying exams.

Second, and still focusing on the two youngest age groups we can estimate what percent of the population that was 15 - 19 at the time of the Census can be expected to have O level qualifications by the time they are 20 - 24. This is assuming that the proportion of O level qualifiers among those who were secondary school attendees will remain relatively constant. That is, at the time of the Census, we obtain the proportion of O level qualifiers of secondary school attenders for persons 20 - 24 and apply this to the persons who are secondary school attenders at age 15 - 19 to estimate what percent of the population that is now 15 - 19 can be expected to be O level qualifiers by the time they are 20 - 24. If we do this it suggests that 38 percent of females and 23 percent of males who were 15 - 19 in 1991 will become O level qualifiers by the time they reach age 20 - 24. Using the same method we can also estimate that 4.2 percent of females and 5.2 percent of males will have A level qualifications. The issue here is really two fold. On the one hand, we need to know why the system appears to discriminate against males and prevents them from attaining any qualification at the same rate as females, and indeed, even prevents them from attending at the same rate as females? On the other hand, for those who are in the system, and indeed even for those who qualify once in, the system appears to discriminate against females. Sustaining improvements in the educational system will require that both of these barriers be broken down and improved upon.

While all of the data presented above suggests that the education system's output has improved all of these data and their interpretations have been population based; that is we have looked at output as a function of input. Another, and perhaps better way, to assess the output of the system is to ask what has the system produced given its inputs, i.e. how has the system produced for persons moving through it. To assess this dimension of output it is necessary to combine data on attendance with data on qualifications. This is done in Table 5.3 where we show the percent of persons with a standardized qualification (O or A Level Certificate or a degree) as a percent of the persons who attended secondary, pre-university or university level education.

Table 5.3

Percent of Persons Who Attended Secondary, Pre-university or University Institutions With a Standardized Qualification, 1991

Metric	20 - 24	25 - 34	35 - 44	45>
Percent	25.0	27.9	25.6	24.4

These data do not suggest that exposure of greater proportions or numbers of students is leading to significantly more output. Among persons over 35 only about one in four who attended a secondary or higher level of education obtained a standardized qualification. This figure improved slightly for persons 25 - 34 and although it is lower for persons 20 - 24 it is important to bear in mind some persons in this age group may still obtain an O Level qualification. This number is likely to be very small suggesting that the rate of output in this sense may actually be declining.

Finally, in order to identify some of the factors associated with access to education data are presented on two specific issues. In Table 5.4 indices of dissimilarity are shown for university attendance by ethnicity for persons 25 and over. We have focused on this age group in order to maximize the likelihood that each person will have had the maximum opportunity to attend at this level. The figure for each ethnic group shows the difference between the percent of the population and the percent of persons who have attended a university. That is, the percent distribution of all persons 25 and over by ethnicity is compared to the percent distribution of university attendees 25 and over by ethnicity. If all persons have had an equal chance to attend a university the value in each cell would be zero. If the ethnic group is under-represented among university attendees it has a negative sign and if it is over-represented it has a positive sign. The index of dissimilarity is the sum of either the positive or negative values and represents the percent of persons 15 and over with a university education who would have to be redistributed in order for each ethnic group to have a proportion of persons who have attended a university equal to their proportion of the population.

Table 5.4

Indices of Dissimilarity Showing Ethnic Segregation for Persons 25 and Over who Attended University by Age, 1991

Ethnicity	All Persons	25 - 34	35 - 44	45>
African/Black	-21.4	-21.3	-12.5	-26.9
Mixed	+ 4.2	+ 2.8	+ 1.8	+ 8.1
Amerindian	- 1.9	- 1.1	- 2.4	- 2.2
White	+15.2	+16.3	+ 8.8	+20.1
Other	+ 4.4	+ 5.1	+ 4.5	+ 1.2
Not Stated	+ .1	+ 1.9	- .2	- .3
Index of dissimilarity	23.3	22.4	15.1	29.4

Overall the index of dissimilarity shows that about 23 percent of university attendees would have to be redistributed to make the ethnic distribution of persons who have attended a university equal to each ethnic groups representation in the population. Examination of the individual values contributing to the index shows that persons identifying themselves as African/Black and Amerindian are under-represented while each of the other groups are over-represented. Indeed, the under-representation of the African/Black population accounts for nearly all of the under-representation in the population while the over-representation of Whites accounts for nearly two thirds of all the over-representation in the population. This basic pattern of ethnic discrimination exist at each specific age, however, the overall value of the index and the amount of over/under representation for the White and African/Black groups shows substantial variation from one age group to the next. It is, as one would expect, highest among persons 45 and over, and declines by nearly one-half for persons 35 - 44. One might expect that this decline resulted from a conscious effort to increase higher educational opportunities for the Black/African population, enhanced efforts to retain Black/African persons with higher education experiences and/or efforts to limit the importation of Whites to fill positions requiring higher education qualifications. From the available census data it is difficult to explain this decline in the index within the context of the sharp rise in its value which appears for persons 25 - 34. The reason for this is because no clear trend is established. All that we do know is that while there appears to have been a decline in higher education discrimination for persons 35 - 44, this discrimination has reemerged for persons 25 - 34. The extent to which this is generated from

within the country and is a product of the education system and/or a product of the forces of international migration is a difficult question to determine from these data.

While this issue cannot be directly or fully addressed from census data (for a number of reasons), we can examine the distribution of persons who attended higher educational institutions and the distribution of highest level of education attended by nativity to gain some additional insight into the issue. Data on the first of these issues are shown in Table 5.5. This Table shows the number of persons who are natives and the number of persons born abroad for each age group and the percent of all persons in the age group who are native. The latter figure is somewhat lower for persons 35 - 44 than in the other two age groups. The next columns of the Table show the absolute number of university attendees and the percent of all university attendees (in these ages) in each age group, and this distribution shows relatively fewer of all university attendees were 35 - 44 while the percent in the other two age groups was nearly equal. The last two columns of the Table show the percent of the total native and the foreign born population in each age group who attended institutions of higher learning. Among natives this percent increases between age 45 and over and age 35 - 44 and decreases from age 35 - 44 to age 25 - 34, but among the foreign born there is a clear inverse association between age and the percent who attended university level. Finally, the last column of the Table shows the percent of all university attendees in the age group who are natives, and here we see that this figure is positively associated with age. That is, as age decreases so does the percent of all persons who attended the university level who are native.

That is, the figures on the percent of natives who attended institutions of higher education do suggest that when a larger percent of the native population had access to higher education there was less ethnic discrimination in who had access to higher education. However, the data also imply that there has been an increasing tendency to meet the needs for persons with higher education through immigration in both the data on the percent of the foreign born who have had some university attendance and in the data showing the percent of all university attendees in the country who are native. The fact that there is an inverse association between age and the percent of the foreign born who have attended university, a positive association between age and the percent of all persons who attended university who are native mitigates against the argument that higher educated natives leave the country as well as any argument that there is not an unmet demand for persons with a higher education, that is not being met by the educational system serving natives

Table 5.5

Selected Educational Characteristics of Persons 25 and over by Nativity

Age	All Persons			Persons Who Attended University Level				
	Native	Foreign Born	% Native	Number	% of Total	% of Native	% of Foreign Born	% of all Attendees Native
25 - 34	9,975	333	96.8	303	34.1	1.8	36.4	60.4
35 - 44	6,336	298	95.5	280	31.5	2.9	32.6	65.7
45 >	14,369	519	96.5	306	34.4	1.5	19.1	68.3

School Attendance

The vast majority of persons in Dominica attending educational institutions are under the age of 24. At the time of the Census in 1991 there were 20,357 persons enrolled in some level of education, and this represented about one of every three and one half persons in the country. Table 5.6 contains data which describes the size and structure of the country's educational system. Nearly 65 percent of the persons enrolled in some form of education were attending primary schools, 18 percent were attending secondary schools, and less than one-half of one percent of persons attending educational institutions were attending universities. The number (and percent) of persons enrolled in nursery schools (11.6%) exceeded the combined number (and percent) of persons enrolled in all other levels of education except primary and secondary schools. Table 5.6 also contains data which shows the student age composition of the educational system. The educational system has a young age structure. Slightly more than one half of the students in the educational system are under the age of ten, and only about 15 percent of the students in the system are over the age of 15.

Table 5.7 shows the age specific enrollment rates for all persons and by sex. For all persons these data show that about 28 percent of persons under the age of 4 are enrolled, and that enrollment peaks at ages 5 - 9 and 10 - 14 before it drops precipitously to less than 40 percent at age 15 - 19, and to less than five percent at age 20 - 24. These data also show that at the youngest age females are slightly more likely than males to attend school. by age 5 - 9 there is no sex differential, but that at successive ages after this a marked sex differential begins to appear which reaches its largest absolute difference (13.8) by age 15 - 19 and its largest relative difference (nearly two to one) at age 20 - 24. That is, the educational system appears to serve males and females equally well through ages 5 - 9, but following this the system appears more accommodating to females than males.

Table 5.6**Size and Structure of the Dominica Educational System, 1991**

Level	Number	Percent	Age	Number	Percent
Nursery	2,370	11.6	0 - 4	2,141	10.5
Primary	13,178	64.7	5 - 9	8,183	40.2
Sr./Jr. School	332	1.6	10 - 14	6,887	33.8
Secondary	3,710	18.2	15 - 19	2,860	14.1
Other	441	2.2	20 - 24	286	1.4
Community College	283	1.4			
University	43	.3			
Total	20,357	100.0		20,357	100.0

The data presented in Table 5.8 help to provide some insight into why this may be the case. In this Table we present age specific enrollment rates for each type of school by sex. These data show that at ages under ten there are minimum differences between the likelihood of enrollment between males and females, and that at these ages all children are enrolled in either nursery or primary schools. By age 10 - 14 greater diversity in the types of schools that students are enrolled in appears for both males and females, and sex differences are most pronounced at the primary and secondary levels. Males are more likely than females to still be enrolled at the primary level (73.6 vs. 66.2) while females are more likely to have advanced to secondary schools (27.3 vs. 19.6). That is, between ages 5 - 9 and 10 - 14 females are more likely than males to be advancing through the system, and for those who are not more females than males attend a Senior or Junior School. The likelihood of 10 - 14 year old males and females to attend a training or technical school is very low but about equal. The key difference here, however, would appear to be that the likelihood of a 10 - 14 year old male or females to attend a primary or secondary school is about equal, but the likelihood of a female attending a secondary school at this age is about 40 percent greater than that for a male. This difference is masked by the relatively small difference in the overall age specific enrollment rate reported above in Table 5.7.

Table 5.7**Age Specific Enrollment of the Total, Male and Female
Population 0 -24, 1991**

Age	Total	Male	Female
0 - 4	27.8	26.9	28.6
5 - 9	98.4	98.5	98.3
10 - 14	96.8	95.8	98.0
15 - 19	39.4	32.7	46.5
20 - 24	4.2	2.9	5.6

At age 15 - 19 where the largest absolute sex difference in overall age specific enrollment rates was observed most of this difference is directly attributable to the higher enrollment of females than males (34.1 vs. 21.9) at secondary schools, but two other considerations are worthy of note. First, males are about 60 percent more likely than females by age 15 to still be enrolled in primary school again suggesting the difficulty that some males may have attempting to move beyond this level; and second, by this age females are nearly twice as likely as males to be enrolled in a training or technical school suggesting that this alternative is markedly more available to young women than young men. By age 20 - 24 when overall enrollment rates were relatively low, but there was the largest relative sex difference in enrollment rates, males were about equally likely to be attending a secondary, technical or training school, community college or university. The enrollment rates for females were higher than those for males at each type of institution except university, but again the relative difference in rates for training and technical schools is particularly striking.

Table 5.8

Age Specific Enrollment Rates by Level of Education and Sex, 1991

Age	Nursery		Primary		Sr./Jr. Sch		Secondary		Training Technical Other		Community College		University	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
0 - 4	26.9	28.6												
5 - 9	2.8	2.8	95.6	95.5										
10 - 14			73.6	66.2	3.2	4.5	19.6	27.3	.1	.1				
15 - 19			4.2	2.6	.8	.9	21.9	34.1	2.9	5.7	2.9	3.3		
20 - 24							.7	1.2	.7	2.8	.7	1.1	.7	.6

CHAPTER 6

Major Activities of the Population 15 and Over

Introduction

In Chapter 3 we examined the activity status of the population within the context of demographic change between 1981 and 1991. This analysis demonstrated that although the rate of unemployment declined dramatically between censuses, this was more a result of individuals not entering the labor force than it was the result of job creation. More young individuals stayed in school longer and more persons not attending school reported their main activity as home duties. Both of these activities do not qualify one to be included in the labor force or the economically active population. In the preceding Chapter our analysis of age specific enrollment rates further confirmed the higher rate of school attendance among individuals in the youthful or early labor force ages, but it also showed that many young people are still leaving school early and that improvements in educational attendance were not leading to proportionate increases in educational qualifications. Thus, while retaining young people in school for more years is helping to relieve the unemployment problem, it is not clear that it is helping to better prepare them to contribute to the development of the country and raise their own quality of life.

In this Chapter we will focus our attention on the main activities of the population 15 and over and the associations between types of activities, age, education and income. In the first part of the Chapter we examine the influence of education on economic activity and inactivity by comparing the distribution of persons with different education achievements. This analysis essentially takes a demand perspective asking if persons with higher educational achievements are more likely to be economically active than persons with lower educational achievements. For persons who are economically active we will examine the association between education and unemployment. In addition to looking at the overall patterns in these demand associations, we will give particular attention to their variations by age. As we noted in the previous Chapter there has been a general trend for the level of education in the population to improve with successively newer cohorts. What we will look at in this context is the extent to which newer more educated cohorts compete for available positions with older more experienced cohorts.

In the final two sections of the Chapter we focus specifically on the employed population examining the broad types of jobs they occupy. We examine the types of jobs given educational qualifications appear to prepare one for, and how education and type of job are associated with income. This analysis is particularly important from the perspective of the functioning of the country's economy. It tells us a great

deal about the types of jobs (or economic opportunities) available to persons in the country, what kinds of educational qualifications are important to achieve these jobs and what level of economic return workers are receiving. Unfortunately, this analysis is constrained by two factors. First, because the country does not have a huge employed labor force we can only consider broad categories of occupations or jobs and second many workers did not provide the needed information to estimate their income from this work. Despite these constraints this analysis is useful, and data are presented to show that distribution of workers for whom income can be estimated is not significantly different from the distribution of all workers. The data also show that the distribution of workers by education for whom income can be estimated differs only slightly from the distribution of all workers by education.

Highest Level of Education Attended and Major Activity

Table 6.1 shows data depicting the major activity of all persons and for persons by the highest level of school attended. All of the data and measures of labor force activity presented in this section of the Chapter are derived from the Census item on major activity during the preceding year. Overall, these data show that 58 percent of the population was economically active, and that even a majority of the population (nearly 53%) 15 and over was employed. Among those who were not economically active the largest plurality (nearly 25% of all persons 15 and over) were primarily involved in home duties, and that nearly an equal number of persons were disabled or attending school. The data also show very clearly that there is a direct and positive relationship between education and being economically active. Among those persons with less than a primary education only 30 percent are economically active. This rises to the mid 50 percent level among persons with a primary and secondary level of attendance, and increases steadily passing 82 percent for persons who reported attending university. Among persons not economically active there is a great deal of variation in the type of non-economic activity they are concentrated in by highest level of education attended. For example, among persons with less than a primary level of attendance there are actually more persons disabled than economically active (32.8 vs. 30.3%), but also more than 26 percent of all persons with less than a primary level of attendance were involved primarily in home duties. Home duties were reported as the primary activity by 29 percent of persons with a primary level of school attendance. At each level of highest attendance above this, individuals who were not economically active tended to be concentrated in the "attended school" category. It is important to note that these figures reflect the proportions of all persons within the attendance categories, and are strongly influenced by the percent who are economically active.

The last two rows of Table 6.1 focuses our attention on the economically active population, and show the relationship between employment and education. The first of these rows shows a conventional unemployment rate obtained by

dividing the unemployed (persons looking for a job) by the economically active population and multiplying the dividend by 1,000. These data show that no matter the level of education there is some unemployment, but the data also show a clear inverse association between highest level of education attended and the rate of unemployment. For persons who attended a university the rate of unemployment is a mere 17 per thousand, and even among persons who attended a pre university

Table 6.1

Major Activities of the Population 15 and Over by Highest Level of Education Attended, 1991

Activity University	All Persons		Less than Primary		Secondary	Other	Pre University	
	N	%						
Total	44,831	100.0	3.2	72.6	18.9	.4	2.8	2.1

Economically Active	26,042	58.1	30.3	58.4	56.1	67.7	76.2	82.3
Employed	23,516	52.5	28.2	52.2	51.1	62.5	74.0	80.9
Unemployed	2,526	5.6	2.1	6.2	5.0	5.2	2.2	1.4
Economically Inactive	18,789	41.9	69.7	41.6	43.9	32.3	23.8	17.7
Home Duties	11,070	24.7	26.7	29.2	12.7	10.4	4.9	2.8
Attended School	3,076	6.9	.2	1.1	28.3	9.4	16.5	9.4
Retired	1,761	3.9	9.6	4.3	1.7	2.1	1.5	4.3
Disabled	2,728	6.1	32.8	6.7	.8	8.8	.2	.3
Other	154	.3	.4	.3	.4	1.6	.7	.9
Unemployment Rate		.097	.070	.106	.089	.077	.029	.017
Employment Ratio		1.222	.392	1.091	1.043	1.667	2.853	4.244

level the rate is only 29 per thousand. The highest levels of unemployment are found among persons with a secondary (89 per 1,000) and primary (106 per 1,000) level of attendance. That persons with less than a primary level of attendance have a lower rate of unemployment (70 per 1,000) than persons with either a primary or secondary level is not surprising for two reasons. First, as seen in Chapter 5 most persons with less than a primary education are older which means they are

probably more experienced workers and even more experienced at looking for and seeking work. That is, they are probably workers most likely to be retained because of their experience, and workers most likely to be better job seekers if they lose a job. Second, persons who have a primary and secondary level of attendance make up the largest supply of workers, and thus face the greatest level of competition for jobs available to persons with these levels of education.

The second measure of employment, the employment ratio, is shown in the last row of Table 6.1. The employment ratio is obtained by dividing the number of employed persons by the sum of unemployed persons and persons economically inactive. The ratio can, thus, be interpreted as the number of employed persons per not working person at each level of educational attendance, and it represents a metric of the relative demand for workers by level of education. The larger the value of this ratio, the greater the effort to not only bring persons into the economically active population, but also to employ and retain them once there. Unlike the unemployment rate, this measure takes account of the labor reserve as well as the labor force, and informs us about the economy's demand for workers with each level of education. These ratios are strongly and positively related to education. For persons with a university level attendance the ratio approaches 4.25 showing that for each person who attended a university and is not working, 4.25 are working. This can be contrasted with a ratio of only .392 for persons with less than a primary level of attendance to see that the demand for persons with a university level attendance is nearly 11 times greater than the demand for persons with a less than primary level of attendance. Similarly, the demand for persons with a pre-university level of education approaches being three times greater than the demand for persons with a primary level of attendance. The demand for persons with a primary level of attendance is nearly three times greater than the demand for persons with a less than primary level of attendance while the demand for persons with a primary or secondary level of attendance is about equal. The latter of these figures is influenced by the greater concentration of females in the economically inactive population and their greater likelihood of having attended secondary school compared to males (see discussion in Chapter 5). In Chapter 7 we will examine the role of gender in detail, but for now it is sufficient to note that education is an asset for both females and males in the performance of home, parental community and national duties and should not be discounted in this sense.

Table 6.2 contains the same data broken down for broad age groups. For all persons within each age group the percent economically active varies from nearly 74 percent among persons 25 - 44 years to 43 percent among persons 45 and over. The latter is influenced by the inclusion of persons at the older ages, but it is notable that if we examine the distribution of persons economically inactive in this age group that more persons reported being disabled or involved in home duties than retired. The relatively larger number of people reported as disabled as opposed to retired in this age group probably reflects the relative lack of pensions for older persons and an ambiguity about what retirement from some types of jobs

really means. Similarly important within the context of retirement there maybe many older persons who would like to be economically active if they were not disabled. That is, no longer being able to work for physical reasons may be more important for removing persons from the economically active population than is the voluntary choice of leaving because of retirement. Among persons 15 - 24 it is equally notable that 55 percent are economically active, and that fewer than 22 percent reported attending school as their main activity. This observation would appear to mitigate against viewing persons in this age group as "youths" as opposed to adults, and these figures need to be seen in a conservative context given that they actually refer to the activities during the time when this age group was 14 - 23.

Table 6.2

**Major Activities of the Population by Age and Highest Level
of Education Attended, 1991**

Activity	All Persons N	%	Less than Primary	Primary	Secondary	Other	Pre University	University
15 - 24	13,705	100.0	1.0	57.8	36.5	.5	3.7	.5
Econ. Active	7,543	55.0	26.3	65.0	39.8	58.6	57.6	46.8
Employed	5,999	43.8	17.3	50.2	33.2	50.0	54.3	43.5
Unemployed	1,544	11.3	9.0	14.8	6.6	8.6	3.3	3.3
Econ. Inactive	6,162	45.0	73.7	35.0	60.2	41.4	42.4	53.2
Home Duties	2,907	21.2	24.8	28.6	11.7	7.1	2.9	—
At School	2,986	21.8	1.5	4.4	47.8	22.9	38.7	50.0
Retired	—	—	—	—	—	—	—	—
Disabled	197	1.4	45.9	1.5	.2	7.1	—	—
Other	72	.6	1.5	.5	.5	4.3	.8	3.2
25 - 44	16,667	100.0	1.1	74.7	16.7	.5	3.5	3.5
Econ. Active	12,244	73.5	36.4	70.0	84.3	79.5	93.5	86.3
Employed	11,456	68.8	33.7	64.6	81.1	75.9	91.8	84.8
Unemployed	788	4.7	2.7	5.4	3.2	3.6	1.7	1.5
Econ. Inactive	4,423	26.5	63.6	30.0	15.7	20.5	6.5	13.7
Home Duties	3,916	23.5	28.3	27.4	13.9	13.3	4.6	3.5
At School	82	.5	.5	.1	.4	2.4	1.0	9.3
Retired	5	.1	—	—	.1	—	.2	—
Disabled	369	2.2	33.7	2.2	1.0	4.8	—	.2
Other	51	.2	1.1	.3	.3	—	.7	.7
45 >	14,463	100.0	7.6	84.1	4.9	.3	1.0	2.1
Econ. Active	6,255	43.2	29.7	42.1	60.4	59.0	71.4	81.9
Employed	6,061	41.9	28.5	40.8	58.7	56.4	71.4	81.3
Unemployed	194	1.3	1.2	1.4	1.7	2.6	—	.6
Econ. Inactive	8,208	56.8	70.3	57.9	39.6	41.0	28.6	18.1
Home Duties	4,247	29.4	26.6	31.4	14.5	10.2	12.9	2.0
At School	12	.1	—	.1	—	—	—	1.3
Retired	1,756	12.1	12.4	11.6	20.2	10.2	13.6	13.4
Disabled	2,162	15.0	31.1	14.6	4.3	20.6	2.1	.7
Other	31	.2	.2	.2	.6	—	—	.7

When highest level of education is taken into account there are some very large differences both within and between age groups in the distributions of persons among the types of activities engaged in by the economically inactive. For example, within each age group there is an inverse relationship between the percent reporting disability and educational attainment as measured by highest level attended. Disabled persons account for nearly 46 percent of all persons 15 - 24 with less than a primary level of attendance and about 34 percent of all persons 25 - 44 with less than a primary level of attendance. In both these age groups, however, persons with less than a primary level of attendance constitute only about one percent of all persons. What we cannot tell from these data is how many persons with disabilities are performing other activities, but it seems likely that these people have disabilities which are severe enough to have both hampered their education as well as their ability to work.

If we look at the percent reported being disabled across age categories, we can see that at the lowest level of educational attainment this is inversely associated with age, but that at each of the other levels of educational attainment it is positively related to age. This is what we would expect if the interpretation in the preceding paragraph is correct, but equally important the increases in reported disability between age groups is a rough index of the risk for disability by educational attainment. When viewed within the context of the educational differential within age groups the data clearly suggest that one benefit of education is a substantial reduction in the risk of disability.

Within each age group the percent of the population reporting home duties as their major activity decreases as level of education attended increases. For persons with less than a primary education the percent reporting home duties ranges in the mid 20 percent level for each age group and is no higher than 3.5 percent at any age group for persons who attended universities. There is no systematic variation within education categories between age groups, and this merely reflects the minimum variation across age groups. As one would expect school attendees are concentrated in higher proportions in the youngest age and retirees at the oldest age.

Table 6.3 contains the unemployment rates and employment ratios for each age group and for the highest level of education attended within each age group. The unemployment rates clearly demonstrate the important role age plays in determining unemployment. The unemployment rate is inversely related to age. Among persons 45 and over the unemployment rate is 31 per 1,000; for persons 25 - 44 it is more than double this (64 per 1,000) and for persons 15 - 24 it is nearly seven times greater (205 per 1,000) than the rate for persons 45 and over. As one would expect, there is an inverse relationship between the level of unemployment and highest level of education attended within each age group. However, taking account of education only emphasizes more clearly the importance of age. For example, the unemployment rates for persons under 25 with a pre university and even a university level of attendance exceed the unemployment rate for persons

with less than a primary level of attendance who are 45 and over. Similarly, the unemployment rate for persons over 45 whose highest level of attendance was less than primary is only 40 per 1,000 (roughly comparable to that for persons 25 - 44 who attended secondary school) compared to a rate of 165 per 1,000 for persons under 25 with a secondary level of attendance. Quite clearly there is an advantage for young people to remain in school to raise their likelihood of employment, but overall age is far more important than education in determining the prospects of employability. Below the pre university level, increments in education present far clearer advantages for young persons than they do for older persons.

Table 6.3

**Age and Education Specific Unemployment Rates
and Employment Ratios, 1991**

Age	All Persons	Less than Primary	Primary	Secondary	Other	Pre University	University
<hr/>							
Unemployment Rate							
15 - 24	.205	.343	.229	.165	.146	.058	.069
25 - 44	.064	.074	.077	.037	.045	.018	.018
45>	.031	.040	.032	.028	.044	—	.008
<hr/>							
Employment Ratio							
15 - 24	.779	.209	1.007	.551	1.000	1.189	.771
25 - 44	2.198	.508	1.825	4.326	3.150	11.167	5.568
45>	.721	.399	.689	1.420	1.294	2.500	4.333

The employment ratios shown in the lower panel of Table 6.3 reveal a picture which is consistent with the above interpretation of the employment rates although the pattern is somewhat different. Basically, the employment ratios show that the demand for workers is related to age in a curvilinear manner; it is highest at the middle ages and lower at the oldest and youngest ages and with one exception (the primary level) the lowest demand is for workers 15 - 24. What is particularly interesting in these employment ratios, however, is that within the context of the general age-education specific pattern the largest differences are at the highest levels of education and this tends to emphasize the structural nature to the economic problems of the country. That is, even though there is a greater demand for workers within each age group as education increases, that demand is heavily

concentrated and met by workers in the middle ages affording younger and older workers relatively fewer opportunities. Jobs which require higher levels of education are not being created at a fast enough pace to create a demand for more educated persons which cannot be met by middle and older age persons with higher levels of education. It is also likely that middle and older age workers occupy higher jobs with less education than younger workers placing even more of a squeeze on the latter. That is, the education qualifications required of older and middle age workers are less for comparable jobs than they are for younger workers.

Education and Jobs

One of the primary functions on an economy is to provide jobs for citizens of a country. In the absence of full employment one can generally assume that nearly all available jobs provided by an economy are filled, and in this situation the occupied jobs provide a fairly good depiction of the job structure of an economy. The first two columns of Table 6.4 show the job structure of Dominica under these assumptions. In 1991 there was a total of 23,618 employed persons in the country, and occupation was reported for 22,970, or all but 2.7 percent. The first row of Table 6.4 shows the educational composition in terms of the highest level of attendance for the employed persons included in the Table, and this distribution parallels that reported in Table 6.1 for all employed persons. In short, the distributions reported in this Table are not significantly effected by the population which has been excluded because of non-reporting.

The educational composition of the employed population mirrors the educational composition of the total population over 15 years of age. Nearly 75 percent of the employed persons attended no more than a primary level of education, and just over 92 percent attended no more than the secondary level. Given this, it is not surprising to find that the jobs in the economy are heavily concentrated in low skill manual forms of work and in low skill service forms of work. For example, agricultural and forestry jobs and elementary jobs account more than 43 percent of all available jobs, and another 25 percent of all jobs involve clerking and/or working in sales in shops or services. By contrast, only about one-in-six jobs involve professional qualifications, higher level managerial/organizational skills or technical qualifications.

The internal cells of Table 6.4 show the association between education and the types of jobs workers are engaged in. From these data it is obvious that 1) there is a clear positive association between education and types of jobs and 2) that education does not guarantee the type of job that one will have. The association between education and the type of job it is likely to qualify one for can be gauged by looking down the diagonal of the Table which shows how jobs are clustered within levels of education. For example, at the highest level of education nearly 57 percent of the jobs occupied are professional and another 19 percent are legislators, senior officials and managers; at the other end of the educational structure nearly 52

percent of persons with less than a primary education are concentrated in agricultural and forestry jobs and another 31 percent are concentrated in elementary jobs. In other words 76 and 83 percent of the individuals with the highest and lowest levels of education are concentrated in the highest and lowest types of jobs respectively. Very similar patterns are observed at the intermediate levels of education. Nearly 50 percent of persons with a pre-university level of education are concentrated in technical and associated professions and another 20 percent are concentrated in clerks jobs; persons with a primary level of attendance (76 %) are concentrated in agricultural and forestry jobs, elementary and craft and related jobs and nearly 71 percent of persons with a secondary level of attendance are in technical and associated professions, clerks and sales in shops or service facilities. While it is important to be aware of this association and its apparent strength, it is also important to be aware of the fact that education does not qualify one for one type or level of job, that it does not disqualify one for any type of job and that there tends to be some overlap between educational qualifications and types of jobs.

Table 6.4

Occupation of all Workers by Highest Level of Education Attended, 1991.

Occupation	All N	Workers %	Less than Primary	Primary	Secondary	Other	Pre University	University
All Jobs	22,970	100.0	1.7	72.5	18.3	.4	3.9	3.2
Legislators, Sr. Officials & Mgrs.	1,434	6.2	4.0	5.4	7.0	12.5	8.0	19.4
Professionals	533	2.3	.3	.1	1.1	3.4	4.6	56.8
Technical & Assoc. Professionals	2,271	9.9	.5	2.9	28.6	34.0	49.9	15.2
Clerks	1,898	8.3	.3	3.0	28.3	10.2	20.3	3.0
Service & Shop Sales Workers	1,927	8.4	2.0	7.8	13.7	6.8	2.9	.9
Craft & Related Plant Machine Operators	3,935	17.1	8.2	20.7	8.2	23.9	8.5	1.6
Elementary	1,007	4.4	1.8	5.2	2.6	4.6	1.9	.3
Agriculture & Forestry Wkers	4,383	19.1	31.1	24.1	5.3	2.3	1.0	.1
	5,582	24.3	51.8	30.8	4.8	2.3	2.9	2.7

Although there is a tendency for persons with a given level of education to be concentrated in one or two types of jobs, there are some persons with each level of education in each type of job. For example, close to 3 percent of persons with a university level of attendance occupy positions which are classified as agricultural

or forestry or elementary jobs while 5 percent of workers with less than a primary level of attendance occupy positions which are classified as legislative, senior officials or managers and technical and associated professional jobs. Moreover, there are some types of jobs which are filled by persons with different levels of education more than others. This is obviously the case for technical jobs and associated professional jobs which are filled in substantial numbers by persons with a secondary, other, pre-university and even university level of education, but it is also true for clerks, craft and related jobs as well as for elementary and agricultural and forestry jobs.

In Table 6.5 we show the percent of persons in each occupational grouping by age and highest level of education attended. These data allow us to compare the extent to which persons of the same age with the same level of education achieve the same types of jobs. The data show that within each level of education there tends to be a rather strong association between the percent having a given type of job and age; but that for some occupation groupings this relationship is positive and for others it is negative. For example, for the first occupational group included in the Table the percent holding these types of job increases with age for each highest level of education attended. Thus, while no one 15 - 24 with less than a primary level of attendance has one of these jobs, 8.4 percent of those persons 45 and over with less than a primary level of attendance have one of these top jobs. Similarly, if we look at persons with a primary level of attendance we can see that persons 25 - 44 are 3.5 times more likely to have one of these types of jobs than persons 15 - 24, and that persons 45 and over are nearly 4.5 times more likely to have one of these jobs than persons 15 - 24. This general pattern holds for each level of education for these highest level types of jobs except at the university level where the difference between age groups is relatively small. The same general pattern is found within each level of education attended for agricultural and forestry jobs, but for each of the three intermediate job groupings the relationship between age and the percent within the education level is inverse. That is, as age increases the percent with a given level of education decreases with only minor exceptions. Thus, the percent of persons with a secondary level of education who hold jobs as clerks and shop/service sales positions increases from 22.3 among persons 45 and over to nearly 38 percent among persons 25 - 44 to 53 percent among persons 15 - 24. Among persons with a pre-university level of education the comparable percents increase with age from 6.3 for persons 45 and over to 16 for persons 25 - 44 to 37 for persons 15 - 24. Roughly the same general patterns can be found for each level of education for the craft and related and plant machinery operators and elementary occupations.

Table 6.5
Occupation of all Workers by Highest Level of
Education Attended and Age, 1991

Age & Occupation*	Less Than Primary	Primary	Secondary	Other	Pre University	University
Leg, Sr O & M, T & A P						
15 - 24	0	2.6	26.3	29.1	48.0	92.0
25 - 44	6.4	9.4	41.8	52.1	73.1	92.5
45>	8.4	11.5	50.5	75.0	74.0	88.9
Clerks & Shop & Ser Sales						
15 - 24	8.7	12.3	53.1	12.5	37.0	4.0
25 - 44	6.4	12.5	37.5	22.9	16.0	4.6
45>	1.0	6.9	22.3	6.3	6.3	2.5
Craft & Related, Plt M O						
15 - 24	30.2	36.5	10.9	54.2	11.7	4.0
25 - 44	20.6	27.7	11.4	20.8	8.5	1.9
45>	6.4	14.3	10.2	12.5	8.3	1.7
Elementary						
15 - 24	34.8	29.9	6.5	4.2	1.5	0
25 - 44	30.2	21.8	4.6	2.1	.5	.2
45>	31.0	23.4	4.6	0	2.1	0
Agricultural & Forestry W						
15 - 24	26.1	18.7	3.2	0	1.8	0
25 - 44	36.4	28.6	4.7	2.1	1.9	.8
45>	53.2	43.9	12.4	4.1	9.3	6.9

*In this Table the following occupational categories have been combined: 1) Legislators, Senior Managers and Officials, Professional & Technical and Associated Professions; 2) Clerks and Service Shop Sales Workers; 3) Craft & Related Workers and Plant Machine Operators.

In short, the data show that older workers above the secondary level tend to be clustered in legislative, senior official, managerial, professional and technical positions and the oldest workers with less than a secondary education in agricultural, forestry and elementary positions. Younger workers with a secondary education are concentrated in clerk and shop and service sales jobs while those with a pre university education have some opportunities in legislative, senior official, managerial, professional and technical positions, but they also tend to go into clerk and shop and service sales in disproportionate numbers. The youngest workers with less than a secondary education are less likely than older workers to go into agricultural and forestry positions than older workers and most likely to go into craft and related jobs and elementary jobs. Workers at the middle ages mirror older workers but their levels of concentration are lower. Thus, although there is an association between education and the jobs which individuals occupy, this

association varies by age showing that older workers with higher education are more likely to occupy higher position than younger workers with higher education, but that older workers with low levels of education are also more likely to occupy agricultural positions than younger workers with low levels of education. Younger workers with low levels of education are disproportionately concentrated in low level jobs outside the agricultural sector.

Education, Job Type and Income

When utilizing the Census data on income some caution needs to be exercised. Census data on income are estimated from a series of questions which ask about gross pay for the last pay period, and period of pay. An inaccurate response to either of these questions produces error in the estimate, and the failure to produce an answer to either question makes estimation for the individual impossible. The former of these biases is difficult to estimate, but we do know that overall income could not be estimated for 19.3 percent or 4,354 of 22,592 workers. There is, however, remarkably little evidence to suggest that this high level of non-response has grossly distorted the income distribution. For example, the percent of persons for whom income cannot be estimated by education is nearly the same at each level of education as what it is for all persons except for the "other" category and among persons with a university level of attendance. For the first of these categories only 37 percent responded to both items and for the latter only 66 percent, but overall these categories only contain two percent of all workers. Second, if we compare the distribution of all workers with the distribution of workers for whom income is available by type of job, there is only one occupational category (Legislators, Senior Officials and Managers) where the percent of those for whom income is available differs by more than one percent (and here it is 1.3%) from that of all workers. In short, the data do not suggest that non-response is selective of persons by either education (other than as noted) or occupation in a serious enough manner to exclude their use if we bear in mind that the estimates for persons with an "other" level of attendance and persons with a university level of attendance are under-represented.

With these caveats in mind we can examine the data in Table 6.6 which show the distribution of all workers by income category and the distribution of workers by income for each highest level of education attended. Overall, workers incomes are low. Nearly 44 percent of all workers earn less than 200 dollars a month and another 21 percent earn from 200 - 400 dollars a month. At the other end of the income distribution only six percent of all workers earn more than 4,000 dollars a month and only 3.2 percent earn more than 6,000 dollars a month. Thus, for each worker in the country earning more than 4,000 dollars a month there are eleven workers earning less than 400 dollars a month. While this emphasizes the sharp income disparity within the country it is equally, if not more, important to emphasize that it also clearly suggests that there is a serious shortage of middle

income job opportunities. For example, just under 15 percent of all workers earn between 800 and 1,999 dollars a month.

Although a low level of education does not preclude one from having a high income earning job and a high level of education does not exclude one from having a low income job there is a clear positive relationship between education and income. Nearly 87 percent of workers with less than a primary education and 76 percent of workers with a primary level of education earn less than 400 dollars a month while the comparable statistics for persons with a secondary and "other" education decline to 31.2 and 35.2 and those for persons with a pre-university and university level of attendance future decline to only 11.2 and 15.3, respectively. Similarly sharp differentials exist by education at the upper-end of the income distribution where only 1.8 and 2.8 percent of those persons with less than a primary and a primary education respectively have monthly incomes of 4,000 dollars or more compared to 27.2 and 35.1 percent of those with a pre-university or university education respectively.

Looking at these distributions in terms of percentages, however, tends to mask the seriousness and complexity of the "income problem." The number of workers with incomes below 400 dollars a month is 11,475 and 7,943 of these have incomes of less than 200 dollars a month while fewer than 1,100 workers earnings exceed 4,000 dollars a month. While the former of these numbers clearly indicates the seriousness of the problem, the latter masks the complexity of the problem. To understand this one needs to consider the numbers of persons who have a primary or less, secondary or other level of education vs. the number of persons with a pre-university or higher level of education relative to the percents at each of these levels who have a given level of education. For example, because the number of employed workers with a level of education at the pre-university or university level is so small (853) compared to those with a primary or less level of education (13,884) or a secondary/other level of education (3,462) the substantially larger percents of these persons with a pre-university/university level earning 4,000 dollars or more a month is small (250) compared to the numbers of persons with a primary or less level of education (380) and a secondary/other level of education (454). That is, the number of persons with lower levels of education earning the highest incomes actually exceeds the number of persons with higher levels of education earning the highest incomes. This situation is even more dramatized at the middle income level (800 - 1,999) where the numbers with a primary or less level (1,196) and a secondary/other level (1,146) surpass the number with a pre-university/university level (300) by nearly four to one.

A central issue raised by these data is the type of impact it has on the young population when it is considerably more likely that they will have contact with a person who has a low education and a high income than with a person who has a high education and a high income. Young people living in this type of environment may very well perceive a situation which suggests that their life chances and income opportunities are not substantially enhanced by higher levels of education.

Table 6.6

Distribution of Workers by Income and Highest Level of Education Attended, 1991

Education	N	<200	200-399	400-799	800-1,199	1,200-1,999	2,000-3,999	4,000-5,999	6,000>
All Workers	18,238	43.6	20.9	11.0	7.1	7.5	3.9	2.8	3.2
<Primary	327	63.9	22.6	7.0	2.9	1.8	-	-	1.8
Primary	13,557	52.0	23.9	11.0	5.3	3.4	1.6	1.1	1.7
Secondary	3,391	18.3	12.9	12.3	13.4	19.8	10.4	6.1	6.8
Other	71	28.2	7.0	7.0	12.7	14.1	7.0	12.7	11.3
Pre-university	625	5.3	5.9	6.4	12.0	28.2	15.0	15.0	12.2
University	228	4.4	10.9	9.7	6.6	14.9	18.4	16.7	18.4

Table 6.7 contains data showing the income distribution for each occupational group. These data show that worker's earnings within each occupational group vary substantially, and that professional and technical and associated professions on average clearly earn more than persons in all other occupational groups; one third of the former and one fifth of the latter earn 4,000 dollars or more per month and only about 13 percent of each earn less than 400 dollars a month. Although there is a substantial gap between workers occupying professional/technical positions and clerks, it will surprise many to learn that clerks with 30 percent earning less than 400 dollars a month (and 12% earning more than 4,000 dollars a month), are the only other occupational group to have fewer than 54 percent of workers earning less than 400 dollars a month. Similarly surprising are the income distributions for legislators, senior official and managers compared to craft and related workers; the two are about equally likely to report earnings of less than 400 dollars per month, but the former are about three times more likely than the latter (8.7 vs. 2.8%) to have incomes in excess of 4,000 dollars. Three occupational groups (elementary, agricultural & forestry and craft and related workers) have 72 percent or more of their occupants earning less than 400 dollars a month and no more than three percent earning more than 4,000 dollars a month. In short, if we consider the extremes of the income distribution only two types of

positions (professional with 34% and technical and associated professions with 21%) offer high earnings potential to more than one in five workers. Six types of positions (elementary positions with 87%, agricultural & forestry workers with 81%, craft and related workers with 72%, service and shop sales positions with 62%, plant machine operators with 56% and legislators and senior officials and managers with 54%) provide the majority of their occupants an income potential of less than 400 dollars a month.

Table 6.7

**Distribution of Workers by Occupation Group and Highest Level
of Education Attended, 1991**

Occupation Group	N	<200	200- 399	400- 799	800- 1,199	1,200- 1,999	2,000- 3,999	4,000- 5,999	6,000
Legislators, Sr. Officials & Mgrs.	886	34.1	20.3	13.4	10.1	8.8	4.6	4.0	4.7
Professional	174	4.0	9.8	9.8	6.3	19.5	16.7	12.6	21.3
Technical & Assoc. Professionals	1,737	4.8	8.2	8.6	14.3	27.6	15.7	10.9	9.9
Clerks	1,634	14.9	14.9	15.7	15.2	18.2	9.1	6.4	5.6
Service & Shop Sales Wkers.	1,610	43.7	18.1	9.6	6.3	7.5	5.5	4.1	5.2
Craft & Related	3,049	42.2	29.5	13.0	6.7	4.1	1.4	1.5	1.6
Plant Machine Operators	828	30.9	25.4	19.2	10.1	8.1	3.5	1.2	1.6
Elementary	3,624	65.0	21.6	7.5	3.1	1.1	.7	.2	.8
Agricultural & Forestry Wkers.	4,512	58.8	22.5	10.2	3.7	2.5	.6	.3	1.4

CHAPTER 7

Women In Dominica

Introduction

Numerically women are an important and vital component of the Dominican population. In 1991 there were 34,885 females in the country and they represented just over 50 percent of the population. Nearly 67 percent of the female population were adult women over the age of 15 and 13.3 percent were elderly women age 60 or older (see Table 2.2 in Chapter 2). Women made-up about 50 percent of the country's total adult population, and 56 percent of its elderly population. In this Chapter we will examine the statuses, roles and contributions adult women are making to the country. We begin the Chapter by comparing the educational achievements of women and proceed to examining their roles as participants in the economy and labor force and conclude the Chapter by considering their roles as childbearers, childrearsers and homemakers.

In recent years a great deal has been written about the roles and status of women and the importance of women in the development process. The recent United Nations Conferences on Women and Development and Population each clearly highlighted many of the issues and complexities which have involved the exploitation of women in countries around the World. One point which was abundantly clear from both of these Conferences is that if women are to achieve their rightful place in society they must have educational opportunities free of traditional boundaries and independent of discrimination and prejudice. Thus, it is important to realize that the data from Censuses on characteristics such as educational attainment can inform us only about the levels of education women are achieving, and that they tell us nothing about how women are treated and tracked in the educational system. They tell us nothing about the potential prejudices or abuses women face within the educational system and/or from forces external to the system. Similarly, in a country like Dominica where emigration has played such an important role in population change (and development) in recent years it is extremely difficult to draw conclusions about the roles and statuses of women by comparing them to men. The reason for this is because we can only make broad conjectures about who has left the country, when they left and what their characteristics were at the time they left. It is primarily for reasons such as these that we make relatively few efforts below to draw direct comparisons between women and men in the country, and make more of an effort to focus our discussion directly on women and their place in Dominican society.

Education

In Chapter 5 we examined the educational attainment for the population 15 and over. This analysis suggested that dramatic achievements had been made in recent years in terms of the number and proportion of persons who attended secondary school, but that the picture of change was far less clear when we examined the highest qualification achieved (as opposed to highest level of school attended) and when we considered the proportion of persons attending University and/or receiving University degrees; that is, receiving or completing higher education. Data depicting the achievements of women in the educational sphere

Table 7.1

Highest Level of Education Attended and Highest Educational Qualification of Women by Age, 1991

Educational Achievement	15 - 19	20 - 24	25 - 34	35 - 39	40 - 44	45>
Level Attended						
Below Primary	1.0	.6	.9	.7	1.1	7.6
Primary	40.9	55.2	67.9	73.3	79.3	85.8
Secondary	54.8	38.0	24.6	17.1	12.6	4.4
Other	.3	.7	.5	.9	.5	.2
Pre-University	2.9	4.8	3.9	4.1	2.9	.8
University	.1	.6	2.2	3.9	3.5	1.2
Highest Qualification						
None	76.8	59.9	67.4	70.4	86.5	88.6
Sch Leaving	8.4	9.8	9.7	13.3	6.1	6.9
O Level	13.5	26.3	17.1	8.8	2.1	1.7
A Level	1.1	2.9	1.7	1.3	.6	.7
Degree	0	.4	1.7	2.6	2.1	.6
Other	6	.7	2.4	3.6	2.6	1.5

are summarized in Table 7.1. For women, the percent with a primary or less education decreases from 93.4 for women 45 and over to just under 42 percent among women 15 - 19. Over the same ages the percent of women with a secondary level of attendance increases from only 4.4 among those 45 and over to nearly 55 percent among those 15 - 19. If we assume that these levels depict changes in the educational experiences of successive cohorts passing through the educational

system, these accomplishments are notable as are the increases in the percent of women attending higher education institutions except in this case there is not a linear increase in the proportion as age decreases. The percent of women with attendance at the pre-university and university level increases from just two percent among those 45 and over to eight percent among those 35 - 39 after which it decreases steadily to three percent among women 15 - 19. While there can be no doubt that the relatively low percent at the youngest ages reflects the fact that many of these women are still completing secondary school and a few may be awaiting admittance to institutions of higher learning these considerations become increasingly less important as age increases from 20 - 24 to 25 - 34 when all women likely to be enrolled in higher education institutions are already enrolled. This leaves only three additional factors to operate on this decreasing share of women reporting attendance at higher educational institutions. First, increasing access to these institutions could have peaked at an earlier time when women 35 - 39 attended, and declined since. Second, it could be that younger women are away from home (and out of the country) attending institutions of higher learning and were not counted in the Census; or third, it is possible that younger women who receive some training in institutions of higher learning find that their prospects for employment and/or wage potential is greater if they emigrate from the country.

When we look at the educational qualifications of women the picture is not all that different except at the lower levels the progress gained in school attendance has not led to proportionate increases in qualifications, while at the highest level the percent of women earning degrees remains remarkably small. For example, among women 45 and over for each 2.6 women who attended secondary school only one qualified at the O level and at the A level it took 6.3 secondary attendees to produce one A level qualifier. These ratios peak among women 40 - 44 (6.0 & 21.0, respectively), and although the O level ratio declines to about 1.45 for women 20 - 24 and 25 - 34, the ratio for the A level remains more than double (13.1 & 14.5, respectively) for these age groups over what it had been for women 45 and over.

Quite clearly, although more women are attending secondary school, proportionately fewer of them are passing qualifying examinations. This, in turn, has kept the percent of women attending university relatively low. The percent of women with university attendance peaks at age 35 - 39 (3.9 percent), and although this represents more than three times the amount who attended university among women 45 and over, the number is small. Moreover, the data does not suggest that this number is increasing, as it declines to only 2.2 among those 25 - 34. The data on qualifications follow the same cohort pattern, but show that the percent holding a college degree peaks at 2.6, and declines to only 1.7 among those 25 - 34.

It is possible that the magnitude and extent of change in educational attainment among women, particularly at the level of higher education, is masked by emigration and the enhanced mobility which a university education offers. While emigration is likely to be playing some role in the cohort patterns, it may be equally important to understand some of the dynamics which underlay emigration

as it is impacting on women (and perhaps men). The cohort patterns suggest one possibility in this sense. The fact that the percents peak (both for attendance and qualifications) at age 35 - 39, and the proportionate increases at these ages over those for women 45 and over, clearly imply that education was made increasingly available to women in the successive cohorts through these ages and even that the economy was increasingly able to absorb women with higher educational achievements and retain them and their skills and talents in the country. The decreasing proportions in the cohorts under age 35 may be more reflective of decreasing economic opportunities rather than of having less access to higher education. That is, making education more available and accessible does not guarantee that society will reap the benefits of the upgrade in human resources even though it absorbs most of the cost for the upgrade. Jobs must also be available to attract and retain individuals who are trained.

Main Activity in the Year Preceding the Census

In Chapter six we examined the activity status of the population giving particular attention to the association between education and labor force activity, education and employment and education and occupation. Here we want to focus our discussion more narrowly upon the main activities of women and how they contribute to the formal economy of the country as well as the roles women perform outside the formal economy. The data in Table 7.2 show that overall nearly 40 percent of all women 15 and over are economically active and in the labor force. The percent of women economically active increases sharply from a low of nearly 36 percent at age 15 - 19 to nearly 52 percent at age 20 - 24. At successively older ages the percent of women in the labor force increases modestly but steadily through age 40 - 44 where it peaks at 55 percent dropping precipitously to about 27 percent at age 45 and over. Unemployment, on the other hand, is inversely related to age. Among women 45 and over the unemployment rate is only 1.7 percent and although it rises at successively younger ages, it is still less than 7.5 percent at ages 25 - 34. Among younger women the unemployment rate is considerably higher; 17.2 percent among women 20 - 24 and nearly 31 percent at ages 15 - 19. The severity of the unemployment problem among young women is clearly suggested by two observations. First, the unemployment rate for all persons (males and females) under the age of 25 is only about 20 percent (see Table 6.3) clearly suggesting that the situation for young women is considerably more severe than for young men. And second, over two-thirds of all unemployed women in the country are under the age of 25. The paradox presented by these observations is that the education data examined here and earlier clearly suggests that young women are more qualified (using education as a criteria) than both young men and older women.

The data presented below in Table 7.3 show the percent of women economically active by age at each level of educational qualification. These data show quite clearly that education has a strong influence on women's opportunities

to be economically active; that is at each age (with only minor exceptions at the older ages where the numbers of women with higher level qualifications are quite small) the higher the level of educational qualification possessed by a woman the greater the chances that she will be economically active. For example, among women 15 - 19 only 18.8 percent of those with no formal qualification are economically active as opposed to 36 percent of women 15 - 19 with a school leaving certificate, and nearly 68 percent of those with an A level qualification. The general patterns in these data are very clear. The percent of women economically active at each level of qualification increases as age increases, and within each age group the percent of women economically active increases as the level of educational qualification increases. Where these patterns do not hold tends to be at the older ages *and* at the higher levels of education. The latter are particularly important because they could well suggest that opportunities for the best educated women are not as good as for women with less education. For example, only 61 percent of women 20 - 24 with a college degree are economically active compared to nearly 86 percent of women 20 - 24 with an A level qualification. Similarly, among women 25 - 34, more with an O level qualification are economically active than with an A level qualification and the percent with a college degree that are economically active is marginally lower than the percent with an O level qualification who are economically active.

Table 7.2

Percent of Women 15 and over Economically Active and the Percent of Women Economically Active Unemployed by Age, 1991

Activity Status	All women						
	15 and over	15 - 19	20 - 24	25 - 34	35 - 39	40 - 44	45>
% Economically Active	39.9	32.6	51.9	53.2	54.1	55.1	26.8
% Unemployed	9.4	30.9	17.2	7.3	3.1	2.7	1.7

Table 7.3

**Age Specific Percent of Women Economically Active by
Educational Qualification: 1991**

Educational Qualification	15 - 19	20 - 24	25 - 34	35 - 39	40 - 44	45 >
None	18.8	39.3	41.2	43.3	47.2	24.1
School Leaving	36.0	47.0	59.9	56.8	58.0	38.7
O Level	46.4	77.1	84.6	90.8	89.0	59.5
A Level	67.6	85.9	77.2	73.1	100.0	46.0
Degree	---	61.5	82.9	91.1	87.9	83.0

The data in Table 7.4 show a similar pattern for the age specific unemployment rates by education for women in the labor force. Among women in the labor force within each age group the lower the level of education, the higher the level of unemployment. And at each level of education, younger women are more likely to be unemployed than older women. These data also show that the problem of unemployment among women is concentrated among young women. For women 15 - 19 the unemployment rate among women with no education is nearly 50 percent and although it declines as level of education increases, the level of unemployment with even an A level qualification is 8 percent. Among women 20 - 24 the unemployment rate is nearly 34 percent for women with no qualification, but it declines markedly to 1.3 percent for women with an A level qualification. Indeed, 45 percent of all unemployed women in the country are women with no educational qualifications under the age of 25, and 52 percent are women with less than an O level qualification under the age of 25.

Table 7.4

**Age Specific Unemployment Rates by Level of
Educational Qualification**

Educational Qualifications	15 - 19	20 - 24	25 - 34	35 - 39	40 - 44	45>
None	48.9	33.8	9.7	4.6	3.7	1.8
School Leaving	28.2	18.9	8.3	2.3	2.9	1.6
O Level	19.2	10.6	3.2	0.0	0.0	1.3
A Level	8.0	1.3	3.2	5.3	0.0	0.0
Degree	---	0.0	3.0	2.4	0.0	0.0

It is also important to note that these data cannot be interpreted as reflecting probabilities of unemployment by education as women age. That is, the lower levels of unemployment within levels of education at successively older ages do not necessarily reflect greater work opportunities for older women, but rather they reflect the combined effects of women leaving the labor force for a whole host of reasons including such things as childbearing and becoming discouraged because of unemployment or the difficulty of finding suitable work. When such women cease looking for work they are no longer included in the labor force, and are not included as being eligible for employment in the formal economy. There are a large number of reasons why women may leave (or never enter) the labor force, but the fact that at no age does the percent of women in the labor force exceed 47 percent of all women, strongly suggests that there are a number of institutionalized barriers keeping many women from becoming economically active.

Women not in the labor force can and do perform a number of significant economic (and non-economic) functions for their families, households and society. Many of these activities are associated with the management, coordination and maintenance of a household, with childbearing and childrearing and some with the provision of direct support for household members who are engaged in economic activities in the formal economic sector. Moreover, it is possible for many women not involved in the formal economic sector to play an important economic, and even income generating, role in their household through economic activities they are involved with in the informal sector as well as serving as unpaid workers in family businesses. What is crucial to realize about all such activities is that they involve making literally hundreds of decisions a day which have a direct bearing on the health, economic and social quality of life of the entire household of which such women are a part. The major difference between such women and those actively involved in the formal sector, is that the latter are directly compensated for the performance of formal sector activities while the former types of activities are not directly compensated. The skills and talents required to perform such "non-economic activities" are both complex and diverse; indeed, one can easily make the

case that they are increasingly more complex and diverse than those required to perform many activities in the formal sector. For reasons such as these it is just as important to be concerned with the positions and talents of women generally as well as for those not in the formal sector compared to those in the formal sector.

Unfortunately, censuses make no effort to identify and collect data on the various types of "non-remunerated activities" identified above. Instead, persons who do not participate in the formal sector are classified into broad categories, two of which imply that some activities are performed by the persons placed in them and two of which imply "inactivity." These categories are identified in Table 7.5. The largest plurality of all women 15 and over (9,451 of 22,182 or about 43%) are involved in "home duties," and women performing home duties account for over 72 percent of all women which the census defines as economically inactive. The problem is that "home duties" encompass a whole range of specific activities which are essential and which are largely performed by women. For example, the crucial contribution of women as childrearers is suggested by the fact that although 37 percent of all households in the country are headed by women nearly 50 percent of all children living in households are living in female-headed households. Moreover, census data also clearly suggest that female-headed households carry an even more disproportionate share of responsibility for caring for the elderly. For example, of the 384 parents or parent-in-laws who live in households they do not head, 304 or nearly 80 percent live in households headed by women. Indeed, over 80 percent of all persons 65 and over in the country who are not in households they head or living with spouses who are heads live in households which are headed by females.

Table 7.5

**Classification of Economically Inactive
Women 15 and over**

Category of Economic Inactivity	Number	Percent
All Women	13,053	100.0
Home Duties	9,451	72.4
Attended School	1,729	13.2
Retired	661	5.1
Disabled	1,212	9.3

As one would expect, nearly 98 percent of the women 15 and over attending school were under the age of 25 and over 92 percent were under the age of 20. Slightly more than 15 percent of the women attending school had O level or higher qualifications, but the vast majority of these had only O level qualifications. Only 1.8 percent of the women (or 31) who said their main activity was attending school had A level or a degree qualification at the time of the Census; these 31 women represent only one-tenth of one percent of all economically active and inactive women. While this figure is low, it is equally troubling that so many women over the age of 15 and still attending school have no qualification. That is, over 75 percent (or 1,319) of the women 15 and over who reported their main activity as attending school had no educational qualification.

Similarly, as one would expect all women who reported themselves as retired were above the age of 55, and nearly all were over the age of 60. While these women represented only 5.1 percent of all economically inactive women, they also represent 13.4 percent of all women 60 and over (4,606). The Census does not allow us to determine how many of these women are receiving pensions or retirement income from other sources or the overall level of income available to retired persons. There is evidence from the census data, however, that many older women have a need to continue to work. For example, the number of women 60 and over (608 or 13.2%) who are still actively working is nearly equal to the number retired. Moreover, the vast majority of working women 60 and over (486 or 80%) reported working at least 11 months in the year preceding the Census, and only 9 percent worked less than six months in the year preceding the census. At least part of this need emanates from the fact that there is a relatively large number of households headed by women 60 and over (2,621) and that nearly one-third of these (814) are single person households.

Disabilities among women also tend to be concentrated at the older ages. Overall, the rate of reported disability for women 15 and over is 55 per thousand, but this varies positively with age ranging from 6 per thousand among women 15 - 19 to 142 per thousand among women 45 and over. It is important to note that the value of these data are limited because disability is self reported, subjective and given as a reason for not being economically active in this context. Thus, there may be persons with the same disabilities working who do not get placed in this category because the disability does not keep them from working. Nevertheless, the data suggest that a substantial proportion of older women have debilitating conditions, many of whom may have special needs and require special services. Moreover, the fact that the rate of disability is so high (nearly 15% of women 45 and over) clearly suggests that this rate would be even higher among older women such as those over 60 that a separate study to determine the extent of their disabilities and their ability to care and provide for themselves is needed.

Fertility

It is possible to collect two types of fertility data in a census. On the one hand it is possible to ask a question about the number of live births a woman has had over her life time. A second approach to collecting fertility data is to ask a question about the number of births each woman has had in the 12 months preceding the Census. In the 1991 Census of Dominica both types of questions were asked for women over the age of 15. The reason for asking both questions is that each tells us some unique things about fertility, and each has some advantages and shortcomings. The first question is traditionally referred to as a children everborn item, and its unique feature is that it allows us to examine the fertility of cohorts of women, and it is particularly informative for allowing us to draw conclusions about the fertility of cohorts of women who have completed (or nearly completed) their fertility. For cohorts of women still in the childbearing years it allows us to assess the volume of fertility they have produced to the point in the childbearing years they have reached, and by making some inferences about their remaining fertility we can estimate how many births they are likely to produce during their remaining years of childbearing. These issues are particularly important for population growth because ultimately the fertility component's contribution to population growth is determined by the relative replacement of cohorts.

If valid data on children ever born were available, it would, in fact, be an ideal measure of cohort fertility. This, however, is never the case; that is, there are inherent shortcomings to the approach as well as reporting biases. The most important inherent shortcomings derive from the fact that the question can only be asked of women who are alive and in the country at the time of the Census. Thus, women from each cohort who have died or left the country are excluded from the denominator while their births are also excluded from the numerator. These exclusions almost guarantee that fertility for cohorts is underestimated by this approach, but the problem is built into the approach and researchers are usually left with no alternative other than to assume that the fertility of deceased women and migrant women is the same as that for those available at the time of the Census. The most likely reporting biases also lead to the technique producing an under-estimation of fertility. That is, women are not likely to report births they did not have, but many women fail to report births they did have that died in infancy or shortly after birth. This problem has been shown to exist at all ages (of mothers), but is most prevalent among women at older ages. Similarly, it is important to note that the question only asks about live births, and that this means even when accurately reported it does exclude information on all pregnancies which did not produce a live birth.

The question which asks about births in the year preceding the Census is intended to produce information useful in the estimation of current period fertility. If the data on births reported in response to this question are accurate and representative of all births that occurred in the 12 months prior to the Census they

can be used to estimate a number of period based measures of fertility ranging from the crude birth rate, to age specific birth rates and the total fertility rate. One can even make the case that birth data from this source are superior source to birth data from a registration system since the number and types of specific rates which one can calculate from the latter are restricted to the information on the mother contained on birth certificate, whereas specific rates from the Census based data can be calculated for any of the characteristics for which data are obtained on the mother in the Census. Yet, the birth data obtain from this question suffer from the same types of problems as the data from the question on children ever born. That is, the question can only be asked for women who are alive and in the country at the time of the Census. This means that current fertility is also underestimated when Census data are used because the item systematically excludes all births that occurred to mothers who died or moved from the country before the Census enumeration. Studies have also shown that many women fail to report births which involved the death of the child shortly after birth. Finally, items of this type are frequently only asked of women who are defined as being in the childbearing ages, and in this case births to women outside this age range are excluded. For example, in Dominica there is evidence to suggest that some women below the age of 15 are having births, yet the question was only asked for women 15 and over.

With these caveats in mind we can begin by examining patterns of current fertility based upon reported births for the year prior to the Census. Table 7.6 contains data on the number of births by two characteristics of mothers: age and marital status. In 1991 women reported a total of 1,456 births as occurring in the year prior to the Census. There is good reason to believe that this number markedly underestimates the number of births that actually occurred. For example, there were 7,711 children 0 - 4 enumerated in the Census; if we assume that the total mortality from infancy through childhood for these persons amounted to 16 percent (which is conservative) it would imply that to achieve this number it would have taken 8,945 births or an annual average of 2,236 births. This, in turn, implies that births may have been under reported by as much as 33 percent. It is generally known that in other countries births to young women are the most under-reported and that this tends to be particularly so if these young women are single or are currently single as a result of dissolved relationships. Moreover, as we see when we examine data of children ever born there are a substantial number of women in the 15 - 19 age group reporting two, three and four births raising the possibility that asking the question of only women 15 and over results in a substantial number of births occurring to women under the age of 15 being systematically excluded. For these reasons we are inclined to suggest that the observations made from the data reported in the Table are likely conservative and actually understate the extent to which births in Dominica occur to young women generally and to young women in nonunion statuses in particular.

With this in mind we can observe from the data in Table 7.6 that 49.5 percent of all reported births in the year preceding the Census occurred to women who were in no union (at the time of the Census) statuses, and that 85 percent of these occurred to single women who had never been in a union. Moreover, overall 16 percent of all births occurred to women who were in their teens (at the time of the Census, not at birth), and that of these, 76 percent occurred to single, never unioned women. That the country has a very young pattern of childbearing is clearly evident from the fact that 45 percent of all reported births occurred to women under the age of 25, and that births to single never unioned women largely account for this pattern is abundantly clear from the fact that these women account for 61 percent of all births to women under 25.

As the above observations imply, there are dramatic differences in the age distribution of births by union status of mother. Births to mothers in marital unions tend to occur at much older ages than do births to women in all other union status categories. Births to women in marital unions were concentrated in the age range from 25 - 34 where 68 percent of all reported births to married women occurred. Among women in common law unions and women in dissolved unions 61 and 65 percent, respectively, of all births were concentrated in the ages from 20 - 29, but among single never unioned women 66 percent of all reported births occurred between the ages of 15 and 24. Similarly indicative of this pattern, 20 percent of all births to women in marital unions occurred to women over the age of 35, but among women in common law unions and women in dissolved unions the comparable percent was only about ten, and for single never unioned women it was only 5.5.

The above description is important from the perspective of informing us about the characteristics of mothers producing births and in this sense it tells us a great deal about the conditions under which children will enter and begin life in the world. What this information does not tell us anything about, however, is the probability that a woman of a given age or age and union status will report a birth. For example, the number of reported births to women in marital unions and common law unions is nearly equal, but this does not mean that women in these two union statuses are equally likely to have had a birth unless they are about equal in number. Data addressing this issue are reported in Table 7.7 where we show the general fertility rate (births per 1,000 women in the childbearing ages) and the age specific birth rates for all women and for women by union status.

Table 7.6

**Reported Births by Age and Marital Status of Mother for Women
15 and Over: 1991**

Age of Mother	All Women	Married Women	Union Status of Mother		
			Common Law	Dissolved Union	Single, Never in Union*
15 - 19	233	3	47	6	177
20 - 24	426	39	135	27	225
25 - 29	381	116	101	44	120
30 - 34	259	122	64	19	54
35 - 39	121	55	31	12	23
40 - 44	36	15	8	2	11
All Births	1,456	350	386	110	610

Note: There was a total of 10 births reported by women over the age of 44. These have been distributed to the appropriate marital status category and included in the age group 40 - 44.

*Only women 15 - 19 who were not attending school were asked for births in the year preceding the Census.

The 1,456 births which were reported in the 1991 Census yield a crude birth rate of 20.9 births per 1,000 population. As noted above we expect that a substantial number of births occurring in the year prior to the Census went unreported. If the actual number of births was more in the order of the 2,220 estimated this would suggest a crude birth rate of about 31 per 1,000 population. No attempt has been made to adjust the rates reported in Table 7.7 for under-reporting of births.

Table 7.7

**General Fertility Rates by Union Status and Age Specific Fertility Rates
by Union Status Based on Reported Births
from the 1991 Census***

Age of Mother	Union Status of Mother				
	All Women	Married Women	Common Law	Dissolved Union	Single, Never in Union
15 - 19	.409	.600	.388	.353	.415
20 - 24	.241	.310	.278	.208	.218
25 - 29	.183	.271	.183	.193	.138
30 - 34	.131	.169	.132	.099	.092
35 - 39	.075	.077	.105	.059	.057
40 - 44	.027	.025	.052	.009	.034
GFR	107.5	76.4	156.0	111.6	136.0

*See notes to Table 7.6

These data reveal quite clearly different patterns than those based solely on the numbers of births. For example, the general fertility rates (GFR) reveal that the highest likelihood for births occurs among women in common law unions. Indeed, the GFR for women in common law unions is more than double the GFR (156.0 vs. 76.4) for women in marital unions, is 15 percent higher than the GFR for single never married women and is 40 percent higher than that for women in dissolved unions. The age specific rates emphasize the young pattern of childbearing discussed above, but also show that this pattern occurs across all union statuses, and that the relatively small number of births to married women at the youngest ages is more a product of relatively few women marrying at these ages than to marriage being related to a delay in the onset of childbearing. Indeed, it is possible that for young women pregnancy may precede marriage. Similarly, it is important to realize that the higher general fertility rate for women in common law unions is a function of the concentration of women in common law unions at the younger ages where fertility is relatively high. The cumulative number of married women in the youngest age groups increases from just 5 to 131 at age 20 - 24 where as the number of women in common law unions increases from 121 to 606. Thus, even though the age specific rates for women in marital unions at these ages are higher than for women in common law unions, because there are more women in common law unions they are producing absolutely more births. Similarly, the reverse tends to be the case at the middle and older ages of child bearing where the age specific rates of fertility are declining.

Finally, the overall age specific pattern of fertility, and the age specific pattern within each category of union status, with the possible exception of women in common law unions where the rates for women 35 - 39 and 40 - 44 are relatively high, quite clearly suggests that women are effectively employing contraception to limit their fertility during the latter years of the childbearing period. At the same time, the data suggest that young women regardless of union status are in need of family planning education and access to contraceptives.

The data in Table 7.8 show children ever born to women by age for all women and single, never married women. Data for other marital statuses are not shown because the possibilities for changes in marital status over the life course of a woman make these difficult to interpret. The data for all women, particularly given that we observed so few births to women above the age of 45 when examining current fertility, do suggest that fertility in the country is on the decline. The average woman 50 - 54 years of age had 5.4 births while for women 45 - 49 the average number of births had declined to 4.6 while for women 40 - 44 the average number of births completed declined further to 3.9. The data presented above on current fertility suggest that by the time this latter group completes their fertility they will add about one-quarter more of a child to their average bringing their total into the range of 4.1 to 4.2 births per woman. Roughly comparable declines can be observed for single, never married women at or near the end of their childbearing years, but their completed fertility at each of these ages runs from about 1.1 to 1.3 children less than that for all women. Nevertheless, within this context it is important to note that the rate of childbearing to single, never married women remains particularly high as we would estimate that by the time these women 40 - 44 complete their childbearing they will have had on average about 3.0 to 3.1 births.

Table 7.8

Children Ever born to Cohorts 15 - 19 through 55 - 54 for All Women and Single Women Never in a Union: 1991.

Cohort	Children Ever Born	All Women		Single, Never in a Union		
		% of Women Childless	Births per 1000 Women	Children Ever Born	% of Women Childless	Births per 1000 Women
15 - 19	658	72.5	326	473	77.1	261
20 - 24	2,838	46.5	872	1,477	57.2	630
25 - 29	4,642	23.0	1,740	1,644	36.5	1,220
30 - 34	5,786	11.4	2,621	1,400	22.7	1,859
35 - 39	5,818	8.0	3,361	1,166	16.6	2,422
40 - 44	5,470	9.1	3,869	1,073	20.3	2,696
45 - 49	5,707	8.0	4,644	960	18.7	3,582
50 - 54	5,990	8.8	5,431	1,052	18.1	4,142

Like the data examined above, these data clearly suggest the vulnerability or risk for births to young, single, never unioned women *and* the substantial impact that eliminating births to these women could have on overall levels of fertility in the country. By age 15 - 19, 23 percent of all single never unioned women have had at least one birth and by age 20 - 24, 43 percent of all single, never unioned women in the country have had at least one birth. The births to single, never unioned women age 15 - 19 account for 72 percent of all births at this age and even for women 20 - 24 the births occurring to single, never unioned women account for 52 percent of births to all women at this age in the country. Such a high level of childbearing for young single, never unioned women surely has a dramatic impact on the quality of their life throughout their life course as well as a dramatic impact on the life chances of their children. Unfortunately, the data contained in the Census do not allow us to quantitatively assess the impacts or causes of childbearing on young women and their children, but such studies are clearly needed and could be designed.

While we cannot assess the impacts of early childbearing on young, single never married women and their children from the data collected in the Census, we can estimate the effect that eliminating childbearing to single never married women could have on overall fertility in the country. For example, the last three cohorts for which data are presented in Table 7.8 are the ones which have either completed or nearly completed their fertility. The women in these cohorts have had an average of 3.9, 4.6 and 5.4 children respectively. If we remove the births to single, never married women their average births would have been 2.7, 3.1 and 3.9 respectively. Alternatively, births on average would have been reduced by 1.2, 1.5 and 1.5 per woman reaping tremendous savings in education, health and general welfare expenditures to say nothing of the potential impact which could occur to wages as the supply of labor is reduced as the children of these women approach labor force age.

CHAPTER 8

Children, Youth and the Elderly

Introduction

Children, youth and the elderly are three sub populations which are traditionally singled out for special attention because of their dependence and vulnerability. Children, from one perspective, can be viewed as a liability to society. Economically, they consume a large share of national resources through education and health cost, and increasingly in many countries the behaviors of many children in the form of deviance and delinquency account for a significant share of public safety costs. Yet, from another perspective, investments in children are vital to social and economic development; indeed, in the modern world it is difficult to imagine any society surviving, let alone sustaining its current quality of life, without making substantial investments in its children. Moreover, from a purely ethical perspective children are not responsible for their existence, and in this context it is important to realize that children, in addition to consuming a large share of economic resources, also consume a large share of time and emotional resources ideally from those both directly and indirectly responsible for their existence. Whether or not children receive the economic, time and emotional resources they need, or whether they are exploited, abused or otherwise mistreated is largely beyond their control. Children have no political power, and only recently have we begun to acknowledge that they have any legal rights which should be systematically protected and monitored by international agreement.

Despite the increasing consensus that children have rights, that these should be provided for and protected, and that children need education, health services and emotional support in order to develop into conscientious and productive citizens, there is a great deal of legitimate debate about who is responsible for providing what to children, when these services should be provided and what responsibilities children should assume and when these should start and when children should begin to assume their roles as adults. When children should start school, and how many years of schooling should be required, what criteria should determine which children receive an education at the state's expense versus the individual's (parent's) expense, and what the content of curriculum should be are but a few of the questions adults in nearly all countries are dealing with today. An equally important set of questions is also increasingly being asked which do not deal with these institutional issues. These questions deal with the vulnerability of children to the influences of the

mass media, advertising, music, movies and peers all of which challenge many of their traditional values and behaviors as children and force them to make decisions to engage or not engage in behaviors for which they are neither emotionally nor physically prepared.

While all of these questions and issues raise vital concerns and issues crucial for the development of children and their preparation for being the "keepers" of the social order, it is also important to realize that these pressures intensify as children age and reach their apex during the middle years of adolescence when the ambiguity of transitioning to adulthood is at its highest. This transitional period has come to be referred to as "youth" within the Caribbean Region and transcends the years from 15 - 24. By the time most young people reach these ages they are physically able to work, conceive children and perform most other adult roles. Indeed, in many respects pressures from peers, the mass media, family and the culture generally are for many young people to do these things. At the same time there are structural constraints that mitigate against young people being able to gain their independence. For many it is the failure of society to provide jobs while for others it is being inadequately prepared for the types jobs which are available. For others it is that their expectations and desires, rightly or wrongly, cannot be met by the level of income provided by the types of jobs available. And, there are still others who voluntarily delay adult activities to gain education or occupational training.

The health risk problems that children are most vulnerable to (primarily infectious and parasitic diseases) can be markedly reduced by behaviors taken by their care givers or public health officials. This is not the case for the health risk of youth. That is, the health risks which youth are most vulnerable to (accidents, violence, substance abuse, STDs/HIV and puerperal conditions) are the products of life styles and volitional behaviors which largely occur in situations outside the context of adult care giver control. Indeed, many of the issues which surround this period of life deal with those of young people moving into independence (from care givers) and the extent to which they have been prepared for this and the social and economic structure of a country can provide them with the opportunities and means to do this.

The third sub population which is traditionally singled out for its dependence and vulnerability is the elderly. In most countries of the world today the elderly are the most rapidly growing segment of the population. This is the period of life when many people's health is declining, when many individuals are faced with the loss of a spouse or partner with whom they have spent many years and formed a dependent relationship and when children have left home to form their own family. The health problems faced by this segment of the population are degenerative, chronic, expensive and from a care giver perspective labor intensive. Many of the associated problems of declining health and physical ability are exasperated by the loss of income, the inability

to adjust to rapidly changing values, and technological change which conflicts with traditional means of accomplishing goals and objectives. For many countries with rapidly growing older populations decisions about what is "owed" to the elderly and what society can provide are increasingly difficult to make. These countries are made-up of an increasingly large group of persons who are surviving to the degenerative years with no pension, and families which cannot afford to provide economic support for them.

The Size and Distribution of Dependent Populations

The number of children 0 - 14 years declined by over 20 percent between 1981 and 1991, or from numbering 29,406 in 1981 to 23,139 in 1991. Similarly, the number of youth declined from 16,398 to 14,032, or by nearly 15 percent during the intercensal interval. As noted in Chapter 2 the decline in the number of children and youth was more than double the decline in the total population of the country (8,633 vs. 4,151) while the decline in the number of children alone was 150 percent larger (6,267 Vs 4,151) than the decline in the total population. Thus, over the intercensal interval the percent of the total population which was classified as children decreased from nearly 40 percent in 1981 to about 33 percent in 1991 and the percent who were classified as youth from 22 to 20 percent. The reasons for the declines in the number of children and youth are quite unclear, but it is patently obvious that they are not primarily attributable to declines in fertility. Indeed, it would appear that all of the decline in the number of youth and a large proportion of the decline in the number of children is a result of immigration. This point cannot be over emphasized because of the instability of change resulting from migration. That is, the trend which appears to have emerged strongly during the 1980's could easily be reversed and is probably being just as heavily influenced by forces outside of the country as by forces operating in the country.

The only dependent and vulnerable population in the country to increase in size over the intercensal period was the elderly. This segment of the population increased from 7,440 in 1981 to 8,177 in 1991; this amounted to an increase of about ten percent. The percent of the total population that was elderly increased from 10 percent in 1981 to nearly 12 percent in 1991. It is likely that the older population will increase at a considerably faster pace in the immediate future as well as over the longer term. The reasons for this cannot be quantified, but factors likely to contribute to this are a general increase in the health of the population resulting in more residents surviving to become older citizens, the return of older immigrants who have gone abroad to work as they retire and the increased likelihood that more immigrants who go abroad at younger ages will survive to retire and return to the country. Similarly, it is important to bear in mind that the combination of continued (and perhaps

increasing) emigration of younger persons seeking work abroad and older immigrants returning to the country to retire is likely to cause the percent of the total population which is elderly to increase at a faster pace in the future.

TABLE 8.1
Percent of the Total Population, Children, Youth & The Elderly
By Parish, 1991

Number	28,138	14,031	8,177	69,644
Parish	Percent of Children	Percent of Youth	Percent of Elderly	Percent of Total Population
Rousseau	7.8	8.3	8.9	8.3
St. George	18.7	20.3	14.5	19.2
St. John	7.2	7.4	7.3	7.1
St. Peter	2.2	2.3	3.3	2.4
St. Joseph	8.6	8.5	9.3	8.8
St. Paul	10.4	11.6	8.2	10.7
St. Luke	2.2	2.2	2.7	2.2
St. Mark	2.6	3.0	3.6	2.8
St. Patrick	11.0	9.6	10.0	10.0
St. Andrew	16.3	14.7	16.9	15.7

Table 8.1 shows the distribution of the total population of the country by Parish of residence in 1991 as well as the separate distributions of children, youth and the elderly. Overall, these data show that the distributions of each of the sub populations follow the same pattern as the distribution of the total population. That is, the largest percents of the total population and of each of the sub populations are found in one group of Parishes composed of St George and St. Andrew followed by a second group composed of St Patrick, St. Paul and St. David. If each of the sub population distributions are compared to the distribution of the total population, however, the data do show that although children and youth are not distributed by Parish in a markedly different way than the total population, the elderly are. This is indicated by the indices of dissimilarity comparing the distributions for each of the sub populations with the distribution for the total population. The index of dissimilarity for children and the total population and youth and the total population are only 1.9 and 2.5 respectively, but for elderly and the total population the index jumps to 7.2.

Careful examination of the data in Table 8.1 will show that much of the age segregation of the elderly is a product of their under representation in St. George and St Paul Parishes and their over representation in St. Patrick and St. Andrew Parishes. The precise reasons for this segregation are not

immediately clear from the Census data, but it is quite possible that the pattern reflects the availability of facilities specifically designed to cater to the needs of the older population and/or the cohort effects of changes in the pattern of urban residential development in the country. That is, if older persons moved into their current residences in St. Patrick and St. Andrew at an earlier point in time and have not relinquished these, and newly forming households are being set-up in St. George and St. Paul, it may be that the age segregation is a product of constraints on cohorts' choices of where housing is available at the time households are set-up.

This interpretation is given further support if we compare the distribution of the youth population with the distribution of the elderly population. This comparison yields an even higher level of age segregation (index of dissimilarity = 9.3) and larger disproportionate differences in the same direction for St. George and St. Paul versus St. Patrick and St. Andrew which is what one would expect if the cohort effect discussed above was dominant. Thus, within this context it is important to note that it is not merely the elderly who are segregated, but that much of the segregation of the elderly is a result of an increased separation of the elderly from youth and by implication that younger segment of the population which is moving into the household/family establishment phase of life. In a similar fashion, the data suggest that a geographic gap is being created between the elderly and that segment of the population which has traditionally been responsible for being their major care givers and sources of emotional and social support. If this is, in fact, the case it would suggest that if this trend continues the government may have to assume a greater role in providing services to the elderly as the separation of the older population from their immediate and extended families increases.

Household Relationships of Children and the Elderly

The data contained in Table 8.2 show that although a majority of children live in a household headed a parent, a sizable plurality (nearly 42%) of children live in households headed by someone other than a parent. This does not mean that in the latter households a parent is not present, it merely indicates that a parent is not the head of the household. The likelihood that a child will live in a household headed by a parent increases with age of the child from just 55 percent among children 0 - 4 to 61 percent among children 10 - 14. Conversely, the likelihood that a child will live in a household headed by a grand parent decreases with age of the child from 33 percent among children 0 - 4 to 22 percent among children 10 - 14. These patterns undoubtedly reflect early childbearing and particularly early childbearing by single mothers who cannot afford to set-up a household of their own during the early stages of family formation. Whereas with advancing age households independent of

parents are established and children move with the parent(s) into their own household. Depending on the structure of households and the presence's of other adults in the household, it is quite likely that younger children have more adults in households to supervise and monitor their behavior than do older children.

Table 8.2
Percent Distribution of Children by Age & Relationship of to Household Head, 1991

Age	Parent	Grand Parent	Other Relative	Non Relative	N
0-4	55.4	33.1	8.7	2.8	7,711
5-9	58.3	28.7	9.4	3.6	8,317
10-14	61.2	22.0	11.8	4.4	7,111
All Children	58.4	28.1	9.9	3.6	23,139

In this sense it may also be important to note that there is a positive relationship between the percent of children who live in households with other relatives and nonrelatives and age of child. Although the percent of children who live with other relatives and nonrelatives is considerably smaller than even the percent who live with grand parents, for both of these categories, the data suggest that as grand parents become less suitable to manage children (as they age) other relatives and nonrelatives may be substituted as companion or exclusive care givers for children.

The Census data also show that many older Dominicans live in households by themselves. This is the case for 29 percent (1,669) of all persons over the age of 60, but there is a sizable difference in the percent of persons 60 - 64 who live alone versus the percent of persons 65 and over; 23 and 31 percent respectively. Perhaps of greater importance, however, is that the data also suggest that only a small percent of the elderly live in households headed by their children (or children-in-law) or other relatives (5.2% and 5.0%, respectively), and that this is also the case even for older persons 65 and over (6.0% and 5.6%, respectively). There are substantial gender differences between older persons living with relatives. For example, older women are three times more likely (7.5% vs. 2.5%) than older males to live with a child or child-in-law, but older males (4.5%) and females (5.4%) are about equally likely to live with some other relative. By deduction it is also the case that older males are more likely to live with some other relative than a child or child-in-law while older females are more likely to live with a child or child-in-law than

with some other relative. In short, the census data suggest that many older persons live in some isolation, and that the number of older persons who are taken-in by their children or other relatives is relatively small.

Economic Activity Among Youth and the Elderly

In Chapter 6 we examined the level of economic activity and a number of factors which influence the types of work available to youth, but in this Chapter we did not present any Census data related to the older population. Youth have the highest rates of unemployment and limited access, due largely to their lack of experience and relatively low levels of education, to occupations which provide incomes sufficient for independent living. In this section we will examine some of the economic characteristics of the country's elderly population. The data upon which this discussion is based are contained in Table 8.3 where we show the major activity in the past 12 months for the total, male and female elderly population.

The general expectation is that elderly individuals will (and have the right to) retire. Retirement, however, means different things to different people, but most people include in their definition of retirement some disengagement from routine economic activity and an alternative source of income usually in the form of family assistance or a government subsidy, private pension or both. When these alternatives are not available and/or the level of living they allow remains below subsistence or does not allow one to attain a level of living they expect to maintain in retirement, continued work is usually the only other option. In Dominica only 22 percent of all older persons reported themselves as retired in the 1991 Census, but an additional 23 percent of all individuals said they were disabled. It is quite likely that some persons who said they were not working because of disability were also retired and that some persons who said they were retired were also disabled, but there is no way from the Census data available to clearly distinguish between these groups. Males were about twice as likely as females to report themselves as retired (30% vs. 16%), but males and females were about equally likely to report themselves as disabled. The latter comparison might suggest that persons were more likely to report themselves as retired if they were receiving some pension or government funds as a source of retirement income, but again, this cannot be determined from the Census data. What is important, however, is that the percent of older men who worked (whether by choice or not) exceeded the number of men who reported themselves as retired (40% Vs 30%) while the number of women who worked and were retired combined was not markedly different from the number of women who reported themselves as disabled (29% vs. 24%).

About 25 percent of all elderly persons in the country reported that their main activity over the 12 months preceding the Census was working, and males (at about 40%) were nearly 3.5 times more likely to work than females (12.6%). Unemployment (see Chapter 6 for a technical definition) was very low among the elderly generally although males had a higher rate of unemployment than females. In this context, however, it must be emphasized that given the low level of work as a main activity and the low level of unemployment, there may be many elderly who would like to work, but have given-up looking for reasons of physical disability or frustration in not finding work when looking. This seems particularly likely when we consider that nearly 25 percent of the elderly reported that they did not work because of physical disability and nearly 30 percent reported that their main activity was "home duties." Again there is likely a large sex differential on this dimension because only about 6.5 percent of older men reported that their main activity was "home duties" as opposed to nearly 47 percent of older women.

Table 8.3
Main Activity of the Elderly Population By Sex, 1991

	Number	Percent	Number	Percent	Number	Percent
Number	7,984	100.0	3,487	100.0	4,497	100.0
Employed	1,971	24.7	1,404	40.3	567	12.6
Unemployed	56	.7	47	1.3	9	.2
Economically Active	2,027	25.4	1,451	41.6	576	12.8
Economically Inactive	5,957	74.6	2,036	58.4	3,921	87.2
Home Duties	2,328	29.2	229	6.6	2,099	46.7
Retired	1,781	22.3	1,051	30.1	730	16.2
Disabled	1,848	23.1	756	21.7	1,092	24.3

CHAPTER 9

THE FUTURE POPULATION OF DOMINICA

INTRODUCTION

In this chapter we will present the population projections developed by the Central Statistical Office. Individuals and governments have a number of reasons for making population projections and these are inheritantly related to the assumptions made, the way these are arrived at or adopted and the projection techniques employed. These considerations, in turn, have important implications for the uses to which projections are put. Thus, we begin this chapter with a discussion of the alternative ways that projection assumptions can be made and how these influence projection outputs and the implications of these for using population projections. This discussion is followed by a summary of important observations which can be made about recent trends in the components of demographic change in the country and their interrelationship and implications for future population change in the country. This discussion will focus on patterns of net emigration change and fertility primarily because these two components are more subject to short and long term shifts and fluctuations, and because recent trends in these components suggest that they are impacting age composition in an interactive manner. In the last section of the chapter we present the projections developed by the Central Statistical Office.

POPULATION PROJECTIONS AND METHODS OF ARRIVING AT THEM

Population projections represent pictures of the future and as such they can be manufactured to depict whatever future reality the person doing them wishes to see or have the rest of the world see. Projection techniques are many, but the most reliable and most widely used techniques are what demographers refer to as "component techniques." This name derives from the nature of these techniques which essentially involves making separate assumptions about the future course and magnitude of change in each of the components of demographic change. In most instances demographers elect to examine past and current trends in demographic, economic and social trends in making these assumptions; careful attention is given to trends in fertility, mortality and migration as well as the age specific patterns of these and how they have varied and changed with changes in and are influenced by the prevailing social and economic conditions. The more accurate and quantitative the information used in making these assumptions, the more reliable projections will be. Because trends in demographic components and the social and economic factors that influence these tend to change more over longer periods of time, population projections for shorter periods are more likely to be more reliable than population projections for longer periods of time.

When this approach is taken the assumption is that the technique and trends in the factors considered determine the outcomes or projections. The projections are viewed as having some basis in reality and as such are useful tools for policy development and program planning. For example, the numbers of children, might be used to estimate the future demand for school facilities. The number of youth, the demand and supply of labor, or the number of elderly the demand for social security and pensions. Similarly, ratios of some age and age sex groups are useful planning tools for estimating things such as the demand for housing, marriage/common law partners and types of social services such as those related to elder care. For a variety of reasons, however, projections may also be derived using the same techniques, but arriving at the underlying assumptions via different approaches. For example, the individual charged with the responsibility for doing projections may elect to make assumptions about fertility, mortality and/or migration which are based on criteria other than current trends in these components or the factors influencing them. This may be because current trends are viewed as an anomaly, or because the individual believes that programs already in place are likely to alter current trends or levels of the components of change in predictable ways, because there is evidence that existing data are inaccurate, or simply because one result or outcome of the projections is viewed as more desirable than another.

While there is nothing inherently incorrect with this latter approach, it is far more difficult to justify its use for program planning and policy development. That is, this approach to arriving at assumptions is based on the idea that changes in the demographic components of change will occur more or less independent of their current trends and the factors which have influenced these and/or that changes in the factors which have influenced these are themselves directly manipulatable to achieve the desired demographic effects in a time dependent manner. This approach is less likely to produce population projections which are useful for planning and policy development, but projections based on assumptions arrived at in this manner can be used to justify existing planning and policy. That is, this approach tells us what will happen if existing programs and policies achieve their assumed goals, but it does not tell us what is likely to happen if the assumed levels of change in the demographic components are not achieved in the assumed manner.

RECENT TRENDS IN NET EMIGRATION AND FERTILITY AND THEIR IMPLICATIONS FOR FUTURE POPULATION CHANGE

In Chapter 2 we presented and analyzed data on population change between 1981 and 1991. Essentially these data made quite clear that over the decade the population of Dominica declined, and that this decline resulted primarily from the net loss due to the emigration of Dominicans to other countries. Indeed, data presented in Chapter 2 showed that the net loss of population over the decade was between 15,300 and 16,700 persons, and that this volume of loss was equal to roughly 22 percent of all persons alive at the beginning of the intercensal period. In the absence of this volume net emigration, natural increase would have resulted in the population increasing by some 12,700 persons or by about 17 percent. Particularly important with respect to the growth potential resulting from natural increase is the analysis of

fertility contained in Chapter 7 and the possible interactions resulting from a particularly young pattern of childbearing (nearly 40 % of all births in the year preceding the Census were accounted for by women under the age of 20) and a particularly young pattern of net loss of population (females) due to emigration (nearly 72% of the total net loss due to migration was accounted for by age groups under the age of 20).

That is, emigration is removing many women from the population prior to their entering or during the peak childbearing years raising the likely situation where efforts to reduce emigration are likely to result in more children being born (not necessarily a higher rate of childbearing) in the country simply because there will be more women in the country to bear children. In addition to this, there is also the likely possibility that the fertility rate may increase particularly at ages 25 - 39/44 (there may be a shift in the age pattern of fertility) because the early childbearing pattern existing in the country at the present time could only be maintained with substantial inputs into a family planning program that allowed (more) women to be successful in avoiding pregnancies over (a long period) the remaining years of the childbearing period.

Indeed, it is even possible that fertility would rise some generally simply because we know nothing about the number or timing of births that are occurring to women who are now leaving the country. The most likely scenario in this sense is that these women exhibit a latter childbearing pattern than women who have remained in the country. Thus, adding the fertility of these women to the current age pattern of childbearing would result in a higher total fertility rate and more children being added to the population immediately. It is also possible, however, that women currently leaving the country would adopt childbearing patterns similar to those of women currently remaining in the country if they did not leave. In this case we can again assume safely that more children would be born into the population, but whether or not these births would result in a higher rate of childbearing would be dependent upon how many children the women remaining in the country did have.

While it is obvious that the above discussion has focused on an assumption that the pattern of net emigration loss which occurred during the 1980's would continue into and possibly beyond the 1990's, it is possible that this trend could cease or even reverse itself in the 1990's or at some point in the future. As noted above migration is a particularly volatile component of population change. This results, in part, from the fact that it is strongly influenced by social and economic conditions not merely in the country, but also in countries which are potential destinations for persons leaving the country as well as in countries from which potential migrants into the country might be attracted. While individual countries can develop programs to improve the situation in their country, there is little they can do to alter or influence the situation in other countries which as a general rule are also working to improve their social and economic situation. In this sense data analyzed in earlier chapters suggested that one important factor influencing net emigration from the country might be the interaction between low levels of education completed qualifications attained and the availability of jobs for new entrants into the labor market. The crucial question here is a difficult one to resolve over a short period of time. It centers around not merely raising the educational qualifications of young people, but of also simultaneously insuring that there will be jobs available that will

produce incomes that allow them to achieve a level of living that meets their expectations and desires.

Moreover, in the case of Dominica the fact that net emigration losses permeated the age structure clearly suggests that the factors influencing migration patterns go beyond the single and obvious one of the interplay between educational quality and the quality of jobs available. No matter the factors that have been behind the recent loss of population resulting from migration, the lesson to be learned from the recent experience is the potential importance of this component as a determinant of change and the influence which it can have on the other components of change, particularly fertility and the number of children born.

ASSUMPTIONS MADE FOR POPULATION PROJECTIONS: 1996 - 2021

The Central Statistical Office has produced a single set of population projections for five year intervals 1996 - 2021. These projections must be viewed with extreme caution because it is more normal to make at least three sets of projections based on different assumptions about levels and trends in change of the components of demographic change. That is, the projections presented below are grounded in the belief of the Central Statistical Office that it can accurately and unequivocally predict not merely the direction of change in the individual components of change, but also the levels at which these are going to operate over the entire projection period. With more than one set of assumptions (and projections based on each) this level of presumed accuracy does not need to be taken and the multiple set of projections can be used to present a range of projection values within which the actual numbers are likely to fall.

A single set of projections is therefore more likely to reflect what the government would like to achieve than what is actually occurring and likely to occur in the future. For example, the fertility assumptions made for the projections show a steady ten percent decline in the total fertility rate over each of the four quinquinia from 1991/1996 through 2006/2011 after which it is assumed fertility will stabilize. This total fertility rate is achieved by assuming that age specific fertility will decline at all ages by the same 9.5 percent during each of the quinquinia of decline; a phenomena very unlikely to occur. That is, given the currently existing young age pattern of fertility, it is likely that declines in fertility at younger ages are more likely to result in some delayed childbearing shifting to older ages. In short, even if the total fertility rate was to decline by about ten percent during each of the five year periods this is assumed to happen during it is highly unlikely that it will occur evenly over the childbearing period.

Similarly, the migration assumptions made are grounded on a continuation of net loss, but at a declining rate through 2001 after which the rate of decline from migration is assumed to level off at a constant loss of 1,337 per quinquinia, or less than one half the assumed loss for the original five year period (1991/1996). Moreover, for each five year period it is assumed that the loss due to net emigration is constant from one age group to the next; again, a phenomena not likely to be achieved in the real world.

In short, the projections developed appear to assume that all changes that will be occurring in social and economic conditions in the country are going to have the same level (and only

one effect) of influence on all persons irregardless of age or stage in the life cycle. In considering the numbers produced this is important for us to bear in mind because change seldom, if ever, operates in this manner. That is, social and economic changes usually have different implications for persons who are at different stages of the life cycle. For example, improved economic conditions usually result in some persons who did not have a child during earlier periods of lesser economic conditions to decide to have the child latter during the childbearing period. Similarly, swings in economic conditions may lead some persons who were intending to migrate from the country to put this off and if it is put off long enough, they may decide not to leave all together.

POPULATION PROJECTIONS

Table 9.1 contains the total projected population and the separate sex components of the projected population through the year 2021. If the assumptions laid out above were to be attained the population of Dominica would be 77,508 by the time of the next census just after the turn of the Century. This would represent not merely a reversal of the decline in population experienced during the previous intercensal decade, but an increase of 6,324 over the number of persons enumerated in 1991. This number represents an increase of 8.9 percent. Over the next ten year period the population would increase to nearly 85,000 or by 7,481, an increase of 9.6 percent. By the end of the projection period the population would increase to 92,417 which represents an increase of nearly 30 percent over the 1991 population.

Table 9.1

Total Population 1981 and 1991 and Projections of the Total Population for Five Year Intervals 1991 - 2021

Population	1981	1991	1996	2001	2006	2011	2016	2021
Total	73,795	71,184	73,937	77,508	81,471	84,989	88,712	92,417
Male	36,754	35,471	36,944	38,758	40,734	42,469	44,277	46,037
Female	37,041	35,713	36,933	38,750	40,737	42,521	44,435	46,380

The assumptions employed produce no significant differences in the expected patterns of change in the male and female populations. The projected number of males and females by the time of the next Census is expected to be nearly equal (38,750), but following this the projections suggest that the female population will increase at a rate slightly higher than that for males. Over the entire period the number of females is projected to be no different from the number of males by more than just 343, and this difference is not attained until the last year for which projections were made. It is worth noting that this, in fact, represents a reversal of the trend which occurred during the 1980's when the female population declined by a larger number than the male population. The trend which emerged during the 1980's reflected the

emergence of a pattern where the net loss from emigration was greater for females than for males. The assumptions employed in the population projections do not reflect a continuation of this trend. The more rapid increase in the female population toward the end of the period results from a leveling and switching of this trend combined with a somewhat higher survival rate at the oldest ages.

Table 9.2 contains the five year age specific projections for the total population depicting the age composition at each date over the projection period. In many countries of the world the fastest growing age segment of the population is found among persons age 60 and over. The projected age structure suggests that this is not going to be the case in Dominica. The projections do clearly indicate that the age structure of the population is going to age continuously and substantially over the projection period. For example, in 1991 the median age of the population is estimated to have been 22.4, and the projections to the next census (2001) show it increasing to 24.5 prior to rising to nearly 31 years by the end of the projection period (2021).

Table 9.2

**Population Projections by Age for the Total
Population 1991 - 2021**

Age	1991	1996	2001	2006	2011	2016	2021
0 - 5	7,763	8,464	8,182	7,877	7,463	7,734	7,860
5 - 9	8,741	7,688	8,406	8,137	7,834	7,423	7,694
10 - 14	8,098	8,630	7,612	8,350	8,082	7,780	7,370
15 - 19	7,808	7,588	8,283	7,376	8,113	7,846	7,546
20 - 24	6,673	6,920	6,987	7,871	6,969	7,704	7,439
25 - 29	5,683	6,088	6,518	6,710	7,591	6,694	7,426
30 - 34	4,732	5,290	5,814	6,324	6,518	7,395	6,502
35 - 39	3,718	4,491	5,116	5,685	6,192	6,387	7,260
40 - 44	2,968	3,570	4,374	5,021	5,587	6,090	6,286
45 - 49	2,507	2,862	3,477	4,285	4,924	5,485	5,981
50 - 54	2,130	2,381	2,750	3,368	4,161	4,789	5,342
55 - 59	2,131	2,009	2,265	2,632	3,231	4,000	4,612
60 - 64	2,111	1,974	1,873	2,123	2,473	3,043	3,779
65 - 69	1,900	1,810	1,729	1,663	1,892	2,218	2,748
70 >	4,221	4,174	4,125	4,049	3,960	4,126	4,572
Md. Age	22.4	23.3	24.5	25.8	27.7	29.4	30.7

The aging of the population as measured by the median age, however, is not the result of radically high growth in the older population. Indeed, the proportion of the population which is elderly is projected to actually decreased through 2006 before it begins to increase slowly until the end of the projection period. Thus, by the end of the projection period, the percent of the population that will be elderly will not be substantially different than what it was in 1991 (11.6% vs. 12.0%). The major shifts in age composition, and those that account for the projected aging of population, thus, all involve slower growth in the population under the age of 15 as compared to rapid growth in the population in the number of persons in the working ages (15 - 59). For example, the population of children is projected to decline by nearly seven percent from 24,602 in 1991 to 22,924 by the end of the projection period.

The most rapid increase in population is projected to occur in the population 15 - 59. The projections indicate that this segment of the population is going to increase from 40,961 in 1991 to 58,394 by 2021 or by nearly 43 percent. If this would, in fact, come to fruition it would mean that 17,433 (or 94%) of the total projected increase in population (18,622) would be absorbed in the ages 15 - 59. Moreover, much of the projected growth which is to occur in the number of persons 15 - 59 is expected to be concentrated in the population 35 - 54. The number of persons in this age range is projected to increase by 13,546 over the number of persons in this age range in 1991, and this means that growth in the number of persons in this age range would account for 73 percent of the total increase in population between 1991 and 2021.

Persons in this age range (35 - 54) in 2021 were already born by 1991 and are the cohorts in Table 9.2 in the ages 5 - 9 through 20 - 24. As noted in Chapter two in 1991 these cohorts are at the ages where migration appears to peak and markedly influence cohort attrition. The only way that the projected growth in these ages has been attained is through the assumption that the net loss to these through migration will be attenuated throughout the projection period. As noted above, migration is the most difficult component of population change to project, and it does seem likely that the validity of this set of projections rests largely on the migration assumptions made by the Central Statistical Office.

The Central Statistical Office Printing Unit
Trinidad and Tobago