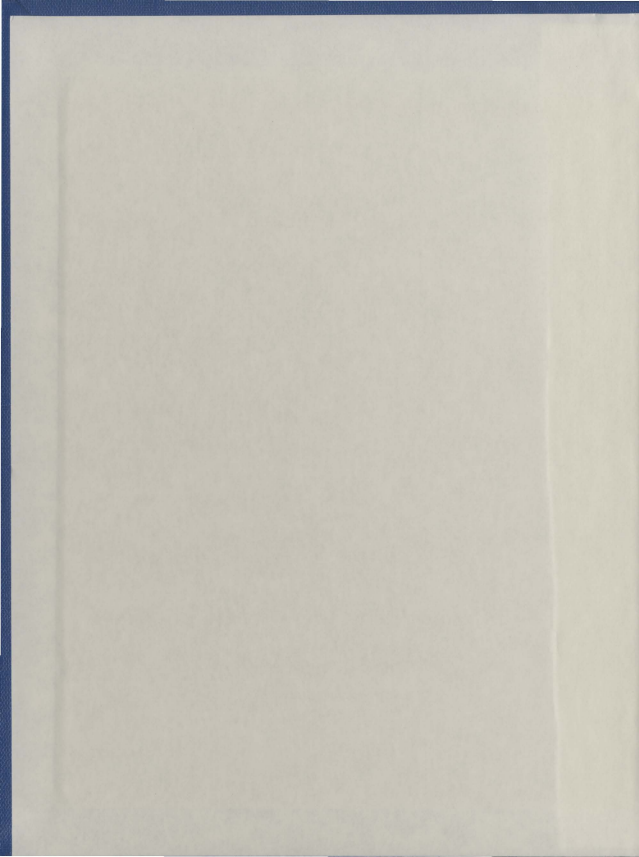


A STUDY OF EDUCATION AND ECONOMICS  
IN THE PROVINCE OF NEWFOUNDLAND AND  
LABRADOR SINCE CONFEDERATION (1949)

BEN-CHIEH LIU







A STUDY OF EDUCATION AND ECONOMICS  
IN THE PROVINCE OF NEWFOUNDLAND AND  
LABRADOR SINCE CONFEDERATION (1949)

by

Ben-chieh Liu, B.A. (Taiwan)

A THESIS

submitted in partial fulfilment of the requirements for  
the degree of  
MASTER OF ARTS

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

July 18, 1965



This thesis has been examined and approved by:

---

---

and

---

---

## ABSTRACT

In the study of economic growth emphasis is at present being placed on the development of human resources, in which development the role of education is featured prominently. This study is an attempt to ~~examine~~ some aspects of the role of education in the economic development of this province since 1949.

The study examines firstly the basic structure and the gradual diversification of Newfoundland's economy. It gives a detailed analysis of population dynamics by census division, the rapid growth in school age population and the population distribution in this province. The evolution of elementary and secondary education in Newfoundland is studied. The methods of financing education in the province are also investigated, while some criteria for educational investment have been discussed. Comparisons between Newfoundland and the rest of Canada intend to show the effects of education on economic growth in Newfoundland. These effects help to interpret the changes in the rate of unemployment, the structure of occupations, as well as labor incomes.

The most important findings of this thesis are:

1. Although the economic structure in Newfoundland is still predominately based on the exploitation of natural resources, diversification and industrialization have taken place.

ii. Despite the great achievement in economic development since Confederation the economic development in Newfoundland is retarded by a relatively high rate of unemployment, a comparatively poor infrastructure, unfavorably endowed natural resources and lack of skilled labor.

iii. Newfoundland has had the highest birth rate and the lowest death rate in Canada in almost every year since 1949; this has resulted in a high rate of population growth which has aggravated the problems of overpopulation and of unemployment. This has also required a very heavy government investment in education.

iv. Urbanization and centralization have taken place extensively, but a very unbalanced distribution of population in Newfoundland has caused difficulties in allocating social overhead capital and the effective use of the capital in some cases.

v. Newfoundland has had a comparatively higher rate of improvement in education than in Canada as a whole during the past fifteen years; however, Newfoundland still ranks last in almost every field of education when compared to the other provinces.

vi. The Provincial Government has been mainly responsible for the costs of education and has contributed a much higher percentage of the costs than any other provincial government

in Canada; nevertheless, the absolute amount spent on education per student in Newfoundland is still very low.

vii. Because Newfoundland has enjoyed a comparatively high rate of improvement in education since Confederation, it has benefited substantially as shown by the comparatively low rate of increase in unemployment, a more rapid absorption in the high earning occupations, and a faster rate of increase in per capita incomes as compared to Canada as a whole.

viii. The relationship between education and economic development is very close in Newfoundland and it is likely that the income gap between Newfoundland and the rest of Canada will be bridged as the educational difference between the two is eventually eliminated.

## TABLE OF CONTENTS

|                        |      |
|------------------------|------|
| ACKNOWLEDGEMENTS ..... | i    |
| LIST OF TABLES .....   | iii  |
| LIST OF CHARTS .....   | viii |

| CHAPTER  | PAGE |
|--|------|
| I. INTRODUCTION.....                                     | 1    |
| 1. The Motivation of the Study                           | 1    |
| 2. The Scope of the Study                                | 2    |
| 3. The Core of the Study                                 | 2    |
| 4. The Approach and Purpose of the Study                 | 3    |
| II. THE ECONOMY OF NEWFOUNDLAND.....                     | 4    |
| 1. The Economic Background and Structure of Newfoundland | 4    |
| A. Resource Industries                                   |      |
| a. The Fisheries   |      |
| b. Forestry  |      |
| c. Mining  |      |
| B. Secondary Industry                                    |      |
| C. Construction  |      |
| D. Tertiary Industry                                     |      |
| 2. Some Economic Problems in Newfoundland                | 14   |
| A. Natural Resources                                     |      |
| B. Capital Formation                                     |      |
| C. Isolated Location and Trade Orientation               |      |
| D. Human Resources                                       |      |

# TABLE OF CONTENTS

| CHAPTER |  | PAGE |
|---------|--|------|
| III.    | POPULATION DYNAMICS OF NEWFOUNDLAND.....   | 35   |
|         | 1. Population Growth in Newfoundland   | 35   |
|         | A. Natural Increase  |      |
|         | B. Population Migration  |      |
|         | C. The Perspective of Population Growth  |      |
|         | 2. Population Distribution in Newfoundland   | 48   |
|         | A. Distribution by Census Division   |      |
|         | a. Distribution in 1951 and 1961 and Population Density  |      |
|         | b. Changes in the Percentage Distribution Among Ten Divisions and the Urbanization in Newfoundland |      |
|         | B. Distribution by Religious Denomination  |      |
|         | C. Distribution by Age Group   |      |
| -IV.    | THE EDUCATION OF NEWFOUNDLAND.....   | 71   |
|         | 1. The State-Denomination Education System   | 71   |
|         | 2. The School Population   | 75   |
|         | A. The Growth and Distribution of Student Population   |      |
|         | a. General Description   |      |
|         | b. Growth and Distribution by Sex and Age Groups   |      |
|         | c. Growth and Distribution by Type of School Attended  |      |
|         | B. Student Attendance  |      |
|         | C. Rate of Retention and Drop out  |      |
|         | 3. The Study of Teachers   | 101  |
|         | 4. The Study of Schools  | 113  |



# TABLE OF CONTENTS

## CHAPTER

PAGE

### V. EDUCATIONAL INVESTMENT IN NEWFOUNDLAND..... 126

1. The Sources and Trends of Educational Investment 127
  - \* A. Provincial Government
    - a. Government Revenue
    - b. Government Expenditure
  - B. Local Support
2. Allocation of Educational Investment 138
  - A. Government Allocation in General
  - B. Government Allocation on Elementary and Secondary Education
  - C. School Board's Allocation of Investment Funds on Elementary and Secondary Education
3. The Analyses of Educational Expenditure in Newfoundland 149
  - A. Educational Criteria
  - B. Benefit and Cost Analysis
  - C. The Efficiency and Planning of Educational Investment

### → + VI. SOME CONTRIBUTIONS OF EDUCATION TO THE ECONOMY OF NEWFOUNDLAND..... 165

1. Education and Changes in the Rate of Unemployment 167
2. Education and Changes in the Occupational Composition of the Labor Force 177
3. Education and Changes in Labor Income 188
  - A. The Comparison of the Rates of Illiteracy and Incomes
  - B. The Comparison of the Rates of Increase in Incomes and Educational Standards

## TABLE OF CONTENTS

| CHAPTER |  | PAGE |
|---------|--|------|
|         | C. The Comparison of the Educational<br>Levels of the Populations and<br>their Incomes in 1961 |      |
| VII     | SUMMARY AND CONCLUSION.....  | 204  |
|         | BIBLIOGRAPHY.....  | 208  |

## ACKNOWLEDGEMENTS

I wish to thank the World University Service of Canada for a scholarship awarded to me in 1963, and for arranging my advanced studies at the Memorial University of Newfoundland. I also thank Memorial University for financial support in the form of Graduate Fellowships, 1963-65. I am greatly indebted to my Supervisor, Dr. N. Hurwitz, Head of the Department of Economics, for his patient and constant supervision, as well as for his invaluable advice. I also owe a particular debt to Dr. P.J. Warren, Assistant Professor of Education at Memorial University and Chairman of the Royal Commission on Education of the Government of Newfoundland and Labrador, for his painstaking and valuable suggestions. Help was readily offered by Mr. B.D. Macpherson of the Department of Mathematics on statistical tabulation and graphical presentation.

I gratefully acknowledge the encouragement and assistance of Dr. P. Copes, former Head of the Department of Economics of Memorial University and now Head of the Department of Economics and Commerce at Simon Fraser University; Professor F. Welch of the University of Chicago; Professor J.C. Mills; Mr. T.F. Wise, Economist of the Federal Government of Canada and formerly Professor of Economics at Memorial University; Mr. I. MacAllister, Provincial Economist; Mr. P.J. Hanley, Deputy Minister and Mr. F. Kirby, Professional Assistant to Deputy Minister, Department of Education, Government of Newfoundland and Labrador.

I highly appreciate the ready cooperation of the staff of the Library of the Memorial University, the various officials of the Department of Education, Public Finance, and Economic Development of the Government of Newfoundland and Labrador, and those of the St. John's Regional Office of the Dominion Bureau of Statistics. I cannot possibly attempt to list the names of all those who have helped me in this study. To them I extend my sincere gratitude. Although I have drawn heavily on the knowledge of others, I take the entire responsibility for the views expressed in this thesis.

Ben-chieh Liu

## LIST OF TABLES

| TABLE |  | PAGE |
|-------|--|------|
| 2-1   | Net Value of Commodity Production by Industries and Total Personal Income from Economic Pursuits in Newfoundland ..            | 5    |
| 2-2   | Labor Force of Newfoundland by Industry ...  | 6    |
| 2-3   | Income from Economic Pursuits and Transfer Payments .....  | 16   |
| 2-4   | A Comparison of Utilities in Newfoundland and Canada .....   | 18   |
| 2-5   | Labor Force, Unemployment and Rate of Participation in Newfoundland and Canada, for Population 14 years of age and over .....  | 24   |
| 3-1   | Rate of Population Growth, Birth and Death Rate in Newfoundland, Natural Increase of Population for Newfoundland and Canada .. | 37   |
| 3-2   | Birth and Death Rate, and Natural Increase in Canada by Province in Selected Years .   | 39   |
| 3-3   | Population Growth in Newfoundland by Census Division .....   | 44   |
| 3-4   | Population by Census Division, Total and 0-19 Years of Age, for Newfoundland .....   | 46   |
| 3-5   | Population Distribution in Newfoundland, Rural-Farm, Rural-urban and Urban Areas by Census Division .....                      | 51   |
| 3-6   | Population Density, by Census Division in Newfoundland and in Total for Canada ....  | 54   |
| 3-7   | Population Distribution in Newfoundland by Census Division and by Selected Religious Denomination .....                        | 60   |
| 3-8   | Percentage Distribution of Population in Newfoundland by Census Division and by Selected Religious Denomination .....          | 62   |

## LIST OF TABLES

| TABLE |   | PAGE |
|-------|---|------|
| 3-9   | Population Distribution by Age Group for Newfoundland in 1951, 1956 and 1961 and for Canada in 1961 .....           | 64   |
| 4-1   | Total Population, School Enrolment and Percentage Distribution by Educational Level and Sex, for Newfoundland ..... | 76   |
| 4-2   | School Age Population and School Enrolment in Newfoundland by Sex and by Age Group .                                | 79   |
| 4-3   | Elementary and Secondary Enrolment in Newfoundland by Type of Services .....  | 83   |
| 4-4   | Enrolment, Average Daily Attendance and Percentage Attendance in Newfoundland Schools .....                         | 88   |
| 4-5   | Average Daily Attendance in Newfoundland Schools by Type of Services .....  | 89   |
| 4-6   | Percentage of Pupil-Days Absence by Cause, for Type of Services in Newfoundland ....                                | 91   |
| 4-7   | Enrolment by Grade, 1949-50 to 1962-63 and the Retention Rate for Selected Years for Newfoundland Schools .....     | 93   |
| 4-8   | Retention Rates of Students in Newfoundland by Type of Services .....   | 96   |
| 4-9   | Percentage of Pupils who left School and Entered Various Occupations, by Grade and Sex, for Newfoundland .....      | 98   |
| 4-10  | Qualifications of Teachers and Student-Teacher Ratio in Newfoundland .....  | 104  |
| 4-11  | Teachers Classified According to Total Professional Experience and Median Tenure in Newfoundland .....              | 107  |
| 4-12  | Teacher's Classifications and the Student-Teacher Ratio by Type of Services for Newfoundland .....                  | 109  |

## LIST OF TABLES

| TABLE |  | PAGE |
|-------|--|------|
| 4-13  | All Teachers in Newfoundland Classified According to Total Professional Experience by Type of Services .....   | 112  |
| 4-14  | Number of Schools, Classrooms and the Student-Classroom Ratio in Newfoundland..  | 114  |
| 4-15  | Number of Schools and Schools Doing work Above Grade VIII, and Number of Classrooms and Students per Classroom by Type of Services in Newfoundland .....                                   | 117  |
| 4-16  | Schools Classified by Number of Classrooms and by Type of Services in Newfoundland .   | 119  |
| 4-17  | Estimated Schools, Classrooms, Populations 5-19 Years of Age and Ratios of Population 5-19 Years of Age to Every Classroom, by Census Division and by Type of Services, Newfoundland ..... | 121  |
| 5-1   | Government Current Account Revenue of Newfoundland by Source, 1951-52, 1956-57 and 1962-63 .....   | 129  |
| 5-2   | Government Revenue and Expenditure of Newfoundland by Current and Capital Account .....  | 130  |
| 5-3   | Provincial Government Expenditure in Newfoundland, by Major Area .....   | 132  |
| 5-4   | Local Sources of Expenditure on Elementary and Secondary Education in Newfoundland .   | 137  |
| 5-5   | Current and Capital Government Expenditures on Education for Newfoundland in Selected Years by Area .....  | 139  |
| 5-6   | Government Expenditure on Education by Current and Capital Account in Current and Constant Dollar for Newfoundland.....  | 140  |
| 5-7   | Government Expenditure on Elementary and Secondary Education for Newfoundland ....   | 143  |

## LIST OF TABLES

| TABLE       |  | PAGE |
|-------------|--|------|
| 5-8         | Major Areas of Government Expenditure on Elementary and Secondary Education for Newfoundland .....   | 147  |
| 5-9         | Government Expenditure per Student and per Capita Personal Disposable Income for Newfoundland .....  | 155  |
| 6-1         | Number and Rate of Unemployment in Newfoundland and Canada by Occupations ..   | 168  |
| 6-2         | Educational Classifications of the Labor Force in Newfoundland and Canada .....  | 171  |
| 6-3         | Number and Rate of Unemployment in Newfoundland and Canada by Age and Schooling of Labor Force, 1961 .....                                     | 174  |
| 6-4         | Composition of the Labor Force in Newfoundland, by Occupations, Sex and Schooling in 1951 and 1961, and by Earnings in 1961                    | 180  |
| 6-5         | The Labor Force in Newfoundland, by Selected Occupations and by Educational Levels .....   | 184  |
| 6-6         | Growth in Educational Levels, Populations and Personal Incomes in Newfoundland and Canada .....  | 191  |
| 6-7         | Number and Average Income for the Non-Farm Population, Fifteen Years of Age and Over, by Sex and Schooling, Newfoundland and Canada, 1961..... | 193  |
| Appendix A: |  |      |
| 1           | Net Value of Commodity Production in Newfoundland, by Industry .....   | 29   |
| 2           | Percentage Distribution of the Net Value of Commodity Production in Newfoundland, by Industry .....  | 30   |



## LIST OF TABLES

| TABLE       |  | PAGE      |
|-------------|--|-----------|
| 3           | Distribution of Personal Income in Newfoundland .....  | 31        |
| 4           | Employees Reported by Main Industries in Newfoundland .....  | 32        |
| 5           | Total Personal Income, Total Personal Disposable Income, and per Capita Personal Income in Newfoundland and Canada .....         | 33        |
| 6           | Per Capita Personal Income and Personal Disposable Income in Newfoundland and Canada in Constant Dollar of 1949 .....            | 34        |
| Appendix B: |  |           |
| 1           | Calculations of Population for Newfoundland in 1951, 1956 and 1961, and for Canada in 1961 .....                                 | <u>68</u> |
| 2           | Estimated Population in Newfoundland .....   | <u>69</u> |
| Appendix C: |  |           |
| 1           | Estimated School Enrolment in Newfoundland.  | 124       |
| 2           | Estimated Secondary School Enrolment in Newfoundland .....   | 125       |
| Appendix D: |  |           |
|             | A Measure of Extra Input-Output Ratio of Educational Investment .....  | 160       |
| D-1         | Total Number of Students in Newfoundland ..  | 163       |
| D-2         | Expenditures on Education in Newfoundland .  | 164       |
| Appendix E: |  |           |
|             | A Measure of Returns on Human Capital .....  | 200       |
| E-1         | The Labor Force in Newfoundland, by Sex and by Educational Level, 1951 and 1961, and Average Earnings of the Labor Force in 1961 | 203       |

## LIST OF CHARTS

| CHART |   | PAGE      |
|-------|---|-----------|
| 2-1   | Net Value of Commodity Production in Newfoundland .....   | 11        |
| 2-2   | Proportional Distribution of Newfoundland Labor Force in Selected Industries .....  | 13        |
| 2-3   | Rate of Unemployment in Newfoundland and Canada .....   | 26        |
| 2-4   | Per Capita Personal Disposable Income Newfoundland and Canada .....   | 28        |
| 3-1   | Birth and Death Rate -- Newfoundland and Canada .....   | 40        |
| 3-2   | Population Growth and Distribution in Newfoundland by Census Division .....   | <u>52</u> |
| 3-3   | Population Density and Urban Population Distribution in Newfoundland by Census Division, 1961 .....                                   | 56        |
| 3-4   | Percentage Distribution of Population in Newfoundland by Religious Denomination ..  | 61        |
| 3-5   | Population Structure in Newfoundland by Age Group .....   | 65        |
| 3-6   | Percentage Distribution of Population in Newfoundland and Canada by Age Group ....  | 66        |
| 4-1   | Total Population and School Enrolment in Newfoundland .....   | 77        |
| 4-2   | Percentage Distribution of School Enrolment in Newfoundland by Type of Services .....   | 84        |
| 4-3   | Retention Rates in Newfoundland Schools 1949-50 to 1958-59 and 1954-55 to 1963-64 .....   | 94        |
| 4-4   | Occupational Distribution of the Students who left School in 1957-58 for Employment, by Educational Level and Sex, Newfoundland ..... | 99        |

## LIST OF CHARTS

| CHART |   | PAGE |
|-------|---|------|
| 4-5   | Qualifications of Teachers in Newfoundland.   | 105  |
| 4-6   | Student-teacher Ratios in Newfoundland by<br>Type of Services .....   | 110  |
| 4-7   | Number of Schools, Classrooms and the<br>Student Classroom Ratios in Newfoundland   | 115  |
| 4-8   | Percentage Distribution of Classrooms in<br>Newfoundland by Type of Services .....  | 118  |
| 4-9   | Population 5-19 Years of Age and the Ratio<br>of Population 5-19 Years of Age to Every<br>Classroom in Newfoundland by Census<br>Division, 1964 ..... | 123  |
| 5-1   | Proportional Expenditures of the Newfound-<br>land Government, by Major Area .....  | 133  |
| 5-2   | Government Expenditure on Education by<br>Current and Capital Account for Newfound-<br>land .....   | 141  |
| 5-3   | Expenditures on Elementary and Secondary<br>Education for Newfoundland .....  | 144  |
| 5-4   | Major Areas of Government Expenditure on<br>Elementary and Secondary Education .....  | 148  |
| 5-5   | Indexes of Government Expenditure per<br>Student and of per Capita Personal<br>Disposable Income, in 1949 dollar<br>Newfoundland .....                | 156  |
| 6-1   | Percentage Distribution of Labor Force<br>in Newfoundland and Canada by Educational<br>Level .....  | 172  |
| 6-2   | Percentage Distribution of Unemployment in<br>Newfoundland and Canada by Educational<br>Levels .....  | 175  |

## LIST OF CHARTS

| CHART |  | PAGE |
|-------|--|------|
| 6-3   | Labor Force with Secondary Education and Above and Average Earnings in Newfoundland, by Sex and Selected Occupations, 1961 | 181  |
| 6-4   | Percentage Distribution of the Labor Force in Newfoundland by Educational Level and by Selected Occupations .....          | 185  |
| 6-5   | Average Income for the Non-farm Population 15 years of Age and Over, by Sex and Schooling Newfoundland and Canada, 1961... | 194  |
|       | Appendix C:  |      |
| A     | Government of Newfoundland -- Department of Education .....  | 74   |

## CHAPTER I

### INTRODUCTION

#### 1. The Motivation of The Study

The emphasis on the role of education in the growth and progress of an economy has been stressed for a long time. Education accelerates the accumulation of human capital which is of importance in achieving the industrialization necessary for economic development and for increasing the national income per capita. It is a truism that the development of education is similar to the building of a pyramid: the deeper and wider the base, the taller and larger the building. Good elementary and secondary educational programs are the foundations for vocational and university education; together they enhance human progress, materially and spiritually.

The elementary and secondary education along denominational lines in Newfoundland and Labrador<sup>1</sup> is different from that in any other province of Canada. The economy of the province also differs greatly from that of the rest of Canada. Newfoundland has the lowest per capita income in Canada: the low educational level of the people has been partly the result of its poor economic condition, which in turn has prevented rapid growth in education. The relationship between

---

1. Although the official name of this Province is Newfoundland and Labrador, the name of Newfoundland only will be used throughout this study when referring to the province.

economic progress and educational development is the principal object of this research.

## 2. The Scope of The Study

Confederation with Canada in 1949 was a turning point in the history of Newfoundland. This union was the beginning of an unprecedented economic upsurge in the province. Since Confederation, Newfoundland, helped by the large financial aid of the Federal Government as well as through its own efforts, has substantially improved its education and economy. Previous to 1949 there had been no comparable improvement. Thus the study will be concentrated on the post 1949 period.

## 3. The Core of The Study

This study deals firstly with the basic structure of Newfoundland's economy, and the factors which have retarded and are still impeding the economic development of Newfoundland. The most important factor in any study of education and economic development is obviously the population; this is analysed in detail in Chapter III. Chapter IV studies the development of the elementary and secondary education, with particular emphasis on the school population and educational facilities. The financing of education is described in Chapter V. Chapter VI purports to show the function of education in the province's economic development.



#### 4. The Approach and Purpose of The Study

Statistical data and other information from published official sources are widely used in the study. These were obtained from the Dominion Bureau of Statistics; the Department of Public Finance of the Federal Government; and the Departments of Education, Public Finance, and Economic Development of the Provincial Government. People with specialized knowledge were also consulted.

In certain sections the study compares Newfoundland with the rest of Canada, and emphasizes the changes which have taken place since Confederation. It is hoped that the study will be of some use in helping to plan an efficient educational service which may speedily accelerate economic development in the Province.

## CHAPTER II

## THE ECONOMY OF NEWFOUNDLAND

1. The Economic Background and Structure of Newfoundland

The Province of Newfoundland and Labrador is an area comprising 147,994 square miles on the East Coast of Canada. Newfoundland is an island located in the Northern Atlantic Ocean, while Labrador is part of the Canadian mainland. The island has for centuries been a link between the two greatest industrial centers in the world, North America and West Europe; yet it is not itself highly industrialized.

The major natural resources of the province are the fisheries, forestry, mining and hydro-electric potential. The economic growth of Newfoundland seemingly will depend on the continued development of those resources. Tables 2-1 and 2-2, which are in terms of production and employment, outline the structure and growth of Newfoundland's economy over the last two decades.

## A. Resource Industries

## a. The Fisheries

Until the end of the nineteenth century, the economic life of the people of Newfoundland had been closely connected with the fishing industries. Since then the predominant place of the fisheries has diminished and Newfoundland's economy has become more diversified. In 1951 the fishing industries produced 14.1 percent of total net value of commodity production



TABLE 2-1

NET VALUE OF COMMODITY PRODUCTION BY INDUSTRIES AND TOTAL  
PERSONAL INCOME FROM ECONOMIC PURSUITS IN NEWFOUNDLAND1951 AND 1961  
(in thousands of dollars)

|   | 1951    |                     | 1961    |                     | 1961 as<br>a per-<br>centage<br>of 1951 |
|---|---------|---------------------|---------|---------------------|---|
|   | Amount  | Percent<br>of total | Amount  | Percent<br>of total |   |
| Net Value of Total<br>Commodity Production      | 145,850 | 100.0               | 261,637 | 100.0               | 179.4                                   |
| 1. Resource Industries                          | 107,952 | 74.1                | 137,181 | 52.5                | 127.1                                   |
| a. Forest industries                            | 62,126  | 42.6                | 60,316  | 23.2                | 99.7                                    |
| Logging and forest<br>services                  | 26,597  | 18.2                | 20,265  | 7.7                 | 76.2                                    |
| Sawmilling                                      | 1,354   | 0.9                 | 826     | 0.3                 | 61.0                                    |
| Pulp and paper<br>production                    | 34,175  | 23.5                | 39,225  | 15.1                | 114.8                                   |
| b. Fishing industries                           | 20,531  | 14.1                | 23,066  | 8.8                 | 112.3                                   |
| Fishing   | 13,500  | 9.3                 | 14,922  | 5.7                 | 110.5                                   |
| Fish processing                                 | 7,031   | 4.8                 | 8,144   | 3.1                 | 115.8                                   |
| c. Trapping                                     | -       | -                   | 46      | -                   | -                                       |
| d. Mining                                       | 25,295  | 17.4                | 53,753  | 20.5 ↑              | 212.5                                   |
| 2. Secondary Manufacturing                      | 10,130  | 6.9                 | 21,815  | 8.3 ↑               | 215.4                                   |
| 3. Other Commodity Production                   | 27,768  | 19.0                | 102,641 | 39.2 ↑              | 369.6                                   |
| a. Electric power                               | 2,668   | 1.8                 | 10,725  | 4.1 ↑               | 402.0                                   |
| b. Construction                                 | 25,100  | 17.2                | 91,916  | 35.1                | 366.2                                   |
| Total Personal Income from<br>Economic Pursuits | 181,000 |                     | 354,000 |                     | 195.6                                   |

- Sources: 1. Dominion Bureau of Statistics, Survey of Production, 1926-57 and 1961.
2. Dominion Bureau of Statistics, National Accounts, Income and Expenditure, 1956 and 1961.
3. See Appendix A, Tables 1 and 2.

TABLE 2-2  
LABOR FORCE OF NEWFOUNDLAND BY INDUSTRY  
1951 AND 1961

|   | 1951    |                     | 1961                |                     | 1961 as<br>a per-<br>centage<br>of 1951 |
|---|---------|---------------------|---------------------|---------------------|---|
|   | Number  | Percent<br>of total | Number              | Percent<br>of total |   |
| Total Industries                                | 106,540 | 100.0               | 112,310             | 100.0               | 105.4                                   |
| 1. Resource Industries                          | 45,662  | 42.9                | 29,969              | 26.7                | 65.6                                    |
| a. Agriculture                                  | 3,525   | 3.3                 | 1,641               | 1.5                 | 46.6                                    |
| b. Forest industries                            | 16,728  | 15.7                | 11,701              | 10.4                | 69.9                                    |
| Logging and forest<br>services                  | 10,534  | 9.9                 | 6,891               | 6.1                 | 65.4                                    |
| Sawmilling                                      | 1,625   | 1.5                 | 1,311               | 1.2                 | 80.5                                    |
| Pulp and paper                                  | 4,569   | 4.3                 | 3,499               | 3.1                 | 76.6                                    |
| c. Fishing industries                           | 21,391  | 20.1                | 12,334 <sup>a</sup> | 11.0                | 53.1                                    |
| Fishing   | 18,148  | 17.1                | 8,389               | 7.5                 | 46.2                                    |
| Fish processing                                 | 3,243   | 3.0                 | 3,945               | 3.5                 | 121.6                                   |
| d. Trapping                                     | 313     | 0.3                 | -                   | -                   | -                                       |
| e. Mineral industries                           | 3,706   | 3.5                 | 4,293               | 3.8                 | 115.8                                   |
| 2. Secondary Manufacturing                      | 5,143   | 4.8                 | 3,203               | 2.8                 | 63.4                                    |
| 3. Other Commodity Production                   | 7,933   | 7.4                 | 9,735               | 8.7                 | 122.7                                   |
| a. Electricity, gas and<br>water supply         | 642     | 0.6                 | 210                 | 0.2                 | 32.7                                    |
| b. Construction                                 | 7,291   | 6.8                 | 9,525               | 8.5                 | 130.6                                   |
| 4. Tertiary Industries                          | 46,441  | 43.6                | 65,915              | 58.7                | 141.9                                   |
| a. Transportation, storage<br>and communication | 10,018  | 9.4                 | 15,213              | 13.6                | 151.9                                   |
| b. Wholesale Trade                              | 3,835   | 3.6                 | 4,287               | 3.8                 | 111.8                                   |
| c. Retail trade                                 | 10,416  | 9.8                 | 14,641              | 13.0                | 140.6                                   |
| d. Finance, insurance and<br>real estate        | 610     | 0.6                 | 1,432               | 1.3                 | 234.8                                   |
| e. Community services                           | 6,515   | 6.1                 | 9,776               | 8.7                 | 150.0                                   |
| f. Government services                          | 9,483   | 8.9                 | 12,579              | 11.2                | 132.6                                   |
| g. Commercial services                          | 5,564   | 5.2                 | 7,987               | 7.1                 | 143.5                                   |
| 5. Not stated                                   | 1,361   | 1.3                 | 3,488               | 3.1                 | 256.3                                   |

Note: <sup>a</sup> This figure includes people engaged in trapping. However, according to the data given by the Federal Department of Fisheries and other Dominion Bureau of Statistics information, this figure should be 22,000.

Source: 1. Calculated from Dominion Bureau of Statistics data, Census of Canada, 1951 and 1961.

in Newfoundland. In 1961 this percentage shrank to 8.8 percent. The gradual decline in the net value of commodity production of the fishing industries is due largely to the outdated technology adopted by Newfoundlanders which does not enable them to compete with others who possess more modern techniques. Thus Newfoundland's fishing industries have suffered, both in quantity of landing and in processing efficiency, because they are not highly mechanized to exploit this "common property" resource.

The fishing industries, however, still employ a great proportion of the total labor force. In 1951 and 1961 employees in the fisheries comprised 20.1 percent and 11 percent of the labor force respectively. According to the information of the Federal Department of Fisheries, the number of people engaged in the fishing industries in 1961 was 22,000, which was approximately 10,000 more than the Canadian Census figure given in Table 2-2. It is said that fishermen in the province did not report their occupation adequately in the Census investigation in 1961. However, this large labor force produced comparatively low percentages of the net value of commodity production (see Table 2-1). This indicates the inefficiency of the industries, as well as the large reservoir of "disguised unemployment" within the fisheries, especially the inshore fishery.

#### b. Forestry

The forest industries assumed greater importance in

the Newfoundland economy with the establishment of two pulp and paper mills in the early part of this century. The Anglo-Newfoundland Development Company Limited began production at Grand Falls in 1909, and the Bowater's Newfoundland Pulp and Paper Mills Limited commenced operation at Corner Brook in 1925. In 1951 the two mills accounted for about one-fourth of the net value of commodity production; and forest industries accounted for 42.6 percent (see Table 2-1). Of the 15.7 percent of the labor force working in the forest industries in 1951, only 4.3 percent or 4,600 people were working in the two mills (see Table 2-2). A decade later, in 1961, the forest industries could not hold first place in terms of net value of commodity production, because output in the two mills increased only slightly. Also, sawmilling and logging production declined, while output of some other industries, especially construction, increased rapidly. In that year forest industries contributed 23.2 percent of the net value produced by the province, while employing 10.4 percent of total labor force.

#### c. Mining

Among resource industries only mining has raised steadily its relative position during the past decade. Its percentage of the total net value produced in 1961 amounted to 20.5 percent as against 17.4 percent ten years earlier (see Table 2-1). This may be attributed to foreign investment,

rate of expansion has been partly due to Confederation, because Newfoundland has given up its independent authority to impose duties on import goods, which have taken over most of the markets in Newfoundland. A dozen or more of manufacturing firms in Newfoundland were forced to close immediately following Confederation;<sup>2</sup> and a noteworthy result has been the withdrawal of close to 2,000 people from secondary enterprises between 1951 and 1961 (see Table 2-2). Furthermore, the meagre supply of local raw materials is another disadvantage.

#### C. Construction

The construction industry has expanded rapidly since Confederation. Construction of roads, buildings and other public utilities has been mainly financed by the Federal or Provincial Government. This has created social capital in Newfoundland as well as many employment opportunities which have generated a great deal of labor income. In 1951 the construction industry ranked third after forestry and mining in net value of production by contributing 17.2 percent. By 1961 the construction industry accounted for 35.1 percent of the net value of commodity production; thereby becoming the most important single industry in Newfoundland (see Table 2-1). Despite its extraordinary increase in production, there has not been a corresponding percentage increase in the labor for

---

2. P. Copes, St. John's and Newfoundland, An Economic Survey, The Newfoundland Board of Trade, 1961, p. 110.

especially in Labrador where the mining industry has been absorbing an unprecedented amount of foreign capital. Approximately \$250 million were provided for financing the Wabush Mines Project in 1962.<sup>1</sup> The prosperity of the mining industries in Labrador has not only brought about industrial momentum, but has also spurred employment in Newfoundland even though mining exploitation is capital intensive and therefore does not use a great proportion of the potential labor force. It used 3.5 percent and 3.8 percent of the total labor force in 1951 and 1961 respectively (see Table 2-2). The mining industry encouraged inter alia the building of roads, the provision of water and power supplies, and the establishment of communities, which are considered "external economies" to other industries.

#### B. Secondary Industry

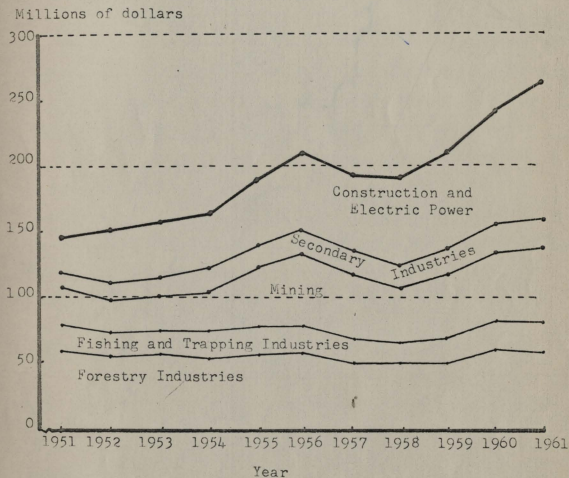
Besides pulp and paper and fish processing, only a few secondary enterprises are found in Newfoundland. The net value of these enterprises increased from 6.9 percent to 8.3 percent between 1951 and 1961 (see Table 2-1). Thus their development has been very slow, although they contributed nearly as much in 1961 to the net value of production of the province as did the fishing industries. The relatively slow

---

1. The Sunday Times, "Industrial Growth Spurs Employment in Nfld.," Newfoundland Supplement 1963, p. 23.



CHART 2-1  
 NET VALUE OF COMMODITY PRODUCTION IN NEWFOUNDLAND  
 1951 TO 1961



Source: Appendix A  
 Table 1

construction purposes. Between 1951 and 1961 employment in this industry rose from 6.8 percent to 8.5 percent of the total labor force. A relatively high productivity of labor in this industry has therefore been achieved.

#### D. Tertiary Industry

With the development of an economy, service industries naturally become important. This is clearly shown by Table 2-2. In 1951 service industries in Newfoundland, including transportation and communication, trade and finance, government services and other services, together employed 43.6 percent of the total labor force. In 1961 workers in these industries constituted 58.7 percent of the total labor force. Transportation and trade played a significant role in the distribution of the products in the developing economy.

It is believed that the tourist enterprise in Newfoundland is one of the potential tertiary industries which can be significantly developed, because it does not entail heavy fixed costs, a highly advanced technology nor a willingness to assume great risks. The same applies to the foreign fleet services such as repairs and supplies.

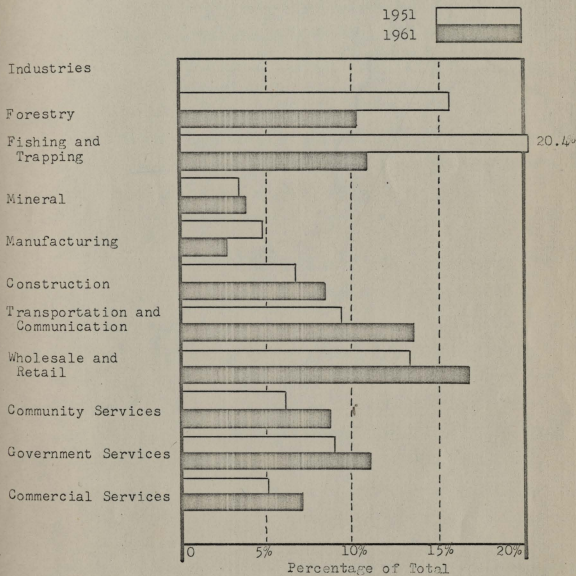
In summary, either from the point of view of commodity production or of labor force distribution, Newfoundland's economy is apparently becoming diversified, and decreasing its heavy reliance on natural resources exploitation.



CHART 2-2

# PROPORTIONAL DISTRIBUTION OF NEWFOUNDLAND LABOR FORCE IN SELECTED INDUSTRIES

1951 AND 1961



Source: Table 2-2

Secondary industries are developing slowly due to the absence of tariff protection for the infant industries, and lack of raw materials. By comparison, the construction and tertiary industries have been developing fairly rapidly during the past decades.

## 2. Some Economic Problems in Newfoundland

Newfoundland has basically the same economic problems of underdeveloped regions; these problems are discussed in some detail under various headings.

### A. Natural Resources

Besides the fisheries, forests, and metals, Newfoundland has few additional natural endowments. It is the only province in Canada without a significant agricultural industry; its agricultural production is not measured by the Dominion Bureau of Statistics (D.B.S.). The disability of Newfoundland's agriculture results from acid and rocky soils and unfavorable climate. The role which natural resources play in the economic development of any country is not as important as it was in the last century; but, agriculture is still deemed the fundamental industry which must be developed before any achievement in industrialization is possible. Professor Lewis asserted that:

"In unenlightened circles agriculture and industry are often considered as alternatives to each other. The truth is that industrialization for a home market can make little progress unless agriculture is

progressing vigorously at the same time, to provide both the market for industry, and industry's labor supply. If agriculture is stagnant, industry cannot grow."<sup>3</sup>

On the other hand, there are abundant unused natural resources in Newfoundland such as the Churchill Falls which can be exploited for the generating of electricity, and large untapped forests in Southern Labrador capable of producing forty million cords of pulpwood.<sup>4</sup>

#### B. Capital Formation

There has always been a lack of domestic capital in Newfoundland: there are few large enterprises which were established solely with domestic capital. Because personal incomes were at a very low level before Confederation, there was little net saving and hence little private investment. Newfoundland had little reliable data of per capita personal income previous to 1949. In that year Newfoundland's per capita personal income was \$472 or one half of that of the Canadian average (see Appendix A, Table 5). Its cost of living was usually 20-25 percent higher than that of the Canadian mainland.<sup>5</sup>

---

3. W.A. Lewis, Report on Industrialization and the Gold Coast, Government Printing Department, Accra, 1953, p.3.

4. F. Copes, op. cit., p. 82.

5. Ibid., p. 138.

Since Confederation a great deal of Federal transfer payments, equal to one-fifth of Newfoundland's domestic income earned in 1963, has flowed into the province every year. In addition, Newfoundland's total income from economic pursuits has trebled since Confederation. The following figures show these changes:

TABLE 2-3  
INCOME FROM ECONOMIC PURSUITS  
AND TRANSFER PAYMENTS

(in millions of dollars)

| Year | Total income<br>from economic<br>pursuits<br>(1) | Growth of<br>index no. | Federal<br>transfer<br>payments<br>(2) | Growth of<br>index no. | (2)<br>(1) |
|------|--|------------------------|--|------------------------|------------|
| 1949 | 142  | 100.0                  | 19                                     | 100.0                  | 0.13       |
| 1956 | 261  | 183.8                  | 46                                     | 242.1                  | 0.18       |
| 1963 | 414  | 291.5                  | 85                                     | 447.4                  | 0.21       |

Source: Appendix A, Table 3.

However, these increased incomes have not led to substantial savings and investments by individual earners. An unparalleled natural growth of population in Newfoundland as compared to other provinces of Canada has offset considerably the increased incomes; and the higher costs of living in Newfoundland have discounted the increased incomes as well.

Therefore, real income per capita in Newfoundland has lagged much behind money incomes. It has increased only 49 percent between 1949 and 1963 (see Appendix A, Table 6), compared with the increase in money incomes as shown in Table 2-3. Besides, the income elasticity of demand for commodity among Newfoundlanders is relatively high, particularly for imported goods. For instance, the number of registered motor vehicles per thousand people was 34.3 in 1955 and it was 161.9 in 1961 (see Table 2-4), while the Canadian average only doubled during the period. This is due partly to the vital dependence of Newfoundland on trade with outside provinces and countries, and partly to some effects of demonstration on consumption. Owing to the high marginal propensity to consume coupled with the vulnerability of the Newfoundland export markets, private capital formation has been low compared with the average of Canada.

Since Confederation the Provincial Government of Newfoundland has been tremendously assisted with Federal Grants for investment in social capital. Of the total Provincial Government expenditures of \$104 million in 1964, 58 percent was provided by the Government of Canada.<sup>6</sup> with such huge financial assistance public capital formation accelerated

---

6. Government of Newfoundland and Labrador, Budget Speech, 1964, pp. 1 and 31.

TABLE 2-4  
A COMPARISON OF UTILITIES IN NEWFOUNDLAND AND CANADA  
1955 AND 1961

|   | Total  |           |        |           | Per thousand people |        |       |        |
|---|--------|-----------|--------|-----------|---------------------|--------|-------|--------|
|   | 1955   |           | 1961   |           | 1955                |        | 1961  |        |
|   | Nfld.  | Canada    | Nfld.  | Canada    | Nfld.               | Canada | Nfld. | Canada |
| Miles of Surfaced Road                                      | 2,270  | 200,090   | 4,275  | 291,303   | 5.6                 | 12.7   | 9.3   | 15.9   |
| Number of Registered Motor Vehicles                         | 13,981 | 2,290,628 | 74,119 | 5,774,810 | 34.4                | 145.9  | 161.9 | 316.6  |
| Number of Telephones  | 33,296 | 4,151,678 | 69,777 | 6,329,448 | 82.0                | 264.5  | 152.4 | 347.0  |
| Number of Hospital Beds                                     | 1,744  | 83,564    | 1,730  | 100,506   | 4.5                 | 5.3    | 3.8   | 5.6    |
| Electric Power Requirement <sup>a</sup><br>(1,000 kilowatt) | 207    | 12,536    | 294    | 18,972    | 0.5                 | 0.8    | 0.6   | 1.0    |
| Total Residential Building Construction<br>(\$1,000)        | 25,000 | 1,813,000 | 33,900 | 2,044,000 | 61.6                | 115.5  | 74.0  | 111.1  |
| Number of Teachers <sup>b</sup>                             | 2,865  | 101,951   | 4,505  | 174,964   | 31.0                | 36.5   | 33.3  | 39.8   |

Notes: a Figures represent the peak load of firms.

b For elementary and secondary schools, per 1,000 students.

Source: 1. Dominion Bureau of Statistics, Statistics of Transportation, Public Utilities, Hospital, Construction and Education, 1956 and 1962.

during the past fifteen years. The \$215 million spent on roads since 1949 is equivalent to nine times the total road expenditures in the fifteen years prior to 1949. Capital expenditure on education amounted to some \$100 million, and expenditure on public health was almost \$200 million which represented mainly the costs of buildings and the running of hospitals. Total expenditure on education since Confederation was seven times the total amount spent for the fifteen years prior to 1949. Similarly, public health expenditure was eight times as much.<sup>7</sup>

Despite the large amounts spent on social capital a great deal in this field has still to be done. The only trans-insular all-weather highway is not yet completed. Part of the south coast of the province has no roads. In 1955 the ratio of miles of surfaced roads per thousand people in Newfoundland was 5.6 and in Canada it was 12.7; in 1961 the corresponding figures were 9.3 and 15.9. In Newfoundland total residential construction was \$61,600 per thousand people in 1955 as compared with \$115,500 for Canada. In 1961 Newfoundland invested \$74,000 per thousand people in residential construction in comparison with \$111,000 for Canada (see Table 2-4).

Compared with the Canadian averages Newfoundland

---

7. Government of Newfoundland and Labrador, op. cit., pp. 14, 17 and 20.



lags far behind in the provision of public facilities and services. Between 1955 and 1961 the number of telephones per thousand people in Newfoundland increased from 82.0 to 152.4, while in Canada as a whole it rose from 264.5 to 347.0. Electric power requirements expanded from 500 kilowatts to 600 kilowatts in Newfoundland as against an increase from 800 kilowatts to 1,000 kilowatts for every thousand Canadians. During the same period the number of hospital beds in Canada increased from 5.3 to 5.6 per thousand people, while in Newfoundland it dropped from 4.5 to 3.8. The number of teachers per thousand students increased from 31.0 to 33.3 in Newfoundland, in contrast to the increase in the Canadian average of from 36.5 to 39.8 during this period (see Table 2-4).

Professor Rostow stated that:

"The point of substance is that the preparation of a viable base for a modern industrial structure requires that quite revolutionary changes be brought about in two non-industrial sectors: agriculture and social overhead capital, most notably in transport."<sup>8</sup>

In Newfoundland these deficiencies in social overhead capital and public services are a serious obstacle to economic development. They tend to raise the costs of production and distribution, hinder the development of human and natural resources, retard urbanization and labor mobility, block the entrance of new industries, and restrict the expansion of local

---

8. W.W. Rostow, The Stages of Economic Growth, Cambridge University Press, London, 1960, p. 25.

enterprises. All in all, they do not provide external economies nor do they create an "investment climate," because social capital, if it is sufficiently and properly allocated, generates investment opportunities in other industries.

In summary, Newfoundland is confronted with the urgent task of modernization. It desperately needs the necessary capital, both private and public, for expansion and sustained growth of its economy.

#### C. Isolated Location and Trade Orientation

Economically, Newfoundland is unfavorably located for regional development. Theoretically, a region is ideally located when it has good access to local and foreign raw materials and markets, which enable it to produce cheaply and market competitively. The isolation of Newfoundland from the industrial mainland results in heavy transportation costs. Again, Newfoundland has to rely heavily on imported consumer goods: 90 percent of food marketed in Newfoundland is produced elsewhere.<sup>9</sup> Besides, there is a limited demand for the primary products of Newfoundland, thereby limiting their expansion. Newfoundland exports over one half of its total production (by value), and more than 90 percent of its exports are accounted for by forestry, mining and fisheries.<sup>10</sup> All these

---

9. P. Copes, op. cit., p. 16.

10. Ibid., p. 97.

factors cause an unfavorable balance of trade with other regions and adversely affect the economic development of the province. Professor Myrdal points out in his famous "backwash effect" that:

"Economic development is a process of circular and cumulative causation which tends to award its favors to those who are already well endowed and even to thwart the efforts of those who happen to live in regions that are lagging behind."<sup>11</sup>

Migration, capital movements and trade are means through which the cumulative process of economic development evolves, but this cumulative process is likely to be accelerated in a developed region and slowed down in a backward one affected by those factors. "In general, if they have positive results for the former, their effects on the latter are negative."<sup>12</sup>

#### D. Human Resources

The quality of its population is vitally important for the economic development of Newfoundland. Economic development is considerably dependent on the attitude of the people, the creation of greater incomes and opportunities, the striving after better standards of living, and the effective application of capital and knowledge to production.

Miss Ward said, "It is by our ideas, we change the way we live, the way we organize society, the way we manipulate

---

11. Gunnar Myrdal, Economic Theory and Underdeveloped Regions, Gerald Duckworth and Company, Ltd., London, 1958, p. 27.

12. Ibid., p. 27.

material things."<sup>13</sup> It is averred that Newfoundland lags behind many of the Canadian provinces partly because the people have a different philosophy of life and different value concepts which are not contributing significantly to its economic development.<sup>14</sup> These are aggravated by the isolation of the many scattered settlements in Newfoundland. Also, the lack of entrepreneurs and of an efficient middle class appears to prevent rapid economic growth.<sup>15</sup>

Furthermore, structural and disguised unemployment have accentuated the problem of wastage of manpower, which in turn is intensified by seasonal unemployment. The numbers employed and the participation rate of the labor force in Newfoundland compare unfavorably with the Canadian average (see Table 2-5). In 1949 Newfoundland's population was 2.6 percent of that of Canada; but its labor force was only 2.2 percent of the total Canadian labor force. The latter represented Newfoundland's highest percentage between 1949 and 1964. In 1949, 9.6 percent of the total unemployed people in Canada were living in Newfoundland; in 1964 it was 7 percent. The rate of unemployment in Newfoundland is usually three times

---

13. Barbara Ward, The Rich Nations and The Poor Nations, W.W. Norton and Company, Inc., New York, 1962, p. 14.

14. Richard J. Needham, "The Happiest Canadians," in Macleans, October, 1964.

15. P. Copes, op. cit., pp. 47 and 55.

## LABOR FORCE, UNEMPLOYMENT AND RATE OF PARTICIPATION IN NEWFOUNDLAND AND CANADA, FOR

POPULATION 14 YEARS OF AGE AND OVER  
(In Thousands of People)  
1949 TO 1964

|                   | Population 14 years<br>of age and over<br>(1) |        | Labor Force<br>(2) |        | Persons<br>Unemployed <sup>a</sup><br>(3) |        | Rate of<br>Participation<br>(2) + (1) x 100 |        | Rate of<br>Unemployment<br>(3) + (2) x 100 |        | Population<br>in Nfld. as<br>a percentage<br>of Canada | Labor Force<br>in Nfld. as<br>a percentage<br>of Canada | Unemployment<br>in Nfld. as<br>a percentage<br>of Canada |
|-------------------|---|--------|--------------------|--------|---|--------|---|--------|--|--------|--|---|--|
|                   | Nfld.   | Canada | Nfld.              | Canada | Nfld.                                     | Canada | Nfld.                                       | Canada | Nfld.                                      | Canada |  |   |  |
| 1949              | 228   | 9,536  | 113                | 5,156  | 11  | 116    | 49.6  | 51.1   | 12.4                                       | 2.8    | 2.6  | 2.2   | 9.6  |
| 1950              | 227   | 9,581  | 99                 | 5,048  | 22  | 306    | 43.6  | 52.7   | 22.2                                       | 6.1    | 2.6  | 2.0   | 7.2  |
| 1951              | 226   | 9,671  | 97                 | 5,101  | 13  | 169    | 42.9  | 52.7   | 13.4                                       | 3.3    | 2.6  | 1.9   | 7.7  |
| 1952              | 230   | 9,870  | 97                 | 5,177  | 10  | 209    | 42.2  | 52.5   | 10.3                                       | 4.0    | 2.6  | 1.9   | 4.8  |
| 1953              | 235   | 10,088 | 92                 | 5,246  | 12  | 167    | 39.1  | 52.0   | 13.0                                       | 3.2    | 2.6  | 1.8   | 7.2  |
| 1954              | 241   | 10,316 | 87                 | 5,343  | 12  | 309    | 36.1  | 51.8   | 13.8                                       | 5.8    | 2.6  | 1.6   | 3.9  |
| 1955              | 246   | 10,531 | 93                 | 5,447  | 11  | 403    | 37.8  | 51.7   | 11.8                                       | 7.4    | 2.6  | 1.7   | 2.7  |
| 1956              | 250   | 10,731 | 96                 | 5,605  | 13  | 258    | 38.4  | 52.2   | 13.5                                       | 4.6    | 2.6  | 1.7   | 5.0  |
| 1957              | 256   | 10,987 | 101                | 5,805  | 13  | 308    | 39.5  | 52.8   | 12.9                                       | 5.3    | 2.6  | 1.7   | 4.2  |
| 1958              | 261   | 11,289 | 110                | 5,998  | 20  | 597    | 42.1  | 53.1   | 26.4                                       | 10.0   | 2.5  | 1.8   | 4.9  |
| 1959              | 267   | 11,495 | 108                | 6,077  | 34  | 554    | 40.5  | 52.9   | 31.5                                       | 9.1    | 2.5  | 1.8   | 6.1  |
| 1960              | 274   | 11,712 | 107                | 6,234  | 30  | 609    | 39.1  | 53.2   | 28.0                                       | 9.8    | 2.5  | 1.7   | 4.9  |
| 1961              | 281   | 11,942 | 113                | 6,353  | 35  | 705    | 40.2  | 53.2   | 31.0                                       | 11.1   | 2.5  | 1.8   | 5.0  |
| 1962              | 289   | 12,158 | 111                | 6,454  | 31  | 560    | 38.4  | 53.1   | 27.9                                       | 8.7    | 2.5  | 1.7   | 5.5  |
| 1963              | 299   | 12,388 | 133                | 6,512  | 33  | 549    | 44.5  | 52.6   | 24.8                                       | 8.4    | 2.5  | 2.0   | 6.0  |
| 1964              | 307   | 12,654 | 121                | 6,729  | 32  | 456    | 39.4  | 53.2   | 26.4                                       | 6.8    | 2.4  | 1.8   | 7.0  |
| Percentage change |   |        |                    |        |   |        |   |        |  |        |  |   |  |
| 1954/1949         | 109.6   | 112.5  | 85.0               | 108.7  | 92.9                                      | 176.7  |   |        |  |        |  |   |  |
| 1964/1949         | 134.6   | 132.7  | 107.1              | 130.5  | 228.6                                     | 312.3  |   |        |  |        |  |   |  |
| 1964/1956         | 122.8   | 117.9  | 126.0              | 120.1  | 246.2                                     | 176.7  |   |        |  |        |  |   |  |

Note: <sup>a</sup> Figures for 1949 are for the month of October, those for 1953, 1954, 1956 and 1957 are for the month of April. For the remaining years the figures pertain to the month of March. Unemployment almost reaches the peak in these months.

Source: 1. Dominion Bureau of Statistics, Monthly Reports of Labor Force.

that of the Canadian average. In March 1950 Newfoundland's rate of unemployment was 22.2 percent as compared with Canadian average of 6.1 percent; in March 1963 the provincial figure was 24.8 percent in contrast with the Canadian unemployment average of 8.4 percent. Again, in March 1964 the rate of unemployment in Newfoundland was 26.4 percent, that is, more than one out of every four workers were idle in that month (see Table 2-5). The actual situation was worse than these figures reveal because disguised unemployment had not been taken into account.

The loss of production from unemployment was intensified by a rapid decline in the rate of participation of the labor force since 1949. In 1949 the participation rate in Newfoundland was 49.6 percent of its labor force as compared with the Canadian figure of 54.1 percent. In 1964 the rate in Newfoundland dropped to 39.4 percent of its labor force while the Canadian rate was somewhat unchanged<sup>f</sup> (53.2 percent).

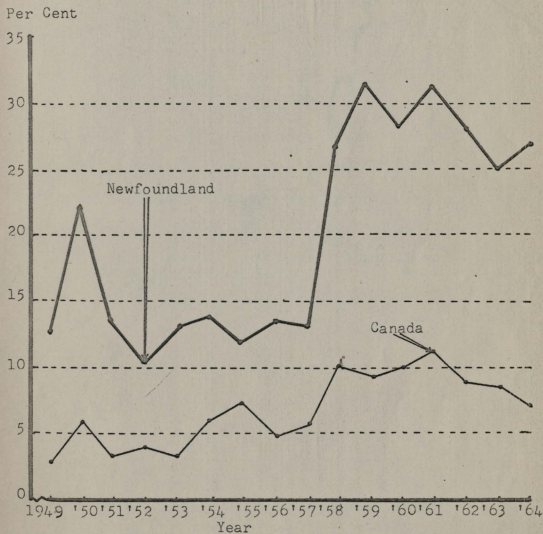
The establishment of labor-intensive industries will help to absorb relatively large numbers of unemployed. On the other hand, the removal of unnecessary workers from the fishing and logging industries will increase the provincial income provided they are absorbed in more productive industries. Thus, for the present, Newfoundland could possibly benefit by encouraging some of its idle people to migrate to the mainland

## CHART 2-3

## RATE OF UNEMPLOYMENT IN NEWFOUNDLAND AND CANADA

1949 TO 1964

(for the month of March)



Source: Table 2-5



where employment opportunities are greater. The problem, however, remains that large numbers of the unemployed workers in Newfoundland are ill-equipped for many of the mainland industries. For longrange planning, it is necessary to improve skills, mobility and adaptability of the Newfoundland labor force.

A healthy sustained growth in the Newfoundland economy will possibly be achieved when its human resources are effectively utilized, and properly allocated. For this, education and training are obviously essential and fruitful. These aspects have been emphasized by Professor Meier in that:

"An advance in knowledge and diffusion of new ideas and objectives are necessary to remove economic backwardness and instill the human abilities and motivations that are more favorable to economic achievement."<sup>16</sup>

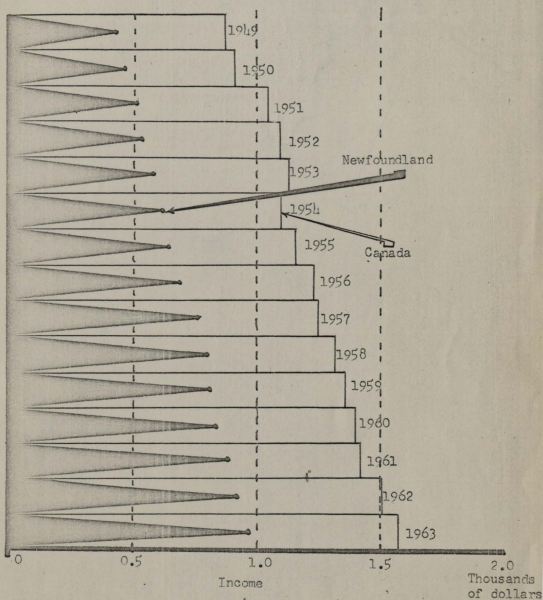
---

16. G.M. Meier (ed.), Leading Issues in Development Economics, Oxford University Press, New York, 1964, p. 268.

CHART 2-4

PER CAPITA PERSONAL DISPOSABLE INCOME  
NEWFOUNDLAND AND CANADA

1949 TO 1963



Source: Appendix A, Table 5.

TABLE 1

NET VALUE<sup>a</sup> OF COMMODITY PRODUCTION<sup>b</sup> IN NEWFOUNDLAND, BY INDUSTRY  
1949 TO 1961

(Net value in thousands of dollars)

|                               | 1949   | 1950   | 1951    | 1952    | 1953    | 1954    | 1955    | 1956    | 1957    | 1958    | 1959    | 1960    | 1961    |
|-------------------------------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Total:                        |        |        |         |         |         |         |         |         |         |         |         |         |         |
| All Commodity Production      | -      | -      | 145,850 | 153,331 | 159,197 | 165,435 | 190,914 | 212,599 | 193,132 | 190,231 | 210,403 | 242,670 | 261,637 |
| 1. Resource Industries        | -      | -      | 107,952 | 98,330  | 100,032 | 105,240 | 124,126 | 135,336 | 118,683 | 106,316 | 118,061 | 135,627 | 137,181 |
| Forest industries             | 59,887 | 47,610 | 62,126  | 59,819  | 61,944  | 51,831  | 58,053  | 60,462  | 53,134  | 51,411  | 51,315  | 63,439  | 60,316  |
| Logging and forest services   | 15,597 | 20,776 | 26,597  | 21,549  | 24,884  | 21,419  | 24,295  | 23,966  | 21,220  | 20,586  | 20,659  | 28,172  | 20,265  |
| Pulp and paper production     | 23,212 | 26,613 | 34,175  | 36,359  | 35,153  | 34,348  | 32,668  | 35,444  | 30,608  | 29,702  | 29,784  | 34,503  | 39,225  |
| Sawmilling                    | 1,078  | 1,221  | 1,354   | 1,911   | 1,507   | 1,064   | 1,090   | 1,052   | 1,306   | 1,123   | 872     | 764     | 826     |
| Fishing industries            | -      | -      | 20,531  | 17,895  | 17,109  | 21,399  | 23,400  | 23,384  | 19,938  | 17,915  | 20,509  | 22,989  | 23,066  |
| Fishing                       | -      | -      | 13,500  | 12,928  | 12,025  | 14,704  | 14,161  | 15,090  | 13,672  | 11,112  | 14,529  | 15,856  | 14,922  |
| Fish processing               | -      | -      | 7,031   | 4,967   | 5,084   | 6,695   | 9,239   | 8,294   | 6,266   | 6,803   | 6,980   | 7,133   | 8,144   |
| Trapping                      | -      | -      | -       | 141     | 62      | 131     | 49      | 158     | 49      | 135     | 52      | 80      | 46      |
| Mining                        | 17,437 | 20,124 | 25,295  | 20,515  | 20,917  | 26,879  | 42,625  | 51,332  | 45,562  | 36,855  | 46,185  | 49,119  | 53,753  |
| 2. Secondary Manufacturing    | 8,629  | 9,878  | 10,130  | 12,911  | 15,632  | 17,377  | 17,590  | 17,817  | 18,364  | 20,617  | 21,119  | 22,250  | 21,815  |
| 3. Other Commodity Production | 14,911 | 26,599 | 27,768  | 42,090  | 43,533  | 47,818  | 49,198  | 59,446  | 56,085  | 63,298  | 71,223  | 84,793  | 102,641 |
| Electric power <sup>c</sup>   | 1,911  | 2,199  | 2,668   | 3,390   | 3,933   | 4,618   | 6,698   | 8,446   | 8,805   | 9,120   | 9,521   | 10,338  | 10,725  |
| Construction                  | 13,000 | 24,400 | 25,100  | 38,700  | 39,600  | 43,200  | 42,500  | 51,000  | 47,280  | 54,178  | 61,702  | 74,455  | 91,916  |

Notes: a - Not available.

b Net value (or value added) is output sale value minus costs of materials, fuel, power and process supplies. Net value is nearly equal to the "return to the factors of production" (such as wages, salaries, interest, dividends and profits) plus capital depletion allowances. By using net value figures, duplication is substantially avoided in adding together the value of output for commodity producing industries in successive stages of production. However, payments made to service industries are still included in the net value of production of the commodity producing industries.

c Agriculture production is excluded.

d The value of electric power generated by industries for their own use (e.g., by pulp and paper mills) is not included in this item, but in that of the industry concerned.

Sources: 1. P. Copes, St. John's and Newfoundland, An Economic Survey, p. 155; table 1.3, for 1949-1957.  
2. Dominion Bureau of Statistics, Survey of Production 1926-57, for 1949-1957; Survey of Production 1961, for 1959-1961.

## APPENDIX A

TABLE 2

PERCENTAGE DISTRIBUTION OF THE NET VALUE OF COMMODITY PRODUCTION IN NEWFOUNDLAND, BY INDUSTRY

1951 TO 1961

|                                 | 1951  | 1952  | 1953            | 1954  | 1955  | 1956  | 1957  | 1958  | 1959  | 1960  | 1961  |
|---------------------------------|-------|-------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total: All Commodity Production | 100.0 | 100.0 | 100.0           | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1. Resource Industries          | 74.1  | 64.1  | 62.8            | 63.6  | 65.0  | 63.7  | 61.5  | 55.9  | 56.1  | 55.9  | 52.5  |
| Forest industries               | 42.6  | 39.0  | 38.9            | 34.4  | 30.4  | 28.5  | 27.5  | 27.0  | 24.4  | 26.2  | 23.2  |
| Logging and forest services     | 18.2  | 14.1  | 15.6            | 12.9  | 12.7  | 11.3  | 11.0  | 10.8  | 9.8   | 11.6  | 7.7   |
| Pulp and paper production       | 23.5  | 23.7  | 22.3            | 20.9  | 17.1  | 16.7  | 15.8  | 15.6  | 14.2  | 14.3  | 15.2  |
| Sawmilling                      | 0.9   | 1.2   | 1.0             | 0.6   | 0.6   | 0.5   | 0.7   | 0.6   | 0.4   | 0.3   | 0.3   |
| Fishing industries              | 14.1  | 11.6  | 10.7            | 12.9  | 12.2  | 11.0  | 10.3  | 9.4   | 9.7   | 9.4   | 8.8   |
| Fishing                         | 9.3   | 8.4   | 7.5             | 8.9   | 7.4   | 7.1   | 7.1   | 5.9   | 6.9   | 6.5   | 5.7   |
| Fish processing                 | 4.8   | 3.2   | 3.2             | 4.0   | 4.8   | 3.9   | 3.2   | 3.5   | 2.8   | 2.9   | 3.1   |
| Trapping                        | -     | 0.1   | .. <sup>a</sup> | 0.1   | ..    | 0.1   | ..    | 0.1   | ..    | ..    | ..    |
| Mining                          | 17.4  | 13.4  | 13.2            | 16.2  | 22.4  | 24.1  | 23.7  | 19.4  | 22.0  | 20.3  | 20.5  |
| 2. Secondary Manufacturing      | 6.9   | 8.4   | 9.8             | 10.5  | 9.2   | 8.3   | 9.5   | 10.8  | 10.0  | 9.2   | 8.3   |
| 3. Other Commodity Production   | 19.0  | 27.5  | 27.4            | 25.9  | 25.8  | 28.0  | 29.0  | 33.3  | 33.9  | 34.9  | 39.2  |
| Electric power                  | 1.8   | 2.2   | 2.5             | 2.8   | 3.5   | 4.0   | 4.6   | 4.8   | 4.5   | 4.3   | 4.1   |
| Construction                    | 17.2  | 25.2  | 24.9            | 23.1  | 22.3  | 24.0  | 24.4  | 28.5  | 29.4  | 30.6  | 35.1  |

Note: <sup>a</sup> .. less than 0.05%.

Source: 1. Calculated from Appendix A, Table 1.

## APPENDIX A

TABLE 3

DISTRIBUTION OF PERSONAL INCOME IN NEWFOUNDLAND<sup>a</sup>

1949 TO 1963

(in millions of dollars)

|      | Wages,<br>Salaries<br>and Supple-<br>mentary<br>Labor Income | Farm<br>Operator's<br>Income<br>from Farm<br>Production | Non-farm<br>Unincorpo-<br>rated<br>Business | Interest,<br>Dividends<br>and Net<br>Rental<br>Income of<br>Persons | Total<br>Income<br>from<br>Economic<br>Pursuits | Govern-<br>ment<br>Transfer<br>Payment <sup>b</sup> |
|------|--|---|---|---|---|---|
| 1949 | 106  | 2   | 26  | 8   | 142   | 19  |
| 1950 | 116  | 2   | 27  | 11  | 156   | 22  |
| 1951 | 138  | 2   | 30  | 11  | 181   | 27  |
| 1952 | 151  | 2   | 27  | 12  | 192   | 30  |
| 1953 | 170  | 2   | 26  | 13  | 211   | 35  |
| 1954 | 177  | 2   | 28  | 16  | 223   | 38  |
| 1955 | 188  | 2   | 29  | 16  | 235   | 41  |
| 1956 | 210  | 2   | 31  | 18  | 261   | 46  |
| 1957 | 227  | 2   | 34  | 17  | 280   | 55  |
| 1958 | 230  | 2   | 33  | 18  | 283   | 77  |
| 1959 | 247  | 2   | 35  | 19  | 303   | 77  |
| 1960 | 260  | 2   | 41  | 23  | 326   | 73  |
| 1961 | 286  | 2   | 41  | 25  | 354   | 78  |
| 1962 | 309  | 2   | 45  | 26  | 382   | 82  |
| 1963 | 336  | 2   | 47  | 29  | 414   | 85  |

Notes: <sup>a</sup> Only the main components of personal income are given in this table, they do not add to the total of personal income.

<sup>b</sup> Government Transfer Payments excluding Bond Interest.

Source: 1. Dominion Bureau of Statistics, National Accounts, Income and Expenditure 1956, 1959 and 1963.

## APPENDIX A

TABLE 4

## EMPLOYEES REPORTED BY MAIN INDUSTRIES IN NEWFOUNDLAND

1949 TO 1963

|  | 1949   | 1950           | 1951   | 1952   | 1953   | 1954   | 1955   | 1956   | 1957   | 1958   | 1959   | 1960   | 1961   | 1962   | 1963   |
|--|--------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Forest (chiefly logging)                     | 4,565  | - <sup>a</sup> | 5,327  | 5,136  | 5,218  | 4,634  | 5,455  | 5,159  | 4,971  | 3,794  | 3,816  | 5,588  | 5,049  | 3,844  | 3,291  |
| Mining                                       | 3,391  | -              | 3,462  | 3,727  | 3,757  | 3,696  | 3,703  | 3,981  | 3,865  | 3,605  | 3,086  | 3,150  | 3,272  | 3,381  | 4,184  |
| Manufacturing                                | 9,109  | -              | 10,558 | -      | -      | -      | -      | 11,150 | 10,722 | 9,698  | 10,103 | 10,076 | 10,672 | 11,033 | 11,426 |
| Food and Beverage                            | 2,931  | -              | 3,318  | 3,309  | 3,350  | 3,467  | 3,564  | 3,526  | 3,344  | 3,165  | 3,285  | 3,276  | 3,441  | 3,549  | 3,678  |
| Canned and Salted Fish                       | 2,822  | -              | 3,243  | -      | -      | -      | -      | 2,654  | 2,549  | 3,214  | 3,536  | 3,528  | 3,945  | 4,376  | 4,795  |
| Pulp and Paper                               | 3,356  | -              | 3,997  | 3,984  | 4,007  | 4,078  | 4,010  | 3,970  | 3,829  | 3,319  | 3,282  | 3,272  | 3,286  | 3,108  | 2,953  |
| Construction                                 | 1,057  | -              | 1,839  | 6,405  | 8,475  | 5,361  | 4,757  | 5,631  | 4,249  | 3,937  | 4,370  | 4,174  | 4,653  | 5,737  | 5,442  |
| Transportation, Storage<br>and Communication | 5,307  | -              | 5,848  | 6,167  | 6,528  | 6,533  | 6,591  | 7,365  | 7,223  | 7,255  | 7,506  | 7,085  | 7,218  | 6,989  | 6,851  |
| Trade  | 6,171  | -              | 6,109  | 6,239  | 6,436  | 6,418  | 6,751  | 6,948  | 6,918  | 6,671  | 6,918  | 6,967  | 6,955  | 7,041  | 7,485  |
| Wholesale                                    | 2,438  | -              | -      | -      | -      | -      | -      | 2,425  | 2,251  | 2,237  | 2,237  | 2,162  | 2,151  | 2,300  | -      |
| Retail                                       | 3,733  | -              | -      | -      | -      | -      | -      | -      | 4,683  | 4,440  | 4,681  | 4,730  | 4,793  | 4,740  | 5,095  |
| Industrial Composite                         | 30,243 | -              | 33,781 | 39,376 | 42,612 | 38,772 | 39,618 | 41,403 | 39,346 | 37,078 | 38,046 | 39,225 | 39,830 | 40,284 | 41,100 |

Note: <sup>a</sup> - Not available.Source: 1. Calculated from Dominion Bureau of Statistics, Indexes of Monthly Average of Employees Reported, Review of Employment and Payrolls, 1955, 1959 and 1963, based on the numbers of employees in 1956.

## APPENDIX A

TABLE 5

TOTAL PERSONAL INCOME, TOTAL PERSONAL DISPOSABLE INCOME<sup>a</sup>, AND PER CAPITA PERSONAL INCOME IN NEWFOUNDLAND AND CANADA

1949 TO 1963

| Year      | Total Personal Income<br>(in millions of dollars) |        |                                 | Total Personal Disposable Income<br>(in millions of dollars) |        |                                 | Per Capita Personal Income<br>(in dollars) |        |                                 | Per Capita Personal Disposable<br>Income (in dollars) |        |                                 |
|-----------|---|--------|---------------------------------|--|--------|---------------------------------|--|--------|---------------------------------|---|--------|---------------------------------|
|           | Nfld.   | Canada | Nfld. as a percentage of Canada | Nfld.  | Canada | Nfld. as a percentage of Canada | Nfld.                                      | Canada | Nfld. as a percentage of Canada | Nfld.   | Canada | Nfld. as a percentage of Canada |
| 1949      | 163   | 12,638 | 1.29                            | 157  | 11,849 | 1.33                            | 472  | 940    | 50.2                            | 455   | 881    | 51.6                            |
| 1950      | 177   | 13,428 | 1.32                            | 171  | 12,688 | 1.35                            | 504  | 979    | 51.5                            | 487   | 925    | 52.6                            |
| 1951      | 205   | 15,824 | 1.30                            | 197  | 14,792 | 1.33                            | 568  | 1,130  | 50.2                            | 545   | 1,056  | 51.6                            |
| 1952      | 219   | 17,395 | 1.26                            | 207  | 16,072 | 1.29                            | 586  | 1,203  | 48.7                            | 553   | 1,112  | 49.7                            |
| 1953      | 242   | 18,336 | 1.32                            | 227  | 16,904 | 1.34                            | 632  | 1,235  | 51.2                            | 593   | 1,139  | 52.1                            |
| 1954      | 258   | 18,421 | 1.40                            | 245  | 16,984 | 1.44                            | 653  | 1,205  | 54.2                            | 620   | 1,111  | 55.8                            |
| 1955      | 274   | 19,820 | 1.38                            | 260  | 18,329 | 1.42                            | 675  | 1,263  | 53.4                            | 640   | 1,168  | 54.8                            |
| 1956      | 305   | 21,958 | 1.39                            | 289  | 20,238 | 1.43                            | 735  | 1,365  | 53.8                            | 696   | 1,258  | 55.3                            |
| 1957      | 332   | 23,024 | 1.44                            | 315  | 21,107 | 1.49                            | 779  | 1,388  | 56.1                            | 743   | 1,271  | 58.5                            |
| 1958      | 358   | 24,440 | 1.46                            | 345  | 22,646 | 1.52                            | 820  | 1,434  | 57.2                            | 799   | 1,326  | 60.3                            |
| 1959      | 378   | 25,940 | 1.46                            | 363  | 23,852 | 1.52                            | 842  | 1,487  | 56.6                            | 823   | 1,364  | 60.3                            |
| 1960      | 395   | 27,435 | 1.44                            | 375  | 25,078 | 1.50                            | 882  | 1,535  | 57.5                            | 837   | 1,403  | 59.7                            |
| 1961      | 429   | 28,493 | 1.51                            | 408  | 25,980 | 1.57                            | 937  | 1,562  | 60.0                            | 891   | 1,425  | 62.5                            |
| 1962      | 460   | 30,817 | 1.49                            | 435  | 28,097 | 1.55                            | 979  | 1,660  | 59.0                            | 926   | 1,518  | 61.0                            |
| 1963      | 495   | 32,771 | 1.51                            | 469  | 29,861 | 1.57                            | 1,029                                      | 1,734  | 59.3                            | 975   | 1,580  | 61.7                            |
| 1956/1949 | 1.87  | 1.74   | 1.08                            | 1.44   | 1.71   | 1.08                            | 1.56                                       | 1.45   | 1.07                            | 1.53  | 1.43   | 1.07                            |
| 1963/1949 | 3.04  | 2.59   | 1.17                            | 2.99   | 2.52   | 1.18                            | 2.18                                       | 1.44   | 1.18                            | 2.10  | 1.79   | 1.20                            |
| 1963/1956 | 1.62  | 1.49   | 1.09                            | 1.62   | 1.48   | 1.10                            | 1.40                                       | 1.27   | 1.10                            | 1.40  | 1.26   | 1.12                            |

Note: <sup>a</sup> Total Personal Disposable Income = Total Personal Income minus Total Personal Direct Taxes.  
Total Personal Income = Total Net National Income at factor cost plus Transfer Payments and Interest on Public Debt minus Earnings not paid out to persons.

Source: 1. Dominion Bureau of Statistics, National Accounts, Income and Expenditure 1956, 1959 and 1963.



TABLE 6

PER CAPITA PERSONAL INCOME AND PERSONAL DISPOSABLE INCOME IN NEWFOUNDLAND AND CANADA IN CONSTANT DOLLAR OF 1949

1949 TO 1963<sup>a</sup>

| Year      | Implicit index number <sup>a</sup> | Per Capita Personal Income |             |                |             |   | Per Capita Personal Disposable Income |             |                |             |   |
|-----------|------------------------------------|----------------------------|-------------|----------------|-------------|---|---------------------------------------|-------------|----------------|-------------|---|
|           |                                    | Newfoundland               |             | Canada         |             | Nfld. as a percentage of Canada 1949 dollar | Newfoundland                          |             | Canada         |             | Nfld. as a percentage of Canada 1949 dollar |
|           |                                    | Current dollar             | 1949 dollar | Current dollar | 1949 dollar |   | Current dollar                        | 1949 dollar | Current dollar | 1949 dollar |   |
| 1949      | 100.0                              | 472                        | 472         | 940            | 940         | 50.2  | 455                                   | 455         | 881            | 881         | 51.6  |
| 1950      | 103.1                              | 504                        | 489         | 979            | 950         | 51.5  | 487                                   | 472         | 925            | 897         | 52.6  |
| 1951      | 114.1                              | 568                        | 498         | 1,130          | 990         | 50.3  | 545                                   | 478         | 1,056          | 926         | 51.6  |
| 1952      | 119.8                              | 586                        | 489         | 1,203          | 1,004       | 48.7  | 553                                   | 462         | 1,112          | 928         | 49.8  |
| 1953      | 120.3                              | 632                        | 525         | 1,235          | 1,027       | 51.1  | 593                                   | 493         | 1,139          | 947         | 52.1  |
| 1954      | 123.2                              | 653                        | 530         | 1,205          | 978         | 54.2  | 620                                   | 503         | 1,111          | 902         | 55.8  |
| 1955      | 123.3                              | 675                        | 510         | 1,263          | 1,024       | 53.4  | 640                                   | 519         | 1,168          | 947         | 54.8  |
| 1956      | 127.9                              | 735                        | 575         | 1,365          | 1,067       | 53.9  | 696                                   | 544         | 1,258          | 984         | 55.3  |
| 1957      | 133.8                              | 779                        | 592         | 1,388          | 1,037       | 56.1  | 713                                   | 555         | 1,271          | 950         | 54.4  |
| 1958      | 136.2                              | 820                        | 602         | 1,414          | 1,053       | 57.2  | 729                                   | 587         | 1,326          | 974         | 60.3  |
| 1959      | 149.7                              | 842                        | 562         | 1,487          | 993         | 56.6  | 823                                   | 550         | 1,364          | 911         | 60.4  |
| 1960      | 140.4                              | 882                        | 628         | 1,535          | 1,093       | 57.5  | 837                                   | 596         | 1,403          | 999         | 59.7  |
| 1961      | 141.3                              | 937                        | 663         | 1,562          | 1,105       | 60.0  | 891                                   | 631         | 1,425          | 1,008       | 62.6  |
| 1962      | 143.6                              | 979                        | 682         | 1,660          | 1,160       | 58.8  | 926                                   | 645         | 1,518          | 1,057       | 61.0  |
| 1963      | 146.4                              | 1,029                      | 703         | 1,734          | 1,184       | 59.4  | 975                                   | 666         | 1,580          | 1,079       | 61.7  |
| change    |                                    |                            |             |                |             |   |                                       |             |                |             |   |
| 1956/1949 | 127.9                              | 1.56                       | 1.22        | 1.45           | 1.11        | 1.07  | 1.53                                  | 1.20        | 1.43           | 1.12        | 1.07  |
| 1963/1949 | 146.4                              | 2.18                       | 1.49        | 1.84           | 1.26        | 1.18  | 2.10                                  | 1.46        | 1.79           | 1.22        | 1.20  |
| 1963/1956 | 114.5                              | 1.40                       | 1.22        | 1.27           | 1.11        | 1.10  | 1.40                                  | 1.22        | 1.26           | 1.10        | 1.12  |

Note: <sup>a</sup> Figures are discounted by implicit price indexes. The implicit indexes are currently weighted price indexes. They reflect not only pure price changes, but also changing expenditure patterns within and between major groups.

Sources: 1. Calculated from Dominion Bureau of Statistics, National Account, Income and Expenditure 1956, 1959, 1963.

## CHAPTER III

## POPULATION DYNAMICS OF NEWFOUNDLAND

There are three basic dimensions of a country's population dynamics: the growth of population, the changes due to geographical distribution, and the population composition by age and sex.<sup>1</sup> The Dominion Bureau of Statistics states that such data are necessary for regional planning, adding that such data on population density and urbanization may be desirable.<sup>2</sup> The writer endeavours to present the data on population growth and distribution as a basis for future educational planning.

Because the composition of population by sex in Newfoundland had not changed in any significant way during the past decades, this is combined with the growth of population for analysis purposes. The composition of population by age groups is dealt with under the general heading of population distribution.

#### 1. Population Growth in Newfoundland

The population growth of any country depends upon natural increase and migration. The total number of births minus the total number of deaths measures the natural increase.

---

1. J.J. Spengler, "Demographic Patterns," in Economic Development, edited by Williamson and Buttrick, Prentice-Hall, Inc., N.J., 1961, p. 64.

2. Dominion Bureau of Statistics, Education Planning and Expanding Economy, Canada, Oct. 1964, p. 54.

The net migration of population is the difference between the numbers entering and leaving the country permanently.

The population growth in Newfoundland since Confederation has been accelerating, because the sudden increase in income per capita tended to result in the formation of large families and led to early marriage in the province.<sup>3</sup> Professor Spengler has stated that, "In most countries an increment in income tends...to be devoted in some part to the reproduction and rearing of more children."<sup>4</sup> Furthermore, an improvement in living standards permits a more rapid rise in the size of population.<sup>5</sup> In 1949 the total population in Newfoundland was 345,000 and at present it numbers almost one-half million. The reasons for this population "explosion" are discussed below.

#### A. Natural Increase

The highest birth rate in Newfoundland since Confederation was 37.5 per thousand people in 1950, and the lowest was 32.1 per thousand in 1963. On the average the birth rate was 34.1 per thousand inhabitants (see Table 3-1). From 1958 onward the birth rate has been fairly stable but lower than the average between 1949 and 1963.

---

3. Charles P. Kindleberger, Economic Development, the McGraw-Hill Book Company, Inc., N.Y., 1958, pp. 210 and 216.

4. J.J. Spengler, op. cit., p. 95.

5. Benjamin Higgins, Economic Development, W.W. Norton & Company, Inc., N.Y., 1959, p. 315.

TABLE 3-1

RATE OF POPULATION GROWTH, BIRTH AND DEATH  
RATE IN NEWFOUNDLAND, NATURAL INCREASE OF  
POPULATION FOR NEWFOUNDLAND AND CANADA

1949 TO 1963

|                   | Population<br>Number | Index<br>Number <sup>a</sup> | Rate of<br>Growth | Birth<br>Rate<br>(per 1,000<br>people) | Death<br>Rate<br>(per 1,000<br>people) | Natural Increase<br>(per 1,000 people)<br>Nfld. | Canada |
|-------------------|----------------------|------------------------------|-------------------|--|--|---|--------|
| 1949              | 345,000              | 100                          | 2.48              | 35.6                                   | 8.3                                    | 27.3  | 18.0   |
| 1950              | 351,000              | 102                          | 1.74              | 37.5                                   | 9.0                                    | 28.5  | 18.0   |
| 1951              | 361,416              | 105                          | 2.97              | 32.5                                   | 8.3                                    | 24.2  | 18.2   |
| 1952              | 374,000              | 108                          | 3.48              | 33.6                                   | 7.4                                    | 26.2  | 19.2   |
| 1953              | 383,000              | 111                          | 2.41              | 33.4                                   | 7.1                                    | 26.3  | 19.5   |
| 1954              | 395,000              | 115                          | 3.13              | 34.3                                   | 7.3                                    | 27.0  | 20.3   |
| 1955              | 406,000              | 118                          | 2.78              | 35.8                                   | 7.8                                    | 28.0  | 20.0   |
| 1956              | 415,074              | 120                          | 2.23              | 35.0                                   | 7.4                                    | 27.6  | 19.8   |
| 1957              | 424,000              | 123                          | 2.15              | 36.0                                   | 7.5                                    | 28.5  | 20.0   |
| 1958              | 432,000              | 125                          | 1.89              | 33.8                                   | 7.1                                    | 26.7  | 19.7   |
| 1959              | 441,000              | 128                          | 2.08              | 33.0                                   | 7.1                                    | 25.9  | 19.4   |
| 1960              | 448,000              | 130                          | 1.59              | 33.1                                   | 6.6                                    | 26.5  | 19.1   |
| 1961              | 457,853              | 133                          | 2.20              | 34.1                                   | 6.6                                    | 27.5  | 18.4   |
| 1962              | 470,000              | 136                          | 2.65              | 32.1                                   | 6.8                                    | 25.3  | 17.6   |
| 1963              | 481,000              | 140                          | 2.34              | 32.1                                   | 6.6                                    | 25.5  | 16.8   |
| Yearly<br>Average |                      |                              | 2.41              | 34.1                                   | 7.4                                    | 26.7  | 19.0   |

Note: <sup>a</sup> 1949=100.

Sources: 1. Dominion Bureau of Statistics, Census of Canada, 1961, for 1949 to 1955.

2. Dominion Bureau of Statistics, Vital Statistics, 1956, 1958, 1960 and 1963.

Between 1949 and 1963 Newfoundland had the highest birth rate of any Canadian province. None of the other provinces in Canada had a birth rate higher than 32.3 per thousand people since 1949. *Aside from* Alberta, which had a peak birth rate of 32.3 per thousand in 1954, all the other eight provinces in Canada had birth rates lower than 30.0 per thousand since 1954 (see Table 3-2). Even though Newfoundland had had its lowest birth rate in 1963, the figure exceeded that of British Columbia (which had the lowest birth rate in Canada of 22.1 per thousand in 1963) by 10.0 births per thousand. Newfoundland exceeded the Canadian average birth rate by more than six births per thousand for every recorded year.

Since 1949 Newfoundland enjoyed not only the highest birth rate but also almost the lowest death rate among the Canadian provinces. The death rate in Newfoundland has continuously declined: from a peak of 9.0 deaths per thousand people in 1950, the death rate declined to 6.6 in 1963. Between 1960 and 1963 the death rate has remained remarkably steady (see Table 3-1). In comparison Prince Edward Island and British Columbia usually has more than nine deaths per thousand people every year. In 1963 the death rates for the two provinces were 9.1 and 8.9 respectively. The gap in the death rates between Canadian average and that of Newfoundland was one person per thousand for each year during the past fifteen years. In 1963 the death rate in Newfoundland was

TABLE 3-2  
BIRTH AND DEATH RATE, AND NATURAL INCREASE  
IN CANADA BY PROVINCE IN SELECTED YEARS

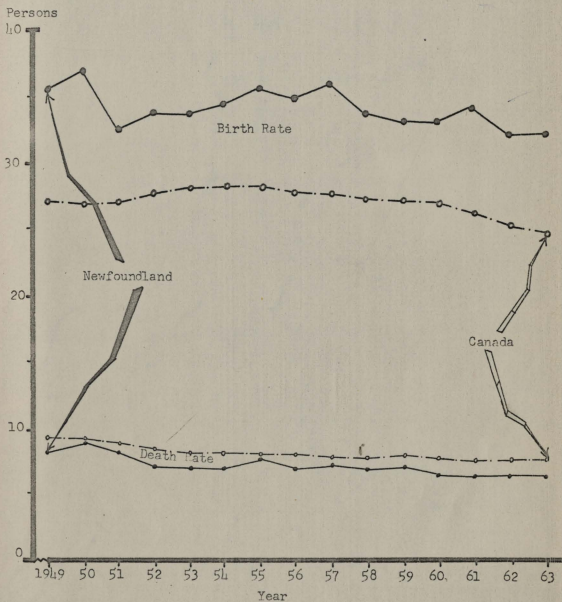
(per 1,000 people)

|                         | Canada | Nfld. | P.E.I. | N.S. | N.B. | Que. | Ont. | Man. | Sask. | Alta. | B.C. |
|-------------------------|--------|-------|--------|------|------|------|------|------|-------|-------|------|
| <u>Birth Rate</u>       |        |       |        |      |      |      |      |      |       |       |      |
| 1951                    | 27.2   | 32.5  | 27.1   | 26.6 | 31.2 | 29.8 | 25.0 | 25.7 | 26.1  | 28.8  | 24.1 |
| 1952                    | 27.9   | 33.6  | 26.2   | 27.5 | 31.7 | 30.3 | 26.0 | 26.0 | 26.8  | 30.0  | 24.9 |
| 1954                    | 28.7   | 34.3  | 25.9   | 28.1 | 30.4 | 30.4 | 27.0 | 26.9 | 28.5  | 32.3  | 26.0 |
| 1956                    | 28.0   | 35.0  | 26.8   | 27.5 | 29.9 | 29.4 | 26.6 | 25.8 | 27.3  | 31.1  | 25.9 |
| 1958                    | 27.6   | 33.8  | 25.8   | 26.6 | 28.4 | 29.0 | 26.3 | 24.9 | 26.9  | 30.7  | 25.6 |
| 1960                    | 26.9   | 33.1  | 26.5   | 26.5 | 27.2 | 27.0 | 26.2 | 25.8 | 26.5  | 30.4  | 25.0 |
| 1962                    | 25.3   | 32.1  | 26.5   | 26.0 | 27.1 | 25.2 | 24.6 | 24.5 | 25.1  | 28.3  | 23.0 |
| 1963                    | 24.6   | 32.1  | 27.6   | 25.1 | 25.7 | 24.4 | 24.1 | 23.9 | 25.2  | 27.4  | 22.1 |
| <u>Death Rate</u>       |        |       |        |      |      |      |      |      |       |       |      |
| 1951                    | 9.0    | 8.3   | 9.2    | 9.0  | 9.4  | 8.6  | 9.6  | 8.7  | 7.7   | 7.6   | 10.0 |
| 1952                    | 8.7    | 7.4   | 8.9    | 8.8  | 8.8  | 8.4  | 9.3  | 8.2  | 7.9   | 7.6   | 10.1 |
| 1954                    | 8.2    | 7.3   | 9.2    | 8.5  | 7.8  | 7.6  | 8.8  | 8.1  | 7.2   | 7.2   | 9.8  |
| 1956                    | 8.2    | 7.4   | 9.4    | 8.3  | 8.4  | 7.6  | 8.7  | 8.3  | 7.6   | 6.9   | 9.6  |
| 1958                    | 7.9    | 7.1   | 9.5    | 8.6  | 7.8  | 7.3  | 8.4  | 8.2  | 7.3   | 6.9   | 8.9  |
| 1960                    | 7.8    | 6.6   | 9.3    | 5.4  | 7.8  | 6.9  | 8.5  | 8.3  | 7.5   | 6.9   | 9.2  |
| 1962                    | 7.7    | 6.8   | 10.0   | 8.5  | 7.9  | 6.9  | 8.2  | 8.0  | 7.5   | 6.8   | 9.0  |
| 1963                    | 7.8    | 6.6   | 9.1    | 8.4  | 7.8  | 7.0  | 8.3  | 8.3  | 8.0   | 6.7   | 8.9  |
| <u>Natural Increase</u> |        |       |        |      |      |      |      |      |       |       |      |
| 1951                    | 18.2   | 24.2  | 17.9   | 17.6 | 21.8 | 21.2 | 15.4 | 17.0 | 18.4  | 11.2  | 14.1 |
| 1952                    | 19.2   | 26.2  | 17.3   | 18.7 | 22.9 | 21.9 | 16.7 | 17.8 | 18.9  | 22.4  | 14.8 |
| 1954                    | 20.5   | 27.0  | 16.7   | 19.6 | 22.6 | 22.8 | 18.2 | 18.8 | 21.3  | 25.1  | 26.2 |
| 1956                    | 19.8   | 27.6  | 17.4   | 19.2 | 21.5 | 21.8 | 17.9 | 17.5 | 19.7  | 24.2  | 16.3 |
| 1958                    | 19.7   | 26.7  | 16.3   | 18.0 | 20.6 | 21.7 | 17.9 | 16.7 | 19.6  | 23.8  | 16.7 |
| 1960                    | 19.1   | 26.5  | 17.2   | 18.1 | 19.4 | 20.1 | 17.7 | 17.5 | 19.0  | 23.5  | 15.8 |
| 1962                    | 17.6   | 25.3  | 16.5   | 17.5 | 19.2 | 18.3 | 16.4 | 16.5 | 17.6  | 21.5  | 14.0 |
| 1963                    | 16.8   | 25.5  | 18.5   | 16.7 | 17.9 | 17.4 | 15.8 | 15.6 | 17.2  | 20.7  | 13.2 |

Source: 1. Dominion Bureau of Statistics, Vital Statistics.

CHART 3-1  
BIRTH AND DEATH RATE -- NEWFOUNDLAND AND CANADA

1949 TO 1963  
(per 1,000 people)



—○— Canada  
—●— NF

Source: Tables 3-1 and 3-2.



6.6 per thousand people while in Canada as a whole it was 7.8

The high birth rate in Newfoundland since Confederation can be greatly attributed to the great increase in provincial income which permits a high level of living standard, an earlier marriage and the formation of a big family. However, the birth rate has been tending to level off since 1957. The low death rate in Newfoundland is partly due to the improvement in medical services and better sanitation.

From 1949 to 1963, owing to its very favorable birth and death rates, this province undoubtedly experienced the highest rate of natural increase in Canada. In Newfoundland, the natural increase was generally higher than 26 per thousand people per year: yet in Canada as a whole it scarcely reached 20 per thousand per year (see Table 3-1). Because of the declining trend in birth rate after 1957, the natural rate of increase in population both in Newfoundland and in Canada as a whole tended to drop. In 1949 it was 27.3 and 18.0 per thousand people in Newfoundland and in Canada respectively; and 25.5 and 16.8 respectively in 1963. During the past fifteen years, the average natural increase in Newfoundland was 26.7 per thousand people as compared to 19.0 per thousand people in Canada as a whole.

#### B. Population Migration

Since Confederation Newfoundland has not had many

immigrants. Even though staffs of the Federal Government and mainland enterprises entered this province, the inflow of population in Newfoundland was not very large. According to the Dominion Bureau of Statistics, only 4,200 foreign immigrants came to Newfoundland between 1951 and 1961. The number of foreigners in Newfoundland was less than 3,000 in 1961.

Emigration numbers are much larger: from 1951 to 1961 Newfoundland lost some 19,000 of its residents.<sup>6</sup> This represents 17 percent of the natural increase in the population of Newfoundland during the period under discussion. The loss due to migration equals 13 percent of the total natural increase in the same period. Therefore, only seven-eighths of the natural increase of Newfoundlanders since Confederation remained in the Province.

The main reason for this loss of population is the lack of employment opportunity. The export of many competent young Newfoundlanders has been partly due to the continuing economic weakness of Newfoundland. This is the so-called "Polarization effect"<sup>7</sup>--the expansion of industries in one locality absorbs the capable youths from the less developed areas and hence retards the development in the areas. This

---

6. This figure is calculated from the information provided by the Dominion Bureau of Statistics in Vital Statistics, 1961.

7. Albert O. Hirschman, The Strategy of Economic Development, Yale University Press, New Haven, 1958, p. 188.

polarization effect is seen in the outflow of Newfoundlanders to the highly developed industrial localities of the mainland.

### C. The Perspective of Population Growth

As shown in Table 3-1, the population of Newfoundland has grown at an average rate of 2.4 percent per year, because of its high birth and low death rates. Between 1951 and 1961 the total population of Newfoundland increased by 26.7 percent.

Table 3-3 shows that the areas of high rates of natural increase were Division 10 (Labrador) with 71.5 percent and Division 4 (St. George's Bay) with 51.3 percent; while Division 2 (Burin Peninsula) enjoyed only a 10.7 percent increase. Division 1 (Avalon Peninsula), usually accounting for two-fifths of the total population of the province, grew at the median rate of 26.3 percent. The rapid growth of population in Division 10 was largely due to the rapid development of economic activities, particularly the mining industries which attracted a great number of migrant workers. In Division 4 the growth in population may be attributed to its relatively young population structure. This will be discussed later. The Dominion Bureau of Statistics report of 1961 has pointed out that the movements of large numbers of people out of Divisions 2, 3 (South Coast) and 7 (Bonavista Bay Area) since Confederation were the main cause of their low rates of population growth. But, the trend to smaller families and later marriages after the people have attained relatively

TABLE 3-3  
POPULATION GROWTH IN NEWFOUNDLAND BY CENSUS DIVISION  
1951 AND 1961

| Division | 1951    |         |         | 1961    |         |         | Percentage Change |        |       |
|----------|---------|---------|---------|---------|---------|---------|-------------------|--------|-------|
|          | Male    | Female  | Total   | Male    | Female  | Total   | Male              | Female | Total |
| 1        | 74,476  | 75,067  | 149,543 | 95,045  | 93,859  | 188,904 | 127.6             | 125.0  | 126.3 |
| 2        | 11,327  | 11,039  | 22,366  | 12,709  | 12,070  | 24,779  | 112.2             | 109.3  | 110.7 |
| 3        | 10,665  | 9,769   | 20,434  | 12,044  | 11,255  | 23,299  | 113.0             | 115.2  | 114.0 |
| 4        | 8,533   | 7,449   | 15,982  | 12,504  | 11,681  | 24,185  | 146.5             | 156.8  | 151.3 |
| 5        | 14,424  | 13,665  | 28,089  | 19,832  | 19,254  | 39,086  | 137.5             | 140.9  | 139.2 |
| 6        | 14,646  | 13,322  | 27,968  | 19,590  | 18,455  | 38,045  | 133.8             | 138.5  | 136.0 |
| 7        | 18,279  | 17,015  | 35,294  | 20,687  | 18,965  | 39,652  | 113.2             | 111.5  | 112.3 |
| 8        | 19,257  | 17,542  | 36,799  | 23,439  | 21,220  | 44,659  | 121.7             | 121.0  | 121.4 |
| 9        | 8,964   | 8,087   | 17,051  | 11,431  | 10,279  | 21,710  | 127.5             | 127.1  | 127.3 |
| 10       | 4,572   | 3,318   | 7,890   | 7,643   | 5,801   | 13,534  | 167.2             | 177.5  | 171.5 |
| Total    | 185,143 | 176,273 | 361,416 | 234,924 | 222,929 | 457,853 | 126.9             | 126.5  | 126.7 |

Source: 1. Dominion Bureau of Statistics, Census of Canada, 1951 and 1961.

higher standards of living should be taken into consideration.<sup>8</sup>

In Newfoundland population growth by sex during the decade was 26.9 percent for males and 26.5 percent for females. Divisions, 10, 4, 5 (Humber Area) and 6 (Central Newfoundland) which had the highest average rates of growth, also had the highest percentages of growth in the female population (see Table 3-3). Increases in the numbers of females have lowered the general average marriageable age in these areas; there is a tendency for females to marry at a lower average age than males. Therefore, a high rate of population growth in these divisions was to be expected. A similar contrast is shown in Table 3-3. The Divisions with low rates of growth in population such as 2 and 7 also have a comparatively lower rate of growth for the female as compared to the male population.

Table 3-4 presents the rapid growth of the school-age group, 0-19 years of age. In 1951 this young group constituted 47.5 percent of the total population and 51.4 percent in 1961. In absolute numbers this group increased by 37 percent, while the total population of all ages grew only 27 percent over the decade. This growth of the younger age groups is consistent with the analysis by Divisions. Division 4, for example, which accounted for the highest percentage increase in

---

<sup>8</sup>. Charles P. Kindleberger, op. cit., p. 215.

TABLE 3-4  
POPULATION BY CENSUS DIVISION, TOTAL AND  
0-19 YEARS OF AGE, FOR NEWFOUNDLAND  
1951 AND 1961

| Census<br>Division | 1951                |                             |                        | 1961                |                             |                        |
|--------------------|---------------------|-----------------------------|------------------------|---------------------|-----------------------------|------------------------|
|                    | Total<br>Population | 0-19 years of age<br>Number | Percentage<br>of total | Total<br>Population | 0-19 years of age<br>Number | Percentage<br>of total |
| 1                  | 149,543             | 67,507                      | 45.1                   | 188,904             | 92,480                      | 49.0                   |
| 2                  | 22,366              | 10,966                      | 49.0                   | 24,779              | 13,259                      | 53.5                   |
| 3                  | 20,434              | 9,782                       | 47.9                   | 23,299              | 12,187                      | 52.3                   |
| 4                  | 15,982              | 8,615                       | 53.9                   | 24,185              | 14,145                      | 58.5                   |
| 5                  | 28,089              | 14,429                      | 51.4                   | 39,086              | 21,184                      | 54.2                   |
| 6                  | 27,968              | 14,338                      | 51.3                   | 38,045              | 20,713                      | 54.4                   |
| 7                  | 35,294              | 15,619                      | 44.3                   | 39,652              | 19,259                      | 48.6                   |
| 8                  | 36,799              | 17,932                      | 48.7                   | 44,659              | 23,729                      | 53.1                   |
| 9                  | 17,051              | 9,094                       | 53.3                   | 21,710              | 12,192                      | 56.2                   |
| 10                 | 7,890               | 3,510                       | 44.5                   | 13,534              | 6,248                       | 46.2                   |
| Total              | 361,416             | 171,793                     | 47.5                   | 457,853             | 235,392                     | 51.4                   |

Source: 1. Dominion Bureau of Statistics, Census of Canada, 1951 and 1961.



population of the divisions on the Island, had not only the highest percentage of this young age-group in its total population (53.9 percent in 1951 and 58.5 percent in 1961), but also the highest rate of increase in this group between 1951 and 1961 (64 percent). In Division 10, the 0-19 years increased in absolute number by 78 percent. These two divisions enjoyed the largest rate of increase in the school-age group during the period under discussion.

Newfoundland appears to be over populated in terms of its natural endowments and its prevailing technology.<sup>9</sup> Professor Kamerschen<sup>10</sup> suggested another way of computing over population by comparing the total numbers of the economically non-productive group with that of <sup>the</sup> economically productive group. People under twenty and over sixty-five years of age are placed in the former group; all others are bracketed in the latter. When the former is larger than the latter, over population is inferred: "When the ratio exceeds one hundred a country is over-populated in a dynamic as well as a static sense".<sup>11</sup> In 1951 the ratio between the non-productive group and the productive group in Newfoundland was 118; it increased from

---

9. P. Copes, St. John's and Newfoundland, An Economic Survey, The Newfoundland Board of Trade, St. John's, Nfld., 1961, p. 61.

10. David R. Kamerschen, "Over population in the Under-developed Countries," in Economic Development and Cultural Change The University of Chicago Press, Vol. XIII, No. 2, January 1965.

11. Ibid., p. 172.



124 to 134 between 1956 and 1961. For the whole of Canada, the ratio was 98 in 1961 (see Appendix E, Table 1). Thus, between 1951 and 1961 over population in Newfoundland was aggravated. Estimated population in Newfoundland will be almost doubled that of the 1949 figure by 1980; 672,025 people compared with 345,000 (see Appendix B, Table 2).

The United Nations referring to population growth in underdeveloped areas asserted that:

"Most of the capital formation every year is pre-empted for working equipment, education, housing, health services and so forth required merely to maintain the existing level of capital assets per person before anything becomes available for new individual investment. Consequently, excessively rapid growth of population may hinder the industrialization even of a country with relatively abundant land and other natural resources."<sup>12</sup>

This statement appears to apply in toto to Newfoundland.

## 2. Population Distribution in Newfoundland

Population distribution in Newfoundland was influenced by historical trends and topography. The fisheries controlled the economic life of the people in Newfoundland for centuries, and the profitable operation of the fisheries scattered the population along a coastline of six thousand miles with more than a thousand settlements. Professor Warren stated that:

---

<sup>12</sup>. United Nations, Processes and Problems of Industrialization in Underdeveloped Countries, New York, 1955, p. 15.

"The early settlers of Newfoundland dispersed themselves in widely scattered small communities around the coastline so that they could enjoy the Colony's best fishing grounds, and avoid the ruthless enforcement of the British Law."<sup>13</sup>

In addition, acid soils, bog land, and bare rocks made the island unsuitable for cultivation. This restricted the movement from fishing to agriculture. Moreover, lack of transportation facilities and lack of manufacturing industries impeded centralization and urbanization as well.

Since Confederation, however, population movement has increased and urbanization has been accentuated. It is maintained that:

"This movement of population away from many of the small isolated communities reflects such factors as the decreasing importance of the inshore fishery, attempt to mechanize and centralize the industry, and a growing desire for improved social services."<sup>14</sup>

At any rate, these movements could be partly attributed to Confederation. The immediate effects of Confederation were of fundamental importance; a rise in personal disposable incomes as well as an increase in Provincial Government revenues. Increased personal incomes enabled people to move into larger communities where better communal facilities were provided.

---

13. Philip John Warren, Financing Education in Newfoundland, unpublished doctoral dissertation, 1962, University of Alberta, p. 76. See also C.D. Phillips, The Development of Education in Canada, W.J. Gage and Company, Ltd., Toronto, 1957, p. 45.

14. Philip John Warren, op. cit., p. 73.

TABLE 3-5

POPULATION DISTRIBUTION IN NEWFOUNDLAND, RURAL-FARM,  
RURAL-URBAN AND URBAN AREAS BY CENSUS DIVISION

1951 AND 1961

| Division    | Rural-Farm |       | Rural-Urban |       | Urban   |       | Division Total |       |
|-------------|------------|-------|-------------|-------|---------|-------|----------------|-------|
|             | Number     | %     | Number      | %     | Number  | %     | Number         | %     |
| <u>1951</u> |            |       |             |       |         |       |                |       |
| 1           | 7,086      | 45.9  | 52,884      | 27.6  | 89,573  | 57.0  | 149,543        | 41.4  |
| 2           | 243        | 1.6   | 17,318      | 9.1   | 4,805   | 3.1   | 22,366         | 6.2   |
| 3           | 93         | 0.6   | 17,707      | 9.3   | 2,634   | 1.7   | 20,434         | 5.7   |
| 4           | 5,467      | 35.4  | 6,453       | 3.4   | 4,062   | 2.6   | 15,982         | 4.4   |
| 5           | 1,104      | 7.1   | 6,445       | 3.4   | 20,540  | 13.3  | 28,089         | 7.8   |
| 6           | 48         | 0.3   | 5,596       | 2.9   | 22,324  | 14.4  | 27,968         | 7.7   |
| 7           | 465        | 3.0   | 28,714      | 15.0  | 6,115   | 4.0   | 35,294         | 9.8   |
| 8           | 608        | 3.9   | 32,829      | 17.2  | 3,362   | 2.1   | 36,799         | 10.2  |
| 9           | 342        | 2.2   | 15,329      | 8.0   | 1,380   | 0.9   | 17,051         | 4.7   |
| 10          |            |       | 7,890       | 4.1   |         |       | 7,890          | 2.1   |
| Total       | 15,456     | 100.0 | 191,165     | 100.0 | 154,795 | 100.0 | 361,416        | 100.0 |
| <u>1961</u> |            |       |             |       |         |       |                |       |
| 1           | 4,163      | 45.9  | 66,833      | 30.8  | 117,908 | 50.8  | 188,904        | 41.3  |
| 2           | 716        | 7.9   | 15,070      | 7.0   | 8,993   | 3.9   | 24,779         | 5.4   |
| 3           | 42         | 0.5   | 15,039      | 6.9   | 8,218   | 3.5   | 23,299         | 5.1   |
| 4           | 1,566      | 17.3  | 12,107      | 5.6   | 10,512  | 4.5   | 24,185         | 5.3   |
| 5           | 630        | 6.9   | 9,273       | 4.3   | 29,183  | 12.6  | 39,086         | 8.5   |
| 6           | 37         | 0.4   | 8,687       | 4.0   | 29,321  | 12.7  | 38,045         | 8.3   |
| 7           | 799        | 8.8   | 28,067      | 12.9  | 10,786  | 4.7   | 39,652         | 8.7   |
| 8           | 565        | 6.2   | 35,901      | 16.6  | 9,193   | 3.5   | 44,659         | 9.8   |
| 9           | 521        | 5.7   | 18,184      | 8.4   | 3,005   | 1.3   | 21,710         | 4.7   |
| 10          | 38         | 0.4   | 7,595       | 3.5   | 5,901   | 2.5   | 13,534         | 2.9   |
| Total       | 9,077      | 100.0 | 216,756     | 100.0 | 232,020 | 100.0 | 457,853        | 100.0 |

Source: 1. Dominion Bureau of Statistics, Census of Canada, 1951 and 1961.

The expansion in government revenues facilitated the means to improve the transportation services and to enhance community planning. The improvement of education in Newfoundland has also given momentum to urbanization, because educated people tend usually to work in urban areas and hence settle their families in cities and towns, and also because the improvement of education leads to a vertical mobility<sup>15</sup> in Newfoundland which creates initiative for urbanization.

#### A. Distribution by Census Division

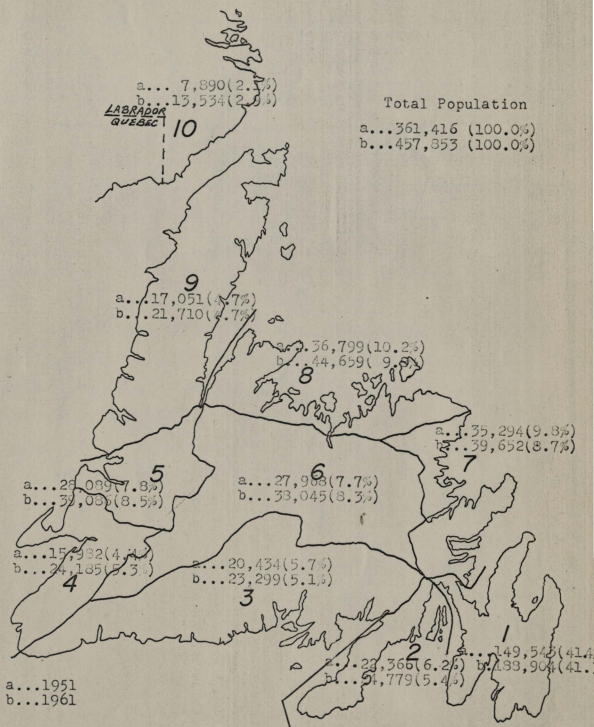
##### a. Distribution in 1951 and 1961 and Population Density

Details of population distribution by Census Division are presented in Table 3-5. Between 1951 and 1961 Division 1, the Avalon Peninsula, which was the first area of Newfoundland to be centrally populated and commercialized, accounted for more than two-fifths of the total population in the province. Concomitantly, this region has been the most densely populated one in Newfoundland, having 41.30 persons per square mile in 1951 and 52.18 persons per square mile in 1961. Division 10, the latest developing and the largest region of the Province, contained less than 3 percent of the total provincial population during the period. It is also the most sparsely populated region; it had 0.07 and 0.13 persons per square mile in 1951

---

15. Arnold Anderson, "A Skeptical Note on Education and Mobility," in Education, Economy and Society, edited by Halsey, Flould and Anderson, The Free Press of Glencoe, Inc., New York, 1961, p. 168.

POPULATION GROWTH AND DISTRIBUTION IN NEWFOUNDLAND  
BY CENSUS DIVISION  
1951 AND 1961



Source: Table 3-5

and 1961. Nonetheless, it had the highest rate of growth in population density, increasing 85.7 percent during the ten years (see Table 3-6).

b. Changes in the Percentage Distribution Among Ten Divisions and the Urbanization in Newfoundland

The distribution of population in Newfoundland has remained almost unchanged over the past fifteen years (see Table 3-5). The population distribution of various localities was consistent with high rates or low rates of population growth for these areas. Between 1951 and 1961 the percentage figures of population living in Divisions 10, 4, 5 and 6 increased by more than 0.6 percent of the total population in Newfoundland, while Divisions 2, 3 and 7 decreased by more than 0.6 percent of the total. Between 1951 and 1961 the population in Division 4 increased by more than 8,000 people, or an increase of 51 percent. This division obtained the highest rate of upward change in population redistribution over the decade, due to its highest birth rate among the ten divisions. Division 7 increased relatively little, adding only 4,358 people to its 1951 figure; and hence lost some of its importance in the provincial population distribution in 1961. This greatest percentage decline in the population distribution was largely attributable to a very low rate of population growth, 12.3 percent as compared to the provincial average of 26.7 percent during the period (see Table 3-3).



TABLE 3-6  
POPULATION DENSITY, BY CENSUS DIVISION  
IN NEWFOUNDLAND AND IN TOTAL FOR CANADA

1951 AND 1961  
(persons per square mile)

| Division    | Area<br>(sq. miles) | Population Density |       | Percentage<br>change |
|-------------|---------------------|--------------------|-------|----------------------|
|             |                     | 1951               | 1961  |                      |
| 1           | 3,620               | 41.30              | 52.18 | 126.3                |
| 2           | 1,730               | 12.93              | 14.32 | 110.8                |
| 3           | 8,012               | 2.55               | 2.91  | 114.1                |
| 4           | 2,714               | 5.89               | 8.91  | 151.3                |
| 5           | 2,391               | 11.75              | 16.35 | 139.1                |
| 6           | 9,591               | 2.92               | 3.97  | 136.0                |
| 7           | 2,556               | 13.81              | 15.51 | 112.3                |
| 8           | 3,109               | 11.84              | 14.36 | 121.3                |
| 9           | 6,836               | 2.49               | 3.18  | 127.7                |
| 10          | 107,435             | 0.07               | 0.13  | 185.7                |
| Nfld. Total | 147,994             | 2.44               | 3.09  | 126.6                |
| Canada      | 3,610,097           | 3.88               | 5.20  | 134.0                |

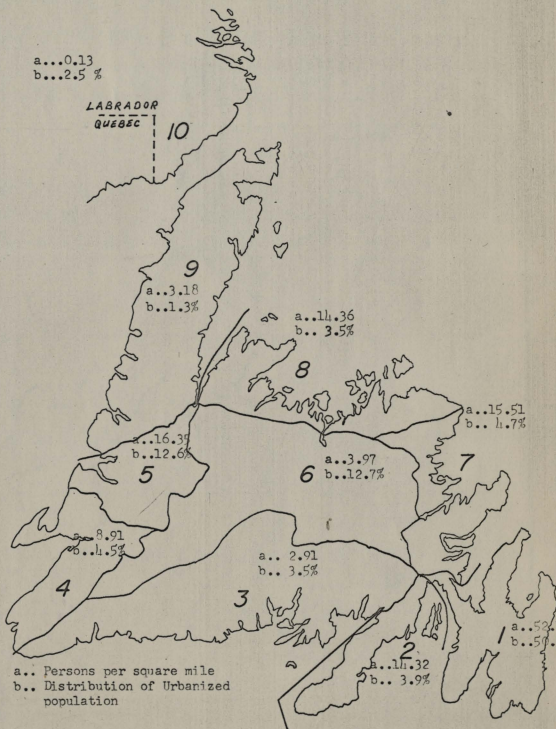
Source: 1. Dominion Bureau of Statistics, Census of Canada, 1951, 1956  
and 1961.



The Dominion Bureau of Statistics defines an urban area as a locality which has more than 1,000 residents. On this basis, Newfoundland had 43 percent of its total population, or 154,795 people living in urban areas in 1951. Of these, 57.9 percent were located in Division 1, 14.4 percent in Division 6 and 13.3 percent in Division 5; none of the other divisions had over 4 percent of the total urban population. In 1961 the urban population reached 232,020 or 51 percent of the total provincial population. Again, the above mentioned three divisions maintained almost the same percentage distribution as 1951, and none of the other divisions had over 5 percent of the total urban population in the province. These slow changes in population distribution may manifest an unwillingness by the people to leave their communities. Further, these slow changes in population distribution represent the unbalanced ratio of the distribution of manufacturing and commercial industries.

In 1951 Newfoundland had one city, St. John's, in Division 1, which was the largest commercial and distributing center. It had 53,000 residents or 14.6 percent of the total population. There were 25 towns which together accommodated 52,000 people in the same year. The largest two were Corner Brook in Division 5 and Grand Falls in Division 6 where pulp and paper mills signalled the most important industrial concentrations in the province. Mining towns, such as Wabana and

POPULATION DENSITY AND URBAN POPULATION DISTRIBUTION  
IN NEWFOUNDLAND BY CENSUS DIVISION, 1961



Source: Tables 3-5 and 3-6.

Buchans, as well as the U.S. military bases of Argentia and Stephenville, are also located in these Divisions. In 1961, St. John's and Corner Brook (which became a city in January, 1956) together accounted for almost one-fifth of the total population. The former was inhabited by 64,000 people and the latter had 25,000 residents. The number of towns rose to 39, together absorbing 84,000 or 18.4 percent of the total Newfoundland population. The greatest change in urbanization was in Division 10, which had no urban centres at all in 1951; it contained 2.5 percent of the total urbanized population in 1961 (see Table 3-5). This was due largely to the development of the mining industry.

The percentage of the total population living in rural-farm areas dropped from 4 percent in 1951 to 2 percent in 1961; only 9,077 people lived in farming areas in the latter year, because of the general depression and disability of the subsistence agriculture. The farming population decreased in every division with the exceptions of Divisions 2 and 7, which revealed a small increase. Meanwhile, the population in rural-urban areas fell from 53 percent of the total provincial population in 1951 to 47 percent in 1961.

The declining importance of the population in rural-farm and rural-urban areas in Newfoundland denotes the transformation of the economy, because in such an economy, population

usually moves from rural areas into the towns and cities when the economy of a society has initiated its industrialization. The advantages of such a movement are many. Labor could be relatively better equipped with capital in urban areas, thereby raising the productivity of labor. Labor income would be simultaneously increased, and children would be able to secure a higher level of education. In addition, concentration of population leads to the reduction of transport, building and related costs for educational purposes.

However, the relatively sparse population in Newfoundland (3.1 persons per square mile as against 5.2 persons per square mile for all Canada) coupled with the unbalanced distribution of divisional population call for greater investments in social capital. On the other hand, the one thousand and more settlements scattered along the six thousand mile coast make the allocation of this capital more difficult and inefficient. Thus, the marginal utility of a small amount of social capital in Newfoundland is comparatively low; without a bulk investment it is practically inefficient. Dr. Copes said in his Economic Survey of Newfoundland that:

"were we to be served with the same standards of transportation facilities as the Mainland, it would undoubtedly involve us in a very much higher per capita cost than would apply to any other province."<sup>16</sup>

---

<sup>16</sup>. P. Copes, op. cit., p. 69.

Moreover, a high average disbursement in maintaining these social overhead capitals is, however, unavoidable. Educational investment forms part of the social overhead capital and the preceding argument is certainly applicable.<sup>17</sup>

#### E. Distribution by Religious Denomination

The population of Newfoundland is distributed mainly among five religious denominations. Of these, the Roman Catholic Church is the strongest, for one out of three Newfoundlanders belongs to this Church. In 1951, 33.6 percent of total population in Newfoundland were of this denomination, and more than a half of these were living in Division 1. In 1961 Catholics accounted for 35.7 percent of the provincial population and close to 60 percent of all Catholics were also residing in Division 1. The regional population of Divisions 4, 2 and 6 were also mainly Catholics (see Table 3-7).

In 1951 and 1961 Anglicans made up 30.1 percent and 28.5 percent of the total population in this province. Anglicans held the pre-eminent position in Divisions 3, 9, 5 and 10. Divisions 7 and 8 were overwhelmingly populated by the adherents of the United Church of Canada. People of this denomination amounted to over one-fifth of the total population in 1951 and 1961. Like the Catholics and Anglicans, they were

---

17. Sidney C. Sufrin, Issues in Federal Aid to Education, Syracuse University Press, Syracuse, N.Y., 1962, pp. 2 and 3.

TABLE 3-7

POPULATION DISTRIBUTION IN NEWFOUNDLAND BY CENSUS DIVISION  
AND BY SELECTED RELIGIOUS DENOMINATION

1951 AND 1961

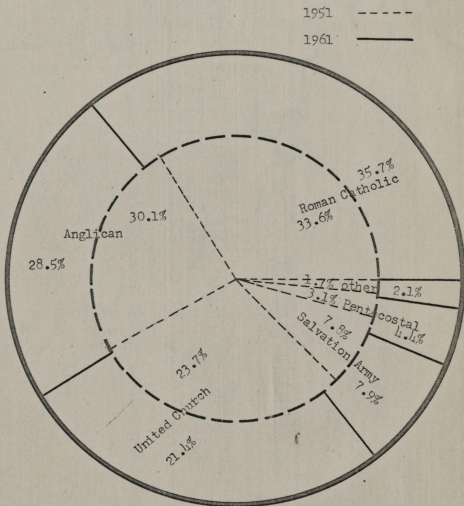
| Census Division     | Roman Catholic<br>Number | Roman Catholic<br>Per-centage<br>of Nfld.<br>total | Anglican<br>Number | Anglican<br>Per-centage<br>of Nfld.<br>total | United Church<br>Number | United Church<br>Per-centage<br>of Nfld.<br>total | Salvation Army<br>Number | Salvation Army<br>Per-centage<br>of Nfld.<br>total | Pentecostal<br>Number | Pentecostal<br>Per-centage<br>of Nfld.<br>total | Newfoundland<br>Number | Percentage |
|---------------------|--------------------------|--|--------------------|--|-------------------------|---|--------------------------|--|-----------------------|---|------------------------|------------|
| <u>1951</u>         |                          |  |                    |  |                         |   |                          |  |                       |   |                        |            |
| 1                   | 69,981                   | 16.8   | 39,165             | 26.1   | 30,819                  | 20.6  | 1,994                    | 3.3  | 1,668                 | 1.1   | 119,513                | 100.0      |
| 2                   | 9,708                    | 13.1   | 5,107              | 21.2   | 5,323                   | 23.8  | 1,804                    | 8.1  | 101                   | 0.5   | 22,366                 | 100.0      |
| 3                   | 3,123                    | 15.3   | 15,063             | 73.7   | 1,759                   | 8.6   | 137                      | 2.1  | 2                     | .. <sup>a</sup>                                 | 20,131                 | 100.0      |
| 4                   | 12,335                   | 77.2   | 2,613              | 16.5   | 679                     | 1.2   | 10                       | 0.3  | 12                    | 0.3   | 15,982                 | 100.0      |
| 5                   | 8,087                    | 21.8   | 9,512              | 31.2   | 6,097                   | 21.7  | 2,709                    | 9.6  | 1,172                 | 1.2   | 28,089                 | 100.0      |
| 6                   | 7,618                    | 27.3   | 5,673              | 20.3   | 6,571                   | 23.5  | 1,994                    | 17.9   | 2,623                 | 9.3   | 27,968                 | 100.0      |
| 7                   | 3,226                    | 9.1  | 13,783             | 39.1   | 11,874                  | 39.3  | 3,904                    | 11.1   | 262                   | 0.7   | 35,291                 | 100.0      |
| 8                   | 3,305                    | 9.0  | 6,267              | 17.0   | 11,978                  | 10.7  | 7,920                    | 21.5   | 1,011                 | 11.0  | 36,799                 | 100.0      |
| 9                   | 2,605                    | 15.3   | 8,271              | 18.5   | 3,686                   | 21.6  | 1,207                    | 7.1  | 1,127                 | 6.6   | 17,051                 | 100.0      |
| 10                  | 1,526                    | 19.3   | 2,906              | 36.8   | 1,752                   | 22.2  | 8                        | 0.1  | 193                   | 2.1   | 7,880                  | 100.0      |
| Divisional<br>Total | 121,511                  | 33.6   | 109,090            | 30.1   | 85,571                  | 23.7  | 28,017                   | 7.8  | 11,237                | 3.1   | 361,116                | 100.0      |
| <u>1961</u>         |                          |  |                    |  |                         |   |                          |  |                       |   |                        |            |
| 1                   | 91,659                   | 18.5   | 11,055             | 25.1   | 36,760                  | 19.5  | 6,110                    | 3.3  | 2,119                 | 1.3   | 188,901                | 100.0      |
| 2                   | 11,299                   | 15.6   | 6,085              | 21.6   | 5,151                   | 20.8  | 2,017                    | 8.3  | 126                   | 0.5   | 21,779                 | 100.0      |
| 3                   | 1,128                    | 18.1   | 16,575             | 71.1   | 1,799                   | 7.7   | 557                      | 2.1  | 31                    | 0.1   | 23,299                 | 100.0      |
| 4                   | 18,101                   | 76.1   | 3,691              | 15.3   | 1,167                   | 1.8   | 262                      | 1.1  | 317                   | 1.1   | 21,185                 | 100.0      |
| 5                   | 11,625                   | 29.7   | 13,052             | 33.1   | 7,875                   | 20.1  | 3,810                    | 9.7  | 1,988                 | 5.1   | 39,086                 | 100.0      |
| 6                   | 11,226                   | 29.5   | 7,305              | 19.2   | 8,189                   | 21.5  | 6,526                    | 17.2   | 1,196                 | 11.0  | 38,015                 | 100.0      |
| 7                   | 3,678                    | 9.2  | 11,630             | 36.9   | 11,973                  | 37.8  | 5,005                    | 12.6   | 1,020                 | 2.6   | 39,652                 | 100.0      |
| 8                   | 1,371                    | 9.8  | 6,619              | 11.8   | 15,363                  | 31.1  | 10,211                   | 22.9   | 7,530                 | 16.9  | 11,659                 | 100.0      |
| 9                   | 3,125                    | 15.8   | 10,339             | 17.6   | 3,973                   | 18.3  | 1,593                    | 7.3  | 2,227                 | 10.3  | 21,710                 | 100.0      |
| 10                  | 3,703                    | 27.1   | 1,337              | 32.0   | 2,636                   | 19.5  | 71                       | 0.5  | 171                   | 3.5   | 13,531                 | 100.0      |
| Divisional<br>Total | 163,618                  | 35.7   | 130,688            | 28.5   | 97,886                  | 21.1  | 36,258                   | 7.9  | 20,361                | 1.1   | 167,853                | 100.0      |

Note: <sup>a</sup> .. less than 0.1%.Source: 1. Dominion Bureau of Statistics, Census of Canada, 1951 and 1961.

CHART 3-4

PERCENTAGE DISTRIBUTION OF POPULATION IN NEWFOUNDLAND  
BY RELIGIOUS DENOMINATION

1951 AND 1961



Source: Table 3-7



TABLE 3-8

PERCENTAGE DISTRIBUTION OF POPULATION  
IN NEWFOUNDLAND BY CENSUS DIVISION AND  
BY SELECTED RELIGIOUS DENOMINATION

1951 AND 1961

| Census<br>Division | Roman<br>Catholic | Anglican | United<br>Church | Salvation<br>Army | Pentecostal | Newfoundland<br>Total |
|--------------------|-------------------|----------|------------------|-------------------|-------------|-----------------------|
| <u>1951</u>        |                   |          |                  |                   |             |                       |
| 1                  | 57.6              | 36.2     | 36.1             | 17.8              | 14.8        | 41.4                  |
| 2                  | 8.0               | 5.0      | 6.2              | 6.4               | 0.9         | 6.2                   |
| 3                  | 2.6               | 13.8     | 2.1              | 1.6               | ..          | 5.7                   |
| 4                  | 10.1              | 2.4      | 0.8              | 0.2               | 0.4         | 4.4                   |
| 5                  | 6.7               | 8.8      | 7.1              | 9.7               | 10.4        | 7.8                   |
| 6                  | 6.3               | 5.2      | 7.7              | 17.8              | 23.4        | 7.7                   |
| 7                  | 2.6               | 12.6     | 16.2             | 13.9              | 2.3         | 9.8                   |
| 8                  | 2.7               | 5.7      | 17.5             | 28.3              | 36.0        | 10.2                  |
| 9                  | 2.1               | 7.6      | 4.3              | 4.3               | 10.0        | 4.7                   |
| 10                 | 1.3               | 2.7      | 2.0              | .. <sup>a</sup>   | 1.8         | 2.1                   |
| Total              | 100.0             | 100.0    | 100.0            | 100.0             | 100.0       | 100.0                 |
| <u>1961</u>        |                   |          |                  |                   |             |                       |
| 1                  | 56.0              | 36.8     | 37.6             | 16.9              | 11.9        | 41.3                  |
| 2                  | 6.9               | 4.7      | 5.3              | 5.6               | 0.6         | 5.4                   |
| 3                  | 2.6               | 12.7     | 1.8              | 1.5               | 0.2         | 5.1                   |
| 4                  | 11.2              | 2.8      | 1.2              | 0.8               | 1.7         | 5.3                   |
| 5                  | 7.1               | 10.0     | 8.0              | 10.5              | 9.8         | 8.5                   |
| 6                  | 6.9               | 5.6      | 8.4              | 18.0              | 20.6        | 8.3                   |
| 7                  | 2.2               | 11.2     | 15.3             | 13.8              | 5.0         | 8.7                   |
| 8                  | 2.7               | 5.0      | 15.7             | 28.3              | 37.0        | 9.8                   |
| 9                  | 2.1               | 7.9      | 4.0              | 4.4               | 10.9        | 4.7                   |
| 10                 | 2.3               | 3.3      | 2.7              | 0.2               | 2.3         | 2.9                   |
| Total              | 100.0             | 100.0    | 100.0            | 100.0             | 100.0       | 100.0                 |

Note: <sup>a</sup> .. less than 0.1%.

Source: 1. Calculated from Table 3-7.

to be found mainly in Division 1. The other two denominations are the Salvation Army and the Pentecostal Assemblies of Newfoundland. Together they numbered a little more than one-tenth of all Newfoundlanders. Almost one-third of these two denominations were centered in Division 8 (see Table 3-8).

Changes in population distribution in Newfoundland according to religious denominations within each region has also been very uniform since Confederation. This illustrates the coherency of the religious followers and the traditional home-community adhesion of the people in Newfoundland. Denominational homogeneity in each division is one of the basic factors which contributed to the development of the denominational system of education prevailing in the province.

#### C. Distribution by Age Group

Between 1951 and 1961 the population distribution by age groups in Newfoundland showed a clear trend in increasing the young population in the structure (see Table 3-9). During this period the number of people bracketed in the lower age groups increased relatively more than those in the higher age groups. The 5-19 years age group expanded from 31.2 percent of the total population in 1951 to 36.7 percent of the total in 1961. Except for a small percentage increase in the age group 45-54 years, the percentages of the remaining age groups declined. The most serious percentage decline was in the age group 25-34 years. This group occupied 13.5 percent of the total population

TABLE 3-9  
POPULATION DISTRIBUTION BY AGE GROUP FOR  
NEWFOUNDLAND IN 1951, 1956 AND 1961 AND  
FOR CANADA IN 1961

| Age<br>Group   | 1951                   |       | 1956                   |       | 1961                   |       | 1961<br>Canada |       |
|----------------|------------------------|-------|------------------------|-------|------------------------|-------|----------------|-------|
|                | Newfoundland<br>Number | %     | Newfoundland<br>Number | %     | Newfoundland<br>Number | %     | Number         | %     |
| 0-4            | 58,831                 | 16.3  | 63,374                 | 15.3  | 67,695                 | 14.8  | 2,256,401      | 12.3  |
| 5-9            | 46,433                 | 12.8  | 50,539                 | 14.4  | 64,404                 | 14.1  | 2,079,522      | 11.4  |
| 10-14          | 36,126                 | 10.0  | 45,997                 | 11.1  | 59,464                 | 13.0  | 1,855,999      | 10.2  |
| 15-19          | 30,403                 | 8.4   | 35,660                 | 8.6   | 43,829                 | 9.6   | 1,432,559      | 7.9   |
| 20-24          | 36,718                 | 7.4   | 30,018                 | 7.2   | 30,238                 | 6.6   | 1,183,646      | 6.5   |
| 25-34          | 48,871                 | 13.5  | 52,207                 | 12.6  | 52,290                 | 11.4  | 2,481,107      | 13.6  |
| 35-44          | 41,417                 | 11.5  | 47,866                 | 11.5  | 48,964                 | 10.7  | 2,389,885      | 13.1  |
| 45-54          | 27,883                 | 7.7   | 32,441                 | 7.8   | 39,343                 | 8.6   | 1,878,504      | 10.3  |
| 55-64          | 21,244                 | 5.9   | 23,183                 | 5.6   | 24,731                 | 5.4   | 1,280,470      | 7.0   |
| 65-69          | 9,071                  | 2.5   | 8,911                  | 2.1   | 9,684                  | 2.1   | 487,102        | 2.7   |
| 70 and<br>over | 14,419                 | 4.0   | 15,878                 | 3.8   | 17,211                 | 3.7   | 904,052        | 5.0   |
| Total          | 361,416                | 100.0 | 415,074                | 100.0 | 457,853                | 100.0 | 18,238,247     | 100.0 |

Source: 1. Dominion Bureau of Statistics, Census of Canada, 1951, 1956  
and 1961.

CHART 3-5

## POPULATION STRUCTURE IN NEWFOUNDLAND BY AGE GROUP

1951 AND 1961

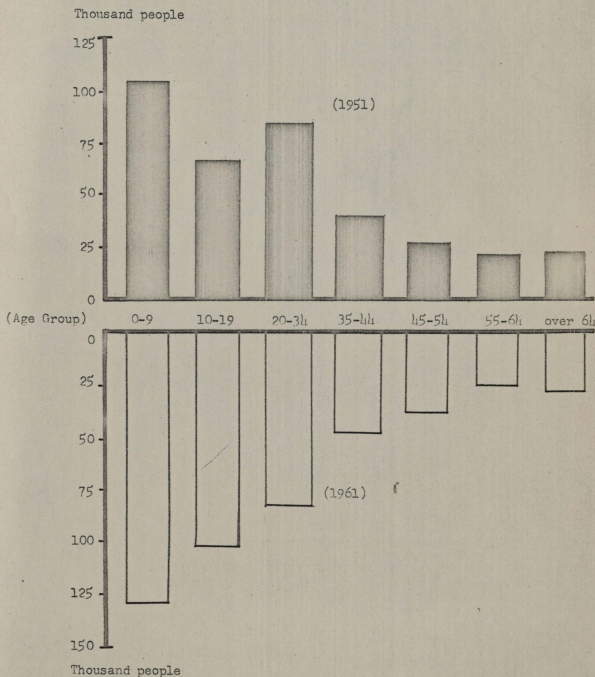
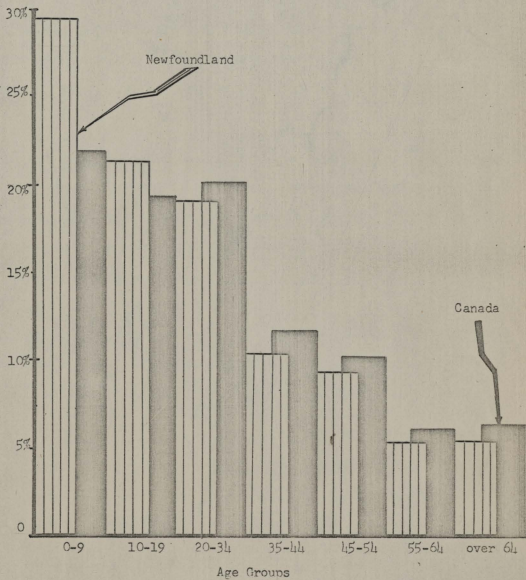


CHART 3-6

PERCENTAGE DISTRIBUTION OF POPULATION IN NEWFOUNDLAND  
AND CANADA BY AGE GROUP

1961



Source: Table 3-9

in 1951 but fell to 11.4 percent of the total in 1961. This, together with the percentage drop in the age group 35-44 years, explains the considerable loss of active manpower to the labor force. On the other hand, the percentage expansion of the school-age group (5-19) especially that of the age group 10-14 years, which had the highest percentage increase, indicates the urgent task of the Provincial Government to allocate more funds for education.

Newfoundland seems to have a case for a relatively greater share of Federal Grants for education because of its comparatively rapid growth in, and its larger proportion of, juvenile population. Newfoundland in 1961 had higher percentages of the total population in each age group below 24 years than did the whole of Canada; beyond 24 years of age, Newfoundland's proportion in each age group was lower than the Canadian average (see Table 3-9). A necessary rise in expenditure for the education of the young generation is obviously essential.

Education is a time-consuming and costly ~~process~~ and its investment has a long gestation. Newfoundland has spent relatively a great share in education, and it has therefore been concluded that Newfoundland would have been better off if its ratio of children to adults had been lower,<sup>17</sup> because a great deal of educational expenditure might have been alternatively utilized.

---

<sup>17</sup>. P. Copes, op. cit., p. 60.

## APPENDIX B

TABLE 1

CALCULATIONS OF POPULATION FOR NEWFOUNDLAND IN  
1951, 1956 and 1961, AND FOR CANADA IN 1961

---


$$1. \frac{\text{Economically non-productive group of Nfld. in 1951}}{\text{Economically productive group of Nfld. in 1951}} \times 100$$

$$= \frac{195,283}{166,133} \times 100 = 118$$

$$2. \frac{\text{Economically non-productive group of Nfld. in 1956}}{\text{Economically productive group of Nfld. in 1956}} \times 100$$

$$= \frac{229,359}{185,715} \times 100 = 124$$

$$3. \frac{\text{Economically non-productive group of Nfld. in 1961}}{\text{Economically productive group of Nfld. in 1961}} \times 100$$

$$= \frac{262,287}{195,566} \times 100 = 134$$

$$4. \frac{\text{Economically non-productive group of Canada in 1961}}{\text{Economically productive group of Canada in 1961}} \times 100$$

$$= \frac{9,015,635}{9,222,612} \times 100 = 98$$


---

Source: 1. Table 3-9.



## APPENDIX B

TABLE 2

## ESTIMATED POPULATION IN NEWFOUNDLAND

1964 TO 1980

|           | Population<br>y | Rate of<br>Growth (%)<br>r | x  | rx     | x <sup>2</sup> | Estimated<br>Population<br>y <sub>c</sub> |
|-----------|-----------------|----------------------------|----|--------|----------------|---|
| 1949      | 345,000         | 2.48                       | -7 | -17.36 | 49             |   |
| 1950      | 351,000         | 1.74                       | -6 | -10.44 | 36             |   |
| 1951      | 361,416         | 2.97                       | -5 | -14.85 | 25             |   |
| 1952      | 374,000         | 3.48                       | -4 | -13.92 | 16             |   |
| 1953      | 383,000         | 2.41                       | -3 | -7.23  | 9              |   |
| 1954      | 395,000         | 3.13                       | -2 | -6.26  | 4              |   |
| 1955      | 406,000         | 2.78                       | -1 | -2.78  | 1              |   |
| 1956      | 415,074         | 2.23                       | 0  | 0      | 0              |   |
| 1957      | 424,000         | 2.15                       | 1  | 2.15   | 1              | 425,409                                   |
| 1958      | 432,000         | 1.89                       | 2  | 3.78   | 4              | 435,832                                   |
| 1959      | 441,000         | 2.08                       | 3  | 6.24   | 9              | 446,336                                   |
| 1960      | 448,000         | 1.59                       | 4  | 6.36   | 16             | 456,914                                   |
| 1961      | 457,853         | 2.20                       | 5  | 11.00  | 25             | 467,560                                   |
| 1962      | 470,000         | 2.65                       | 6  | 15.90  | 36             | 478,267                                   |
| 1963      | 481,000         | 2.34                       | 7  | 16.38  | 49             | 489,028                                   |
| Total (Σ) |                 | 38.04                      | 0  | -11.03 | 280            |   |
| 1964      |                 | r <sub>c</sub> 2.21        | 8  |        |                | 499,836                                   |
| 1965      |                 | 2.17                       | 9  |        |                | 510,682                                   |
| 1966      |                 | 2.13                       | 10 |        |                | 521,559                                   |
| 1967      |                 | 2.09                       | 11 |        |                | 532,460                                   |
| 1968      |                 | 2.05                       | 12 |        |                | 543,375                                   |
| 1969      |                 | 2.01                       | 13 |        |                | 554,079                                   |
| 1970      |                 | 1.97                       | 14 |        |                | 564,994                                   |
| 1971      |                 | 1.93                       | 15 |        |                | 575,898                                   |
| 1972      |                 | 1.89                       | 16 |        |                | 586,782                                   |
| 1973      |                 | 1.85                       | 17 |        |                | 597,637                                   |
| 1974      |                 | 1.81                       | 18 |        |                | 608,454                                   |
| 1975      |                 | 1.77                       | 19 |        |                | 619,224                                   |

(continued)

APPENDIX B, TABLE 2 (continued)

|      | Population<br>y | Rate of<br>Growth (%)<br>r | x  | rx | x <sup>2</sup> | Estimated<br>Population<br>y <sub>c</sub> |
|------|-----------------|----------------------------|----|----|----------------|---|
| 1976 |                 | 1.73                       | 20 |    |                | 629,937                                   |
| 1977 |                 | 1.69                       | 21 |    |                | 640,583                                   |
| 1978 |                 | 1.65                       | 22 |    |                | 651,153                                   |
| 1979 |                 | 1.61                       | 23 |    |                | 661,637                                   |
| 1980 |                 | 1.57                       | 24 |    |                | 672,025                                   |

Notes: Formula used: 1.  $Na + b\sum x = \sum y$   
 $a\sum x + b\sum x^2 = \sum xy$

2.  $a = \frac{\sum x^2 \sum y - \sum x \sum xy}{N \sum x^2 - (\sum x)^2}$

$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - (\sum x)^2}$

$$a = 38.04/15 = 2.53$$

$$b = -11.03/280 = -0.04$$

$$r_c = a + bx = 2.53 - 0.04x$$

$$y_c = y (100 + 2.53 - 0.04x)$$

base year: July 1, 1956

x unit: one year

Source: Dominion Bureau of Statistics, Population Information from 1949 to 1963.

## CHAPTER IV

## THE EDUCATION OF NEWFOUNDLAND

This chapter deals mainly with the evolution of education in Newfoundland since Confederation. However, it is necessary to discuss first the system of education. Quantitative and qualitative analyses of students, teachers and the provision of schools and classrooms follow this discussion.

The analyses proceed along two lines: first for the province as a whole, and then for each major religious denomination. Accordingly, a few projections of the future demand for educational services and a divisional investigation are made.

1. The State-Denomination Education System

Education in Newfoundland has always been unique because its system has no exact counterpart in the world.<sup>1</sup> Newfoundland's educational pattern, like the pattern of population distribution, was framed religiously and topographically. The Society for the Propagation of the Gospel established the first formal school at Bonavista in 1722 or 1723,<sup>2</sup> and for some time thereafter the schools in Newfoundland were operated generally by some religious and philanthropic

---

1. F.W. Rowe, The Development of education in Newfoundland, The Ryerson Press, Toronto, 1964, preface.

2. Ibid., p. 28.

societies. In 1923 the Newfoundland School Society ended its voluntary education activities after the Department of Education had been set up in 1920 under the Education Act. Thus, the Government has actively shouldered the responsibility of educating its people since then.

Because churches initiated the educational activities and provided free opportunities for their followers, and because most of the people in each of the communities were adherents of one denomination, the educational system in Newfoundland has developed along denominational lines. The enrolment of schools consists largely of students of one denomination. In certain areas Amalgamated Schools have also been established, especially for the higher grades, in order to consolidate and educate more efficiently the students of various denominations.

At present, education in Newfoundland is being administered by the Department of Education. The Minister of Education is the chief executive. with him on the Council of Education or the policy-making body are the Deputy Minister and five superintendents representing five different religious denominations: The Roman Catholic, The Church of England, The United Church of Canada, The Salvation Army and The Pentecostal Assemblies of Newfoundland. Each of these superintendents has a veto power in the Council of Education. A director of Amalgamated School Services is also a member of the Council but

has no voting right. The superintendents guide the school board and teachers within their denominations. The Presbyterians and The Seventh Day Adventists have been recognized for educational purposes, but they are not represented at the departmental level by a superintendent.

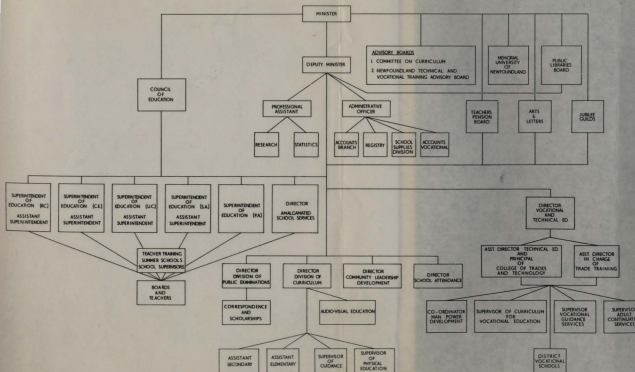
At the present time the province has a total of some 276 school districts. In each district, there is a School Board of five or more persons, one of whom is usually the senior clergyman or other officer of the denomination of the district. The constitutions of school boards must be approved by the Council of Education. The separate boards then make by-laws for the management of their property and business, signing of agreements and contracts, appointment and dismissal of teachers, and various other administrative duties (see Appendix C, Chart1).

The education system in Newfoundland is not a State system or a private enterprise. The State does not entirely control education nor provide all the monies necessary to operate it. Nor is the system a church system. Although the churches own all the schools through their various School Boards, the patent to operate schools must be granted by the Government. In addition, the churches depend substantially on Government Grants for both overhead and working capital. Moreover, teachers' salaries are paid entirely by government. It is this working partnership between churches and state which makes

# GOVERNMENT OF NEWFOUNDLAND

## DEPARTMENT OF EDUCATION

74.



the education system in Newfoundland unique.

## 2. The School Population

### A. Growth and Distribution of Student Population

#### a. General Description.

The rapid growth of population, particularly of the school-age group (5-19 years of age) was described in Chapter III. This factor has inevitably caused a relatively high percentage of student enrolment. From 1949 to 1963, as shown in Table 4-1, the provincial population expanded by 36.2 percent, whereas the total enrolment increased more than three-fourths, or from less than eighty thousand to more than one hundred and thirty seven thousand pupils. Total enrolment was 29.3 percent of the total population in 1963. During this period, male pupils increased about 80 percent as compared to an increase of 72 percent for female students. In the school year of 1958-59 a yearly peak of increase in enrolment was reached when more than six thousand additional students were enroled. The lowest number of beginners was in 1950-51 when only a little more than one thousand new students were enroled. On the average over the past fourteen years, the student population in Newfoundland increased by four thousand six hundred students per year (see Table 4-1).

The increase in enrolment was especially high at the secondary level. Between 1949 and 1963 the total secondary



TABLE 4-1

TOTAL POPULATION, SCHOOL ENROLMENT AND PERCENTAGE DISTRIBUTION BY  
EDUCATIONAL LEVEL AND SEX, FOR NEWFOUNDLAND

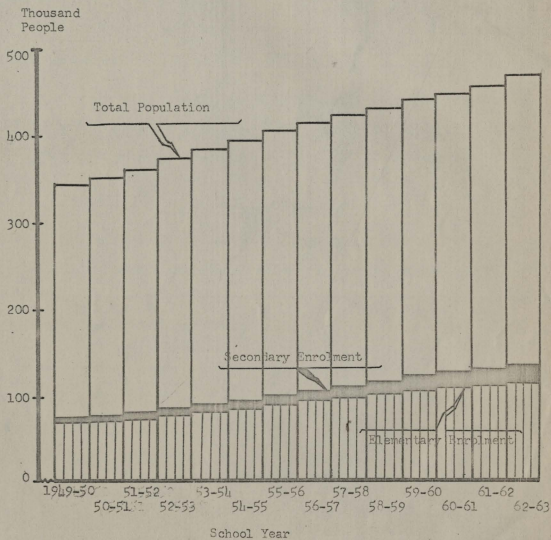
1949-50 TO 1962-63

|  | Provincial<br>Population | Enrolment                  |                              |         | Enrolment as a percentage<br>of provincial population |           |       | Percentage Distribution of Students |           |       |       |        |
|--|--------------------------|----------------------------|------------------------------|---------|---|-----------|-------|-------------------------------------|-----------|-------|-------|--------|
|  |                          | Elementary<br>Grade I-VIII | Secondary<br>Over Grade VIII | Total   | Elementary  | Secondary | Total | Educational Level                   |           |       | Sex   |        |
|  |                          |                            |                              |         |   |           |       | Elementary                          | Secondary | Total | Male  | Female |
| 1949-50                                    | 345,000                  | 60,808                     | 8,463                        | 78,271  | 20.2  | 2.5       | 22.7  | 89.2                                | 10.8      | 100.0 | 50.0  | 50.0   |
| 1950-51                                    | 351,000                  | 70,348                     | 8,980                        | 79,328  | 20.0  | 2.6       | 22.6  | 88.7                                | 11.3      | 100.0 | 50.0  | 50.0   |
| 1951-52                                    | 361,416                  | 73,715                     | 9,983                        | 83,698  | 20.4  | 2.8       | 23.2  | 88.1                                | 11.9      | 100.0 | 52.5  | 47.5   |
| 1952-53                                    | 374,000                  | 77,540                     | 10,273                       | 87,813  | 20.7  | 2.8       | 23.5  | 88.3                                | 11.7      | 100.0 | 50.3  | 49.7   |
| 1953-54                                    | 383,000                  | 81,546                     | 10,818                       | 92,364  | 21.3  | 2.8       | 24.1  | 88.3                                | 11.7      | 100.0 | 50.5  | 49.5   |
| 1954-55                                    | 395,000                  | 86,231                     | 11,569                       | 97,800  | 21.8  | 3.0       | 24.8  | 88.2                                | 11.8      | 100.0 | 50.5  | 49.5   |
| 1955-56                                    | 406,000                  | 90,428                     | 12,205                       | 102,633 | 22.3  | 3.0       | 25.3  | 88.1                                | 11.9      | 100.0 | 50.5  | 49.5   |
| 1956-57                                    | 415,074                  | 95,081                     | 13,027                       | 108,108 | 22.9  | 3.1       | 26.0  | 88.0                                | 12.0      | 100.0 | 50.7  | 49.3   |
| 1957-58                                    | 424,000                  | 98,731                     | 14,512                       | 113,243 | 23.3  | 3.4       | 26.7  | 87.2                                | 12.8      | 100.0 | 50.6  | 49.4   |
| 1958-59                                    | 432,000                  | 103,546                    | 15,733                       | 119,279 | 24.0  | 3.6       | 27.6  | 86.8                                | 13.2      | 100.0 | 50.8  | 49.2   |
| 1959-60                                    | 441,000                  | 107,959                    | 17,308                       | 125,267 | 24.4  | 3.9       | 28.3  | 86.1                                | 13.9      | 100.0 | 50.9  | 49.1   |
| 1960-61                                    | 448,000                  | 109,630                    | 19,287                       | 128,917 | 24.5  | 4.3       | 28.8  | 85.0                                | 15.0      | 100.0 | 50.9  | 49.1   |
| 1961-62                                    | 457,853                  | 112,316                    | 21,431                       | 133,747 | 24.5  | 4.7       | 29.2  | 84.0                                | 16.0      | 100.0 | 51.4  | 48.6   |
| 1962-63                                    | 470,000                  | 115,161                    | 22,539                       | 137,700 | 24.5  | 4.8       | 29.3  | 83.6                                | 16.4      | 100.0 | 51.1  | 48.9   |
| Percentage<br>change<br>1962-63<br>1949-50 | 136.2                    | 165.0                      | 266.3                        | 175.9   | -   | -         | -     | -                                   | -         | -     | 179.7 | 172.2  |
| Average Yearly<br>Increase                 | 9,615                    | 3,488                      | 1,083                        | 4,571   | -   | -         | -     | -                                   | -         | -     | -     | -      |

Sources: 1. Dominion Bureau of Statistics, for population data.  
2. Government of Newfoundland and Labrador, Department of Education, Annual Report, 1949 and 1963.

## TOTAL POPULATION AND SCHOOL ENROLMENT IN NEWFOUNDLAND

1949-50 TO 1962-63



Source: Table 4-1.

students increased from 8,463 to 22,539 or 166 percent, while elementary students rose from 69,808 pupils to 115,161 pupils or 65 percent. Despite the increase in absolute numbers, enrolment in elementary schools accounted for 83.6 percent of total enrolment in 1962-63 as against 89.2 percent of the total in 1949-50.

Appendix C (Tables 1 and 2) contains the projected figures for future growth of school enrolments in Newfoundland. According to recent long-term trends the total enrolment in the province will be 259,676 pupils by 1980 or nearly double the 1963 figure. Enrolments at secondary level will increase to 44,046 by 1970 or over twice as many as the number of secondary students in 1963. Based on these figures, an estimate can be made of such future needs as teachers, classrooms, finances and so forth.

b. Growth and Distribution by Sex and Age Groups.

The school-age population of Newfoundland increased by more than seventy thousand people or 66.1 percent during the first fourteen years after Confederation, as compared with a 36.2 percent growth in the total provincial population. The number of girls of school age increased relatively more rapidly than did the boys, while the absolute number of both sexes were approximately the same, with boys outnumbering girls by only 2,000 in 1962-63 (see Table 4-2). In contrast, the

SCHOOL AGE POPULATION<sup>a</sup> AND SCHOOL ENROLMENT IN NEWFOUNDLAND  
BY SEX AND BY AGE GROUP  
1949-50 AND 1962-63

|  | 1949-50 |        |         | 1962-63 |        |         | Percentage Change |       |       |
|--|---------|--------|---------|---------|--------|---------|-------------------|-------|-------|
|  | Boy     | Girl   | Total   | Boy     | Girl   | Total   | Boy               | Girl  | Total |
| School age population                          | 54,758  | 52,192 | 106,950 | 89,800  | 87,800 | 177,600 | 164.0             | 168.2 | 166.1 |
| Aggregate students                             | 39,144  | 39,127 | 78,271  | 70,339  | 67,361 | 137,700 | 179.7             | 172.2 | 176.0 |
| 1. Elementary                                  | 35,426  | 34,382 | 69,808  | 59,030  | 56,131 | 115,161 | 166.6             | 163.3 | 165.0 |
| 2. Secondary                                   | 3,718   | 4,745  | 8,463   | 11,309  | 11,230 | 22,539  | 304.2             | 236.7 | 266.3 |
| 1. Under 6                                     | 1,446   | 1,541  | 2,987   | 2,902   | 2,990  | 5,892   | 200.7             | 194.0 | 197.3 |
| 2. 6-14  | 33,103  | 32,738 | 65,841  | 55,412  | 54,181 | 109,593 | 167.4             | 165.5 | 166.5 |
| 3. 15-17                                       | 4,227   | 4,457  | 8,684   | 10,973  | 9,671  | 20,644  | 259.6             | 217.0 | 237.7 |
| 4. 18 and over                                 | 368     | 391    | 759     | 1,052   | 519    | 1,571   | 285.9             | 132.7 | 207.0 |
| Percentage of Total                            |         |        |         |         |        |         |                   |       |       |
| School age population                          | 51.2    | 48.8   | 100.0   | 50.6    | 49.4   | 100.0   |                   |       |       |
| Aggregate students                             | 50.0    | 50.0   | 100.0   | 51.1    | 48.9   | 100.0   |                   |       |       |
| 1. Elementary                                  | 50.7    | 49.3   | 100.0   | 51.3    | 48.7   | 100.0   |                   |       |       |
| 2. Secondary                                   | 43.9    | 56.1   | 100.0   | 50.2    | 49.8   | 100.0   |                   |       |       |
| 1. Under 6                                     | 48.4    | 51.6   | 100.0   | 49.4    | 50.6   | 100.0   |                   |       |       |
| 2. 6-14  | 50.3    | 49.7   | 100.0   | 50.6    | 49.4   | 100.0   |                   |       |       |
| 3. 15-17                                       | 48.7    | 51.3   | 100.0   | 53.2    | 46.8   | 100.0   |                   |       |       |
| 4. 18 and over                                 | 48.5    | 51.5   | 100.0   | 67.0    | 33.0   | 100.0   |                   |       |       |
| Percentage of Aggregate Students               |         |        |         |         |        |         |                   |       |       |
| Aggregate students                             | 100.0   | 100.0  | 100.0   | 100.0   | 100.0  | 100.0   |                   |       |       |
| 1. Elementary                                  | 90.5    | 87.9   | 89.2    | 83.9    | 83.3   | 83.6    |                   |       |       |
| 2. Secondary                                   | 9.5     | 12.1   | 10.8    | 16.1    | 16.7   | 16.4    |                   |       |       |
| 1. Under 6                                     | 3.7     | 3.9    | 3.8     | 4.0     | 4.4    | 4.3     |                   |       |       |
| 2. 6-14  | 84.6    | 83.7   | 84.1    | 78.9    | 80.4   | 79.6    |                   |       |       |
| 3. 15-17                                       | 10.8    | 11.4   | 11.1    | 15.6    | 14.4   | 15.0    |                   |       |       |
| 4. 18 and over                                 | 0.9     | 1.0    | 1.0     | 1.5     | 0.8    | 1.1     |                   |       |       |
| Aggregate students to<br>School age population | 0.71    | 0.75   | 0.73    | 0.78    | 0.77   | 0.78    |                   |       |       |

Note: <sup>a</sup> Figures for 1949-50 are estimated, based on 1951 Census figures.

Sources: 1. Dominion Bureau of Statistics, Census of Canada, 1951 and population information from St. John's Regional Office, for 1962-63.

2. Government of Newfoundland and Labrador, Department of Education, Annual Report, 1950 and 1962.

enrolment of boys increased relatively more rapidly than did that of girls. In 1949-50 boys accounted for 50.0 percent of the total enrolment while in 1962-63 they constituted 51.1 percent of the total. Therefore, in 1962-63 the ratio of enrolment to school population for boys was larger than for the girls, i.e. 0.78 as against 0.77. But the ratio for boys in 1949-50 was smaller than that of girls: 0.71 compared with 0.75. For both sexes the ratio rose from 0.73 to 0.78 during the past fourteen years (see Table 4-2). This implies that the economic progress in Newfoundland raised family incomes; hence boys were released from working and could stay in schools longer. This explanation is supported by Table 4-2. Among the secondary students, the sex composition altered considerably. Out of the total secondary enrolments in 1949-50, 43.9 percent consisted of boys, while in 1962-63, they amounted to 50.2 percent of the total. Male enrolment in secondary schools was more than trebled while female enrolment was little more than doubled. On the whole, secondary enrolments increased by 166.3 percent as compared with an increase of 65 percent for elementary enrolments. The distribution of elementary students according to sex did not change very much during the period concerned, with boys and girls each making up half of the students.

As the enrolment increased, the average years which students stayed at schools also increased, because the number

of older students grew relatively more rapidly than the younger ones. Between 1949 and 1963 the percentage of students under six years of age represented little more than the average increase of all students: 97 percent against 76 percent. Students aged six to fourteen years rose less than the average. However, students aged fifteen years and over increased to more than twice the number of their counterparts in 1949, especially the age group of fifteen to seventeen years which had an exceptionally high increase. Again, male students in every age group showed an overriding percentage increase as compared with the female students. This was particularly so in the age group eighteen years and over in which male students almost trebled the 1949 figure, and female students rose by one-third more than the 1949 figure (see Table 4-2).

The percentage distribution of total students according to age did not change greatly. There was a proportional decrease in the age group six to fourteen years. It accounted for 84.1 percent of the total enrolment in 1949-50, but only for 79.6 percent of all students in 1962-63. There was a proportional rise in the number of students aged fifteen to seventeen years, which was 11.1 percent of the total in 1949-50 and became 15.0 percent of the total in 1962-63. About 4 percent and 1 percent of the total consisted of the youngest and oldest group respectively (see Table 4-2).

c. Growth and Distribution by Type of School Attended

The growth and distribution of students in each type of school attended is shown by Table 4-3. Amalgamated schools, which contain primarily Protestant high school students, had the highest percentage expansion in enrolment from 1949 to 1963. The total number of students in these schools more than doubled during this period. The amalgamated schools accommodated less than six thousand students or 7.4 percent of the provincial total in 1949-50, and educated more than thirteen thousand students or 9.9 percent of the total in 1962-63. Of the increase, the number of secondary students rose particularly sharply, over four times more than the 1949-50 figure. About one out of four amalgamated school students in 1962-63 were at the secondary level. In the province as a whole, secondary students in this type of service accounted for 7.9 percent of total in 1949-50, and for 13.7 percent in 1962-63.

Roman Catholic schools educate more pupils than any other denomination. These schools educated more than one-third of the students or 34.7 percent in 1949-50 and 38.0 percent in 1962-63. During this period, the number of students in this type of service increased by 92.6 percent. But the proportion of secondary students in these schools to the total provincial figure in 1962-63 was less than that of 1949-50. The percentage



TABLE 1-3

## ELEMENTARY AND SECONDARY ENROLMENT IN NEWFOUNDLAND BY TYPE OF SERVICES

1949-50 AND 1962-63

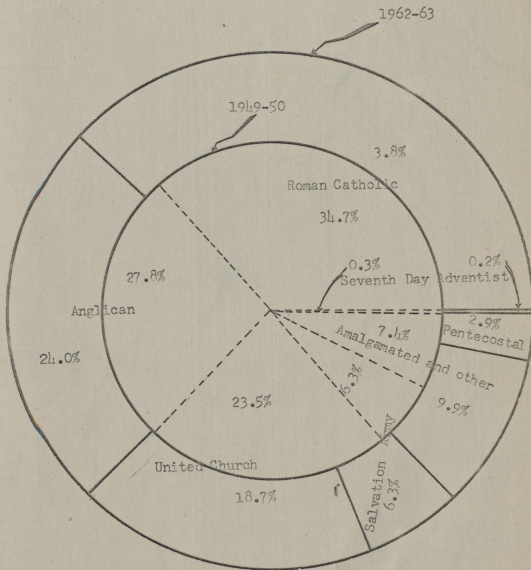
|                               | 1949-50    |           |        | 1962-63    |           |         | Percentage change |           |       |
|-------------------------------|------------|-----------|--------|------------|-----------|---------|-------------------|-----------|-------|
|                               | Elementary | Secondary | Total  | Elementary | Secondary | Total   | Elementary        | Secondary | Total |
| Roman Catholic                | 23,844     | 3,333     | 27,177 | 44,260     | 8,088     | 52,348  | 185.6             | 242.7     | 192.6 |
| Anglican                      | 19,688     | 2,070     | 21,758 | 27,750     | 5,236     | 32,986  | 140.9             | 252.9     | 151.6 |
| United Church                 | 16,331     | 2,055     | 18,386 | 21,161     | 4,626     | 25,787  | 129.6             | 225.1     | 140.3 |
| Salvation Army                | 4,626      | 316       | 4,942  | 7,656      | 1,010     | 8,666   | 165.5             | 319.6     | 175.4 |
| Pentecostal                   | -          | -         | -      | 3,480      | 449       | 3,929   | -                 | -         | -     |
| Seventh Day Adventist         | 215        | 18        | 233    | 320        | 40        | 360     | 148.8             | 222.2     | 154.5 |
| Amalgamated and others        | 5,104      | 671       | 5,775  | 10,534     | 3,090     | 13,624  | 206.4             | 460.5     | 235.9 |
| Aggregate total               | 69,808     | 8,463     | 78,271 | 115,161    | 22,539    | 137,700 | 165.0             | 266.3     | 176.0 |
| Percentage of Total           |            |           |        |            |           |         |                   |           |       |
| Roman Catholic                | 87.7       | 12.3      | 100.0  | 84.5       | 15.5      | 100.0   |                   |           |       |
| Anglican                      | 90.5       | 9.5       | 100.0  | 84.1       | 15.9      | 100.0   |                   |           |       |
| United Church                 | 88.8       | 11.2      | 100.0  | 82.1       | 17.9      | 100.0   |                   |           |       |
| Salvation Army                | 93.6       | 6.4       | 100.0  | 88.3       | 11.7      | 100.0   |                   |           |       |
| Pentecostal                   | -          | -         | -      | 88.6       | 11.4      | 100.0   |                   |           |       |
| Seventh Day Adventist         | 92.3       | 7.7       | 100.0  | 88.9       | 11.1      | 100.0   |                   |           |       |
| Amalgamated and others        | 88.4       | 11.6      | 100.0  | 77.3       | 22.7      | 100.0   |                   |           |       |
| Aggregate total               | 89.2       | 10.8      | 100.0  | 83.6       | 16.4      | 100.0   |                   |           |       |
| Percentage of Aggregate total |            |           |        |            |           |         |                   |           |       |
| Roman Catholic                | 34.2       | 39.4      | 34.7   | 38.4       | 35.9      | 34.0    |                   |           |       |
| Anglican                      | 28.2       | 24.5      | 27.8   | 24.1       | 23.2      | 24.0    |                   |           |       |
| United Church                 | 23.4       | 24.3      | 23.5   | 18.4       | 20.5      | 18.7    |                   |           |       |
| Salvation Army                | 6.6        | 3.7       | 6.3    | 6.7        | 4.5       | 6.3     |                   |           |       |
| Pentecostal                   | -          | -         | -      | 3.0        | 2.0       | 2.9     |                   |           |       |
| Seventh Day Adventist         | 0.3        | 0.2       | 0.3    | 0.3        | 0.2       | 0.2     |                   |           |       |
| Amalgamated and others        | 7.3        | 7.9       | 7.4    | 9.1        | 13.7      | 9.9     |                   |           |       |
| Aggregate total               | 100.0      | 100.0     | 100.0  | 100.0      | 100.0     | 100.0   |                   |           |       |

Source: 1. Government of Newfoundland and Labrador, Department of Education, Annual Report, 1949-50 and Statistical Supplement, 1962-63.

CHART 4-2

PERCENTAGE DISTRIBUTION OF SCHOOL ENROLMENT IN NEWFOUNDLAND  
BY TYPE OF SERVICES

1949-50 AND 1962-63



Total Enrolment  
 1949-50: 78,271  
 1962-63: 137,700

Note: In 1949-50 there was no Pentecostal school.

Source: Table 4-3.

dropped from 39.4 percent to 35.9 percent, despite the fact that the absolute number of the secondary students had increased considerably.

The second largest educational service is offered by Anglican schools. During the past fourteen years, the number of students in these schools rose by only one half, and the proportion of the total provincial students in these schools declined from 27.8 percent to 24.0 percent. However, Anglican schools showed a relatively greater concentration towards secondary education: secondary enrolments in these schools rose from 9.5 percent to 15.9 percent of their total enrolments.

From 1949-50 to 1962-63, enrolment in the schools of the United Church had the lowest percentage increase among the different denominational schools (40.3 percent). The proportion of students in the United Church schools decreased from 23.5 percent to 18.7 percent of the provincial total. Nonetheless, these schools enrolled a comparatively high percentage of secondary students among all denominational schools: more than one out of six students in this type of educational service was above Grade VIII in 1962-63.

The number of students in schools of the Salvation Army grew approximately the same as the provincial average,

and the absolute number of secondary students in this type of service more than trebled over the period. Nevertheless, the number of secondary students in these schools in 1962-63 still constituted a very small part of their total enrolment. The percentage was 11.7, which was lower than the provincial average of 16.4 percent (see Table 4-3).

Recognized educational services were not provided by the Pentecostal Assemblies of Newfoundland until 1957. Also, they educated less than 3 percent of total students in 1962-63. In that year 360 students enrolled at schools established by the Seventh Day Adventist. These two types of educational services were primarily elementary students, and only a little more than one-tenth of their total enrolments were secondary students in 1962-63.

#### B. Student Attendance

Student attendance is an important factor in determining educational efficiency. A developed country has a high and progressing level of education among its population; similarly, a good educational system is bound to result in a high and progressing level of attendance among students. It was not until 1943 that the Newfoundland Government passed the School Attendance Act whereby attendance for all children between seven and fourteen years of age was made free and compulsory. With the introduction of the Act there was an

immediate improvement in attendance. In 1949 Family Allowance Payments, which are contingent upon satisfactory attendance at school, were introduced. Parents do not wish to run the risk of having the monthly allowance stopped as a result of the failure of their children to attend school.<sup>3</sup> The percentage attendance was below 70 percent prior to 1943, but it was 76.4 percent in 1948-49 and 85.2 percent in 1949-50. From 1956-57 onward, the percentage attendance in Newfoundland has never fallen below 90.0 percent, and the highest record of attendance in Newfoundland history was 92.7 percent in 1959-60 (see Table 4-4).

Between 1949-50 and 1962-63 total enrolment rose by 76 percent, but student average daily attendance grew by 88 percent. The yearly increase in enrolment averaged 4,571 students, while average daily attendance increased by 4,455. In 1949-50 Roman Catholic schools had the highest percentage attendance of any denomination, with 86.3 percent. Salvation Army schools with 76.3 percent were the lowest. In 1962-63 amalgamated schools obtained the highest percentage attendance in the Province, with a record of 93.4 percent as compared with 91.8 percent in the United Church schools. All other schools had percentage attendances below the provincial average of 91.6 percent (see Table 4-5).

---

3. Government of Newfoundland and Labrador, Department of Education, Annual Report, 1963, p. 127.

TABLE 4-4

ENROLMENT, AVERAGE DAILY ATTENDANCE AND PERCENTAGE  
ATTENDANCE IN NEWFOUNDLAND SCHOOLS

1949-50 TO 1962-63

|                               | Total<br>Enrolment | Average Daily Attendance<br>Growth |                    |                | Percentage<br>Attendance |
|-------------------------------|--------------------|------------------------------------|--------------------|----------------|--------------------------|
|                               |                    | Number                             | Index <sup>a</sup> | Annual<br>Rate |                          |
| 1949-50                       | 78,271             | 66,727                             | 100                | -              | 85.2                     |
| 1950-51                       | 79,328             | 67,638                             | 101                | 1.37           | 88.5                     |
| 1951-52                       | 83,698             | 71,064                             | 106                | 5.07           | 88.7                     |
| 1952-53                       | 87,813             | 77,040                             | 115                | 8.41           | 89.5                     |
| 1953-54                       | 92,364             | 80,841                             | 121                | 4.93           | 89.4                     |
| 1954-55                       | 97,800             | 85,417                             | 128                | 5.66           | 89.5                     |
| 1955-56                       | 102,633            | 90,132                             | 135                | 5.52           | 89.5                     |
| 1956-57                       | 108,108            | 96,060                             | 144                | 6.58           | 90.7                     |
| 1957-58                       | 113,243            | 98,496                             | 149                | 3.58           | 90.1                     |
| 1958-59                       | 119,279            | 106,656                            | 160                | 7.20           | 90.4                     |
| 1959-60                       | 124,867            | 114,320                            | 171                | 7.19           | 92.7                     |
| 1960-61                       | 128,917            | 116,584                            | 175                | 1.98           | 91.7                     |
| 1961-62                       | 133,747            | 120,382                            | 180                | 3.26           | 91.2                     |
| 1962-63                       | 137,700            | 125,365                            | 188                | 4.14           | 91.6                     |
| Yearly<br>Average<br>Increase | 4,571              | 4,455                              | -                  | 4.99           | -                        |
| 1962-63<br>1949-50            | 1.76               | 1.88                               | -                  | -              | -                        |

Note: <sup>a</sup> 1949-50 = 100.Source: 1. Government of Newfoundland and Labrador, Department of Education, Statistical Supplement 1956 and 1963.

TABLE 4-5  
AVERAGE DAILY ATTENDANCE IN NEWFOUNDLAND  
SCHOOLS BY TYPE OF SERVICES

1949-50 AND 1962-63

|                        | 1949-50 |                          | 1962-63 |                          | Percentage<br>change of<br>A.D.A. |
|------------------------|---------|--------------------------|---------|--------------------------|-----------------------------------|
|                        | A.D.A.  | Percentage<br>Attendance | A.D.A.  | Percentage<br>Attendance |                                   |
| Roman Catholic         | 23,449  | 86.3                     | 48,203  | 91.2                     | 205.6                             |
| Anglican               | 18,542  | 85.2                     | 29,707  | 91.5                     | 160.2                             |
| United Church          | 15,608  | 84.8                     | 23,276  | 91.8                     | 149.1                             |
| Salvation Army         | 3,771   | 76.3                     | 7,781   | 90.7                     | 206.3                             |
| Pentecostal            | -       | -                        | 3,506   | 90.9                     | -                                 |
| Seventh Day Adventist  | 198     | 84.9                     | 317     | 90.7                     | 160.1                             |
| Amalgamated and others | 5,159   | 84.0 <sup>a</sup>        | 12,578  | 93.4                     | 243.8                             |
| Total                  | 66,727  | 85.2                     | 125,367 | 91.6                     | 187.9                             |

Note: <sup>a</sup> This is the percentage attendance of amalgamated school; in community schools it was 85.6% and 88.7% in land settlement schools.

Source: 1. Government of Newfoundland and Labrador, Department of Education, Annual Report, 1950 and Statistical Supplement, 1963.



Table 4-6 shows various causes of student absences from schools by each type of educational service. Illness has been the overwhelming reason of poor attendance in Newfoundland. It was responsible for 63.2 percent for all absent pupil-days in 1962-63. Unexcused absence and bad weather were other main reasons, while student's absences resulting from parents' neglect were negligible. Of the reasons for absenteeism, illness and home help may conceivably decrease following improvement in standards of living in the Province. Educational opportunity lost because of bad weather will be lessened when transportation facilities are improved and school and residence centralization increased.

#### C. Rate of Retention and Drop out

Although it is argued that it is the economic situation that forces attention to school drop out,<sup>4</sup> the drop out is none the less itself an important factor in both economic and educational study. Enrolment in each year consists of last year's figure plus new students less graduates and drop outs. In Newfoundland the Department of Education thought that the rate of drop out should be calculated on the basis of pupils over seven years of age or beyond Grade I, because many children begin school at various ages prior to the compulsory

---

<sup>4</sup>. Daniel Schreiber (ed.), The School Dropout, National Education Association, Washington, D.C., 1964, p. 207.

TABLE 4-6  
 PERCENTAGE OF PUPIL-DAYS ABSENCE BY CAUSE,  
 FOR TYPE OF SERVICES IN NEWFOUNDLAND

1962-63

|                          | Pupils'<br>Illness | Unexcused<br>Absence | Parental<br>Neglect | Weather | Home<br>Help | Other | Total |
|--------------------------|--------------------|----------------------|---------------------|---------|--------------|-------|-------|
| Roman<br>Catholic        | 65.4               | 6.2                  | 0.9                 | 8.3     | 1.8          | 14.4  | 100.0 |
| Anglican                 | 61.6               | 8.9                  | 0.8                 | 7.0     | 4.5          | 17.2  | 100.0 |
| United<br>Church         | 64.7               | 7.3                  | 0.7                 | 7.2     | 5.2          | 14.9  | 100.0 |
| Salvation<br>Army        | 53.7               | 11.2                 | 1.2                 | 7.2     | 5.4          | 21.3  | 100.0 |
| Pentecostal              | 46.0               | 13.5                 | 0.6                 | 7.1     | 6.5          | 26.3  | 100.0 |
| Seventh Day<br>Adventist | 66.1               | 7.2                  | 0.4                 | 10.5    | 2.1          | 13.7  | 100.0 |
| Amalgamated              | 69.2               | 5.8                  | 0.7                 | 3.6     | 2.2          | 18.5  | 100.0 |
| Total                    | 63.2               | 7.6                  | 0.8                 | 7.3     | 4.7          | 16.4  | 100.0 |

Source: 1. Government of Newfoundland and Labrador, Department of Education, Statistical Supplement, 1963.

age and some repeat Grade I.<sup>5</sup> In addition, the number of drop outs in each grade should logically be calculated after adjusting for the number of students repeating or skipping grades.<sup>6</sup> For simplification, however, the following analysis has not included these factors, nor has student migration in and out of the Province been taken into account.

Table 4-7 presents in detail the enrolment in the various grades from 1949-50 to 1962-63. The rate of drop out within each grade has been decreasing since Confederation; in other words, the rate of retention from school has continuously increased:

|         | From Grade II | to Grade VIII | to Grade X | to Grade XI |
|---------|---------------|---------------|------------|-------------|
| 1943-44 | 100.0%        | 49.3%         | 37.4%      | 25.9%       |
| 1949-50 | 100.0%        | 62.7%         | 38.7%      | 27.5%       |
| 1954-55 | 100.0%        | 80.1%         | 54.3%      | -           |

Table 4-7 also indicates that the highest percentage of students drop out after Grades VII and IX. The total Grade II students in the selected years dropped out as follows:

|         | After Grade VII | After Grade IX |
|---------|-----------------|----------------|
| 1943-44 | 13.4%           | 12.4%          |
| 1949-50 | 12.6%           | 14.3%          |
| 1954-55 | 9.8%            | 26.2%          |

---

5. Government of Newfoundland and Labrador, Department of Education, Annual Report, 1962.

6. Dominion Bureau of Statistics, Education Through Progress.

## ENROLMENT BY GRADE, 1949-50 TO 1962-63 AND THE RETENTION RATE FOR SELECTED YEARS FOR NEWFOUNDLAND SCHOOLS

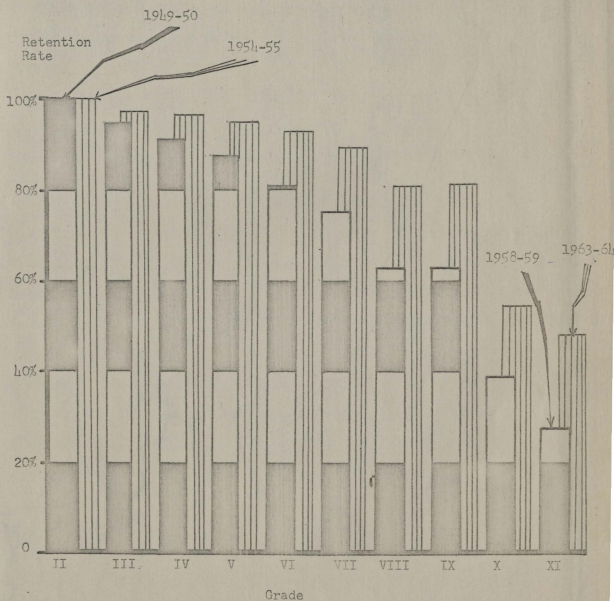
| Year                               | I      | II                             | III              | IV               | Grade<br>V VI    |                  | VII                        | VIII             | IX     | X               | XI    | XII   | Commercial<br>and special | Total   |
|------------------------------------|--------|--------------------------------|------------------|------------------|------------------|------------------|----------------------------|------------------|--------|-----------------|-------|-------|---------------------------|---------|
| 1949-50                            | 18,422 | 10,151<br>(100.0) <sup>a</sup> | 8,923            | 8,375            | 7,663            | 6,838            | 5,408<br>63.7 <sup>a</sup> | 4,028            | 3,631  | 2,550           | 1,809 | 47    | 426                       | 78,271  |
| 1950-51                            | 17,212 | 10,417                         | 9,572<br>(94.3)  | 8,474            | 7,774            | 6,809            | 5,905                      | 4,185<br>49.3    | 3,931  | 2,734           | 1,849 | 49    | 417                       | 79,328  |
| 1951-52                            | 18,004 | 10,218                         | 10,099           | 9,238<br>(91.0)  | 8,057            | 7,279            | 6,219                      | 4,601<br>49.8    | 4,227  | 3,030           | 2,160 | 62    | 504                       | 83,698  |
| 1952-53                            | 19,071 | 10,449                         | 10,041           | 9,772            | 8,907<br>(87.7)  | 7,631            | 6,568                      | 5,098            | 4,432  | 3,176<br>37.4   | 2,180 | 35    | 450                       | 87,813  |
| 1953-54                            | 19,410 | 11,866                         | 10,243           | 9,867            | 9,453            | 8,342<br>(81.2)  | 6,943                      | 5,422            | 4,917  | 3,245<br>25.9   | 2,201 | 47    | 408                       | 92,364  |
| 1954-55                            | 19,516 | 12,554<br>(100.0)              | 11,746           | 10,230           | 9,571            | 9,010            | 7,644<br>(75.3)            | 5,960            | 5,530  | 3,518           | 2,110 | 46    | 365                       | 97,800  |
| 1955-56                            | 20,025 | 12,935                         | 12,200<br>(97.2) | 11,606           | 9,824            | 9,133            | 8,344                      | 6,361<br>(62.7)  | 6,047  | 3,489           | 2,276 | 32    | 361                       | 102,633 |
| 1956-57                            | 20,341 | 13,364                         | 12,750           | 12,094<br>(96.3) | 11,243           | 9,444            | 8,530                      | 7,315<br>(63.0)  | 6,394  | 3,858           | 2,425 | 37    | 313                       | 108,108 |
| 1957-58                            | 20,233 | 13,629                         | 13,236           | 12,530           | 11,882<br>(94.7) | 10,805           | 8,801                      | 7,615<br>7,388   | 7,388  | 3,931<br>(38.7) | 2,807 | 44    | 342                       | 113,243 |
| 1958-59                            | 20,527 | 13,844                         | 13,697           | 13,112           | 12,277           | 11,612<br>(92.5) | 10,223                     | 8,214            | 7,712  | 4,887<br>(27.5) | 2,796 | 73    | 265                       | 119,279 |
| 1959-60                            | 20,449 | 14,401<br>(100.0)              | 13,784           | 13,786           | 12,772           | 11,858           | 11,277<br>(80.8)           | 9,232            | 8,371  | 4,960           | 3,506 | 125   | 346                       | 124,867 |
| 1960-61                            | 20,835 | 14,226                         | 14,112<br>(98.0) | 13,624           | 13,153           | 12,134           | 11,488                     | 10,058<br>(80.1) | 9,147  | 5,772           | 3,772 | 162   | 434                       | 128,917 |
| 1961-62                            | 21,425 | 14,648                         | 14,072           | 14,052<br>(97.6) | 13,313           | 12,609           | 11,781                     | 10,416<br>(80.5) | 10,107 | 6,469           | 4,266 | 73    | 516                       | 133,747 |
| 1962-63                            | 21,823 | 14,763                         | 14,498           | 14,206           | 13,783<br>(95.7) | 12,693           | 12,311                     | 11,084           | 10,349 | 6,821<br>(54.3) | 4,770 | 95    | 504                       | 137,700 |
| Percentage of total                |        |                                |                  |                  |                  |                  |                            |                  |        |                 |       |       |                           |         |
| 1949-50                            | 23.6   | 13.0                           | 11.4             | 10.7             | 9.8              | 8.7              | 6.9                        | 5.1              | 4.6    | 3.3             | 2.3   | 0.1   | 0.5                       | 100.0   |
| 1962-63                            | 15.9   | 10.7                           | 10.5             | 10.3             | 10.0             | 9.2              | 8.9                        | 8.0              | 7.5    | 5.0             | 3.5   | 0.1   | 0.4                       | 100.0   |
| 1962-63 as a percentage of 1949-50 |        |                                |                  |                  |                  |                  |                            |                  |        |                 |       |       |                           |         |
|                                    | 118.5  | 145.4                          | 162.5            | 169.6            | 180.0            | 185.6            | 227.6                      | 275.2            | 285.0  | 267.4           | 263.7 | 202.1 | 118.3                     | 175.9   |

Note: <sup>a</sup> The number of students with grade two in 1943-44 was 8,490 which has been taken as 100.0% as those of 1949-50, 1954-55 and 1959-60 in calculating each corresponding retention rate.

Source: 1. Government of Newfoundland and Labrador, Department of Education, Annual Report and Statistical Supplement, 1949 to 1963.

CHART 4-3

RETENTION RATES IN NEWFOUNDLAND SCHOOLS  
1949-50 TO 1958-59 AND 1954-55 TO 1963-64



Source: Table 4-7.

Apparently the low rate of retention after Grades VII and IX results in only a small percentage of students enrolled in Grade XI which is the level of junior matriculation. Grade XI students in 1961-62 accounted for 40.8 percent of the total Grade II students nine years before (see Table 4-7). Accordingly, about one out of two Grade II students in the past several years will conceivably reach Grade XI at the proper time.

Table 4-8 gives the comparable figures of student retention rate according to denomination. Pupils enrolled in Grade II in 1952-53 in Roman Catholic schools generally maintained a high rate of retention in each year and students in Salvation Army schools usually dropped out earlier than others. Amalgamated schools, probably due to their locations in more urbanized areas and their acceptances of many students at Grade IX transferring from other schools, showed an extremely high rate of retention. Of their Grade II students in 1952-53, 77.3% reached Grade XI as compared with the provincial average of 40.8 percent.

Students drop out for various reasons, including inability to keep up with others, lack of desire, fear of failure, wish to do something else, and lack of money. It has been reported that, "at present many are dropping out

TABLE 4-8  
RETENTION RATES OF STUDENTS<sup>a</sup> IN NEWFOUNDLAND BY  
TYPE OF SERVICES

1951-52 TO 1961-62

| Year                  | 1951-<br>52 | 1952-<br>53     | 1953-<br>54    | 1955-<br>56   | 1957-<br>58   | 1959-<br>60   | 1960-<br>61   | 1961-<br>62   | 1962-<br>63 |
|-----------------------|-------------|-----------------|----------------|---------------|---------------|---------------|---------------|---------------|-------------|
| Grade                 | I           | II              | III            | V             | VII           | IX            | X             | XI            | XII         |
| Roman Catholic        | 6,298       | 3,825<br>100.0  | 3,770<br>98.6  | 3,667<br>95.9 | 3,187<br>83.3 | 2,988<br>78.1 | 2,116<br>55.3 | 1,550<br>40.5 | 95          |
| Anglican              | 4,940       | 2,858<br>100.0  | 2,787<br>97.5  | 2,676<br>93.6 | 2,383<br>83.4 | 2,154<br>75.4 | 1,392<br>48.7 | 1,030<br>36.0 |             |
| United Church         | 3,913       | 2,318<br>100.0  | 2,252<br>97.2  | 2,042<br>88.1 | 1,781<br>76.8 | 1,704<br>77.4 | 1,304<br>56.3 | 933<br>23.8   |             |
| Salvation Army        | 1,390       | 749<br>100.0    | 709<br>94.6    | 672<br>89.7   | 621<br>82.9   | 520<br>69.4   | 243<br>32.4   | 167<br>22.3   |             |
| Pentecostal           | -           | -               | -              | 125           | 167           | 141           | 95            | 64            |             |
| Seventh Day Adventist | 46          | 29<br>100.0     | 30<br>103.4    | 32<br>110.3   | 25<br>86.2    | 25<br>86.2    | 15<br>51.7    | 4<br>13.8     |             |
| Amalgamated           | 1,417       | 670<br>100.0    | 695<br>103.7   | 610<br>91.0   | 637<br>95.1   | 749<br>111.8  | 607<br>90.6   | 518<br>77.3   |             |
| Total                 | 18,004      | 10,449<br>100.0 | 10,243<br>98.0 | 9,824<br>94.0 | 8,801<br>84.2 | 8,371<br>80.1 | 5,772<br>55.2 | 4,266<br>40.8 | 95          |

Note: <sup>a</sup> 1952-53 = 100.0

Source: 1. Government of Newfoundland and Labrador, Department of Education, Annual Report and Statistical Supplement, 1951 to 1962.



long before reaching the level of their mental ability."<sup>7</sup> Those students who have intelligence and should remain in school but drop out from schools cause serious losses to themselves as well as the province. Professor Chandler expressed the typical educator's view (in his book Education in Urban Society) with the words, "The inescapable conclusion is that the school dropout of today is the unemployed of tomorrow".<sup>8</sup> This also clearly intensifies the already serious unemployment problem in this province. The proper utilization of student abilities would result in considerably larger numbers continuing through high school and university. On the other hand, "more education generally ensures higher incomes; the chances are that one's lifetime earnings will be increased for each year of schooling successfully completed."<sup>9</sup>

A very interesting examination of those who left school at secondary school grades in order to take a job in 1957-58 has been given in Table 4-9. In that year one-third of the drop outs with Grade VIII were employed; only 26.7 percent of the total female drop outs found jobs. Nevertheless, of the students reaching Grade XI or XII, 75.4 percent of boys

---

7. Dominion Bureau of Statistics, A Graphic Presentation of Canadian Education, Cat. No. 81-515, September, 1961, p. 16.

8. B.J. Chandler, Education in Urban Society, Dodd, Mead & Co., New York, 1962, p. 279.

9. Dominion Bureau of Statistics, Statistical Review of Canadian Education, Cat. No. 81-503, 1958, p. 67.

TABLE 4-9  
 PERCENTAGE OF PUPILS WHO LEFT SCHOOL AND ENTERED VARIOUS  
 OCCUPATIONS, BY GRADE AND SEX, FOR NEWFOUNDLAND

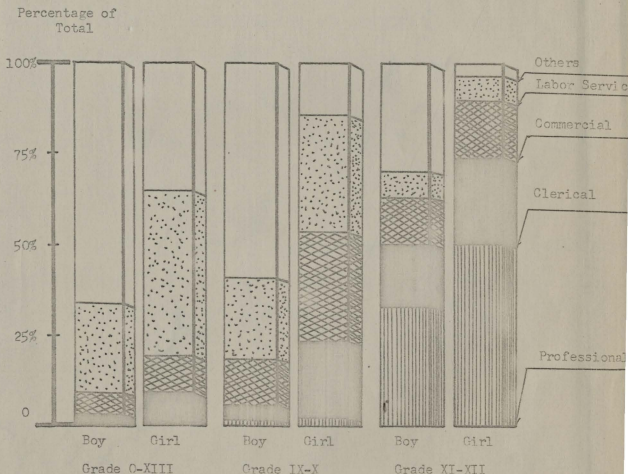
1957-58

|                             | Up to Grade VIII |       | Grade IX-X |       | Grade XI-XII |       | Total |       |       |
|-----------------------------|------------------|-------|------------|-------|--------------|-------|-------|-------|-------|
|                             | Boys             | Girls | Boys       | Girls | Boys         | Girls | Boys  | Girls | Total |
| No. leaving school (1)      | 462              | 502   | 493        | 641   | 585          | 624   | 1,540 | 1,767 | 3,307 |
| No. finding employment (2)  | 228              | 134   | 311        | 305   | 441          | 528   | 980   | 967   | 1,947 |
| (2)<br>(1) x 100            | 49.3             | 26.7  | 63.1       | 47.6  | 75.4         | 84.6  | 63.6  | 54.7  | 58.9  |
| Distribution by Occupations |                  |       |            |       |              |       |       |       |       |
| Professional                | 0                | 0     | 2.2        | 2.6   | 32.6         | 50.6  |       |       |       |
| Clerical                    | 3.1              | 9.7   | 3.9        | 21.0  | 17.5         | 24.2  |       |       |       |
| Commercial                  | 6.1              | 9.7   | 11.6       | 30.2  | 12.9         | 15.3  |       |       |       |
| Laborers and services       | 24.6             | 45.5  | 23.5       | 31.8  | 7.3          | 6.3   |       |       |       |
| Others                      | 66.2             | 35.1  | 58.8       | 14.4  | 29.7         | 3.6   |       |       |       |
| Total                       | 100.0            | 100.0 | 100.0      | 100.0 | 100.0        | 100.0 |       |       |       |

Source: 1. Dominion Bureau of Statistics, Student Progress Through the Schools, Cat. No. 81-513, 1960, pp. 34-35.

CHART 4-4

OCCUPATIONAL DISTRIBUTION OF THE STUDENTS WHO LEFT  
SCHOOL IN 1957-58 FOR EMPLOYMENT, BY EDUCATIONAL  
LEVEL AND SEX, NEWFOUNDLAND



Note: In 1957-58, none of the students who left school below Grade IX for employment purposes obtained a professional job.

Source: Table 4-9.

and 84.6 percent of girls obtained jobs in that year. On the average, more than two out of three drop outs from secondary schools secured jobs, and boys had a higher rate of employment than girls. The table also reveals a distinct difference in occupational distribution between those who left school from the lower grades and those dropping out from the higher grades. The higher the grade attained the smaller was the percentage of both sexes who took the manual and service jobs. On the contrary, none of the drop outs with less than nine years of education were able to join the professions while 32.6 percent of boys and 50.6 percent of girls finishing school at Grade XI or XII were recruited into professions.

In summary, the rate of retention among the students in Newfoundland in each grade has been rising over time. Since Confederation, the rate of retention has risen from one-fourth of the Grade II students attending Grade XI to more than two-fifths of students of Grade II studying at the Grade XI level. By individual services, students in Amalgamated and Roman Catholic schools generally stayed at schools longer than others. This improvement in education will accordingly assure a proper utilization of human resources. Better education will enable students to find a job with less difficulty and to gain higher incomes. From another point of view, a high quality education should enable as many people as possible to reach as high a

level as possible in knowledge and skill.<sup>10</sup> Newfoundland is tending to have high quality education as measured by its increase in rate of retention. However, the concern for drop outs is getting important because of the confluence of these factors, such as: "(a) an anarchic, unorganized, inefficient labor market prevails; (b) economic growth is limited; and (c) technological change is occurring at a rapid clip."<sup>11</sup>

### 3. The Study of Teachers

Education is a self-producing industry, quantitatively, but is itself a major consumer of highly qualified manpower.<sup>12</sup> The quality of the output of education relies heavily on the "entrepreneurial capacity" of its managers, among whom teachers play an incomparable role. The academic qualifications and ability, enthusiasm, dedication and experience in teaching, have been regarded as the most influential factors in determining the quality of students. In short, "qualified and competent teachers are indispensable to good education."<sup>13</sup>

---

10. Harold F. Clark, Cost and quality in Public Education, Syracuse University Press, Syracuse, New York, 1963, p. 2.

11. Daniel Schreiber (ed.), Op. cit., p. 18.

12. John Vaizey, The Economics of Education, Faber and Faber Ltd., London, 1962, p. 45.

13. Patricia Cayo Sexton, Education and Income, The Viking Press, New York, 1961, p. 116.

Since Confederation the number of teachers in Newfoundland has more than doubled. In 1962-63 the total was 4,789. According to their qualification 11.3 percent of these had Grade 4. This means that more than one out of every ten teachers in this Province had a university degree in education. This was 8.5 times the number in 1949-50. Teachers with Grades 2 and 3 or with two and three years university training increased slowly in absolute number. Nor did Grade 1 teachers increase very rapidly, even though they accounted for the highest percentage among graded teachers, being over one-third of the total teaching staff in 1962-63. Teachers holding various types of licences for teaching numbered almost the same as Grade 1 teachers in that year. They increased very slowly, having an increase less than two-fold since Confederation. Emergency supply and other less qualified teachers decreased both in proportion and in absolute numbers. Their numbers in 1949-50 were halved by 1962-63 and only shared 5.3 percent of total number of teachers in 1962-63.

These statements denote the rapid growth in quantity and enormous improvement in quality of teachers in Newfoundland since Confederation. This was due mainly to a policy of encouraging people to enter the teaching profession after they had left school and to attain high qualifications. Those teachers, in turn, have produced more and better students.



It is commonly agreed that the qualifications of teachers should be progressively improved, and the student load per teacher should also be lightened gradually, so that teachers can direct their students more appropriately and efficiently. In Newfoundland the student load per teacher in 1949-50 was, on the average, 33 students. This is the heaviest load since Confederation, matched only in 1955-56. All the other years showed a reducing load of students per teacher. Up to 1962-63, each teacher was directing and teaching fewer than 29 students (see Table 4-10). Nonetheless, the unbalanced location of schools following the geographical and demographical pattern results in unbalanced distribution of students as well as teachers: some teachers have more than fifty students while some teachers have less than ten students. This still remains a problem.

Experience and tenure are two factors which more or less have some influences on teacher quality and quantity. Teaching is undeniably a special skill; expertness of a teacher depends largely on his experience and ability to keep up with the latest development in his field. As in most other occupations, the ability of a teacher tends to improve with experience; and, other things being equal, an experienced teacher is much to be preferred to an inexperienced one.<sup>14</sup>

---

<sup>14</sup>. Patricia Cayo Sexton, op. cit., p. 122.



## QUALIFICATIONS OF TEACHERS AND STUDENT-TEACHER RATIO IN NEWFOUNDLAND

1949-50 TO 1962-63

|                                | Certificated |         |         |                      | Licensed | Emergency<br>Supply<br>and others <sup>b</sup> | Total | Student-<br>Teacher<br>Ratio |
|--------------------------------|--------------|---------|---------|----------------------|----------|--|-------|------------------------------|
|                                | Grade 1      | Grade 3 | Grade 2 | Grade 1 <sup>a</sup> |          |  |       |                              |
| 1949-50                        | 57           | 111     | 168     | 651                  | 983      | 1,05   | 2,375 | 33.0                         |
| 1950-51                        | 61           | 121     | 175     | 668                  | 1,069    | 1,05   | 2,499 | 31.7                         |
| 1951-52                        | 87           | 121     | 187     | 687                  | 1,119    | 384  | 2,595 | 32.4                         |
| 1952-53                        | 106          | 142     | 187     | 686                  | 1,183    | 132  | 2,736 | 32.1                         |
| 1953-54                        | 130          | 138     | 188     | 693                  | 1,173    | 543  | 2,865 | 32.2                         |
| 1954-55                        | 165          | 138     | 200     | 738                  | 1,349    | 459  | 3,049 | 32.1                         |
| 1955-56                        | 217          | 131     | 229     | 784                  | 1,277    | 468  | 3,105 | 33.0                         |
| 1956-57                        | 249          | 141     | 293     | 867                  | 1,235    | 583  | 3,368 | 32.1                         |
| 1957-58                        | 279          | 133     | 314     | 996                  | 1,271    | 534  | 3,527 | 32.1                         |
| 1958-59                        | 322          | 156     | 347     | 1,111                | 1,583    | 375  | 3,894 | 30.6                         |
| 1959-60                        | 385          | 176     | 406     | 1,191                | 1,528    | 333  | 4,019 | 31.1                         |
| 1960-61                        | 434          | 186     | 425     | 1,280                | 1,693    | 299  | 4,317 | 29.9                         |
| 1961-62                        | 469          | 211     | 479     | 1,365                | 1,671    | 307  | 4,502 | 29.7                         |
| 1962-63                        | 542          | 240     | 538     | 1,550                | 1,665    | 254  | 4,789 | 28.8                         |
| 1962-63<br>1960-60             | 9.5          | 2.2     | 3.2     | 2.4                  | 1.7      | 0.6  | 2.0   |                              |
| <u>Percentage Distribution</u> |              |         |         |                      |          |  |       |                              |
| 1949-50                        | 2.4          | 4.7     | 7.1     | 27.4                 | 41.4     | 17.0   | 100.0 |                              |
| 1956-57                        | 7.4          | 4.2     | 8.7     | 25.7                 | 36.7     | 17.3   | 100.0 |                              |
| 1962-63                        | 11.3         | 5.0     | 11.2    | 32.4                 | 34.8     | 5.3  | 100.0 |                              |

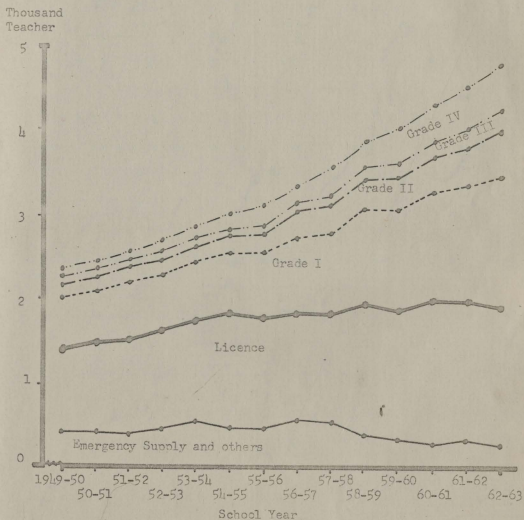
Notes: <sup>a</sup> Including specialists who have no basic certificate or licence.<sup>b</sup> Including uncertificated teachers.

Government of Newfoundland and Labrador, Department of Education, Statistical Supplement, 1956 and 1963.

## CHART 4-5

## QUALIFICATIONS OF TEACHERS IN NEWFOUNDLAND

1949-50 TO 1962-63



Source: Table 4-10.

Therefore, teachers are generally expected to stay not only in their occupation but also in their locality for at least a certain period of time.

The average number of years experience per teacher in Newfoundland is not very large. This poses a serious problem. In 1962-63 teachers with no more than five years professional experience amounted to 63.6 percent of the total teaching force as compared with 62.8 percent of the total thirteen years ago. Teachers who had dedicated themselves to education for twenty or more years constituted 10.5 percent of the total number of teachers in 1962-63, and the corresponding figure for 1949-50 was 12.4 percent. Those with six to ten years experience also accounted for a smaller percentage of the total in 1962-63 than in 1949-50 (see Table 4-11). Therefore, the absolute number of teachers in each of the various categories of experience has more than doubled, but the percentages of teachers in those categories have remained almost the same.

The primary reason for the failure of the improvement in experience and tenure is the turnover rate of teachers, especially young teachers who transfer to other occupations. The lack of devotion to the profession, and the emergence of other higher-paid opportunities, have caused a high rate of drop out of young teachers. Actually, the average median experience of teachers in the province dropped from three years and

TABLE 4-11

TEACHERS CLASSIFIED ACCORDING TO TOTAL PROFESSIONAL  
EXPERIENCE AND MEDIAN TENURE<sup>a</sup> IN NEWFOUNDLAND

1949-50 AND 1962-63

| Experience                              | 1949-50           |                        | 1962-63 |                        |
|---|-------------------|------------------------|---------|------------------------|
|   | Number            | Percentage<br>of total | Number  | Percentage<br>of total |
| Not reported                            | 10                | 0.4                    | 7       | 0.1                    |
| None                                    | -                 | -                      | 895     | 18.7                   |
| Less than 1 year                        | -                 | -                      | 38      | 0.8                    |
| 1 year                                  | 788               | 33.2                   | 670     | 14.1                   |
| 2 years                                 | 221               | 9.3                    | 512     | 10.7                   |
| 3 years                                 | 200               | 8.4                    | 408     | 8.5                    |
| 4 years                                 | 166               | 7.0                    | 303     | 6.3                    |
| 5 years                                 | 116               | 4.9                    | 217     | 4.5                    |
| 6 years                                 | 104               | 4.4                    | 186     | 3.9                    |
| 7 years                                 | 73                | 3.1                    | 144     | 3.0                    |
| 8 years                                 | 63                | 2.7                    | 112     | 2.3                    |
| 9 years                                 | 55                | 2.3                    | 108     | 2.3                    |
| 10 years                                | 40                | 1.7                    | 113     | 2.3                    |
| 11 years                                | 36                | 1.5                    | 84      | 1.8                    |
| 12 years                                | 30                | 1.3                    | 88      | 1.8                    |
| 13 years                                | 29                | 1.2                    | 78      | 1.6                    |
| 14 years                                | 28                | 1.1                    | 71      | 1.5                    |
| 15-19 years                             | 122               | 5.1                    | 254     | 5.3                    |
| 20-24 years                             | 126               | 5.3                    | 169     | 3.5                    |
| 25-29 years                             | 62                | 2.6                    | 118     | 2.5                    |
| 30-34 years                             | 49                | 2.1                    | 113     | 2.4                    |
| 35 years and over                       | 57                | 2.4                    | 101     | 2.1                    |
| Total                                   | 2,375             | 100.0                  | 4,789   | 100.0                  |
| Median Experience<br>(years and months) | 3-11              |                        | 3-7     |                        |
| Median Tenure<br>(years and months)     | 1-11 <sup>b</sup> |                        | 1-4     |                        |

Notes: <sup>a</sup> Tenure means a place where teacher was working.  
<sup>b</sup> 1950-51 figure.

Source: 1. Calculated from Government of Newfoundland and Labrador,  
Department of Education, Annual Report, 1951 and Statistical

eleven months in 1949-50, to three years and seven months in 1962-63. Concomitantly, the average median tenure, or the period a teacher stayed at one place, has also declined from twenty-three months in 1950-51 to sixteen months in 1962-63 (see Table 4-11).

Teachers in Roman Catholic schools generally had higher qualifications than those of other denominations. Half of the teachers in Amalgamated and Roman Catholic schools possessed Grade 1 and above in the year of 1949-50. In 1961 certificated teachers in both these services constituted more than seven-tenths of the total in each; Anglican and the United Church schools had a lower percentage of graded teachers, with a little more than half of their total faculties. The rest of the schools had less than 40 percent graded teachers in the year (see Table 4-12).

Even though the number of teachers in Roman Catholic schools increased relatively more than the provincial average, the average ratio of students to teacher in those schools was still higher than the provincial ratio. In 1949-50, the highest student-teacher ratio was found in Seventh Day Adventist schools (39:1). Anglican schools held the lowest ratio, each teacher on the average taught less than 32 students. However, the student load for each teacher in Roman Catholic schools in that year was a little higher than the provincial

## TEACHER'S CLASSIFICATIONS AND THE STUDENT-TEACHER RATIO BY TYPE OF SERVICES FOR NEWFOUNDLAND

1949-50 AND 1962-63

|                               | Roman Catholic | Anglican | United Church | Salvation Army | Pentecostal | Seventh Day Adventist | Amalgamated and others | Total |
|-------------------------------|----------------|----------|---------------|----------------|-------------|-----------------------|------------------------|-------|
| <u>1949-50</u>                |                |          |               |                |             |                       |                        |       |
| Grade 1                       | 26             | 8        | 12            | 2              | 0           | 0                     | 9                      | 57    |
| Grade 3                       | 28             | 33       | 29            | -              | 0           | 0                     | 21                     | 111   |
| Grade 2                       | 57             | 53       | 39            | 5              | 0           | 1                     | 13                     | 168   |
| Grade 1 <sup>a</sup>          | 298            | 152      | 120           | 19             | 0           | 4                     | 58                     | 651   |
| Licensed                      | 295            | 285      | 290           | 59             | 0           | 1                     | 53                     | 983   |
| Emergency Supply <sup>b</sup> | 106            | 156      | 81            | 55             | 0           | 0                     | 7                      | 405   |
| Total Number                  | 810            | 687      | 571           | 110            | 0           | 6                     | 161                    | 2,375 |
| Percentage                    | 34.1           | 28.9     | 24.0          | 5.9            | 0           | 0.3                   | 6.8                    | 100.0 |
| Students/Teacher              | 33.6           | 31.7     | 32.2          | 35.3           | -           | 38.8                  | 36.0                   | 33.0  |
| <u>1962-63</u>                |                |          |               |                |             |                       |                        |       |
| Grade 1                       | 188            | 119      | 111           | 21             | 6           | 1                     | 96                     | 542   |
| Grade 3                       | 95             | 52       | 55            | 8              | 1           | 1                     | 28                     | 240   |
| Grade 2                       | 176            | 134      | 115           | 22             | 7           | 5                     | 79                     | 538   |
| Grade 1                       | 738            | 323      | 227           | 59             | 28          | 6                     | 169                    | 1,550 |
| Licensed                      | 655            | 502      | 396           | 110            | 84          | 0                     | 88                     | 1,665 |
| Emergency Supply              | 69             | 71       | 26            | 54             | 24          | 1                     | 9                      | 254   |
| Total Number                  | 1,721          | 1,201    | 930           | 304            | 150         | 14                    | 469                    | 4,789 |
| Percentage                    | 35.9           | 25.1     | 19.4          | 6.4            | 3.1         | 0.3                   | 9.8                    | 100.0 |
| Students/Teacher              | 30.4           | 27.5     | 27.7          | 28.5           | 26.2        | 25.7                  | 29.0                   | 28.9  |
| <u>1962-63/1949-50</u>        |                |          |               |                |             |                       |                        |       |
| Certificated                  | 2.93           | 2.55     | 2.54          | 4.23           | -           | 2.60                  | 3.68                   | 3.06  |
| Licensed                      | 1.54           | 1.76     | 1.37          | 2.37           | -           | -                     | 1.66                   | 1.69  |
| Emergency Supply              | 0.65           | 0.66     | 0.32          | 0.98           | -           | -                     | 1.29                   | 0.63  |
| Total                         | 2.12           | 1.75     | 1.63          | 2.17           | -           | 2.33                  | 2.91                   | 2.02  |

Notes:

a - Not available.

b Grade 1 includes specialists who have no basic certificate or licence.

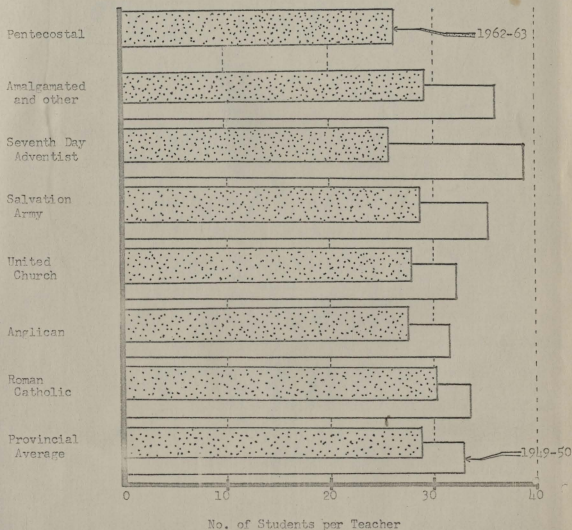
Emergency supply includes uncertificated and D grade licence teachers.

Source: 1. Government of Newfoundland and Labrador, Department of Education, Annual Report, 1961 and Statistical Supplement, 1961.

CHART h-6

STUDENT-TEACHER RATIOS IN NEWFOUNDLAND  
BY TYPE OF SERVICES

1949-50 AND 1962-63



Note: No Pentecostal school in 1949-50.

Source: Table h-12.



average of 33 students. In 1962-63 teachers in Roman Catholic schools still looked after more than 30 students each, which was the heaviest student load in the province; in no other denomination was the average load more than 29 students which was the provincial average in that year (see Table 4-12).

Table 4-13 gives the years of experience of teachers in the various denominational schools. Again, teachers in Amalgamated and Roman Catholic schools kept their records in occupation and locality longer than the rest.

In summary, assuming that 25 students per teacher is the maximum ratio for optimum schooling, Newfoundland lacked more than 700 teachers or 15 percent of the total number of teachers in 1962-63 and, based on the writer's estimated enrolment, Newfoundland will need ten thousand teachers in 1980. If all teachers in high schools were required to have a university degree, more than one half of the present high school teachers would be disqualified. There will be no shortage of high school teachers by 1970 if Grade 4 teachers will be numbered fourteen hundred (see Appendix C, Tables 1 and 2).

The shortage of teachers is not only a problem in Newfoundland, but also in other provinces of Canada.<sup>15</sup> However,

---

15. C.E. Phillips, The Development of Education in Canada, W.J. Gage & Company Ltd., Toronto 1957, p. 566.

TABLE h-13

ALL TEACHERS IN NEWFOUNDLAND CLASSIFIED ACCORDING TO TOTAL PROFESSIONAL EXPERIENCE BY TYPE OF SERVICES

112.

1949-50 AND 1962-63

| Total Experience (years) | Roman Catholic    | Anglican | United Church | Salvation Army | Pentecostal | Seventh Day Adventist | Amalgamated and other | Total |
|--------------------------|-------------------|----------|---------------|----------------|-------------|-----------------------|-----------------------|-------|
| 1949-50                  |                   |          |               |                |             |                       |                       |       |
| 0- 9 <sup>a</sup>        | 551               | 531      | 471           | 125            | 0           | 4                     | 114                   | 1,796 |
| 10-19                    | 106               | 78       | 58            | 10             | 0           | 2                     | 31                    | 285   |
| 20-29                    | 87                | 54       | 30            | 4              | 0           | 0                     | 13                    | 188   |
| 30-34                    | 25                | 17       | 5             | 0              | 0           | 0                     | 2                     | 49    |
| 35 and over              | 41                | 7        | 7             | 1              | 0           | 0                     | 1                     | 57    |
| Total                    | 810               | 687      | 571           | 140            | 0           | 6                     | 161                   | 2,375 |
| Median experience        | h-11 <sup>b</sup> | 3-4      | 3-4           | 1-0            | -           | -                     | 6-7                   | 3-11  |
| Median tenure            | -                 | -        | -             | -              | -           | -                     | -                     | -     |
| 1962-63                  |                   |          |               |                |             |                       |                       |       |
| 0- 9                     | 1,249             | 909      | 705           | 247            | 143         | 10                    | 337                   | 3,600 |
| 10-19                    | 241               | 184      | 139           | 35             | 5           | 2                     | 82                    | 688   |
| 20-29                    | 108               | 64       | 59            | 18             | 2           | 2                     | 34                    | 287   |
| 30-34                    | 61                | 23       | 17            | 4              | 0           | 0                     | 8                     | 113   |
| 35 and over              | 62                | 21       | 10            | 0              | 0           | 0                     | 8                     | 101   |
| Total                    | 1,721             | 1,201    | 930           | 304            | 150         | 14                    | 469                   | 4,789 |
| Median experience        | 3-9               | 3-8      | 3-4           | 2-9            | 2-1         | -                     | h-5                   | 3-7   |
| Median tenure            | 1-7               | 1-2      | 1-3           | 0-7            | -           | -                     | 1-3                   | 1-4   |
| 1963                     |                   |          |               |                |             |                       |                       |       |
| 1949                     |                   |          |               |                |             |                       |                       |       |
| 0- 9                     | 2.27              | 1.71     | 1.50          | 1.98           | -           | 2.50                  | 2.96                  | 2.00  |
| 10-29                    | 1.81              | 1.88     | 2.25          | 3.79           | -           | 2.00                  | 2.64                  | 2.06  |
| 30 and over              | 1.86              | 1.83     | 2.70          | 4.00           | -           | 2.33                  | 5.33                  | 2.02  |

Notes: - Not available.

<sup>a</sup> Including teachers not reported and unclassified<sup>b</sup> h-11 means h years and 11 months.Source: 1. Calculated from Government of Newfoundland and Labrador, Department of Education, Annual Report, 1961 and Statistical Supplement, 1963.

this problem seems more serious in Newfoundland. Professor Vaizey has stated that teaching itself is a very specific skill "which makes an enormous demand on educated man- and woman-power" and that "teachers are in chronic short supply because of the rapid expansion of education as incomes rise."<sup>16</sup> This statement is very applicable to Newfoundland.

#### 4. The Study of Schools

The increase or decrease in the number of schools says little about any improvement or a regression in educational facilities, but their locations do have some influence on the efficiency of the educational program. Centralized or bigger schools are commonly more efficient than smaller sole-charge schools (one-room schools). A decline in the student-classroom ratio is also desirable.

In Newfoundland the total number of schools doing work above Grade VIII has been decreasing: the number in 1962-63 was three-fourths of that of 1949-50 (see Table 4-14). This is a result of centralization and amalgamation of schools which has brought about considerable economies of scale. Evidently, the larger school has many advantages, such as making the optimum use of existing facilities, improving the efficiency in management, avoiding duplications and unnecessary costs, and

---

<sup>16</sup>. John Vaizey, op. cit., pp. 108 and 112.

TABLE 4-14

NUMBER OF SCHOOLS, CLASSROOMS AND THE STUDENT-CLASSROOM  
RATIO IN NEWFOUNDLAND

1949-50 TO 1962-63

|  | Schools          |                          |                          | Total<br>Class<br>Room | Student-<br>Classroom<br>Ratio |
|--|------------------|--------------------------|--------------------------|------------------------|--------------------------------|
|  | Total            | High School <sup>a</sup> | Sole Charge <sup>b</sup> |                        |                                |
| 1949-50                                  | 1,182<br>(100.0) | 869<br>(73.5)            | 725<br>(61.3)            | 2,354                  | 33.3                           |
| 1950-51                                  | 1,185            | 855                      | 702                      | 2,477                  | 32.0                           |
| 1951-52                                  | 1,138            | 854                      | 631                      | 2,513                  | 33.3                           |
| 1952-53                                  | 1,166            | 873                      | 639                      | 2,623                  | 33.5                           |
| 1953-54                                  | 1,173            | 850                      | 619                      | 2,749                  | 33.6                           |
| 1954-55                                  | 1,192            | 816                      | 599                      | 2,878                  | 34.0                           |
| 1955-56                                  | 1,164            | 842                      | 536                      | 2,998                  | 34.2                           |
| 1956-57                                  | 1,186            | 805                      | 511                      | 3,215                  | 33.6                           |
| 1957-58                                  | 1,198            | 849                      | 487                      | 3,387                  | 33.4                           |
| 1958-59                                  | 1,245            | 854                      | 488                      | 3,682                  | 32.4                           |
| 1959-60                                  | 1,244            | 767                      | 389                      | 3,890                  | 32.1                           |
| 1960-61                                  | 1,253            | 791                      | 425                      | 4,140                  | 31.1                           |
| 1961-62                                  | 1,223            | 731                      | 397                      | 4,225                  | 31.7                           |
| 1962-63                                  | 1,249<br>(100.0) | 620<br>(49.6)            | 391<br>(31.3)            | 4,446                  | 31.0                           |
| 1962-63 as a<br>percentage of<br>1949-50 | 105.7            | 71.3                     | 53.9                     | 188.9                  | 93.1                           |

Notes: <sup>a</sup> High School represents any school which educates students above Grade VIII.

<sup>b</sup> One room school.

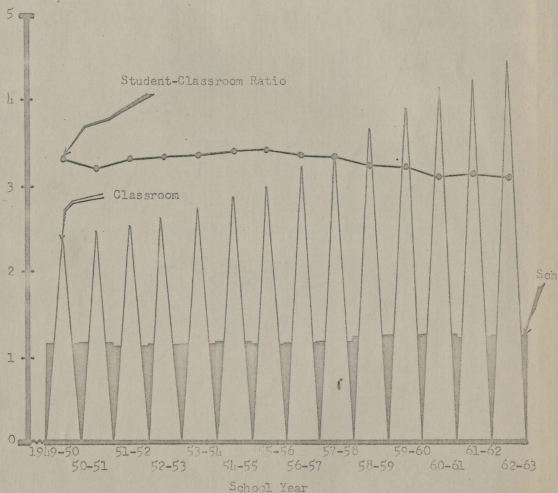
Source: 1. Government of Newfoundland and Labrador, Department of Education, Statistical Supplement, 1956 and 1963.

CHART 4-7

NUMBER OF SCHOOLS, CLASSROOMS AND THE STUDENT  
CLASSROOM RATIOS IN NEWFOUNDLAND

1949-50 AND 1962-63

1,000 School  
1,000 Classroom  
10 Pupil



Source: 4-14.

increasing coordination in various educational affairs. Due to the consolidation and the expansion in size of schools, the student-classroom ratio and the number of sole-charge schools also decreased in the province. From 1949 to 1963 the ratio fell from 33.3 to 31.0 and the number of sole-charge schools halved (see Table 4-14).

During the period, the number of schools having 2-9 classrooms nearly doubled. The number of schools having more than nine classrooms tripled. There was only one amalgamated school which had more than thirty classrooms in 1949-50 in the province; in 1962-63 four Roman Catholic schools were found to have more than thirty classrooms. There were no sole-charge schools under Amalgamated and Seventh Day Adventist administration in 1962-63, while about three-fifths of the number of Anglican sole-charge schools in 1949-50 still existed in 1962-63. Since Confederation, student-classroom ratio in every type of educational service has fallen. Schools in Pentecostal and Anglican services had relatively low ratios in 1962-63. Tables 4-15 and 4-16 show foregoing descriptions in detail according to each type of educational service.

Any attempt to investigate the ratio of population 5-19 years of age to the quantity of classrooms available according to denomination and Census Division is very difficult. Because school districts in Newfoundland bear no relation to

TABLE 1-15

NUMBER OF SCHOOLS AND SCHOOLS DOING WORK ABOVE GRADE VIII, AND NUMBER OF CLASSROOMS  
AND STUDENTS PER CLASSROOM BY TYPE OF SERVICES IN NEWFOUNDLAND

1949-50 AND 1962-63

|                       | 1949-50                        |       |                      |       |                                  | 1962-63           |       |                      |       |                                  | (2)-(1) |
|-----------------------|--------------------------------|-------|----------------------|-------|----------------------------------|-------------------|-------|----------------------|-------|----------------------------------|---------|
|                       | Schools<br>Number <sup>a</sup> | %     | Classrooms<br>Number | %     | (1)<br>Students per<br>Classroom | Schools<br>Number | %     | Classrooms<br>Number | %     | (2)<br>Students per<br>Classroom |         |
| Roman Catholic        | 348<br>(258)                   | 29.4  | 791                  | 33.6  | 34.4                             | 361<br>(182)      | 28.9  | 1,598                | 35.9  | 32.8                             | - 1.6   |
| Anglican              | 401<br>(269)                   | 33.9  | 689                  | 29.3  | 31.6                             | 391<br>(204)      | 31.3  | 1,145                | 25.8  | 28.8                             | - 2.8   |
| United Church         | 320<br>(247)                   | 27.1  | 572                  | 24.3  | 32.1                             | 307<br>(119)      | 24.6  | 862                  | 19.4  | 29.9                             | - 2.2   |
| Salvation Army        | 77<br>(64)                     | 6.5   | 142                  | 6.0   | 34.8                             | 86<br>(51)        | 6.9   | 288                  | 6.5   | 30.1                             | - 4.7   |
| Pentecostal           | 0                              | 0     | 0                    | 0     | 0                                | 53<br>(34)        | 4.2   | 142                  | 3.2   | 27.7                             | -       |
| Seventh Day Adventist | 2<br>(1)                       | 0.2   | 2                    | 0.1   | 116.5                            | 4<br>(2)          | 0.3   | 12                   | 0.3   | 30.0                             | -86.5   |
| Amalgamated and other | 34<br>(30)                     | 2.9   | 158                  | 6.7   | 26.6                             | 47<br>(28)        | 3.8   | 399                  | 8.9   | 34.1                             | - 2.5   |
| Total                 | 1,182<br>(869)                 | 100.0 | 2,354                | 100.0 | 33.3                             | 1,249<br>(620)    | 100.0 | 4,446                | 100.0 | 31.0                             | - 2.3   |

Note: <sup>a</sup> Numbers bracketed are schools doing work above Grade VIII.

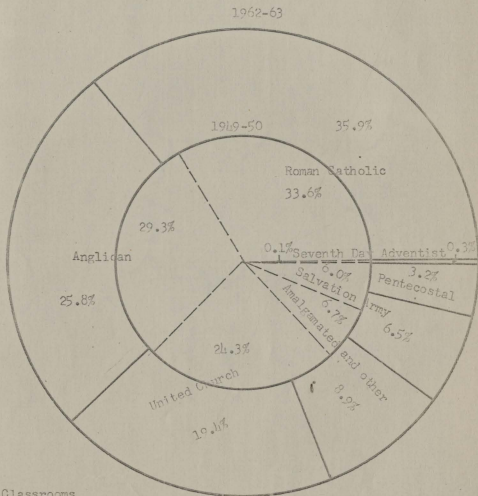
Source: 1. Calculated from Government of Newfoundland and Labrador, Department of Education, Annual Report, 1950 and 1963.



CHART 4-8

PERCENTAGE DISTRIBUTION OF CLASSROOMS  
IN NEWFOUNDLAND BY TYPE OF SERVICES

1949-50 AND 1962-63



Total Classrooms

1949-50: 2,354

1962-63: 4,446

Source: Table 4-15.

TABLE 4-16  
SCHOOLS CLASSIFIED BY NUMBER OF CLASSROOMS  
AND BY TYPE OF SERVICES IN NEWFOUNDLAND

1949-50 AND 1962-63

|                        | Classrooms |     |                |       |     |       |
|------------------------|------------|-----|----------------|-------|-----|-------|
|                        | 1          | 2-9 | 10-19          | 20-29 | 30+ | Total |
|                        |            |     | <u>1949-50</u> |       |     |       |
| Roman Catholic         | 209        | 128 | 6              | 5     | 0   | 348   |
| Anglican               | 260        | 138 | 5              | 0     | 0   | 401   |
| United Church          | 201        | 115 | 3              | 1     | 0   | 320   |
| Salvation Army         | 39         | 38  | 0              | 0     | 0   | 77    |
| Pentecostal            | 0          | 0   | 0              | 0     | 0   | 0     |
| Seventh Day Adventist  | 1          | 1   | 0              | 0     | 0   | 2     |
| Amalgamated and others | 15         | 19  | 1              | 1     | 1   | 34    |
| Total                  | 725        | 434 | 15             | 7     | 1   | 1,182 |
|                        |            |     | <u>1962-63</u> |       |     |       |
| Roman Catholic         | 111        | 214 | 24             | 8     | 4   | 361   |
| Anglican               | 146        | 231 | 12             | 2     | 0   | 391   |
| United Church          | 104        | 194 | 7              | 2     | 0   | 307   |
| Salvation Army         | 15         | 67  | 4              | 0     | 0   | 86    |
| Pentecostal            | 15         | 37  | 1              | 0     | 0   | 53    |
| Seventh Day Adventist  | 0          | 4   | 0              | 0     | 0   | 4     |
| Amalgamated and others | 0          | 34  | 10             | 2     | 1   | 47    |
| Total                  | 391        | 781 | 58             | 14    | 5   | 1,249 |

Source: 1. Government of Newfoundland and Labrador, Department of Education, Annual Report, 1950 and 1963.

Census Division, the number of classrooms of each type of service is calculated on the basis of the former, while an estimation of school-age population by denomination has to be based on the latter. However, this difficult investigation has been undertaken and presented in Table 4-17. From the table, it can be seen that some classrooms would have been over-crowded while others would have too few pupils if all school-age population were enrolled. For the province as a whole, each classroom in Divisions 1, 3 and 6 had 36 or more school age children since 1961, as compared with the provincial average of 34 in the school age group. Division 10 is the only area where each classroom had less than 30 in this school age group. By denomination, corresponding figures vary from place to place. Of course, all amalgamated schools accept students from the various denominations and some other schools do sometimes accept students of other denominations; this is of little importance in analyzing the appropriate provision of schools for adherent children. The ratio of school age population to classroom in Roman Catholic schools is comparatively evenly distributed within the ten Census Divisions, ranging approximately from 30 to 35 children per classroom. In the other denominations, this ratio varies from thirty to more than four hundred in different Divisions. Nevertheless, this table is provided, if it is very useful, for the educational planning of each denomination and the Department of Education.

Table 4-17 (continued).

| Census Division      | 1      | 2     | 3     | 4     | 5      | 6      | 7      | 8      | 9     | 10    | Total   |
|----------------------|--------|-------|-------|-------|--------|--------|--------|--------|-------|-------|---------|
| Total:               |        |       |       |       |        |        |        |        |       |       |         |
| No. of schools       | 334    | 104   | 79    | 72    | 60     | 45     | 194    | 209    | 123   | 47    | 1,269   |
| No. of classrooms(1) | 1,444  | 306   | 234   | 286   | 439    | 395    | 1,766  | 531    | 259   | 143   | 4,913   |
| Population 5-19 (2)  | 66,768 | 9,723 | 8,673 | 9,503 | 14,793 | 14,342 | 14,204 | 16,921 | 8,773 | 3,997 | 167,697 |
| (2)/(1)              | 36     | 32    | 37    | 33    | 34     | 36     | 30     | 32     | 34    | 28    | 34      |

## Notes:

Because lack of proper information, this table is very difficult to compile correctly. Population data were given by 1961 Census, which are correct (except the S.A. column) in columns of total. All other figures are estimated. Populations 5-19 years of age of Roman Catholic, Anglican, United Church and Pentecostal are distributed in each Census Division in accordance with their percentage distributions in Table 2-7. Population 5-19 years of age in Salvation Army is obtained by sharing the total population 5-19 years of age according to the percentage of Salvation Army in the total population in each Census Division, also from Table 2-7. Therefore, total population 5-19 years of age in this table in each Census Division may not total the sum of each religious denomination's figure.

Population 5-19 years of age for Seventh Day Adventist, by Census Division, is not possible to estimate, because there is no information, and the number is also very little.

Schools and classrooms are compiled according to the information offered by the Department of Education.

## Sources:

1. Dominion Bureau of Statistics, Census of Canada, 1961.
2. Government of Newfoundland and Labrador, Department of Education, List of Schools in Newfoundland, 1961.

ESTIMATED SCHOOLS, CLASSROOMS, POPULATIONS 5-19 YEARS OF AGE AND RATIOS OF POPULATION 5-19 YEARS OF AGE  
TO EVERY CLASSROOM, BY CENSUS DIVISION AND BY TYPE OF SERVICE, NEWFOUNDLAND

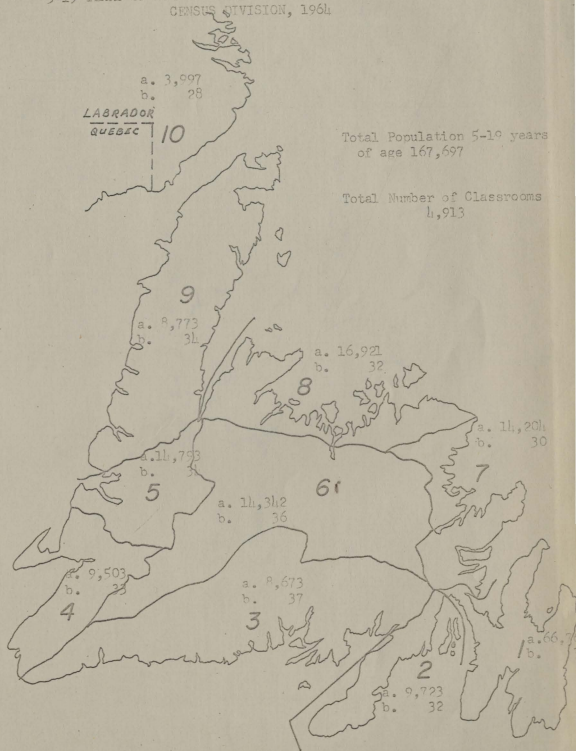
1964

| Census Division        | 1      | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    | Total  |
|------------------------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| Roman Catholic:        |        |       |       |       |       |       |       |       |       |       |        |
| No. of schools         | 151    | 53    | 13    | 56    | 14    | 13    | 22    | 18    | 23    | 9     | 372    |
| No. of classrooms (1)  | 975    | 155   | 36    | 230   | 148   | 130   | 47    | 52    | 41    | 37    | 1,851  |
| Population 5-19 (2)    | 34,903 | 4,300 | 1,620 | 6,980 | 4,425 | 4,300 | 1,371 | 1,683 | 1,309 | 1,433 | 62,324 |
| (2)/(1)                | 36     | 28    | 45    | 30    | 30    | 33    | 29    | 32    | 32    | 39    | 34     |
| Anglican:              |        |       |       |       |       |       |       |       |       |       |        |
| No. of schools         | 90     | 23    | 56    | 11    | 22    | 4     | 73    | 33    | 58    | 21    | 391    |
| No. of classrooms (1)  | 447    | 55    | 175   | 28    | 88    | 17    | 157   | 63    | 119   | 42    | 1,191  |
| Population 5-19 (2)    | 17,007 | 2,172 | 5,869 | 1,294 | 4,621 | 2,588 | 5,176 | 2,311 | 3,651 | 1,525 | 46,214 |
| (2)/(1)                | 38     | 39    | 34    | 46    | 53    | 152   | 33    | 37    | 31    | 36    | 39     |
| United Church:         |        |       |       |       |       |       |       |       |       |       |        |
| No. of schools         | 72     | 20    | 9     | 2     | 6     | 6     | 75    | 86    | 23    | 10    | 309    |
| No. of classrooms (1)  | 362    | 55    | 20    | 4     | 30    | 26    | 194   | 182   | 43    | 29    | 945    |
| Population 5-19 (2)    | 12,602 | 1,776 | 603   | 402   | 2,641 | 2,415 | 5,128 | 5,262 | 1,341 | 905   | 33,515 |
| (2)/(1)                | 35     | 32    | 30    | 101   | 89    | 108   | 26    | 29    | 31    | 31    | 36     |
| Salvation Army:        |        |       |       |       |       |       |       |       |       |       |        |
| No. of schools         | 12     | 6     | 1     | 0     | 2     | 4     | 16    | 35    | 6     | 0     | 82     |
| No. of classrooms (1)  | 7      | 20    | 3     | 0     | 19    | 39    | 52    | 87    | 13    | 0     | 240    |
| Population 5-19 (2)    | 2,203  | 807   | 204   | 105   | 1,435 | 2,467 | 1,790 | 3,875 | 640   | 20    | 13,546 |
| (2)/(1)                | 315    | 40    | 68    | -     | 76    | 63    | 34    | 45    | 49    | -     | 56     |
| Pentecostal:           |        |       |       |       |       |       |       |       |       |       |        |
| No. of schools         | 3      | 0     | 0     | 1     | 1     | 4     | 4     | 30    | 7     | 3     | 53     |
| No. of classrooms (1)  | 9      | 0     | 0     | 6     | 2     | 34    | 5     | 82    | 19    | 5     | 162    |
| Population 5-19 (2)    | 1,024  | 51    | 17    | 146   | 843   | 1,772 | 430   | 3,182 | 938   | 198   | 8,601  |
| (2)/(1)                | 114    | -     | -     | 24    | 421   | 52    | 86    | 39    | 49    | 40    | 53     |
| Seventh Day Adventist: |        |       |       |       |       |       |       |       |       |       |        |
| No. of schools         | 2      | 0     | 0     | 0     | 1     | 1     | 1     | 0     | 0     | 0     | 5      |
| No. of classrooms      | 9      | 0     | 0     | 0     | 2     | 2     | 1     | 0     | 0     | 0     | 14     |
| Amalgamated:           |        |       |       |       |       |       |       |       |       |       |        |
| No. of schools         | 4      | 2     | 0     | 2     | 14    | 13    | 3     | 7     | 6     | 4     | 55     |
| No. of classrooms      | 35     | 21    | 0     | 18    | 150   | 147   | 20    | 65    | 24    | 30    | 510    |

(continued)

## CHART h-9

POPULATION 5-19 YEARS OF AGE<sup>a</sup> AND THE RATIO OF POPULATION  
5-19 YEARS OF AGE TO EVERY CLASSROOM<sup>b</sup> IN NEWFOUNDLAND BY  
CENSUS DIVISION, 1964



APPENDIX C  
TABLE 1

ESTIMATED SCHOOL ENROLMENT IN NEWFOUNDLAND  
1964 TO 1980

|           | Total No.<br>of Students<br>Enrolled | Rate of<br>Growth in<br>Enrolment | x  | rx       | x <sup>2</sup> | Estimated<br>Enrolment<br>y <sub>c</sub> |
|-----------|--------------------------------------|-----------------------------------|----|----------|----------------|--|
|           | y                                    | r                                 |    |          |                |  |
| 1940-50   | 78,271                               |                                   |    |          |                |  |
| 1950-51   | 89,328                               | 1.3504                            | -6 | - 8.1024 | 36             |  |
| 1951-52   | 83,698                               | 5.5088                            | -5 | -27.5440 | 25             |  |
| 1952-53   | 87,813                               | 4.9225                            | -4 | -19.6900 | 16             |  |
| 1953-54   | 92,364                               | 5.1760                            | -3 | -15.5307 | 9              |  |
| 1954-55   | 97,800                               | 5.8854                            | -2 | -11.7708 | 4              |  |
| 1955-56   | 102,633                              | 4.9417                            | -1 | - 4.9417 | 1              |  |
| 1956-57   | 108,108                              | 5.3345                            | 0  | 0        | 0              | 108,108                                  |
| 1957-58   | 113,243                              | 4.7409                            | 1  | 4.7409   | 1              | 112,866                                  |
| 1958-59   | 119,279                              | 5.3301                            | 2  | 10.6602  | 4              | 117,779                                  |
| 1959-60   | 124,867                              | 4.6848                            | 3  | 14.0544  | 9              | 122,850                                  |
| 1960-61   | 128,917                              | 3.2435                            | 4  | 12.9740  | 16             | 128,081                                  |
| 1961-62   | 133,747                              | 3.7466                            | 5  | 18.7330  | 25             | 133,473                                  |
| 1962-63   | 137,700                              | 2.9556                            | 6  | 17.7336  | 36             | 130,029                                  |
| Total (Σ) |                                      | 57.8307                           | 0  | - 8.6745 | 182            |  |
| 1963-64   |                                      | r <sub>c</sub> 4.1146             | 7  |          |                | 144,749                                  |
| 1964-65   |                                      | 4.0669                            | 8  |          |                | 150,636                                  |
| 1965-66   |                                      | 4.0192                            | 9  |          |                | 156,951                                  |
| 1966-67   |                                      | 3.9715                            | 10 |          |                | 163,184                                  |
| 1967-68   |                                      | 3.9238                            | 11 |          |                | 169,587                                  |
| 1968-69   |                                      | 3.8761                            | 12 |          |                | 176,160                                  |
| 1969-70   |                                      | 3.8284                            | 13 |          |                | 182,904                                  |
| 1970-71   |                                      | 3.7807                            | 14 |          |                | 189,836                                  |
| 1971-72   |                                      | 3.7330                            | 15 |          |                | 196,923                                  |
| 1972-73   |                                      | 3.6853                            | 16 |          |                | 204,180                                  |
| 1973-74   |                                      | 3.6376                            | 17 |          |                | 211,607                                  |
| 1974-75   |                                      | 3.5899                            | 18 |          |                | 219,203                                  |
| 1975-76   |                                      | 3.5422                            | 19 |          |                | 226,968                                  |
| 1976-77   |                                      | 3.4945                            | 20 |          |                | 234,899                                  |
| 1977-78   |                                      | 3.4468                            | 21 |          |                | 242,995                                  |
| 1978-79   |                                      | 3.3991                            | 22 |          |                | 251,255                                  |
| 1979-80   |                                      | 3.3514                            | 23 |          |                | 259,676                                  |

Formula Used: 1.  $Na + bx = \Sigma y$   
 $a \Sigma x + b \Sigma x^2 = \Sigma xy$   
 2.  $a = \frac{\Sigma x^2 \Sigma y - \Sigma x \Sigma xy}{N \Sigma x^2 - (\Sigma x)^2}$   
 $b = \frac{N \Sigma xy - \Sigma x \Sigma y}{N \Sigma x^2 - (\Sigma x)^2}$

$a = 57.8307/13 = 4.4485$   
 $b = -8.6745/182 = -0.0477$   
 $r_c = a + bx = 4.4485 - 0.0477x$   
 $y_c = y(100+r_c) = y(100+4.4485-0.0477x)$   
 Base Year: July 1, 1957  
 x unit : one year



## APPENDIX C

TABLE 2

ESTIMATED SECONDARY SCHOOL ENROLMENT IN NEWFOUNDLAND  
1964 TO 1970

|           | No. of students<br>enrolled in<br>Grade IX-XII<br>y | Rate of<br>Growth in<br>Enrolment<br>r | x  | rx      | x <sup>2</sup> | Estimated<br>Students with<br>Grade IX-XII<br>y <sub>c</sub> |
|-----------|---|--|----|---------|----------------|--|
| 1949-50   | 8,463   |  |    |         |                |  |
| 1950-51   | 8,980   | 6.109                                  | -6 | -36.654 | 36             |  |
| 1951-52   | 9,983   | 11.169                                 | -5 | -55.845 | 25             |  |
| 1952-53   | 10,273  | 2.905                                  | -4 | -11.620 | 16             |  |
| 1953-54   | 10,818  | 5.305                                  | -3 | -15.915 | 9              |  |
| 1954-55   | 11,569  | 6.942                                  | -2 | -13.884 | 4              |  |
| 1955-56   | 12,205  | 5.497                                  | -1 | - 5.497 | 1              |  |
| 1956-57   | 13,027  | 6.734                                  | 0  | 0       | 0              | 13,027   |
| 1957-58   | 14,512  | 11.399                                 | 1  | 11.399  | 1              | 14,088   |
| 1958-59   | 15,733  | 8.413                                  | 2  | 16.826  | 4              | 15,275   |
| 1959-60   | 17,308  | 10.010                                 | 3  | 30.030  | 9              | 16,605   |
| 1960-61   | 19,287  | 11.434                                 | 4  | 45.736  | 16             | 18,097   |
| 1961-62   | 21,431  | 11.116                                 | 5  | 55.580  | 25             | 19,774   |
| 1962-63   | 22,539  | 5.170                                  | 6  | 31.020  | 36             | 21,662   |
| Total (Σ) | 187,665   | 102.203                                | 0  | 51.176  | 182            |  |
| 1963-64   | r <sub>c</sub>                                      | 9.829                                  | 7  |         |                | 23,791   |
| 1964-65   |   | 10.110                                 | 8  |         |                | 26,196   |
| 1965-66   |   | 10.391                                 | 9  |         |                | 28,918   |
| 1966-67   |   | 10.672                                 | 10 |         |                | 32,004   |
| 1967-68   |   | 10.953                                 | 11 |         |                | 35,509   |
| 1968-69   |   | 11.234                                 | 12 |         |                | 39,498   |
| 1969-70   |   | 11.515                                 | 13 |         |                | 44,046   |

Formula Used: 1.  $Na + b \sum x = \sum y$ 

$$a \sum x + b \sum x^2 = \sum xy$$

$$2. a = \frac{\sum x^2 \sum y - \sum x \sum xy}{N \sum x^2 - (\sum x)^2}$$

$$b = \frac{N \sum xy - \sum x \sum y}{N \sum x^2 - (\sum x)^2}$$

$$a = 102.203/13 = 7.862$$

$$b = 51.176/182 = 0.281$$

$$r_c = a + bx = 7.862 + 0.281x$$

$$y_c = y(100+r_c) = y(100+7.862+0.281x)$$

Base Year: July 1, 1957

x unit: one year

## CHAPTER V

## EDUCATIONAL INVESTMENT IN NEWFOUNDLAND

The simplest definition of economics is that it is a study of human wants and their satisfaction. The ultimate goal of the economic system is to maximize the satisfaction of human wants by using minimum resources. This goal can be achieved partly with the assistance of education which yields new techniques, knowledge, and abilities.

Education is an act of consumption, in the sense that it gives direct personal satisfaction; better still, education can be regarded an investment, because it increases tangible returns in the form of higher incomes in the future. Neither the immediate satisfaction nor the future returns of education can be precisely measured. The inputs or costs of education cannot be exactly estimated because they comprise not only the tangible resources spent on education but also the time, the less tangible factors such as the efforts, and foregone earning opportunities of students. Besides, education is an extremely complex part of the complicated social mechanism; and the education system is the result of the interaction of various combinations of economic and social impacts. Therefore, the attempt made to evaluate and judge the investment in education is rather hazardous and formidable; nevertheless,

"the financing of education is a very broad field of knowledge."<sup>1</sup>

This chapter deals with the annual investment in education since Confederation and, the manner in which it has been financed and allocated.

### 1. The Sources and Trends of Educational Investment

In Newfoundland, schools have been and are being run jointly by religious denominations which are endeavouring to produce the highest quality and maximum student output, while the Provincial Government provides much of the investment in education in order to maximize social gains. The total educational investment consists of school fees, taxes, and other voluntary contributions from churches as well. Because of the very rapid increase in the school age population since 1949, as well as the general recognition of the importance of education, a tremendous demand for widening and deepening educational investment has arisen. This demand has been set by increasing support from both public and private investment sources.

#### A. Provincial Government

##### a. Government Revenue

The Provincial Government has three sources of

---

1. Roe L. Johns and Edgar L. Morphet, Financing the Public Schools, Prentice-Hall, Inc., New Jersey, 1960, preface.

revenue. The vitally important one since 1949 has been Federal Government Grants in Aid. Next has been provincial taxation and the sale of goods and services (see Table 5-1). The Federal Government usually supports 50-65 percent of the total provincial revenue by means of tax rentals and grants. The various grants have been increased steadily and have become particularly important in recent years. In 1951-52 the Federal Government contributed 62.1 percent of the total provincial revenue, of which one half belonged to tax rentals. By 1962-63 Federal Government support was trebled; of the \$50 million, however, grants accounted for seven-tenths. This is similar to the "trickling-down effect."<sup>2</sup> Newfoundland has benefited from other developed provinces under this government policy.

Taxes in Newfoundland have been a rapidly increasing source of provincial revenue; rising from less than one-fifth of the total provincial revenue in 1951-52 to nearly one-third of the total eleven years later. This denotes a growing economy which increases the personal incomes and hence the taxable potential. "Other revenue" and revenue from sales of goods and services have shown little percentage changes (see Table 5-2).

---

2. See Albert D. Hirschman, The Strategy of Economic Development, Yale University Press, New Haven, 1958, p. 188.

TABLE 5-1

GOVERNMENT CURRENT ACCOUNT REVENUE OF NEWFOUNDLAND  
BY SOURCE, 1951-52, 1956-57 AND 1962-63

(in thousands of dollars)

|  | 1951-52 |       | 1956-57 |       | 1962-63 |       | Ratio of<br>1962-63 to<br>1951-52 |
|--|---------|-------|---------|-------|---------|-------|-----------------------------------|
|  | Amount  | %     | Amount  | %     | Amount  | %     |                                   |
| <u>Provincial</u>                                    |         |       |         |       |         |       |                                   |
| Taxes  | 4,781   | 18.6  | 12,051  | 27.4  | 30,357  | 31.8  | 6.35                              |
| Licences, Rentals,<br>Royalties, Permits<br>and Fees | 1,334   | 5.2   | 2,276   | 5.2   | 4,643   | 4.9   | 3.48                              |
| Sales  | 2,613   | 10.0  | 6,579   | 14.9  | 8,380   | 8.8   | 3.21                              |
| Interest   | 715     | 2.8   | 632     | 1.4   | 468     | 0.5   | 0.65                              |
| Other  | 334     | 1.3   | 520     | 1.2   | 1,032   | 1.1   | 3.09                              |
| Sub-total  | 9,777   | 37.9  | 22,058  | 50.1  | 44,980  | 47.1  | 4.60                              |
| <u>From Federal Government</u>                       |         |       |         |       |         |       |                                   |
| Statutory Subsidies                                  | 1,569   | 6.1   | 1,569   | 3.6   | 1,656   | 1.7   | 1.06                              |
| Tax Rental   | 7,994   | 30.9  | 14,019  | 31.8  | 14,098  | 14.8  | 1.76                              |
| Transitional Grants                                  | 6,500   | 25.1  | 2,250   | 5.1   | -       | -     | -                                 |
| Grants in Aid  | -       | -     | 4,163   | 9.4   | 16,215  | 17.0  | -                                 |
| Atlantic Province<br>Grant                           | -       | -     | -       | -     | 10,500  | 11.0  | -                                 |
| Award under Term 29                                  | -       | -     | -       | -     | 8,000   | 8.4   | -                                 |
| Sub-Total  | 16,063  | 62.1  | 22,001  | 49.9  | 50,469  | 52.9  | 3.14                              |
| Total Current<br>Account Revenue                     | 25,840  | 100.0 | 44,059  | 100.0 | 95,449  | 100.0 | 3.69                              |

Source: 1. Government of Newfoundland and Labrador, Department of Public Finance, Public Accounts, 1952, 1957 and 1963.

TABLE 5-2

GOVERNMENT REVENUE AND EXPENDITURE OF NEWFOUNDLAND  
BY CURRENT AND CAPITAL ACCOUNT

1951-52, 1956-57 AND 1962-63

(in thousands of dollars)

|                                      | 1951-52 <sup>a</sup> |   | 1956-57 |       | 1962-63 |       |
|--------------------------------------|----------------------|---|---------|-------|---------|-------|
|                                      | Amount               | % | Amount  | %     | Amount  | %     |
| Total Current<br>Account Revenue     | 25,840               | - | 44,059  | 95.7  | 95,450  | 79.7  |
| Total Capital<br>Account Revenue     | -                    | - | 1,958   | 4.3   | 24,256  | 20.3  |
| Gross Revenue                        | 30,941               | - | 46,017  | 100.0 | 119,706 | 100.0 |
| Total Current<br>Account Expenditure | 24,142               | - | 43,892  | 74.4  | 94,109  | 70.3  |
| Total Capital<br>Account Expenditure | -                    | - | 15,117  | 25.6  | 39,842  | 29.7  |
| Gross Expenditure                    | 29,234               | - | 59,009  | 100.0 | 133,951 | 100.0 |
| Budget Balance                       | 1,707                |   | -12,992 |       | -14,245 |       |

Note:     <sup>a</sup>     Gross Revenue and Expenditure in 1951-52 represent budgetary accounts; data for capital accounts are not available.

Source:    1.     Government of Newfoundland and Labrador, Department of Public Finance, Public Accounts, 1952, 1957 and 1963.



The Provincial Government's revenue on current account during the period increased from \$25.8 million to \$95.4 million, or twice the 1951-52 amount in real terms. Total provincial revenue was three times the 1951-52 figure in real terms, rising from \$30.9 million to \$119.7 million (see Tables 5-1 and 5-2).

b. Government expenditure

As noted above, the Provincial Government has invested a great deal in building an infra-structure and in creating social utilities. This is evidenced by Table 5-3, in which the largest drains of Governmental expenditure are clearly depicted: education, highways, social welfare, health and public works together accounted for over three-fourths of the total expenditure since Confederation. The social welfare payments scheme distributes more equally the family incomes in the society and provides relatively equal opportunities for individuals to enjoy the progress of the society. The payment will proportionally decline when personal earnings increase, and the gap in personal disposable incomes will gradually close: Provincial Government expenditure on social welfare payments are tending to decline proportionately.

As stated before, education is a productive investment which is not only fully liquidated, but also yields a return



TABLE 5-3

## PROVINCIAL GOVERNMENT EXPENDITURE IN NEWFOUNDLAND, BY MAJOR AREA

1949-50 TO 1962-63

(in thousands of dollars)

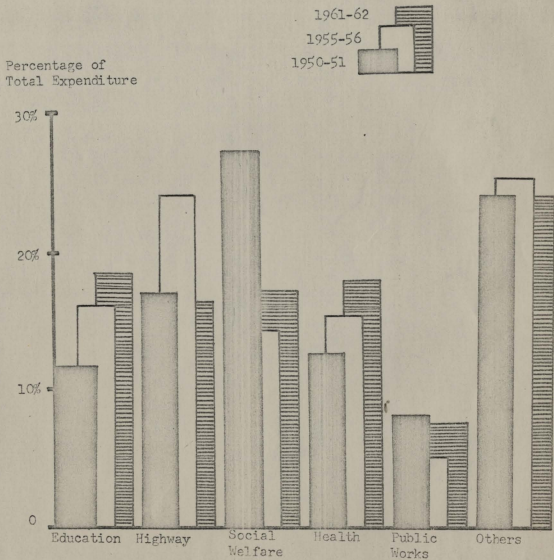
|         | Education |                     | Highway |                     | Social Welfare |                     | Health |                     | Public Works |                     | Total   |                     |
|---------|-----------|---------------------|---------|---------------------|----------------|---------------------|--------|---------------------|--------------|---------------------|---------|---------------------|
|         | Amount    | Percentage of total | Amount  | Percentage of total | Amount         | Percentage of total | Amount | Percentage of total | Amount       | Percentage of total | Amount  | Percentage of total |
| 1949-50 | 4,422     | 12.6                | 3,956   | 11.3                | 8,620          | 24.6                | 4,904  | 14.0                | 3,881        | 11.1                | 35,024  | 100.0               |
| 1950-51 | 4,653     | 11.8                | 6,556   | 16.6                | 10,768         | 27.3                | 4,971  | 12.6                | 3,163        | 8.0                 | 39,484  | 100.0               |
| 1951-52 | 5,499     | 11.8                | 6,782   | 14.6                | 9,677          | 20.8                | 5,825  | 12.5                | 3,082        | 6.6                 | 46,589  | 100.0               |
| 1952-53 | 6,417     | 15.4                | 5,501   | 13.4                | 6,777          | 15.1                | 6,402  | 15.4                | 2,353        | 5.7                 | 41,580  | 100.0               |
| 1953-54 | 6,732     | 15.2                | 7,518   | 16.9                | 6,788          | 15.3                | 7,007  | 17.6                | 2,234        | 5.0                 | 44,369  | 100.0               |
| 1954-55 | 8,713     | 15.6                | 12,037  | 21.6                | 7,503          | 13.4                | 8,376  | 15.0                | 3,035        | 5.4                 | 55,843  | 100.0               |
| 1955-56 | 8,976     | 16.0                | 13,468  | 24.1                | 7,021          | 14.1                | 8,899  | 15.8                | 2,880        | 5.1                 | 56,259  | 100.0               |
| 1956-57 | 10,454    | 17.7                | 11,004  | 18.8                | 8,821          | 14.9                | 9,880  | 16.7                | 3,115        | 5.3                 | 59,011  | 100.0               |
| 1957-58 | 11,605    | 17.4                | 9,317   | 14.0                | 11,049         | 16.6                | 11,616 | 17.4                | 3,089        | 4.6                 | 66,702  | 100.0               |
| 1958-59 | 14,766    | 17.3                | 18,332  | 21.5                | 15,116         | 17.8                | 13,648 | 16.0                | 5,219        | 6.1                 | 85,129  | 100.0               |
| 1959-60 | 15,803    | 17.1                | 22,373  | 24.3                | 16,269         | 17.7                | 15,428 | 16.7                | 4,235        | 4.6                 | 92,151  | 100.0               |
| 1960-61 | 18,734    | 18.8                | 21,940  | 22.0                | 16,479         | 16.5                | 16,937 | 17.0                | 4,309        | 4.3                 | 99,733  | 100.0               |
| 1961-62 | 19,383    | 18.3                | 17,133  | 16.2                | 17,714         | 16.8                | 18,515 | 17.5                | 7,912        | 7.5                 | 105,740 | 100.0               |
| 1962-63 | 22,114    | 16.5                | 22,509  | 16.8                | 19,537         | 14.6                | 19,445 | 14.5                | 20,602       | 15.4                | 133,952 | 100.0               |
| 1949-50 | 5.0       | -                   | 5.7     | -                   | 2.3            | -                   | 4.0    | -                   | 5.3          | -                   | 3.8     | -                   |

Source: 1. Government of Newfoundland and Labrador, Department of Public Finance, Public Accounts, 1950 to 1963.

CHART 5-1

PROPORTIONAL EXPENDITURES OF THE NEWFOUNDLAND  
GOVERNMENT, BY MAJOR AREA

1950-51, 1955-56 AND 1961-62



Source: Table 5-3.

over and above its initial cost.<sup>3</sup> Some studies have led to the conclusion that "education steps up living standards."<sup>4</sup> Certainly, education becomes more necessary, more complex but also more costly:<sup>5</sup> the financing of education is associated with a country's economy and <sup>both</sup> are inter-dependent. Expenditure on education in this province has demanded the utilization of a large proportion of its resources, and this expenditure has shown a strong upward trend. ~~Disbursement on~~ education accounted for one-eighth of the total provincial expenditures in 1949-50, while it has occupied almost one-fifth of the total since 1960-61. Expenditure on education rose from \$4 million in 1949-50 to \$22 million in 1962-63 (see Table 5-3). About 90 percent of all educational expenditure had been allocated to elementary and secondary education (see Table 5-7). The steady increase in the expenditure on education has been partly a cause of Government budget deficits (see Table 5-2).

#### B. Local Support

More than four-fifths of the total investment in education in Newfoundland has been derived from governmental

---

3. American Association of School Administrators, Public Relations for American School, 28th year book, Washington, D.C., 1950, p. 225.

4. Harold F. Clark, Education Steps Up Living Standards, Chamber of Commerce of the U.S., Washington, D.C., 1945.

5. Johns and Morphet, op. cit., p. 16.

accounts, while the rest has come from local contributions. This local source has been supported by various ways in which educational taxes are of more importance to discuss.

As noted earlier, Newfoundland has a denominational system of school districts, and these districts vary in geographic and demographic size. A district may comprise twenty scattered little settlements and one community may include several educational districts.<sup>6</sup> There are 276 districts today, each with its school board.<sup>7</sup> These school boards, subject to the approval of the Council of Education, may assess school fees. A general educational tax can be *collected of the* local ~~levels~~ when it is authorized by the "School Tax Authority." This body consists of representatives of school boards and Municipal Councils in the school tax area. The Authority distributes equally the collected taxes on a per student basis to school boards in the area.<sup>8</sup> Previous to 1955 there was no educational tax in Newfoundland, but in 1955 Corner Brook and Deer Lake initiated taxation for education. This tax was not

---

6. G.A. Frecker, Education in the Atlantic Provinces, W.J. Gage and Co. Ltd., Toronto, 1956, p. 96.

7. The United Church owns most school boards in the province, namely, 85; Anglican school boards number 83 and Roman Catholic 53; Amalgamated 34; Pentecostal and Seventh Day Adventist 1.

8. Philip J. Warren, Financing Education in Newfoundland, unpublished doctoral dissertation, University of Alberta, 1962, p. 135.

collected until 1958. At present, there are three other places that have levied this taxation, i.e., Lewisporte, Gander and Happy Valley.

School boards have been required to raise a portion of the funds for new capital projects. They raise these funds through voluntary contributions from pupil's parents, religious and educational benefactors, as well as from school fees and local taxation. Unfortunately, such data are not readily available as they have not been compiled by the Department of Education. Professor Warren using D.B.S. figures estimated that between 1949 and 1960 contributions from local sources increased from \$1.1 million to \$3.5 million.<sup>9</sup> These sources in 1960 equalled almost one-fifth of the total government expenditure spent on elementary and secondary education in that year. Of the local contributions in 1960, 23 percent came from school fees, and only 6 percent from education taxation. However, Professor Warren using data from the individual school boards, arrived at another estimation: in 1959-60 only \$1.9 million was raised locally. Of this 40.2 percent came from school fees and 18.6 percent from educational taxation<sup>10</sup> (see Table 5-4).

---

9. Philip J. Warren, op. cit., p. 138.

10. Ibid., p. 140.

TABLE 5-4  
LOCAL SOURCES OF EXPENDITURE ON ELEMENTARY  
AND SECONDARY EDUCATION IN NEWFOUNDLAND

1956-57 TO 1959-60

(in thousands of dollars)

|  | 1956-57 |       | 1957-58 |       | 1958-59 |       | 1959-60 |       | 1959-60<br>1956-57 |
|--|---------|-------|---------|-------|---------|-------|---------|-------|--------------------|
|  | Amount  | %     | Amount  | %     | Amount  | %     | Amount  | %     |                    |
| Fees                                       | 433     | 39.4  | 642     | 46.0  | 703     | 39.7  | 772     | 40.2  | 1.78               |
| Church funds                               | 253     | 23.0  | 221     | 15.8  | 455     | 25.7  | 455     | 23.7  | 1.80               |
| Local Taxation<br>and Payroll<br>Deduction | 190     | 17.3  | 259     | 18.5  | 308     | 17.4  | 358     | 18.6  | 1.88               |
| Others                                     | 223     | 20.3  | 273     | 19.7  | 304     | 17.2  | 335     | 17.5  | 1.50               |
| Total                                      | 1,099   | 100.0 | 1,395   | 100.0 | 1,770   | 100.0 | 1,920   | 100.0 | 1.75               |

Source: 1. P.J. Warren, Financing Education in Newfoundland, Unpublished Doctoral Dissertation, The University of Alberta, 1962, p. 140.

## 2. Allocation of Educational Investment

### A. Government Allocation in General

Table 5-5 portrays the detailed factor costs for education in this province for selected years: current account or working capital amounted to over four-fifths of the total investment every year. Of this working capital, 70 percent is granted to the school boards for teachers' salaries. School supplies required about 4-5 percent of the total current expenditures. The expenditure on scholarships has been rising rapidly. It was only \$4,000 in 1949-50 but it rose to \$439,000 in 1962-63. Undoubtedly, this is intended to provide greater equality of educational opportunity.

Expenditure on capital account showed an increase at the expense of the current account. Between 1949-50 and 1962-63 expenditure on capital account rose from 9.7 percent to 16.1 percent of the total investment in education. School building, including maintenance and repairs, absorbed 98 percent of the total capital expenditure during the period above mentioned (see Table 5-5). Amounts for maintenance were allocated on a classroom basis in accordance with the size and type of school.

Table 5-6 contains a year to year total government expenditure in constant dollars on education, classified by current and capital accounts and by dollars per capita. Total



## CURRENT AND CAPITAL GOVERNMENT EXPENDITURES ON EDUCATION FOR NEWFOUNDLAND IN SELECTED YEARS BY AREA

(in thousands of dollars)

|                                | 1949-50 |                            | 1954-55 |                            | 1959-60 |                            | 1962-63 |                            | 1962-63<br>1949-50 |
|--------------------------------|---------|----------------------------|---------|----------------------------|---------|----------------------------|---------|----------------------------|--------------------|
|                                | Amount  | % of<br>Aggregate<br>Total | Amount  | % of<br>Aggregate<br>Total | Amount  | % of<br>Aggregate<br>Total | Amount  | % of<br>Aggregate<br>Total |                    |
| <u>Current Account</u>         |         |                            |         |                            |         |                            |         |                            |                    |
| Minister's Office              | 9       | 0.2                        | 12      | 0.1                        | 14      | 0.1                        | 15      | 0.1                        | 1.7                |
| General Office                 | 69      | 1.6                        | 111     | 1.3                        | 173     | 1.1                        | 56      | 0.3                        | 0.8                |
| Accounting Office              | 10      | 0.2                        | 15      | 0.2                        | 75      | 0.2                        | 16      | 0.1                        | 1.6                |
| School Supplies                | 203     | 4.6                        | 410     | 4.7                        | 484     | 3.1                        | 893     | 4.0                        | 4.4                |
| Supervisory Service            | 97      | 2.2                        | 118     | 1.3                        | 129     | 0.8                        | 156     | 0.7                        | 1.6                |
| Library Service                | 86      | 1.9                        | 139     | 1.6                        | 160     | 1.0                        | 185     | 0.8                        | 2.2                |
| Correspondence Courses         | 2       | .. <sup>a</sup>            | 3       | ..                         | 28      | 0.2                        | 16      | 0.1                        | 8.0                |
| Training Teachers              | 71      | 1.6                        | 166     | 1.9                        | 314     | 2.0                        | 482     | 2.2                        | 6.8                |
| Teachers' Pensions             | 145     | 3.3                        | 152     | 1.7                        | 185     | 1.2                        | 260     | 1.2                        | 1.8                |
| Scholarships                   | 4       | 0.1                        | 26      | 0.3                        | 306     | 1.9                        | 439     | 2.0                        | 109.8              |
| Vocational Training            | 52      | 1.2                        | 136     | 1.6                        | 238     | 1.5                        | 306     | 1.4                        | 5.9                |
| Handicrafts                    | 60      | 1.3                        | 30      | 0.3                        | 30      | 0.2                        | 30      | 0.1                        | 0.5                |
| Adult Education                | 42      | 0.9                        | 51      | 0.6                        | 104     | 0.7                        | 98      | 0.4                        | 2.3                |
| Grants                         | 3,112   | 70.6                       | 5,866   | 67.2                       | 11,385  | 72.0                       | 15,087  | 68.2                       | 4.8                |
| Audio-Visual                   | 23      | 0.5                        | 179     | 2.1                        | 68      | 0.4                        | 78      | 0.3                        | 3.4                |
| Public Examinations            | 11      | 0.2                        | 71      | 0.8                        | 133     | 0.8                        | 180     | 0.8                        | 16.4               |
| Cultural Activities            | -       | -                          | 2       | ..                         | 3       | ..                         | 3       | ..                         | ..                 |
| Curriculum Service             | -       | -                          | 9       | 0.1                        | 10      | 0.1                        | 179     | 0.8                        | ..                 |
| Temperance Education           | -       | -                          | 17      | 0.2                        | -       | -                          | 10      | ..                         | ..                 |
| School Attendance              | -       | -                          | -       | -                          | 34      | 0.2                        | 41      | 0.2                        | ..                 |
| Public School Service          | -       | -                          | -       | -                          | -       | -                          | 122     | 0.6                        | ..                 |
| Community Leadership           | -       | -                          | -       | -                          | -       | -                          | 53      | 0.2                        | ..                 |
| Total                          | 3,995   | 90.3                       | 7,503   | 86.1                       | 13,824  | 87.5                       | 18,543  | 83.9                       | 4.6                |
| <u>Capital Account</u>         |         |                            |         |                            |         |                            |         |                            |                    |
| Loans to School Boards         | -       | -                          | 217     | 2.5                        | -       | -                          | -       | -                          | -                  |
| Vocational School<br>Equipment | -       | -                          | 90      | 1.0                        | 7       | ..                         | 1,529   | 6.9                        | ..                 |
| Library Buildings              | 8       | 0.2                        | 5       | 0.1                        | 4       | ..                         | 5       | ..                         | 0.6                |
| School Buildings               | 419     | 9.5                        | 897     | 10.3                       | 1,956   | 12.4                       | 2,037   | 9.2                        | 4.9                |
| Other                          | -       | -                          | -       | -                          | 12      | 0.1                        | -       | -                          | -                  |
| Total                          | 427     | 9.7                        | 1,210   | 13.9                       | 1,979   | 12.5                       | 3,571   | 16.1                       | 8.4                |
| Aggregate Total                | 4,422   | 100.0                      | 8,713   | 100.0                      | 15,803  | 100.0                      | 22,114  | 100.0                      | 5.0                |

Note: <sup>a</sup> .. less than 0.1%.Source: 1. Government of Newfoundland and Labrador, Department of Public Finance, Public Accounts, 1950, 1955, 1960 and 1963.

TABLE 5-6

GOVERNMENT EXPENDITURE ON EDUCATION BY CURRENT AND CAPITAL  
ACCOUNT IN CURRENT AND CONSTANT DOLLAR FOR NEWFOUNDLAND

1949 TO 1963

|                                  | Expenditure In Current Dollar          |               |  |               | Expenditure In 1949 Dollar |                     |                               |
|----------------------------------|--|---------------|--|---------------|----------------------------|---------------------|-------------------------------|
|                                  | Current Account<br>Amount<br>(\$1,000) | % of<br>total | Capital Account<br>Amount<br>(\$1,000) | % of<br>total | Total<br>(\$1,000)         | Amount<br>(\$1,000) | Expenditure<br>per people (#) |
| 1949-50                          | 3,995                                  | 90.3          | 427                                    | 9.7           | 4,422                      | 4,422               | 12.8                          |
| 1950-51                          | 4,249                                  | 91.3          | 403                                    | 8.7           | 4,652                      | 4,512               | 12.9                          |
| 1951-52                          | 4,934                                  | 89.7          | 565                                    | 10.3          | 5,499                      | 4,819               | 13.3                          |
| 1952-53                          | 5,730                                  | 89.3          | 687                                    | 10.7          | 6,417                      | 5,356               | 14.3                          |
| 1953-54                          | 6,074                                  | 90.2          | 659                                    | 9.8           | 6,732                      | 5,596               | 14.6                          |
| 1954-55                          | 7,503                                  | 86.1          | 1,210                                  | 13.9          | 8,713                      | 7,072               | 17.9                          |
| 1955-56                          | 8,100                                  | 90.2          | 876                                    | 9.8           | 8,976                      | 7,280               | 17.9                          |
| 1956-57                          | 8,643                                  | 82.7          | 1,811                                  | 17.3          | 10,454                     | 8,173               | 19.7                          |
| 1957-58                          | 9,877                                  | 85.1          | 1,728                                  | 14.9          | 11,605                     | 8,673               | 20.5                          |
| 1958-59                          | 12,129                                 | 82.1          | 2,637                                  | 17.9          | 14,766                     | 10,841              | 25.1                          |
| 1959-60                          | 13,824                                 | 87.5          | 1,979                                  | 12.5          | 15,803                     | 10,556              | 23.9                          |
| 1960-61                          | 16,090                                 | 85.9          | 2,644                                  | 14.1          | 18,734                     | 13,343              | 29.8                          |
| 1961-62                          | 17,238                                 | 88.9          | 2,145                                  | 11.1          | 19,383                     | 13,718              | 30.0                          |
| 1962-63                          | 18,543                                 | 83.9          | 3,571                                  | 16.1          | 22,114                     | 15,400              | 32.8                          |
| <u>1962-63</u><br><u>1949-50</u> | 4.6                                    |               | 8.4                                    |               | 5.0                        | 3.5                 | 2.6                           |

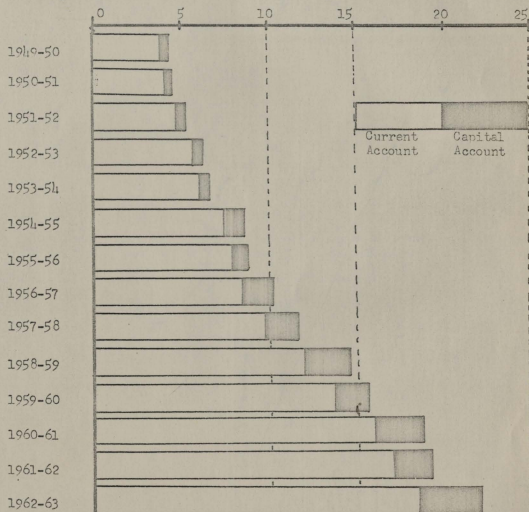
- Sources: 1. Government of Newfoundland and Labrador, Department of Public Finance, Public Accounts, 1950 to 1963.  
 2. Expenditures in 1949 dollar are calculated from Tables 5-7 and 3-1.

CHART 5-2

GOVERNMENT EXPENDITURE ON EDUCATION BY CURRENT  
AND CAPITAL ACCOUNT FOR NEWFOUNDLAND

1949-50 TO 1962-63

Millions of Dollars



Source: Table 5-6.

expenditure rose 2.5 times in real terms as compared with a four-fold increase in monetary terms. The amount spent (in 1949 dollars) on a per capita basis increased from \$12.8 to \$32.8, from 1949-50 to 1962-63.

#### E. Government Allocation on Elementary and Secondary Education.

Since vocational training was only formally established in this province after 1962, the dominant function of the Department of Education was focused on elementary and secondary education, which accounted for 86.7 percent to 94.2 percent of the total expenditure on education. The absolute amount rose from \$4 million in 1949-50 to \$20 million in 1962-63 or 2.4 times in terms of 1949 dollar. On a per student basis, the real value of expenditure rose from \$50.6 to \$98.7; but on the basis of per student average daily attendance, the real expenditure increased from \$59.4 to \$108.4 (see Table 5-7). The lower rate of increase in expenditure on per student (90 percent) as compared to educational expenditure on per people in the province (160 percent) was mainly due to the increase in school-age population and an improvement in retention rate.

Education, especially elementary and secondary education, is a labor intensive industry. In Newfoundland this labor cost

TABLE 5-7

GOVERNMENT EXPENDITURE ON ELEMENTARY AND SECONDARY  
EDUCATION FOR NEWFOUNDLAND

1949 TO 1963

|                    | Expenditure in Current Dollar |   | Price Index Number <sup>a</sup> | Expenditure In 1949 Dollar |                  |  |
|--------------------|-------------------------------|---|---------------------------------|----------------------------|------------------|--|
|                    | Amount (\$1,000)              | Percentage of total Education Expenditure |                                 | Amount (\$1,000)           | Per Student (\$) | Per Student in Average Daily Attendance (\$) |
| 1949-50            | 3,962                         | 89.8                                      | 100.0                           | 3,962                      | 50.6             | 50.6   |
| 1950-51            | 4,184                         | 90.0                                      | 103.1                           | 4,058                      | 51.2             | 60.0   |
| 1951-52            | 4,925                         | 89.6                                      | 114.1                           | 4,316                      | 51.6             | 60.7   |
| 1952-53            | 5,665                         | 88.3                                      | 119.8                           | 4,729                      | 53.9             | 61.4   |
| 1953-54            | 6,012                         | 89.3                                      | 120.3                           | 4,998                      | 54.1             | 61.8   |
| 1954-55            | 7,559                         | 86.8                                      | 123.2                           | 6,136                      | 62.7             | 71.8   |
| 1955-56            | 8,150                         | 90.8                                      | 123.3                           | 6,610                      | 64.4             | 73.3   |
| 1956-57            | 9,059                         | 86.7                                      | 127.9                           | 7,083                      | 65.5             | 73.7   |
| 1957-58            | 10,198                        | 88.0                                      | 133.8                           | 7,622                      | 67.3             | 76.6   |
| 1958-59            | 13,544                        | 91.7                                      | 136.2                           | 9,944                      | 83.4             | 93.2   |
| 1959-60            | 14,882                        | 94.2                                      | 140.7                           | 9,941                      | 79.6             | 87.0   |
| 1960-61            | 17,622                        | 94.1                                      | 140.4                           | 12,551                     | 97.4             | 107.7  |
| 1961-62            | 18,243                        | 94.1                                      | 141.3                           | 12,911                     | 96.5             | 107.3  |
| 1962-63            | 19,511                        | 88.2                                      | 143.6                           | 13,587                     | 98.7             | 108.4  |
| 1962-63<br>1949-50 | 4.9                           | -   | -                               | 3.4                        | 1.9              | 1.8  |

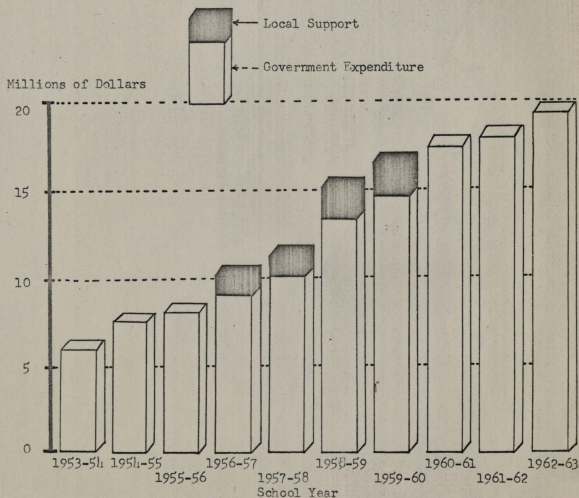
Note: <sup>a</sup> 1949 = 100.

- Sources: 1. Government of Newfoundland and Labrador, Department of Education Annual Report, 1950 to 1963.  
 2. Dominion Bureau of Statistics, Incomes and Expenditures.  
 3. Tables 4-1 and 4-4.

CHART 5-3

EXPENDITURES ON ELEMENTARY AND SECONDARY EDUCATION  
FOR NEWFOUNDLAND

1953-54 TO 1962-63



Note: Data for local support are available only for years from 1956-57 to 1959-60.

Source: Tables 5-4 and 5-7.

or teachers' salaries absorbed from 62.9 percent to 73.8 percent of the total expenditure for the elementary and secondary education. Between 1949-50 and 1962-63, this cost increased from \$2.9 million to \$12.9 million. Nevertheless, this cost has tended to decline proportionately to the capital cost: teachers' salaries have risen comparatively more slowly than capital outlays since teachers become more available and the market for teachers more competitive. This is due to the fact that:

"Teaching has become a profession whose salary spread is narrow, and whose relative salary position has deteriorated, reflecting a growing abundance of educated talent."<sup>11</sup>

Capital costs in the province have demanded an increasing share of the provincial total expenditure. They have risen as a result of educational improvement or favorable education programming. This appears to be a general phenomenon according to Mrs. Sexton who points out that:

"Perhaps the most important and most costly elements of good education, aside from teachers, are school buildings and school facilities, and in an inadequate school building with substandard facilities, the quality of education in all probability will be inferior."<sup>12</sup>

In 1950-51 capital cost was 16 percent of the total cost, while ten years later it exceeded 24 percent of the total

---

11. John Vaizey, The Economics of Education, Faber and Faber Ltd., London, 1962, p. 110.

12. Patricia Cayo Sexton, Education and Income, The Viking Press, New York, 1961, pp. 122 and 123.



cost (see Table 5-8).

In order to turn out highly qualified students and to create opportunities for financially poor but academically good students, scholarships, transportation and boarding grants have increased substantially. Together, these awards and grants increased from less than 0.1 percent of the total government expenditure on education in 1949-50 to over 5 percent in 1962-63 (see Table 5-8).

#### C. School Board's Allocation of Investment Funds on Elementary and Secondary Education

The school boards in Newfoundland have been assigned the responsibility of providing resources for expenditure on education. However, this responsibility is confined to costs of a fixed nature, because almost all such variable costs as teachers' salaries are paid by government. School boards provided at least 30 percent of the total capital outlays for regional and central high schools, and 40 percent for other building expenditure;<sup>13</sup> local boards of elementary schools are also responsible for 40 percent of these fixed costs.

School boards have considerable freedom in allocating the funds raised from fees, church activities and so forth.

---

13. Philip John warren, op. cit., p. 306.

## MAJOR AREAS OF GOVERNMENT EXPENDITURE ON ELEMENTARY AND SECONDARY EDUCATION FOR NEWFOUNDLAND

1949 TO 1963  
(In thousands of dollars)

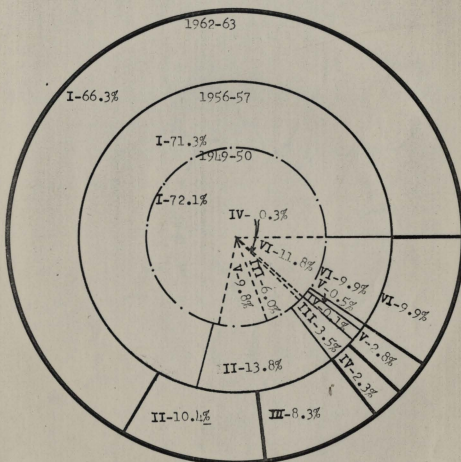
|         | Teacher Salaries |            | Buildings |            | Maintenance & Repairs |            | Scholarships & Bursaries |            | Transportation & Boarding |            | Total  |            |
|---------|------------------|------------|-----------|------------|-----------------------|------------|--------------------------|------------|---------------------------|------------|--------|------------|
|         | Amount           | % of total | Amount    | % of total | Amount                | % of total | Amount                   | % of total | Amount                    | % of total | Amount | % of total |
| 1949-50 | 2,893            | 73.0       | 429       | 10.8       | 232                   | 5.9        | 4                        | 0.1        | -                         | -          | 3,962  | 100.0      |
| 1950-51 | 3,037            | 72.1       | 408       | 9.8        | 269                   | 6.0        | 13                       | 0.3        | -                         | -          | 4,187  | 100.0      |
| 1951-52 | 3,439            | 69.8       | 561       | 11.4       | 255                   | 5.2        | 19                       | 0.4        | -                         | -          | 4,925  | 100.0      |
| 1952-53 | 3,988            | 70.4       | 693       | 12.2       | 265                   | 4.7        | 25                       | 0.4        | -                         | -          | 5,665  | 100.0      |
| 1953-54 | 4,328            | 72.0       | 657       | 10.9       | 285                   | 4.7        | 25                       | 0.4        | -                         | -          | 6,012  | 100.0      |
| 1954-55 | 5,525            | 73.1       | 897       | 11.9       | 304                   | 4.0        | 26                       | 0.3        | 6                         | 0.1        | 7,559  | 100.0      |
| 1955-56 | 6,016            | 73.8       | 866       | 10.6       | 320                   | 3.9        | 31                       | 0.4        | 13                        | 0.2        | 8,150  | 100.0      |
| 1956-57 | 6,461            | 71.3       | 1,246     | 13.8       | 313                   | 3.5        | 87                       | 1.0        | 42                        | 0.5        | 9,059  | 100.0      |
| 1957-58 | 7,269            | 71.3       | 1,106     | 10.8       | 363                   | 3.6        | 94                       | 0.9        | 67                        | 0.7        | 10,198 | 100.0      |
| 1958-59 | 8,821            | 65.1       | 2,335     | 17.2       | 946                   | 7.0        | 189                      | 1.4        | 112                       | 0.8        | 13,584 | 100.0      |
| 1959-60 | 10,143           | 68.2       | 1,957     | 13.2       | 988                   | 6.6        | 306                      | 2.1        | 197                       | 1.3        | 14,882 | 100.0      |
| 1960-61 | 11,085           | 62.9       | 2,608     | 14.8       | 1,656                 | 9.4        | 393                      | 2.2        | 311                       | 1.8        | 17,622 | 100.0      |
| 1961-62 | 11,862           | 65.0       | 2,126     | 11.7       | 1,602                 | 8.8        | 460                      | 2.5        | 408                       | 2.1        | 18,283 | 100.0      |
| 1962-63 | 12,927           | 66.3       | 2,037     | 10.4       | 1,626                 | 8.3        | 439                      | 2.3        | 545                       | 2.8        | 19,511 | 100.0      |
| 1963-64 | 4.5              | -          | 4.7       | -          | 7.0                   | -          | 109.7                    | -          | -                         | -          | 4.9    | -          |

Source: 1. Government of Newfoundland and Labrador, Department of Education, Annual Report.

CHART 5-4

MAJOR AREAS OF GOVERNMENT EXPENDITURE ON  
ELEMENTARY AND SECONDARY EDUCATION

1949-50, 1956-57 AND 1962-63



- |                            |                                |
|----------------------------|--------------------------------|
| I. Teacher Salaries        | IV. Scholarships and Bursaries |
| II. Buildings              | V. Transportation and Boarding |
| III. Maintenance & Repairs | VI. Others                     |

Note: No expenditure on Transportation and Boarding in 1949-50.

Source: Table 5-8.

expenditure by school boards ~~has~~ not been accurately measured and such an investigation is rather difficult. Table 5-4 shows the local sources of expenditure on education while Table 5-6 gives the current and capital expenditure by government on education. Expenditure from local sources fluctuates annually from 34 percent to 45 percent of the provincial expenditure.

### 3. The Analyses of Educational Expenditure in Newfoundland

#### A. Educational Criteria

The basic guarantees of political and legal equality which imply equality of opportunity is the main principle in a democratic country. The major means of securing equality of opportunity is education. Thus the ideal of educational opportunity -- the availability of substantial free education regardless of the social status of the prospective student -- is a vital part of modern ideology.<sup>14</sup> Elementary and secondary education in Newfoundland may be considered free, apart from small fees and taxes. This free education indicates the belief that educational investment will have a high return and it reflects the policy that the parents should not be more heavily burdened as compared to couples with no children. This practice tends to conform to the principle of the

---

<sup>14</sup>. Sidney C. Sufrin, Issues in Federal Aid to Education, Syracuse University Press, Syracuse, N.Y., 1962, p. 1.

"equality of educational opportunity." This principle emphasizes that every person in a country should have the same opportunity for the kind and quality of education that will best meet his needs as an individual and as a member of the society in which he lives. Further, the adequacy of the education to be received should be no less important than the equality of opportunity, and the two should be developed hand in hand if civilization is to flourish,<sup>15</sup> and resource utilization is to be optimal. This may justify the increasing expenditures on transportation, scholarships and boarding grants for those students from remote isolated settlements.

The financing of education in Newfoundland since Confederation has been one of the chief functions of the Provincial Government. Of the basic governmental services, such as highway, public welfare, health and education, only the latter one has enjoyed steadily and substantially increasing proportions of government resources, because the government realizes that the "expenditure level is one of the highly important factors in achieving good education. Communities spending more for education get more in the way of results generally desired by people."<sup>16</sup>

---

15. Johns and Morphet, op. cit., p. 138.

16. Paul R. Mort and Walter C. Reusser, Public School Finance, McGraw-Hill Book Co., Inc., New York, 1951, p. 140.

The demand for education depends on three sets of factors: (a) financial ability of the community, (b) educational aspiration levels of members of the community, and (c) those institutionalized governmental variables that permit priority and preference to be expressed.<sup>17</sup> The actual total costs of education, according to Professor Schultz, should be earnings foregone by students.<sup>18</sup> If the actual total costs are justified by the total demand for education, the optimum result is fulfilled. A rational person is characterized by an inclination to learn;<sup>19</sup> any learning necessitates an investment of time, energy and financial resources.

The investment of education in Newfoundland is probably still far too limited. This is witnessed by the fact that Newfoundland has the lowest retention rate of students in Grade XI ~~in~~ the provinces of Canada.<sup>20</sup> Another apparent factor is the relatively lower average salaries of teachers in

---

17. J. Alan Thomas, Institutional Character of Education: Economic and Fiscal Aspects, A Review of Educational Research, A.E.R.A., Washington, D.C., October 1964, p. 428.

18. Theodore W. Schultz, The Economic Value of Education, Columbia University Press, New York, 1963.

19. Johns and Morphet, op. cit., p. 3.

20. Dominion Bureau of Statistics, Student Progress Through The Schools, Cat. No. 81-513 1960, p. 28. Estimated retention rates in Grade XI for the period from 1946 to 1948, Newfoundland was 29 percent, while in British Columbia it was 68 percent.

Newfoundland as compared with the rest of Canada;<sup>21</sup> this fails to attract and to keep qualified teachers, especially young graduates.

The Provincial Government has steadily contributed a large proportion to the costs of education. For Canada as a whole, provincial governments shared on the average 46 per cent of public, elementary and secondary education costs in 1960-61; in the same year the Newfoundland Government carried 88 percent of the burden, which was a much higher percentage than that borne by any other provincial government.<sup>22</sup> Despite this fact, per pupil expenditure on elementary and secondary education, calculated on the basis of average daily attendance in Newfoundland, was the lowest among the ten Canadian provinces, being less than one half the Canadian average <sup>23</sup> (See Table 5-7).

A social problem can be solved adequately only by

---

21. Dominion Bureau of Statistics, Salaries and Qualifications of Teachers in Public Elementary and Secondary Schools, Cat. No. 81-202 1963-64, p. 20. Average salaries of teachers and principals in Newfoundland in 1963-64 were \$2,526 for elementary level and \$4,343 for secondary level (\$248 more than the figure in Prince Edward Island); the highest corresponding salaries in Canada were \$5,365 for elementary level in British Columbia and \$7,496 for secondary level in Ontario.

22. Dominion Bureau of Statistics, Survey of Education Finance, Cat. No. 81-208 1961, p. 13.

23. Ibid., p. 33. See also Eric J. Hanson, Fiscal Needs of the Canadian Provinces, Canadian Tax Foundation, Toronto 1961, pp. 17-24, for various comparisons of educational expenditures, between Newfoundland and other provinces of Canada.



the members of the society. The proper amount of resources to be allocated to education requires an agreement among the individuals of the society. It has been generally agreed that investment in education in Newfoundland has not been sufficient.<sup>24</sup> Surprisingly, there still is opposition ~~to~~ against education taxation even in the several places in Newfoundland where this tax has been assessed.

#### B. Benefit and Cost Analysis

We next discuss what percentage of Newfoundland's resources should be devoted to education and how to raise the money needed for educational purposes.

From either the social or economic point of view, whether or not a given amount of resources is feasible for a certain use can be judged only in terms of its financial costs. The ultimate criterion of the adequacy of a given amount of resources in education is the value of the alternatives foregone.<sup>25</sup> There is common agreement that the benefits from education which are being collectively realized is greater than the benefits which accrue to the individuals. In other words, the "spill-over" effects of education have paramount social functions and significance. The marginal social benefits of education considerably exceed the marginal private benefits;

---

24. P.J. warren, op. cit., p. 329.

25. Coldwell Daniel, "Allocation of Resources to National Education" in The Indian Journal of Economics, No. 16: January 1961, p. 292.

and an adoption of "accounting price" in evaluating the real costs of education is also expected.

The people in Newfoundland have discerned that their educational provision is lagging behind the Canadian average. Investigation has shown that **many** people in Newfoundland agree that added educational investment should come more from local sources than from government accounts, because government has taken an extremely heavy share of education in addition to its liabilities in other fields.<sup>26</sup> As personal incomes in Newfoundland have risen considerably since Confederation (see Table 5-9) an educational tax in Newfoundland is, to a certain extent, probably reasonable; the people must be convinced that education must play a vital role in Newfoundland where economic development has been hindered by the comparatively high rate of illiteracy. Hence they ought to rate educational value more highly than in the rest of Canada. They have to appreciate the private and social benefits brought about by education which is partly responsible for the continuous rise in personal disposable incomes.

The size of the tax will be determined by ascertaining the amounts people are generally willing to pay for the additional education which otherwise would not be forthcoming

---

26. Philip John Warren, op. cit., p. 158.

TABLE 5-9

GOVERNMENT EXPENDITURE PER STUDENT AND PER CAPITA  
PERSONAL DISPOSABLE INCOME FOR NEWFOUNDLAND1949 TO 1962<sup>a</sup>

in constant (1949) dollars

|      | Government Expenditure Per Student |  | Personal Disposable Income |                           |
|------|------------------------------------|--|----------------------------|---------------------------|
|      | Amount                             | Growth of<br>Index Number <sup>b</sup> | Amount                     | Growth of<br>Index Number |
| 1949 | 50.6                               | 100.0                                  | 455                        | 100.0                     |
| 1950 | 51.2                               | 101.2                                  | 472                        | 103.7                     |
| 1951 | 51.6                               | 102.0                                  | 478                        | 105.1                     |
| 1952 | 53.9                               | 106.5                                  | 462                        | 101.5                     |
| 1953 | 54.1                               | 106.9                                  | 493                        | 108.4                     |
| 1954 | 62.7                               | 123.9                                  | 503                        | 110.5                     |
| 1955 | 64.4                               | 127.3                                  | 519                        | 114.0                     |
| 1956 | 65.5                               | 129.4                                  | 544                        | 119.6                     |
| 1957 | 67.3                               | 133.0                                  | 555                        | 122.0                     |
| 1958 | 83.4                               | 164.8                                  | 587                        | 129.0                     |
| 1959 | 79.6                               | 157.3                                  | 550                        | 120.9                     |
| 1960 | 97.4                               | 192.5                                  | 596                        | 131.0                     |
| 1961 | 96.5                               | 190.7                                  | 631                        | 138.7                     |
| 1962 | 98.7                               | 195.1                                  | 645                        | 141.8                     |

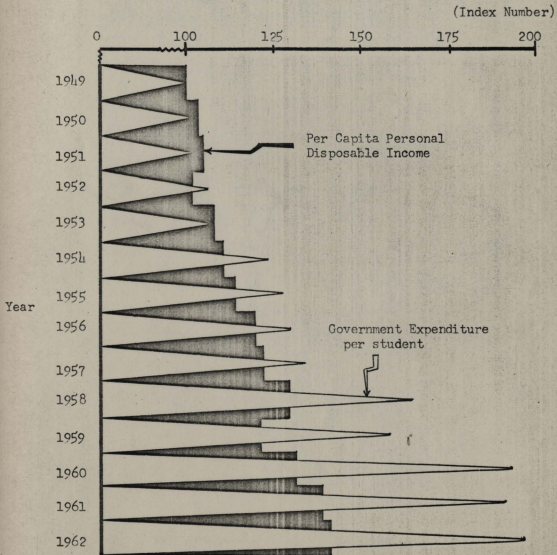
Notes: a Years for government expenditure per student represents school years, i.e., 1949 represents the expenditure in 1949-50, 1950 represents 1950-51 and so forth.

b 1949-50 = 100.

Sources: 1. For government expenditure, see Table 5-7.  
2. For personal disposable income, see Appendix A, Table 6.

INDEXES OF GOVERNMENT EXPENDITURE PER STUDENT AND OF  
PER CAPITA PERSONAL DISPOSABLE INCOME, IN 1949 DOLLAR  
NEWFOUNDLAND

1949 TO 1962



Note: 1949 = 100.

Source: Table 5-9.

without foregoing alternative investments. In addition, "equally important with a belief in equality of opportunity for all children is the idea of approximate equality of sacrifice in providing a basic program."<sup>27</sup> The ability to pay ~~for~~ the tax should be simultaneously considered with the willingness to pay. However, price tags associated with perfect competitive market are not attached to specific goods and services in the public sector such as education: consumers cannot be expected to reveal their preferences for government goods, since the individual taxpayer, regardless of who pays for the government program, cannot be excluded from the enjoyment of a collectively provided good service. Therefore, an optimum and efficient solution can be relied only on government decision-makers who interpret individual preference patterns and tax and spend accordingly.<sup>28</sup> Nonetheless, historical experience in the finances of public education has shown that:

"Voters in the various state and local communities have differing ideas of the appropriate levels of taxation to support schools, and also preconceptions as to the appropriate increases in existing levels of taxes. As time runs its course, the appropriate levels may be raised, and the idea of upward adjustments may become more acceptable."<sup>29</sup>

---

27. H.P. Moffatt, Juence Lecture 1957, p. 43. See also Dominion Bureau of Statistics, A Graphic Presentation of Canadian Education, Cat. No. 81-515 1961, p. 38.

28. Jesse Burkhead, State and Local Taxes for Public Education, Syracuse University Press, Syracuse, N.Y., 1963, p. 3.

29. Sidney C. Sufrin, op. cit., p. 7.

And, the absolute increase in the rate of tax to finance expansion would be noticeable in the households, by reason of their low income levels<sup>30</sup> in accordance with the principle of "justice" between the richer and the poor in paying tax for this public service.

### C. The Efficiency and Planning of Educational Investment

The efficiency of a given enterprise is generally reckoned in terms of the relationship between input and output.<sup>31</sup> Input connotes the foregoing of alternatives which would have satisfied immediate personal wants, while output refers to the satisfactions which are given through the use of this output. The long period of production with the lowest input-output ratio project should have priority. If expenditure on consumption were to be soundly invested in education, there would undoubtedly be an increase in the total income of the nation. Professor Clark stresses that "the average expenditure on education would almost certainly be more productive than the average consumer expenditure."<sup>32</sup>

An estimation has been made by the writer, based on

---

30. H.F. Moffatt, "Some Principles on Educational Finance" in Canadian Education and Research Digest, Vol. 14, No. 3, 1964, p. 203.

31. Coldwell Daniel, op. cit., p. 293.

32. Harold F. Clark, Cost and Quality in Public Education, Syracuse University Press, Syracuse, N.Y., 1963, pp. 24-25.



the additional expenditures on education and the additional earnings from a change in the educational distribution of labor force, both in real terms, to show the incremental capital-output ratio for education over a certain period of time. Based on the data for Newfoundland, the input-output ratio is 2.34 for 1951 to 1961 (see Appendix D). This ratio could be compared with the input-output ratios of other public investments in Newfoundland for making investment decisions.

There are also other considerations relating to the efficiency of investment, such as the various types of education and administration, the most appropriate location and size of schools, the quality and quantity of teachers and their salaries as well as the coordination and consistency in educational services. These factors should be considered in educational planning, because educational planning is "a process which is undertaken to make the most effective use of resources available for education."<sup>33</sup> Planning also establishes goals with a time sequence and suggests the best means to reach these goals. A good educational plan should also be of the same characteristics as other plans, it must be publically 'understandable', administratively 'manageable', financially 'practicable', and coordinately 'flexible'.<sup>34</sup>

---

<sup>33</sup>. Dominion Bureau of Statistics, Education Planning and the Expanding Economy, Cat. No. 81-524 1964, p. 7.

<sup>34</sup>. Jan Tinbergen and Hendricus C. Bos, Aims and Means of Programming, Mathematical Models of Economic Growth, McGraw-Hill Book Co., New York, 1962, pp. 1-10.



## APPENDIX D

A MEASURE OF EXTRA INPUT-OUTPUT RATIO OF  
EDUCATIONAL INVESTMENT

## I. A Tentative Method of Obtaining an Extra Input-Output Ratio of Educational Investment.

## A) Assumptions

1. The educational level of the labor force is raised which increases the productivity and hence the incomes of the labor.
2. Returns on all other productive factors are constant, the production function does not alter and no new markets for the products are developed.
3. The inherent intelligence of workers and their work habits remain unchanged during the period of time concerned.

## B) Symbols

$W_a^i$  -- Average earnings in the last year, including both sexes and comprising of:

$W_a^e, W_a^s, W_a^u$  -- Average earnings of the workers with elementary, secondary and university education.

$N_a^i$  -- Number of workers in the last year, including both sexes and comprising of:

$N_a^e, N_a^s, N_a^u$  -- Number of workers with elementary, secondary and university education.

$N_a^i$  -- Number of workers in the last year, assuming that the educational composition rate of the labor force remained the same as that of the base year. It includes:

$N_a^e, N_a^s, \text{ and } N_a^u$

L -- Ratio of the number of workers in the last year to the base year.

P -- Ratio of price index numbers of consumer goods.

J -- years (b, b+1, b+2, b+3, ... a )

(continued)

$C^i$  -- Total expenditure on education:  $C^e$ ,  $C^s$  and  $C^u$ .

$S^i$  -- Total weighted number of students, according to the average expenditure per student with various educational levels. It represents  $S^e$ ,  $S^s$  and  $S^u$ .

$i$  -- Education --  $e$  (elementary),  $s$  (secondary),  $u$  (university).

$K$  -- The Ratio of Extra Input (extra expenditures on education) to Extra Output (extra earnings from educational improvement of the labor force).

- C) Formula for calculating the ratio of extra input and extra output of education during a certain period of time is:

$$K = \frac{\sum_{j=b}^a C_j^i \frac{P_a}{P_j} - \sum_{j=b}^a \sum_{i=e,s,u} \left( \frac{C_b^i}{S_b^i} \times S_j^i \right) \times \frac{P_a}{P_b}}{\sum_{i=e,s,u} W_a^i N_a^i - \sum_{i=e,s,u} W_a^i \bar{N}_a^i}$$

## II. Case Study of Newfoundland (during the period of 1951 to 1961, in 1961 dollars)

- A. Total expenditure on education

$$\sum_{j=b}^a C_j^i \frac{P_a}{P_j} = \$112,591,000 \text{ (See Table D-2)}$$

- B. Total expenditure on education, assuming that average expenditure per student in the same educational level remained the same as that of 1951:

$$\sum_{j=b}^a \sum_{i=e,s,u} \left( \frac{C_b^i}{S_b^i} S_j^i \right) \frac{P_a}{P_b} = \$8,380,000 \times 13.131 = \$110,037,780$$

(see Table D-1 for weighted number of students and Table D-2 for expenditure.)

- C. Total labor incomes in 1961:

$$\sum_{i=e,s,u} W_a^i N_a^i = \$282,726,000$$

(see Appendix E on page 202 )

(continued)

- D. Total labor incomes in 1961, assuming that the labor force in 1961 were distributed according to the educational composition of the labor force of 1951.

$$\sum_{i=e,s,u} w_a^i N_a^i = \$268,814,000$$

(see Appendix E on page 202 )

- E. Extra input-output ratio of education

$$\begin{aligned} K &= \frac{A - B}{C - D} \\ &= \frac{\$32,553,220}{\$13,912,000} \\ &= 2.3399 \end{aligned}$$

(continued)

## TOTAL NUMBER OF STUDENTS IN NEWFOUNDLAND

1951-52 TO 1960-61

| Year    | Elementary<br>& Secondary | Vocational | University | Total     |                        | Weighted Student Numbers <sup>b</sup> |           |
|---------|---------------------------|------------|------------|-----------|------------------------|---------------------------------------|-----------|
|         |                           |            |            | Number    | Index No. <sup>a</sup> | Total                                 | Index No. |
| 1951-52 | 83,698                    | 374        | 416        | 84,488    | 100.0                  | 88,106                                | 100.0     |
| 1952-53 | 87,813                    | 427        | 457        | 88,697    | 105.0                  | 92,720                                | 105.2     |
| 1953-54 | 92,364                    | 373        | 457        | 93,194    | 110.3                  | 97,055                                | 110.2     |
| 1954-55 | 97,800                    | 658        | 504        | 99,042    | 117.2                  | 104,520                               | 118.6     |
| 1955-56 | 102,633                   | 882        | 685        | 104,200   | 123.3                  | 110,956                               | 125.9     |
| 1956-57 | 108,108                   | 995        | 896        | 109,999   | 130.2                  | 118,360                               | 134.3     |
| 1957-58 | 113,243                   | 1,155      | 1,130      | 115,528   | 136.7                  | 125,773                               | 142.8     |
| 1958-59 | 119,279                   | 1,480      | 1,150      | 121,909   | 144.3                  | 133,249                               | 151.2     |
| 1959-60 | 124,867                   | 1,773      | 1,184      | 127,824   | 151.3                  | 140,247                               | 159.2     |
| 1960-61 | 128,917                   | 1,826      | 1,400      | 132,143   | 156.4                  | 146,021                               | 166.7     |
| Total   | 1,058,722                 | 9,943      | 8,359      | 1,077,024 | 1274.8                 | 1,157,007                             | 1313.1    |

## Notes:

<sup>a</sup>. 1951-52 = 100.<sup>b</sup>. Expenditure per university student was approximately seven times as high as that of elementary and secondary student, and four times as high for vocational student in 1951-52.

## Sources:

1. Dominion Bureau of Statistics, Survey of Education.2. Government of Newfoundland and Labrador, Department of Education, Annual Reports.3. Memorial University of Newfoundland, Catalogue, 1964.

TABLE D-2  
EXPENDITURES ON EDUCATION IN NEWFOUNDLAND

1951-52 TO 1960-61  
(in 1,000 dollars)

|         | Provincial<br>Government | Federal<br>Government | Local<br>Source | Total<br>Current | 1961 Value | Purchasing<br>Power of<br>1961 dollar <sup>a</sup> |
|---------|--------------------------|-----------------------|-----------------|------------------|------------|--|
| 1951-52 | 5,499                    | 180                   | 1,090           | 6,769            | 8,380      | 123.8  |
| 1952-53 | 6,418                    | 187                   | 1,338           | 7,943            | 9,365      | 117.9  |
| 1953-54 | 6,732                    | 192                   | 1,591           | 8,515            | 10,005     | 117.5  |
| 1954-55 | 8,753                    | 207                   | 1,323           | 10,283           | 11,795     | 114.7  |
| 1955-56 | 9,015                    | 214                   | 1,995           | 11,224           | 12,863     | 114.6  |
| 1956-57 | 10,454                   | 415                   | 2,401           | 13,270           | 14,663     | 110.5  |
| 1957-58 | 11,605                   | 441                   | 2,382           | 14,428           | 15,236     | 105.6  |
| 1958-59 | 14,766                   | 670                   | 1,845           | 17,281           | 17,920     | 103.7  |
| 1959-60 | 15,803                   | 1,340                 | 3,041           | 20,184           | 19,134     | 94.8   |
| 1960-61 | 18,734                   | 1,033                 | 3,463           | 23,230           | 23,230     | 100.0  |
| Total   | 107,779                  | 4,879                 | 20,469          | 133,127          | 142,591    |  |

Note: <sup>a</sup>. It is calculated from the price index numbers of consumer goods, Appendix A, Table 6.

- Sources: 1. Dominion Bureau of Statistics, Survey of Education.  
 2. Government of Newfoundland and Labrador, Department of Education, Annual Report.  
 3. P.J. Warren, Financing Education in Newfoundland, unpublished doctoral dissertation, The University of Alberta, 1962, p. 137.

## CHAPTER VI

SOME CONTRIBUTIONS OF EDUCATION  
TO THE ECONOMY OF NEWFOUNDLAND

Professor Marshall discussed the contribution of education by averring that, "no change would conduce so much to a rapid increase of material wealth as an improvement in our schools."<sup>1</sup> Education is of vital importance in the creation and improvement of skills, and in leading people, whatever their talents, into productive channels. That education is one of the few sure roads to economic progress is a "contemporary creed".<sup>2</sup> Nevertheless, the economic returns on education are very difficult to assess. Because "education is many-sided and contribution to the national product is only one of the results expected of it" said Mr. Caine, "it fits men and women not only to be better producers but to be better citizens....to be more nearly capable of realizing their full individual potentialities."<sup>3</sup> Education can influence all social activities and in turn these social activities affect the progress of education. Therefore, expenditures on education are usually deemed as both investment as suggested by Professor Schultz

---

1. Alfred Marshall, Principles of Economics, Macmillan & Co. Ltd., London, 1961, p. 212.

2. Mary Jean Bowman and C. Arnold Anderson, The Role of Education in Development, Development of Emerging Countries, The Brookings Institution, Washington, D.C., 1962, p. 153.

3. W. Marming Dacey (ed.), Lloyds Bank Review, "Education as a Factor of Production," No. 72, April 1964, p. 2.

and Vaizey,<sup>4</sup> and consumption, the viewpoint of Professors Friedman and Groves.<sup>5</sup> In addition, the time factor involved in educational benefits also causes a problem in measuring the returns to educational costs, socially and privately. The economist, therefore, generally deals with educational rewards in terms of "averages", a method analogous to dealing with any other "public good".<sup>6</sup>

Recent research by economists has shown that, when the gross national product is measured for a dynamically changing economy, education contributes increasing amounts to this measure of wealth. Dr. Adiseshiah asserted that the contribution of education to the gross national product could be about 25 percent in developed countries.<sup>6</sup> Dr. Denson, by using benefit-cost analysis, has concluded that between 1929 and 1957, 23 percent of the 2.93 percent annual growth rate in the American gross national product was a direct result of education.<sup>7</sup>

---

4. T.W. Schultz, "Investment in Human Capital", American Economic Review, Vol. 51, No. 1, March 1961. John Vaizey, The Economics of Education, Faber and Faber Ltd., London, 1962, p. 36.

5. Robert A. Solo (ed.), Economics and Public Interest, "The role of Government in Education," New Brunswick, N.J., 1955. Harold M. Groves, Education and Economic Growth, National Educational Association, Washington, 1961, p. 23.

6. M. Adiseshiah, "Education, Economic Growth and Gaps in Information," Journal of Political Economy, edited by Edward F. Denson, October, 1962, pp. 124-129.

7. C.S. Benson (ed.), Prospectives on the Economics of Education, Houghton Mifflin Co., Boston, 1963, p. 38.



There are several specific techniques for measuring the contribution of education to economic growth. The major one in use relies upon the assessments of the income differences that are associated with different amounts of schooling. In dealing with the contribution of education to Newfoundland's economic development during the past decades, the writer wishes to emphasize three changes: change in the rate of unemployment, change in the occupational composition of the labor force, and change in labor income. These changes are related to the increase of the provincial income and result partly from the improvement in education levels among Newfoundlanders.

#### 1. Education and Changes in the Rate of Unemployment<sup>8</sup>

Calculations from Census data given by the Dominion Bureau of Statistics (shown in Table 6-1) reveal that the rates of unemployment in 1951 during the week ending prior to the enumeration were 5.8 percent of the labor force in Newfoundland and 1.7 percent of the labor force in Canada as a whole; in 1961 the rates were 8.7 percent and 3.9 percent respectively. This means that in 1951 the rate of unemployment in Newfoundland was more than three times the rate of unemployment in

---

<sup>8</sup>. when comparing percentage figures of Newfoundland and Canadian average, the great difference in absolute numbers must be borne in mind. Percentage increases in Newfoundland are higher than those in Canada, but the base figures on which the calculation is made are also very much smaller. Higher percentage of change is more easily obtained when dealing with smaller denominators. However, the following analyses of the contribution of education to the growth of income in Newfoundland is not greatly affected or discounted by this factor.

TABLE 6-1  
NUMBER AND RATE OF UNEMPLOYMENT IN NEWFOUNDLAND AND CANADA BY OCCUPATIONS  
1951 and 1961<sup>a</sup>

168.

| Occupations                                   | Newfoundland |                         | 1951<br>Canada |                         | Nfld. as a<br>percentage<br>of Canada | Newfoundland |                         | 1961<br>Canada |                         | Nfld. as a<br>percentage<br>of Canada |
|---|--------------|-------------------------|----------------|-------------------------|---------------------------------------|--------------|-------------------------|----------------|-------------------------|---------------------------------------|
|   | Number       | Rate of<br>unemployment | Number         | Rate of<br>unemployment |                                       | Number       | Rate of<br>unemployment | Number         | Rate of<br>unemployment |                                       |
| Total Unemployment <sup>a</sup>               | 6,206        | 5.8                     | 91,529         | 1.7                     | 6.8                                   | 9,734        | 8.7                     | 250,904        | 3.9                     | 3.9                                   |
| All Occupations                               | 5,417        | 5.1                     | 78,057         | 1.5                     | 6.9                                   | 8,273        | 7.4                     | 212,398        | 3.3                     | 3.9                                   |
| 1. Managerial                                 | 20           | 0.3                     | 887            | 0.2                     | 2.3                                   | 50           | 0.6                     | 3,708          | 0.7                     | 1.3                                   |
| 2. Professional and<br>Technical              | 18           | 0.3                     | 777            | 0.2                     | 2.3                                   | 86           | 0.9                     | 4,422          | 0.7                     | 1.9                                   |
| 3. Clerical                                   | 91           | 1.4                     | 2,834          | 0.5                     | 3.2                                   | 276          | 2.8                     | 18,756         | 2.2                     | 1.5                                   |
| 4. Commercial and<br>Financial                | 107          | 1.9                     | 2,667          | 0.8                     | 4.0                                   | 253          | 3.5                     | 10,835         | 2.6                     | 2.3                                   |
| 5. Service and<br>Recreational                | 250          | 2.4                     | 5,002          | 1.0                     | 5.0                                   | 552          | 4.2                     | 23,391         | 3.0                     | 2.4                                   |
| 6. Farming and related                        | 127          | 3.4                     | 1,863          | 0.2                     | 6.8                                   | 55           | 3.2                     | 6,233          | 1.0                     | 0.8                                   |
| 7. Logging and related                        | 723          | 7.9                     | 3,454          | 3.4                     | 20.9                                  | 1,411        | 24.5                    | 12,808         | 16.2                    | 11.0                                  |
| 8. Fishing, Trapping<br>and Hunting           | 534          | 2.9                     | 1,074          | 2.1                     | 49.7                                  | 560          | 6.8                     | 1,974          | 5.5                     | 28.4                                  |
| 9. Mining, Quarrying<br>and Related           | 88           | 3.9                     | 769            | 1.2                     | 11.4                                  | 191          | 8.6                     | 3,215          | 4.9                     | 5.9                                   |
| 10. Manufacturing and<br>related <sup>b</sup> | 1,022        | 5.9                     | 12,193         | 1.0                     | 8.3                                   | 2,352        | 9.2                     | 68,047         | 4.4                     | 34.6                                  |
| 11. Laborers (not else-<br>where specified)   | 1,121        | 13.1                    | 9,299          | 2.6                     | 12.1                                  | 1,322        | 17.2                    | 32,023         | 10.2                    | 4.1                                   |
| 12. Transportation and<br>Communication       | 491          | 4.5                     | 4,193          | 1.0                     | 11.7                                  | 744          | 8.2                     | 16,057         | 4.1                     | 4.6                                   |
| 13. Not stated                                | 825          | 76.0                    | 33,045         | 51.5                    | 25.0                                  | 421          | 11.0                    | 10,929         | 6.6                     | 3.9                                   |
| Unexperienced <sup>c</sup>                    | 789          | -                       | 13,472         | -                       | 5.9                                   | 1,461        | -                       | 38,506         | -                       | 3.8                                   |

Notes: <sup>a</sup> Persons looking for work 14 years (1951) or 15 years (1961) of age and over during the week prior to enumeration.  
<sup>b</sup> Including manufacturing and mechanical, electric light and power, stationary engineering and construction.  
<sup>c</sup> Persons who have never worked and were seeking work.

Source: 1. Calculated from Dominion Bureau of Statistics data, Census of Canada, Labor Force, 1951 and 1961.

Canada; in 1961 it was only more than twice the Canadian rate. Comparing 1961 to 1951 the number of unemployed in Newfoundland increased by 57 percent while in Canada it rose by 174 percent.

Both in Canada and Newfoundland, managerial, professional and technical, and clerical occupations which need a relatively high level of education, indicated an extremely low rate of unemployment (see Table 6-1). Less educated people such as loggers, fishermen, miners and other manual laborers had a higher unemployment rate, apart from seasonal unemployment.

From 1951 to 1961 the average rate of unemployment in every occupation increased more in Canada as a whole than in Newfoundland. It was three and a half times as high in the managerial occupations in Canada as compared with twice in Newfoundland; in the logging industry the rate of unemployment in Canada has a five-fold increase as against a tripled enlargement in Newfoundland (see Table 6-1).

The above data show that the rate of increase in unemployment in Newfoundland is below the national average. Nonetheless, the percentage of the total Canadian unemployed workers who live in Newfoundland is greater than the percentage of the total Canadian labor who live in Newfoundland. For example, in March of 1951 and 1961, the labor force in Newfoundland was 1.9 percent and 1.8 percent of the Canadian total, but Newfoundland's unemployment constituted 7.7 percent

and 5.0 percent of the total Canadian unemployment (see Table 2-5, p. 24). In Education and Income, Sexton said: "Surveys show that job security also increases sharply with educational levels."<sup>9</sup> This relatively slower rate of increase in unemployment in Newfoundland as compared to the national average could possibly be interpreted as being due to the relatively higher rate of improvement in education. In support of this statement, there will be two comparisons given, in which Newfoundland rates favorably: first, the improvements in the educational levels of the labor forces of Newfoundland and Canada; secondly, the educational standards of the unemployed people of Newfoundland and Canada.

Table 6-2 shows that from 1951 to 1961 the educational levels of the labor force in Newfoundland were raised relatively more rapidly than in the whole of Canada. Comparing 1961 to 1951 for Canada as a whole, the numbers in the labor force with only elementary education decreased 1.6 percent, while it dropped 24.2 percent in Newfoundland. The numbers of workers with secondary education in Canada increased 57.8 percent, while in Newfoundland it rose 62.8 percent. Over the period, workers in Newfoundland with some university education or degrees, although few in number, had an increase of 80.8

---

<sup>9</sup>. Patricia Cayo Sexton, Education and Income, The Viking Press, New York, 1961, p. 13.

TABLE 6-2

EDUCATIONAL CLASSIFICATIONS OF THE LABOR FORCE<sup>a</sup>  
IN NEWFOUNDLAND AND CANADA

1951 AND 1961

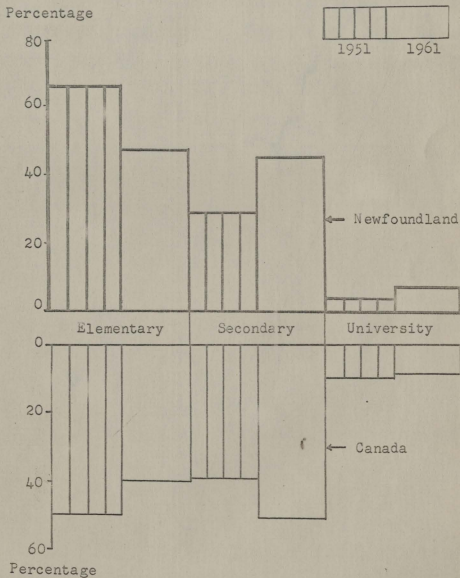
| Years of Schooling                      | Newfoundland |            | Canada    |            |
|---|--------------|------------|-----------|------------|
|   | Number       | Percentage | Number    | Percentage |
| 1951                                    |              |            |           |            |
| Total                                   | 106,540      | 100.0      | 5,286,153 | 100.0      |
| Elementary                              | 71,071       | 66.7       | 2,662,988 | 50.3       |
| Secondary                               | 31,610       | 29.7       | 2,080,684 | 39.4       |
| Some University and degrees             | 3,859        | 3.6        | 542,481   | 10.3       |
| 1961                                    |              |            |           |            |
| Total                                   | 112,310      | 100.0      | 6,471,850 | 100.0      |
| Elementary                              | 53,885       | 48.0       | 2,620,448 | 40.5       |
| Secondary                               | 51,449       | 45.8       | 3,283,025 | 50.7       |
| Some University and degrees             | 6,976        | 6.2        | 568,337   | 8.8        |
| Percentage change between 1951 and 1961 |              |            |           |            |
| Total                                   |              | 5.4        |           | 22.4       |
| Elementary                              |              | -24.2      |           | - 1.6      |
| Secondary                               |              | 62.8       |           | 57.8       |
| Some University and degrees             |              | 80.8       |           | 4.8        |

Note:     <sup>a</sup>   14 years of age and over in 1951;  
               15 years of age and over in 1961.

Source: 1. Calculated from Dominion Bureau of Statistics data,  
Census of Canada, Labor Force, 1951 and 1961.

PERCENTAGE DISTRIBUTION OF LABOR FORCE IN  
NEWFOUNDLAND AND CANADA BY EDUCATIONAL LEVEL

1951 AND 1961



Source: 1. Table 6-2.

percent as compared to 4.8 percent on the average of Canada.

In terms of educational classifications, the distribution of the labor force in Newfoundland was more similar to that of all Canada in 1961 than in 1951. For instance, in 1951 workers who had elementary education comprised 50.3 percent of the total Canadian labor force, and the workers in Newfoundland with the same educational standard equalled 66.7 percent of Newfoundland labor force. In 1961 the corresponding figures were 40.5 percent for Canada as a whole and 48.0 percent for Newfoundland.


Newfoundland, at any rate, has shown a faster rate of improvement in education in its labor force than that of Canada as a whole. 

Table 6-3 shows that the percentage of unemployment for people with elementary education is higher in Newfoundland than in Canada. In 1961 the percentage in Newfoundland was 65.8 percent of the total unemployed as against 52.3 percent of the national unemployed. But, the opposite held good in the case of the people with secondary and higher education. Unemployed people with secondary education and above accounted for a smaller percentage of the total unemployed in Newfoundland than in Canada. The figure was 32.9 percent for Newfoundland and 43.5 percent for Canada.



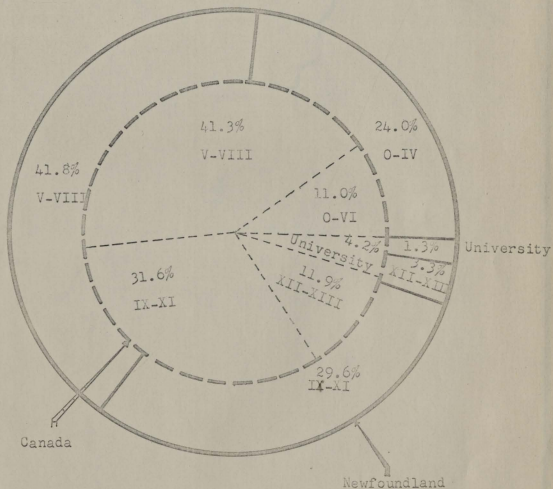
TABLE 6-3  
NUMBER AND RATE OF UNEMPLOYMENT IN NEWFOUNDLAND AND  
CANADA BY AGE AND SCHOOLING OF LABOR FORCE, 1961

|                                | Newfoundland |                 | Canada  |                 | Nfld. as a<br>percentage<br>of Canada |
|--------------------------------|--------------|-----------------|---------|-----------------|---------------------------------------|
|                                | Number       | Per-<br>centage | Number  | Per-<br>centage |                                       |
| Age (years)                    |              |                 |         |                 |                                       |
| 15 - 24                        | 3,873        | 39.8            | 94,895  | 37.8            | 4.1                                   |
| 25 - 34                        | 2,219        | 22.8            | 52,197  | 20.8            | 4.3                                   |
| Over 34                        | 3,642        | 37.4            | 103,812 | 41.4            | 3.5                                   |
| Total                          | 9,734        | 100.0           | 250,904 | 100.0           | 3.9                                   |
| Schooling (years)              |              |                 |         |                 |                                       |
| Elementary                     | 6,405        | 65.8            | 131,240 | 52.3            | 4.9                                   |
| 0 - 4                          | 2,340        | 24.0            | 27,615  | 11.0            | 8.5                                   |
| 5 plus                         | 4,065        | 41.8            | 103,625 | 41.3            | 3.9                                   |
| Secondary                      | 3,203        | 32.9            | 109,108 | 43.5            | 2.9                                   |
| 1 - 3                          | 2,879        | 29.6            | 79,176  | 31.6            | 3.6                                   |
| 4 plus                         | 324          | 3.3             | 29,932  | 11.9            | 1.1                                   |
| Some University<br>and degrees | 126          | 1.3             | 10,556  | 4.2             | 1.2                                   |

Source: 1. Dominion Bureau of Statistics, Census of Canada, Labor Force, 1961.

PERCENTAGE DISTRIBUTION OF UNEMPLOYMENT IN  
NEWFOUNDLAND AND CANADA BY EDUCATIONAL LEVELS,

1961



Source: 1. Table 6-3.

Thus, the lower the educational standard of a worker, the greater is his possibility of unemployment in Newfoundland than on the Mainland; and the higher the educational standard of a worker, the reverse appears to hold good. Because Newfoundland had a relative scarcity of secondary and university-educated people, it has been easier for those highly educated people to find and to hold jobs. In short, the demand for highly educated workers relative to the supply is greater in Newfoundland than in the national market.

From the above comparisons of unemployment in Newfoundland and in Canada, four factors emerged:

- i. the rate of the growth in unemployment was slower in Newfoundland than in the rest of Canada;
- ii. the rate of the improvement in the educational levels of the labor force of Newfoundland was generally faster than in the whole of Canada;
- iii. at levels of secondary education and above, the dismissal rate in Newfoundland was lower than in Canada as a whole. The reverse is true for levels below secondary education.
- iv. Newfoundland had a relatively low rate of increase in unemployment because of the widespread educational promotion of its labor force, the fast reduction in the numbers of uneducated or less educated workers, and the increased demand for highly educated workers in Newfoundland.

## 2. Education and Changes in the Occupational Composition of the Labor Force

The most important prerequisite for entrance to the various occupations is usually a certain level of education and "it is well established that educational attainment is related to the type of work in which people engage."<sup>10</sup> Highly educated people are better equipped and more capable of taking highly paid jobs. On the other hand, the lower paid occupations generally involve work which requires little knowledge and training. Mrs. Sexton, after investigation, said:

"A lower-class family will tend to have a low income, lower status occupations....and low educational levels. A family possessing any one of these characteristics will tend to possess all of them....In general, the more education the family head has, the higher the family income is likely to be."<sup>11</sup>

Wage rates often reflect returns on investment in education. These returns in a developing country generally tend to increase with greater investments. During economic development there is a tendency for labor to change occupations. It involves "a task of shifting workers from agricultural to industrial or commercial employment; this involves the training of new generations for work in other than traditional

---

10. Halsey, Floud and Anderson (eds.), Education, Economy and Society, The Free Press of Glencoe, Inc., New York, 1961, p. 67.

11. Patricia Cayo Sexton, op. cit., p. 11.

employment."<sup>12</sup> When the level of education in a country is raised its productive efficiency will be increased simultaneously, because the percentage of people working in primary industries which produce low wages and salaries will be likely decreased; while the percentage working in the secondary and tertiary industries will be seemingly increased.

In a developing country there is a relatively greater need for education; therefore, the relationship between education and occupations appears to be stronger in a developing than a developed country. From Table 6-4, the importance of the contribution of education in changing the structure of the labor force in Newfoundland over the past decade is very clear, especially in the lowest earning occupations. In 1951 the highest earning occupations (managerial, professional and technical, and clerical) in Newfoundland absorbed 36.8 percent of all the labor force who had secondary education, while only 10.4 percent with secondary education were in the lowest earning jobs (logging, farming, and fishing, trapping and hunting). About four-fifths of the labor force with a university education were in the former group in contrast with 2.2 percent of the university-trained people in the latter group. Again, of the people who had no more than four years schooling

---

<sup>12</sup>. Charles D. Stewart, "The Work Force" in Economic Development, edited by Williamson and Buttrick, Prentice-Hall, Inc., New Jersey, 1961, p. 104.

only 3.1 percent were working in the former group and 50.9 percent in the latter. In 1961 the percentage of people with secondary education working in the highest earning group was about the same as that of 1951 (35.6 percent). But in the lowest earning group, the percentage of people with secondary education was halved in 1961 as compared with 1951 (5.9 percent). People with four years of schooling or less who were working in the highest earning group accounted for a slightly higher percentage in 1961 (4.3 percent) than in 1951 (3.1 percent), due to an actual decrease in total number of workers in this educational category. However, the percentage of people within this educational category and working in the lowest income group decreased from 50.9 percent to 33.5 percent of the total number in the category. In 1961 there were over four-fifths of people with a university education working in the highest income group as contrast to less than one percent in the lowest income group.

Thus, a higher level of education will ensure the worker better paid jobs which are created in a developing economy; on the other hand, an improvement in education in the labor force increases total productivity.

Table 6-4 also shows that between 1951 and 1961 the number engaged in the highest earning occupations experienced an over-all percentage increase. During the same period, the numbers working in the lowest income occupations showed an

COMPOSITION OF THE LABOR FORCE IN NEWFOUNDLAND, BY OCCUPATIONS, SEX AND SCHOOLING  
IN 1951 AND 1961, AND BY EARNINGS IN 1961

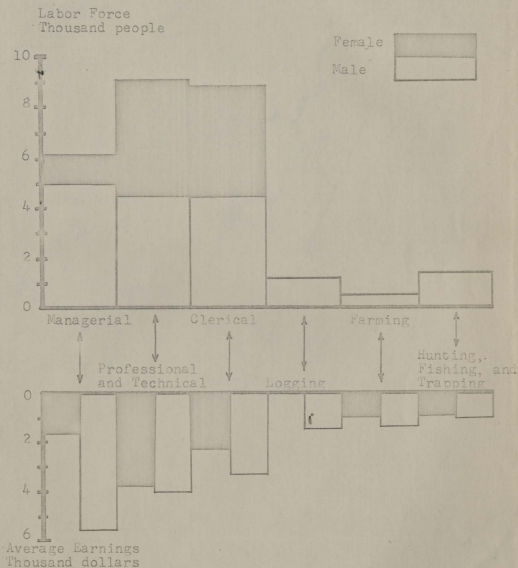
| Years of education and number of workers |   | O-IV    |                      | V-VIII  |                      | IX-XII  |                      | XIII and over |                      | Total   |                      | Percentage change of total 1961 to 1951 | Average Earnings \$ |
|--|---|---------|----------------------|---------|----------------------|---------|----------------------|---------------|----------------------|---------|----------------------|---|---------------------|
| Occupations and Sex                      |   | Persons | Per-centage of total | Persons | Per-centage of total | Persons | Per-centage of total | Persons       | Per-centage of total | Persons | Per-centage of total |   |                     |
| 1951                                     |   |         |                      |         |                      |         |                      |               |                      |         |                      |   |                     |
| Managerial                               | M | 697     | 2.5                  | 1,762   | 4.0                  | 2,722   | 8.6                  | 530           | 13.7                 | 5,711   | 5.4                  |   |                     |
|  | F | 78      | 0.3                  | 122     | 1.0                  | 564     | 1.8                  | 54            | 1.4                  | 1,118   | 1.0                  |   |                     |
| Professional and Technical               | M | 17      | .. <sup>a</sup>      | 133     | 0.3                  | 1,424   | 4.5                  | 1,238         | 32.1                 | 2,812   | 2.6                  |   |                     |
|  | F | 0       | 0.0                  | 54      | 0.1                  | 1,808   | 5.7                  | 794           | 20.6                 | 2,666   | 2.5                  |   |                     |
| Clerical                                 | M | 85      | 0.3                  | 787     | 1.8                  | 2,558   | 8.1                  | 272           | 7.0                  | 3,702   | 3.5                  |   |                     |
|  | F | 7       | ..                   | 205     | 0.5                  | 2,572   | 8.1                  | 192           | 5.0                  | 2,976   | 2.8                  |   |                     |
| Logging and related                      | M | 4,486   | 16.4                 | 3,933   | 9.0                  | 717     | 2.3                  | 10            | 0.3                  | 9,146   | 8.6                  |   |                     |
|  | F | 3       | ..                   | 3       | ..                   | 1       | ..                   | 0             | 0.0                  | 7       | ..                   |   |                     |
| Farming                                  | M | 1,182   | 4.3                  | 1,686   | 3.9                  | 663     | 2.1                  | 36            | 0.9                  | 3,567   | 3.3                  |   |                     |
|  | F | 29      | 0.1                  | 56      | 0.1                  | 28      | 0.1                  | 2             | ..                   | 115     | 0.1                  |   |                     |
| Fishing, Trapping and Hunting            | M | 8,225   | 30.1                 | 8,235   | 18.8                 | 1,867   | 5.9                  | 39            | 1.0                  | 18,366  | 17.2                 |   |                     |
|  | F | 3       | ..                   | 8       | ..                   | 5       | ..                   | 1             | ..                   | 17      | ..                   |   |                     |
| Sub-Total                                | M | 14,692  | 53.7                 | 16,536  | 37.8                 | 9,951   | 31.5                 | 2,125         | 55.1                 | 43,304  | 40.6                 |   |                     |
|  | F | 120     | 0.4                  | 748     | 1.7                  | 4,978   | 15.7                 | 1,043         | 27.0                 | 6,889   | 6.5                  |   |                     |
| All Occupations                          | M | 26,082  | 95.4                 | 38,302  | 87.6                 | 22,376  | 70.8                 | 2,700         | 70.0                 | 89,460  | 84.0                 |   |                     |
|  | F | 1,256   | 4.6                  | 5,431   | 12.4                 | 9,234   | 29.2                 | 1,159         | 30.0                 | 17,080  | 16.0                 |   |                     |
| Total                                    |   | 27,338  | 100.0                | 43,733  | 100.0                | 31,610  | 100.0                | 3,859         | 100.0                | 106,540 | 100.0                |   |                     |
| 1961                                     |   |         |                      |         |                      |         |                      |               |                      |         |                      |   |                     |
| Managerial                               | M | 530     | 2.9                  | 1,387   | 3.9                  | 4,175   | 8.1                  | 804           | 11.5                 | 6,896   | 6.1                  | 20.7                                    | 5,628               |
|  | F | 151     | 0.8                  | 531     | 1.5                  | 1,076   | 2.1                  | 49            | 0.1                  | 1,807   | 1.6                  | 61.6                                    | 1,715               |
| Professional and Technical               | M | 41      | 0.2                  | 204     | 0.6                  | 2,069   | 4.0                  | 2,482         | 35.6                 | 4,793   | 4.3                  | 70.1                                    | 4,107               |
|  | F | 10      | ..                   | 81      | 0.2                  | 2,809   | 5.5                  | 1,785         | 25.6                 | 4,685   | 4.2                  | 76.4                                    | 3,925               |
| Clerical                                 | M | 84      | 0.4                  | 709     | 2.0                  | 4,155   | 8.1                  | 344           | 5.5                  | 5,332   | 4.7                  | 44.0                                    | 3,409               |
|  | F | 16      | ..                   | 209     | 0.6                  | 4,019   | 7.8                  | 247           | 3.5                  | 4,491   | 4.0                  | 50.9                                    | 2,360               |
| Logging and related                      | M | 2,099   | 11.4                 | 2,453   | 6.9                  | 1,166   | 2.3                  | 28            | ..                   | 5,746   | 5.1                  | -37.1                                   | 1,591               |
|  | F | 0       | 0.0                  | 1       | ..                   | 1       | ..                   | 0             | 0.0                  | 2       | ..                   | -71.4                                   | 0                   |
| Farming                                  | M | 452     | 2.5                  | 684     | 1.9                  | 446     | 0.9                  | 27            | ..                   | 1,606   | 1.4                  | -55.0                                   | 1,543               |
|  | F | 22      | 0.1                  | 31      | 0.1                  | 32      | 0.1                  | 3             | 0.0                  | 88      | ..                   | -23.5                                   | 1,007               |
| Fishing, Trapping and Hunting            | M | 3,587   | 19.5                 | 3,228   | 9.1                  | 1,340   | 2.6                  | 12            | ..                   | 8,167   | 7.3                  | -55.5                                   | 1,080               |
|  | F | 7       | ..                   | 4       | ..                   | 5       | ..                   | 0             | 0.0                  | 16      | ..                   | -5.9                                    | 900                 |
| Sub-Total                                | M | 6,793   | 36.8                 | 8,659   | 24.4                 | 13,351  | 25.9                 | 3,737         | 53.6                 | 32,540  | 29.0                 | -24.8                                   | -                   |
|  | F | 206     | 1.1                  | 857     | 2.4                  | 7,942   | 15.4                 | 2,084         | 29.9                 | 11,089  | 9.9                  | 61.0                                    | -                   |
| All Occupations                          | M | 17,336  | 94.0                 | 30,503  | 86.0                 | 36,113  | 70.2                 | 4,750         | 68.1                 | 88,720  | 79.0                 | - 0.8                                   | 2,823               |
|  | F | 1,098   | 6.0                  | 4,948   | 14.0                 | 15,336  | 29.8                 | 2,226         | 31.9                 | 23,608  | 21.0                 | 38.2                                    | 1,440               |
| Total                                    |   | 18,434  | 100.0                | 35,451  | 100.0                | 51,449  | 100.0                | 6,976         | 100.0                | 112,310 | 100.0                | 5.4                                     | -                   |

Note: <sup>a</sup> .. less than 0.1%.

Sources: 1. Calculated from Dominion Bureau of Statistics data, Census of Canada, 1951 and 1961.



LABOR FORCE WITH SECONDARY EDUCATION AND ABOVE  
AND AVERAGE EARNINGS IN NEWFOUNDLAND, BY SEX  
AND SELECTED OCCUPATIONS, 1961



Source: Table 6-4

overall percentage decrease. These percentage increases were particularly significant for female workers. During the period, female workers in the professional and technical category increased by 76.4 percent as compared with an increase by 70.1 percent in male workers; in the managerial category, female workers increased by 61.6 percent while male workers added only 20.7 percent to the 1951 figure. Again, in the clerical category, female workers increased by 50.9 percent as against 44.0 percent for the males. The percentage decreases among the male workers are of importance. There was a decrease by 37.1 percent in male workers working in logging industries and a decline of more than one half of the total male workers working in the farming and fishing industries. Female workers in this lowest income group were unimportant because of their small numbers (see Table 6-4).

Table 6-5 is another version of the numbers of persons engaged in the highest and the lowest paid occupations according to their levels of education. From 1951 to 1961 the total numbers engaged in the three highest earning occupations increased at the expense of the lowest earning occupations. A rise in the educational standards of the labor force was concomitant with the transfer between occupations.

Between 1951 and 1961 the number of people having less

than nine years of schooling in all the occupations mentioned decreased from thirty-two thousand to seventeen thousand; only professional and technical occupations had a small increase. This decrease in absolute numbers was much more apparent in the lowest paid occupations, declining over 50 percent.

The number of people in the highest earning occupations with Grade IX or more schooling showed a very high percentage increase over the ten years. The absolute numbers of workers in the managerial occupation increased by three-fifths, in professional and technical occupation they increased by four-fifths, and in clerical occupation they increased by three-fifths. However, by 1961 there was a decline of about 30 percent in the number of workers with secondary education and above in such occupations as farming, fishing, trapping and hunting.

The total number of people with Grade IX and higher education employed in the above mentioned occupations increased about 50 percent by 1961, when a total number of twenty-seven thousand workers were employed in that year.

The total columns in Table 6-5 indicate that the number of workers employed in the professional and technical category increased more rapidly than elsewhere, an increase of the order of 73 percent or four thousand people. The

THE LABOR FORCE IN NEWFOUNDLAND, BY SELECTED OCCUPATIONS AND BY EDUCATIONAL LEVELS  
1951 AND 1961

|                                     | 1951            |                     |         | 1961            |                     |         | Percentage change |                     |       |
|-------------------------------------|-----------------|---------------------|---------|-----------------|---------------------|---------|-------------------|---------------------|-------|
|                                     | Grade<br>0 - IX | Grade<br>X and over | Total   | Grade<br>0 - IX | Grade<br>X and over | Total   | Grade<br>0 - IX   | Grade<br>X and over | Total |
| 1. Managerial                       | 2,959           | 3,870               | 6,829   | 2,599           | 6,104               | 8,703   | 87.8              | 157.7               | 127.4 |
| 2. Professional and<br>Technical    | 204             | 5,264               | 5,468   | 333             | 9,145               | 9,478   | 163.2             | 173.7               | 173.3 |
| 3. Clerical                         | 1,084           | 5,594               | 6,678   | 1,018           | 8,805               | 9,823   | 93.9              | 157.4               | 147.1 |
| 4. Logging                          | 8,425           | 728                 | 9,153   | 4,553           | 1,195               | 5,748   | 54.0              | 164.1               | 62.8  |
| 5. Farming                          | 2,953           | 729                 | 3,682   | 1,186           | 508                 | 1,694   | 40.2              | 69.7                | 46.0  |
| 6. Fishing, Trapping<br>and Hunting | 16,471          | 1,912               | 18,383  | 6,826           | 1,357               | 8,183   | 41.4              | 71.0                | 44.5  |
| 7. Others                           | 38,975          | 17,372              | 56,347  | 37,370          | 31,311              | 68,681  | 95.9              | 180.2               | 121.9 |
| Aggregate Total                     | 71,071          | 35,469              | 106,540 | 53,885          | 59,425              | 112,310 | 75.8              | 164.7               | 105.4 |

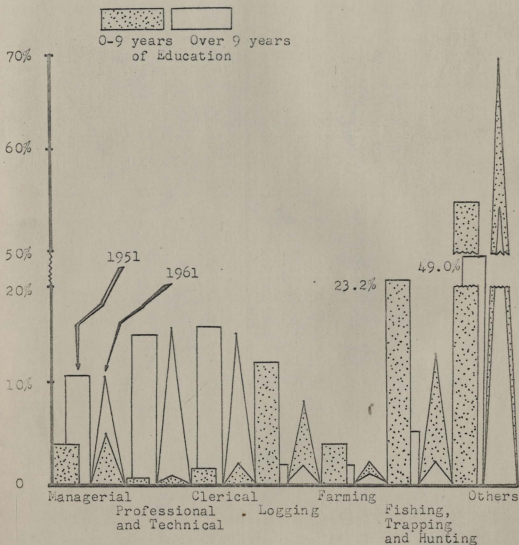
|                                     | 1951                |      |       | 1961                |      |       |
|-------------------------------------|---------------------|------|-------|---------------------|------|-------|
|                                     | Percentage of Total |      |       | Percentage of Total |      |       |
| 1. Managerial                       | 43.3                | 56.7 | 100.0 | 29.9                | 70.1 | 100.0 |
| 2. Professional and<br>Technical    | 3.7                 | 96.3 | 100.0 | 3.5                 | 96.5 | 100.0 |
| 3. Clerical                         | 16.2                | 83.8 | 100.0 | 10.4                | 89.6 | 100.0 |
| 4. Logging                          | 92.0                | 8.0  | 100.0 | 79.2                | 20.8 | 100.0 |
| 5. Farming                          | 80.2                | 19.8 | 100.0 | 70.0                | 30.0 | 100.0 |
| 6. Fishing, Trapping<br>and Hunting | 89.6                | 10.4 | 100.0 | 83.4                | 16.6 | 100.0 |
| 7. Others                           | 69.2                | 30.8 | 100.0 | 54.4                | 45.6 | 100.0 |
| Aggregate Total                     | 66.7                | 33.3 | 100.0 | 48.0                | 52.0 | 100.0 |

|                                     | 1951                          |       |       | 1961                          |       |       |
|-------------------------------------|-------------------------------|-------|-------|-------------------------------|-------|-------|
|                                     | Percentage of Aggregate Total |       |       | Percentage of Aggregate Total |       |       |
| 1. Managerial                       | 4.2                           | 10.9  | 6.4   | 4.8                           | 10.4  | 7.7   |
| 2. Professional and<br>Technical    | 0.2                           | 14.8  | 5.1   | 0.6                           | 15.7  | 8.4   |
| 3. Clerical                         | 1.5                           | 15.8  | 6.3   | 1.9                           | 15.1  | 8.8   |
| 4. Logging                          | 11.9                          | 2.1   | 8.6   | 8.4                           | 2.0   | 5.1   |
| 5. Farming                          | 4.2                           | 2.1   | 3.5   | 2.2                           | 0.9   | 1.5   |
| 6. Fishing, Trapping<br>and Hunting | 23.2                          | 5.3   | 17.2  | 12.7                          | 2.3   | 7.3   |
| 7. Others                           | 54.8                          | 49.0  | 52.9  | 69.4                          | 53.6  | 61.2  |
| Aggregate Total                     | 100.0                         | 100.0 | 100.0 | 100.0                         | 100.0 | 100.0 |

CHART 6-4

PERCENTAGE DISTRIBUTION OF THE LABOR FORCE IN NEWFOUNDLAND  
BY EDUCATIONAL LEVEL AND BY SELECTED OCCUPATIONS

1951 AND 1961



Source: Table 6-5.

number of clerical workers increased by 47 percent and managerial workers by 27 percent. The number of people employed in the lowest income occupations decreased most rapidly in fishing and farming, the decrease being more than 50 percent, followed by logging with almost 37 percent. During the period, more than nine thousand workers entered the highest earning occupations. However, the Dominion Bureau of Statistics data concerning fishermen are somewhat inaccurate because of the misreporting of the fishermen about their occupation when they were interviewed.<sup>13</sup> The report of the Department of Fisheries stated that in 1961 there were twenty thousand people engaged in the fishery, a little more than in 1951.

Again, the proportional changes in the number of workers in each occupation according to levels of education are very noteworthy. In 1951 the highly educated managers constituted 57 percent of the total managerial employees, while in 1961 they numbered 70 percent. In 1961, 90 percent of clerical were in the highly educated category as compared to 84 percent in 1951. Correspondingly, there was a small increase in the professional and technical category by 1961. In 1951 the less educated loggers accounted for more than nine-tenths of the total logging force, but this figure dropped to

---

13. T.F. Wise, Economist, Atlantic Development Board. Federal Government of Canada.

less than four-fifths by 1961; corresponding figures for farming declined from 80 percent to 70 percent.

Of the total labor force in all occupations in 1961, the highest earning group occupied one-fourth as compared to one-sixth in 1951. In 1951 workers in loggers and farming amounted to 12 percent of the total labor force, but these workers accounted for only 7 percent of the total in 1961.

In short, three facts are particularly important for Newfoundland:

i. A large increase in the numbers engaged in the highest earning occupations and a large decrease in the numbers engaged in the lowest earning occupations occurred during the past decade.

ii. Most of the better educated people (over Grade VIII) entered the highest earning occupations. A few better educated people were employed in the logging industry.

iii. Of the total labor force in Newfoundland in 1961, more than one half had some secondary or higher education compared with only one-third in 1951. Contrasting 1961 with 1951, workers with less than nine years of schooling declined to three-fourths of the 1951 figure, but workers with educational levels above Grade VIII increased by 65 percent.

In summary, Professor Clark has written:



"whether education increases the income of the individual is largely a function of the relationship of occupation to education. If education enables one to get into an occupation that has a high income return....education will undoubtedly help to increase income."<sup>14</sup>

In Newfoundland, the development of education evoked an adjustment in the occupational composition of the labor force. This adjustment enlarged the provincial production which in turn facilitated further developments in education.

### 3. Education and Changes in Labor Income

The above two sections have pointed out that the improvement in education in Newfoundland has been associated with a relatively low rate of increase in unemployment and an adjustment in the occupation structure of the labor force. These changes have resulted in increased incomes and hence in increased revenues. A lower rate of increase in unemployment in Newfoundland as compared to the Canadian average, implies a relatively more rapid growth in production. An adjustment in the occupational structure of the labor force increased the total provincial income because there were more people in the higher than in the lower earning occupations.

Although the evidence of the influence of education on the increased provincial income during the past decade is

---

14. Harold F. Clark, Cost and Quality in Public Education, Syracuse University Press, New York, 1963, p. 21.

not wholly sufficient, there are other proofs of the contribution of education in raising incomes in Newfoundland. These are the comparisons between the Newfoundland and the Canadian averages of (A) the rates of illiteracy and incomes; (B) rates of increase in educational standards and incomes; (C) the educational levels of the populations and their incomes in 1961. In addition, a calculation was made of the estimated contribution of education in the increased real incomes in Newfoundland from 1951 to 1961.

#### A. The Comparison of the Rates of Illiteracy and Incomes.

Professor Spengler maintains that, "international disparity in per capita income is explainable in considerable part by disparity in educational attainment."<sup>15</sup> Mr. Cook has also stated that:

"The level of literacy of the adult population is a fair indicator of the range and effectiveness of a nation's educational system. With each passing year, the relationship of literacy to national economic growth and higher living levels becomes more pronounced in a modern technological world."<sup>16</sup>

These are strongly supported by comparisons between Newfoundland and Canadian averages of illiteracy and incomes.

---

15. Joseph J. Spengler, "Demographic Patterns" in Economic Development, edited by Williamson and Buttrick, Prentice-Hall, Inc., New Jersey, 1961, p. 77.

16. Robert C. Cook (ed.), Population Bulletin, Population Reference Bureau, Inc., Washington, D.C., Vol. XIX, No. 6, October 1963, p. 149.

In 1951 the average money income in Canada as a whole was twice that of Newfoundland. Meanwhile, for the age group five years and over, the rate of illiteracy or the numbers of people who could neither read nor write to the total population over that age in Newfoundland was twice as high as the Canadian level. Again, in 1961 the average income in Canada as a whole in terms of 1951 dollar was 1.7 times as high as in Newfoundland. Similarly, the rate of illiteracy in Newfoundland in 1961 was about 1.7 times that of Canada as a whole (see Table 6-6). This illustrates vividly that by raising the educational level of Newfoundland people, the income gap between Newfoundland and the rest of Canada is tending to narrow. The general conclusion is, that the higher the rate of illiteracy the lower the average income, and vice versa.

### 3. The Comparison of the Rates of Increase in Incomes and Educational Standards.

In real terms, the rate of increase in per capita personal income in Newfoundland was higher than in all of Canada over the past ten years. Between 1951 and 1961 the total Canadian increase was 11.6 percent as compared with 33.3 percent for Newfoundland (see Appendix A, Table 6, page 34 ). Whatever the other factors bringing about this higher rate of increase in incomes in Newfoundland may be, education inevitably and functionally played a great part, because the rate of educational

TABLE 6-6  
GROWTH IN EDUCATIONAL LEVELS, POPULATIONS AND PERSONAL INCOMES IN NEWFOUNDLAND AND CANADA  
1951 AND 1961

191

| Newfoundland                                | 1951                 |            | 1961       |            | Percentage change |
|---|----------------------|------------|------------|------------|-------------------|
|   | Number (1)           | Percentage | Number (2) | Percentage |                   |
| Total population 5 years of age and over    | 302,585              | 100.0      | 390,158    | 100.0      | 28.9              |
| Educated population                         | 268,172              | 88.6       | 361,549    | 92.7       | 34.8              |
| Elementary Education                        | 198,381              | 65.6       | 237,058    | 60.8       | 19.5              |
| Secondary Education                         | 64,043               | 21.2       | 115,276    | 29.5       | 80.0              |
| Some University and <i>degrees</i>          | 5,748                | 1.8        | 9,235      | 2.4        | 60.7              |
| Illiterate population                       | 34,413               | 11.4       | 28,589     | 7.3        | -16.9             |
| Total population                            | 361,416              |            | 457,853    |            | 26.7              |
| Per capita personal income (current dollar) |                      | 568        |            | 937        | 65.0              |
| (1951 constant dollar)                      |                      | 568        |            | 757        | 33.3              |
| <b>Canada</b>                               |                      |            |            |            |                   |
| Total population 5 years of age and over    | 12,287,320           | 100.0      | 15,981,846 | 100.0      | 30.1              |
| Educated population                         | 11,633,824           | 94.7       | 15,320,170 | 95.9       | 31.7              |
| Elementary Education                        | 6,899,820            | 56.2       | 8,382,214  | 52.4       | 21.5              |
| Secondary Education                         | 3,884,746            | 31.6       | 6,152,448  | 38.5       | 58.4              |
| Some University and <i>degrees</i>          | 849,258 <sup>a</sup> | 6.9        | 785,508    | 5.0        | -7.5              |
| Illiterate population                       | 653,496              | 5.3        | 661,676    | 4.1        | 1.2               |
| Total population                            | 14,009,429           |            | 18,238,247 |            | 30.2              |
| Per capita personal income (current dollar) |                      | 1,130      |            | 1,562      | 38.2              |
| (1951 constant dollar)                      |                      | 1,130      |            | 1,261      | 11.6              |

Note:

<sup>a</sup>. Including students with Grade XIII.

Source:

1. Calculated from Dominion Bureau of Statistics data, Census of Canada, 1951 and 1961; National Accounts, Income and Expenditure, 1956 and 1963.

improvement was relatively higher in Newfoundland than in all of Canada. For instance, numbers with secondary education in Newfoundland increased by 80.0 percent as against 58.4 percent in Canada as a whole. Moreover, during the same period, the number of people with some university education decreased in Canada as a whole, the decrease being 7.5 percent. In Newfoundland university-educated people on the contrary increased by 60.7 percent. Newfoundland had approximately the same rate of increase as the rest of Canada in the number of people with elementary education only (20.0 percent). The numbers of illiterate people decreased in Newfoundland (16.9 percent) while they increased in Canada as a whole (1.2 percent). The relatively rapid growth in education in Newfoundland is striking since Newfoundland had a relatively smaller increase in total population five years of age and over than the rest of Canada: 28.9 percent against 30.1 percent (see Table 6-6).

C. The Comparison of the Educational Levels of the Populations and their Incomes in 1961.

The gap in average incomes between Canada and Newfoundland in 1961 for the non-farm population fifteen years of age and over is shown in Table 6-7. The greatest gap in average incomes is found among people with only elementary education; the Canadian incomes are 42 percent higher for male and 61 percent higher for females than in Newfoundland. The gap

TABLE 6-7

NUMBER AND AVERAGE INCOME FOR THE NON-FARM POPULATION,  
FIFTEEN YEARS OF AGE AND OVER, BY SEX AND SCHOOLING,  
NEWFOUNDLAND AND CANADA, 1961

| Schooling               | Sex | Number |           | Average Income<br>(in dollars) |        | Ratio of<br>Earnings-<br>Canada to<br>Nfld. |
|-------------------------|-----|--------|-----------|--------------------------------|--------|---|
|                         |     | Nfld.  | Canada    | Nfld.                          | Canada |   |
| No Schooling            | M   | 7,109  | 63,212    | 1,449                          | 1,715  | 1.18  |
|                         | F   | 4,729  | 60,474    | 690                            | 888    | 1.29  |
| Elementary <sup>a</sup> | M   | 66,722 | 2,114,034 | 2,210                          | 3,134  | 1.42  |
|                         | F   | 56,322 | 1,977,656 | 773                            | 1,247  | 1.61  |
| Secondary<br>1-3 years  | M   | 43,245 | 1,578,128 | 3,179                          | 3,943  | 1.24  |
|                         | F   | 49,084 | 1,823,353 | 1,384                          | 1,589  | 1.15  |
| Secondary<br>4-5 years  | M   | 5,224  | 774,131   | 3,886                          | 4,825  | 1.24  |
|                         | F   | 6,597  | 1,012,028 | 1,478                          | 2,080  | 1.41  |
| Some<br>University      | M   | 3,287  | 217,866   | 4,109                          | 4,995  | 1.22  |
|                         | F   | 3,002  | 160,313   | 2,142                          | 2,535  | 1.18  |
| University<br>Graduates | M   | 1,467  | 229,925   | 8,133                          | 9,048  | 1.11  |
|                         | F   | 371    | 90,052    | 3,523                          | 3,384  | 0.96  |

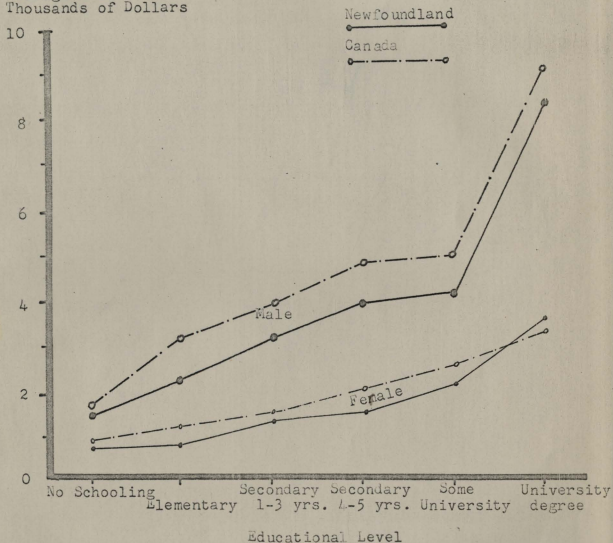
Note:      <sup>a</sup>   Including kindergarten.

Source:    1.   Dominion Bureau of Statistics, Census of Canada, 1961.

CHART 6-5

AVERAGE INCOME FOR THE NON-FARM POPULATION  
15 YEARS OF AGE AND OVER, BY SEX AND SCHOOLING  
NEWFOUNDLAND AND CANADA, 1961

Average Income  
Thousands of Dollars





in average incomes between people with secondary education and some university training is comparatively narrow. The least difference is observed among people with university degrees. In 1961 male graduates in Canada as a whole had an average income which was 11 percent higher than in Newfoundland, while female graduates in Canada earned on the average 4 percent less than their counterparts in Newfoundland. These comparisons between Canada and Newfoundland reveal that the percentages by which incomes in Newfoundland lag behind those in Canada decrease as higher educational levels are attained.

Table 6-7 also shows that in 1961 male university graduates in Newfoundland earned on the average \$8,133 which was 5.6 times higher than that earned by men with no schooling in the province. Female graduates had an average yearly income of \$3,523 which equalled 5.1 times that of women with no schooling. In the same year, the corresponding figures in Canada as a whole were relatively smaller, the difference in the former group was 5.3 times and 3.8 times for the latter. This bears out the contention that the higher the basic and universal level of education in any country, the less differential advantage education will give. In other words, it points out that the gap between the highest and the lowest average income is comparatively larger in an educationally backward country than in an educationally advanced one. "In

terms of measurable phenomena," said Mr. Caine, "both the personal and social benefits of education thus diminish as the school-leaving age is raised."<sup>17</sup> This is an application of diminishing marginal returns to education when the educational level is reaching an optimum in the society.

The analysis in this section infers that the income of Newfoundlanders generally may match those of other Canadians when the educational gap is effectively bridged, because "an educated community with highly trained leadership does not remain economically backward."<sup>18</sup>

D. An Estimation of the Contribution of Education to the Increased Real Income in Newfoundland from 1951 to 1961.

In Appendix E, an attempt is made to show how much the increased real income in Newfoundland during the decade was due to improved educational standards. Basic to the argument is the assumption that there were constant returns to all factors of production. The assumption of constant returns in the economy may be unrealistic, for it supposes that the production function had not altered, that no new technology and market for Newfoundland's products had emerged, and that there was no change in the inherent intelligence of labor,

---

17. Sydney Caine, "Education as a Factor of Production" in Lloyds Bank Review, No. 72, April 1964, p. 6.

18. John Vaizey, op. cit., p. 143.

nor in their working habits and so forth. It is assumed everything remained the same except the educational levels of the workers, which caused their productivity to rise and thereby changed the wage structure in the province. Although the economy of Newfoundland did not remain exactly the same as suggested by this assumption, the main elements of its production function and the market mechanism did not appear to change significantly over the past decade.

The result indicates what would be earned by the same number of workers had their educational standards in 1961 remained the same as in 1951; of the \$283 million earned by the total labor force in 1961, \$14 million is attributable to the improvement in education among Newfoundland workers. Total earnings in 1951 has been revalued from \$138 million to be \$180 million because of the increase in size of the labor force and the inflation of prices in 1961. The increase in real income (in 1961 prices) from 1951 to 1961 is therefore \$103 million. Thus, the improvement of education among Newfoundland workers contributed about \$14 million which approximately equals 14 percent of the increased real income between 1951 and 1961. This percentage can be interpreted as the "extra earnings" gained from the improved education to the "total increase in labor income", and the "total increase in labor income" is obtained after the total labor income in

1951 has been adjusted by the changes in prices and quantity of labor. Professor Clark points out that "it is certainly safe to assert that on the average more education increases the output of goods and services in the economy."<sup>19</sup> Therefore, we can assume that as much as 14 percent increase in real incomes in Newfoundland was due to the improvement in education of workers. In short, better education in Newfoundland has resulted in slowing down the rate of increase in unemployment, in adjusting the occupational structure, in raising incomes and developing the economy. Mr. Henson's argument for "education, as a factor in regional development" in the Atlantic Provinces is thus supported.<sup>20</sup>

There is certainly a relationship between education and economic development, in that economic development requires higher levels of education, which in turn will lead to greater improvements in the economy. Special emphasis on the educational function in economic growth from modern famous economists are very prevalent, such as

"the man without skills and knowledge leaning  
terrifically against nothing."<sup>21</sup>

---

19. Harold F. Clark, op. cit., p. 21.

20. Guy Henson, Looking Ahead in the Atlantic Provinces, Canadian Association for Adult Education, Toronto, 1956.

21. Theodore W. Schultz, op. cit., p. 16.

and "the major capital stock of an industrially advanced nation is not its physical equipment; it is the body of knowledge amassed from tested findings and discoveries of emperical science, and the capacity and training of its population to use this knowledge effectively."<sup>22</sup>

However, it is difficult to ascertain how much would be the real contribution of education to economic development. It is also impossible to determine which should come first in the attempt to break through a "chronic backwardness".<sup>23</sup> Professor Vaizey claimed that, "the alternative to using education to stimulate growth is to use economic growth to stimulate education."<sup>24</sup> This simply means that education and economic development are complementary: in order to achieve an optimal progress, neither one can be entirely overlooked or overemphasized.

---

22. Simon Kuznets, Toward A Theory of Economic Growth, Doubleday and Co., New York, 1955, p. 39.

23. John Vaizey, op. cit., p. 143.

24. Ibid., p. 131.

## APPENDIX E

## A MEASURE OF RETURNS ON HUMAN CAPITAL

## I. A Tentative Method of Obtaining a Percentage of the Contribution of Education to the Increased Real Labor Income

## A) Assumptions

1. The educational level of the labor force is raised which increases the productivity and hence the incomes of the labor.
2. Returns on all other productive factors are constant, the production function does not alter and no new markets for the products are developed.
3. The inherent intelligence of workers and their habits remain unchanged during the period of time concerned.

## B) Symbols

$W_a^i$  -- Average earnings in the last year, including both sexes and comprising of:

$W_a^e, W_a^s, W_a^u$  -- Average earnings of the workers with elementary, secondary and university education

$W_b^i$  -- Average earnings in the base year, including both sexes and comprising of:

$W_b^e, W_b^s$  and  $W_b^u$ .

$N_a^i$  -- Number of workers in the last year, including both sexes and comprising of:

$N_a^e, N_a^s, N_a^u$  -- Number of workers with elementary, secondary and university education

$N_b^i$  -- Number of workers in the base year, including both sexes and comprising of:

$N_b^e, N_b^s$  and  $N_b^u$

$\hat{N}_a^i$  -- Number of workers in the last year assuming that the educational composition rate of the labor force remained the same as that of the base year. It includes  $\hat{N}_a^e, \hat{N}_a^s$  and  $\hat{N}_a^u$ .

L -- Ratio of the number of workers in the last year to the base year.

(continued)



P -- Ratio of the price index numbers of consumer goods in the last year with the base year equal to 100.

i -- Education -- e (elementary), s (secondary), u (university).

E -- Percentage of increase in real labor income contributed by education.

- C) The assumptions are embodied in the following formula for calculating the percentage of the extra earnings resulting from the improved education of the labor force to the increased real income of a country during a certain period of time:

$$E = \frac{i=e, \sum_s, u (W_a^i N_a^i) - i=e, \sum_s, u (W_a^i \bar{N}_a^i) \times 100}{i=e, \sum_s, u (W_a^i N_a^i) - (i=e, \sum_s, u W_b^i N_b^i) \times L \times P}$$

$$= \frac{i=e, \sum_s, u W_a^i (N_a^i - \bar{N}_a^i) \times 100}{i=e, \sum_s, u (W_a^i N_a^i) - i=e, \sum_s, u (W_b^i N_b^i) \times L \times P}$$

## II. Case Study of Newfoundland

### 1. Actual earnings of labor in 1961

$$i = e, \sum_s, u W_a^i N_a^i = \$282,726,000$$

### 2. Total earnings of labor in 1951

$$i = e, \sum_s, u W_b^i N_b^i = \$138,000,000$$

### 3. Total earnings of the labor force in 1961 distributed according to the educational levels of 1951

$$i = e, \sum_s, u W_a^i \bar{N}_a^i = \$268,814,000$$

### 4. Price and labor adjustments

$$P = 141.3/114.1 = 1.238^a$$

$$L = 112,310/106,540 = 1.054$$

(continued)



5. Contribution of education to labor incomes  
 $\$282,726,000 - \$268,814,000 = \$13,912,000$
6. Contribution of education as a percentage of increased real income  
 $E = 100 \times 13,912,000 / (282,726,000 - 138,000,000 \times 1.238 \times 1.054)$   
 $= 13.54\%$

## II. Discussion of the Formula

The Formula can be rewritten as follows:

$$E = \frac{\sum_{i=e, s, u} W_a^i N_a^i - \sum_{i=e, s, u} W_a^i N_b^i \times \sum_{i=e, s, u} N_a^i / \sum_{i=e, s, u} N_b^i}{\sum_{i=e, s, u} W_a^i N_a^i - \sum_{i=e, s, u} W_b^i N_b^i \times \sum_{i=e, s, u} N_a^i / \sum_{i=e, s, u} N_b^i} \times 100$$

$$\bar{N}_a^i = \sum_{i=e, s, u} N_a^i \times \frac{N_b^i}{\sum_{i=e, s, u} N_b^i} = N_b^i \times \frac{\sum_{i=e, s, u} N_a^i}{\sum_{i=e, s, u} N_b^i}$$

$\bar{N}_b^i$  denotes the adjustments made in  $N_b^i$  because of the changes in the composition of the labor force. After making adjustments for changes in prices, we have:

$$\bar{W}_b^i = (W_b^i \times P)$$

$$L = \frac{\sum_{i=e, s, u} N_a^i}{\sum_{i=e, s, u} N_b^i}$$

The numerator of the re-written formula is the same as denominator except that the former contains  $W_a^i$  and the latter  $\bar{W}_b^i$ . If we assume that  $W_a^i$  and  $\bar{W}_b^i$  are equal viz., the wage structure over the period under study remains the same, then the whole increase in income is attributable to the higher level of education. However, as the educational level rises, the scarcity of skilled labor is alleviated but the returns on education are expected to diminish after the educational level has reached the optimum. This is one reason wage structure in real terms is not likely to remain unchanged. If the educational composition of the labor force and number of workers remain unchanged, then E is zero.

The formula then reads: the contribution of education as a percentage of the increased real income is equal to the change in earnings attributable to a change in the educational distribution of the labor force divided by the change in total earnings in real terms.

TABLE E-1

THE LABOR FORCE IN NEWFOUNDLAND, BY SEX AND BY EDUCATIONAL LEVEL, 1951 AND 1961,  
AND AVERAGE EARNINGS OF THE LABOR FORCE IN 1961

|   | Elementary (e) |        | Secondary (s) |         | University (u) |         | Total  |        | Total<br>Labor Force |
|---|----------------|--------|---------------|---------|----------------|---------|--------|--------|----------------------|
|   | Male           | Female | Male          | Female  | Male           | Female  | Male   | Female |                      |
| 1951  |                |        |               |         |                |         |        |        |                      |
| Labor Force (N <sub>51</sub> <sup>1</sup> )                               | 64,384         | 6,687  | 22,376        | 9,234   | 2,700          | 1,159   | 89,460 | 17,080 | 106,540              |
| Percentage<br>Distribution  | 60.4%          | 6.3%   | 21.0%         | 8.7%    | 2.5%           | 1.1%    | 83.9%  | 16.1%  | 100.0%               |
| 1961  |                |        |               |         |                |         |        |        |                      |
| Labor Force (N <sub>61</sub> <sup>1</sup> )                               | 47,839         | 6,046  | 36,113        | 15,336  | 4,750          | 2,226   | 88,702 | 23,608 | 112,310              |
| Percentage<br>Distribution  | 42.6%          | 5.4%   | 32.1%         | 13.7%   | 4.2%           | 2.0%    | 78.9%  | 21.1%  | 100.0%               |
| Had Labor Force<br>Distributed as<br>1951 (N <sub>51</sub> <sup>2</sup> ) | 67,836         | 7,076  | 23,585        | 9,771   | 2,807          | 1,235   | 94,228 | 18,082 | 112,310              |
| Average Earnings<br>in 1961 (N <sub>61</sub> <sup>2</sup> )               | \$2,295        | \$869  | \$3,229       | \$1,479 | \$4,686        | \$2,608 |        |        |                      |

Note: a. Price Index -- 114.1 for 1951 and 141.3 for 1961, these are implicit price indexes which are currently weighted numbers. They reflect not only pure price changes, but also changing expenditure patterns, within and between major groups.

Sources: 1. Dominion Bureau of Statistics, Census of Canada 1951 and 1961, for labor force; National Accounts, Income and Expenditure, 1956 and 1963 for Price Indexes of Consumer Goods (100 for 1949), and for Actual Income of Labor Force in 1951.  
2. Census of Canada, 1961, for weighted average earnings of labor force by educational levels and by sex.

## CHAPTER VII

## SUMMARY AND CONCLUSION

When Newfoundland joined Canada its economy lagged in almost every respect behind all the other Mainland provinces. However, the province has since undergone a radical change: in the first one and one-half decades of Confederation (1949-64) Newfoundland has achieved great economic development. Although Newfoundland's economy is still predominately based on the exploitation of its natural resources, diversification and industrialization have altered its economic structure. Despite their rapid increase in absolute terms the fishery and forestry industries have added proportionately less to the provincial net value of commodity production than mining, construction and electric power. Tertiary industries, especially transportation and trade, have played an increasing role in the economy. During the period under discussion, the value of construction has tripled, mineral production has risen five times, and domestic consumption of electricity has increased ten-fold. The most important achievement was the doubling of the per capita income in Newfoundland, although the labor force increased less than one-tenth.

These accomplishments were largely due to the inflow of money into the province as part of Federal Government policy. This financial aid provided public utilities and other social

infrastructure, and stimulated investment and economic growth. The result was a rate of economic expansion surpassing that of the Canadian average.

Unfortunately, Newfoundland's resources and access to markets compare unfavorably with the rest of Canada. Newfoundland's secondary industry cannot compete advantageously with competitors outside the province. This has been a retarding factor in its development and reduces tremendously the possibility of broadening the base of Newfoundland's economy. Moreover, the economic situation in Newfoundland was aggravated by its population growth, the highest rate in Canada, and by the relatively low levels of education of its people.

Since Confederation, Newfoundland has enjoyed a high birth rate and a low death rate. The population explosion in Newfoundland has accentuated the serious problem of unemployment. A declining participation rate of its labor force, and comparatively low levels of "skills" resulting from low levels of academic and technical training, have seriously affected the improvement of labor productivity. Again, the irregular population distribution created difficulties for the effective allocation of social overhead capital. The explosive growth of the school age population overwhelmingly burdened the finances available for education.

Entrepreneurial capacity, managerial ability, specialized skill and high degree of adaptability of the labor force can only be obtained with a sound elementary and secondary education. The increasing rate of retention and average daily attendance at school resulted in improving the productivity of the labor force. Although Newfoundland's rate of progress in education compares favorably with the national average, the province has a long way to go. Sole-charge schools were largely reduced due to centralization, but the attainment of an ideal ratio of students to qualified teachers as well as the establishment of better schooling facilities require further endeavour. Because students left schools early they could not utilize fully their potentialities. Although educational services and educational attainment in the different denominations and regions varied a great deal, a degree of uniformity is being achieved.

The Newfoundland Government has comparatively shouldered a greater responsibility in the total costs of education as compared to other provinces. Government expenditure has increased five times since Confederation, although the student population has only doubled. This expenditure has been steadily rising in proportion. If people in this province were to understand more clearly the contribution of education to economic development, they would tend to lessen their opposition to the levying of taxes for educational

purposes. It is likely that education on denominational lines together with some necessary amalgamation will ensure sound educational levels for the people of Newfoundland.

Generally, a nation with high educational levels has actually accumulated a stock of human capital which in turn gives rise to higher per capita incomes. People in Newfoundland might be able to compete economically with the rest of Canadians only when they are given efficient educational training. Since Confederation, the improvement in education in this province has been partly responsible for the low rate of increase in unemployment. Improvement in education has also led to a relatively rapid readjustment of occupation, with numbers increasing in the high earning occupations and decreasing in the low earning occupations. Consequently, the rate of increase in per capita income exceeded by far that of the national average, and the gap between the Newfoundland and Canadian economic standards has been narrowing continuously. It is not unreasonable to assume that per capita income in Newfoundland will eventually reach that of Canada, provided that the educational gap between Newfoundlanders and the rest of Canadians is eventually bridged.

# BIBLIOGRAPHY

## Books and Monographs

- American Association of School Administrators, Public Relations for American Schools, 28th Year Book. Washington, D.C., 1950.
- Benson, C.S. (ed.), Prospective on the Economics of Education. Houghton Mifflin Company, Boston, 1963.
- Bowman, Mary Jean and Anderson, C. Arnold, The Role of Education in Development, Development of Emerging Countries. The Brookings Institution, Washington, D.C., 1962.
- Burkhead, Jesse, State and Local Taxes for Public Education. Syracuse University Press, Syracuse, New York, 1963.
- Chandler, B.J., Education in Urban Society, Dodd, Mead, and Company, New York, 1962.
- Clark, Harold F. Cost and Quality in Public Education. Syracuse University Press, Syracuse, New York, 1963.
- Clark, Harold F. Education Steps Up Living Standards. Chamber of Commerce of the United States, Washington, D.C., 1945.
- Copes, Parzival, St. John's and Newfoundland, An Economic Survey, The Newfoundland Board of Trade, 1961.
- Frecker, G.A., Education in the Atlantic Provinces. W.J. Gage and Company, Limited, Toronto, 1956.
- Grove, Harold M., Education and Economic Growth. National Educational Association, Washington, 1961.
- Halsey, Floud and Anderson (eds.). Education, Economy and Society, The Free Press of Glencoe, Inc., New York, 1961.
- Hanson, Eric J., Fiscal Needs of the Canadian Provinces, Canadian Tax Foundation, Toronto, 1961.
- Henson, Guy, Looking Ahead in the Atlantic Provinces, Canadian Association for Adult Education, Toronto, 1956.
- Higgins, Benjamin, Economic Development, W.W. Norton and Company Inc., New York, 1959.



- Hirschman, Albert O. The Strategy of Economic Development, Yale University Press, New Haven, 1958.
- Johns, Roe L. and Morphet, Edgar L. Financing the Public Schools, Prentice-Hall, Inc., New Jersey, 1960.
- Kindleberger, Charles P. Economic Development, The McGraw-Hill Book Company, Inc., New York, 1958.
- Kuznets, Simon, Toward A Theory of Economic Growth, Doubleday and Company, Inc., New York, 1955.
- Lewis, W.A., Report on Industrialization and the Gold Coast, Government Printing Department, Accra, 1953.
- Marshall, Alfred, Principles of Economics, Macmillan and Company, Limited, London, 1961.
- Meier, G.M. (ed.), Leading Issues in Development Economics, Oxford University Press, New York, 1964.
- Mort, Paul R. and Reusser, Walter C., Public School Finance, McGraw-Hill Book Company, Inc., New York, 1951.
- Myrdal, Gunnar, Economic Theory and Underdeveloped Regions, Gerald Duckworth and Company, Limited, London, 1958.
- Phillips, C.E., The Development of Education in Canada, W.J. Gage and Company, Limited, Toronto, 1957.
- Rostow, W.W., The Stages of Economic Growth, Cambridge University Press, London, 1960.
- Rowe, F.W., The Development of Education in Newfoundland, The Ryerson Press, Toronto, 1964.
- Schreiber, Daniel (ed.), The School Dropout, National Education Association, Washington, D.C., 1964.
- Schultz, Theodore W., The Economic Value of Education, Columbia University Press, New York, 1963.
- Sexton, Patricia Cayo, Education and Income, The Viking Press, New York, 1961.
- Solo, Robert A. (ed.), Economics and Public Interest, New Brunswick, New Jersey, 1955.

Sufrin, Sidney C., Issues in Federal Aid to Education, Syracuse University Press, Syracuse, New York, 1962.

Tinbergen, Jan and Bos, Hendricus C., Aims and Means of Programming, Mathematical Models of Economic Growth, McGraw-Hill Book Company, New York, 1962.

United Nations, Processes and Problems of Industrialization in Underdeveloped Countries, New York, 1955.

Ward, Barbara, The Rich Nations and The Poor Nations, W.W. Norton and Company, Inc., New York, 1962.

Warren, Philip John, Financing Education in Newfoundland, unpublished doctoral dissertation, University of Alberta, 1962.

Williamson and Buttrick (ed.), Economic Development, Prentice-Hall, Inc., New Jersey, 1961.

Vaizey, John, The Economics of Education, Faber and Faber Ltd., London, 1962.

#### Articles

Adiseshian, M., "Education, Economic Growth and Gaps in Information," Journal of Political Economy, October, 1962.

Caine, Sydney, "Education as a Factor of Production," Lloyds Bank Review, No. 72, April, 1964.

Cook, Robert C. (ed.), Population Bulletin, Vol. XIX, No. 6, October, 1963.

Daniel, Goldwell, "Allocation of Resources to National Education," The Indian Journal of Economics, No. 162, January, 1961.

Kamerschen, David R., "Over Population in the Under-developed Countries," Economic Development and Cultural Change, Vol. XIII, No. 2, January, 1965.

Moffatt, H.F., "Some Principles on Educational Finance," Canadian Education and Research Digest, Vol. 14, No. 3, 1964.

Needham, Richard J., "The Happiest Canadians," Macleans, October, 1964.

Schultz, T.W., "Investment in Human Capital," American Economic Review, Vol. 51, No. 1, March, 1961.

The Sunday Times, "Wabash Mines, Industrial Growth Spurs Employment in Newfoundland," Newfoundland Supplement, 1963.

Thomas, J. Alan, "Institutional Character of Education: Economic and Fiscal Aspects," A Review of Educational Research, October, 1964.

## Government Publications and Documents

### Federal Government

Dominion Bureau of Statistics, A Graphic Presentation of Canadian Education, Catalogue No. 81-515, September, 1961.

Dominion Bureau of Statistics, Canadian Statistical Review (monthly).

Dominion Bureau of Statistics, Census of Canada, 1951.

Dominion Bureau of Statistics, Census of Canada, 1956.

Dominion Bureau of Statistics, Census of Canada, 1961.

Dominion Bureau of Statistics, Education Planning and The Expanding Economy, Catalogue No. 61-524, October, 1964.

Dominion Bureau of Statistics, Education Through Progress, 1962.

Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1949.

Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1950.

Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1951.

Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1952.

Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1953.

Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1954.

Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1955.

Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1956.

- Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1957.
- Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1958.
- Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1959.
- Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1960.
- Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1961.
- Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1962.
- Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1963.
- Dominion Bureau of Statistics, Labor Force, Monthly Reports, 1964.
- Dominion Bureau of Statistics, National Accounts, Incomes and Expenditures, 1926-1956.
- Dominion Bureau of Statistics, National Accounts, Incomes and Expenditures, 1956.
- Dominion Bureau of Statistics, National Accounts, Incomes and Expenditures, 1958.
- Dominion Bureau of Statistics, National Accounts, Incomes and Expenditures, 1959.
- Dominion Bureau of Statistics, National Accounts, Incomes and Expenditures, 1963.
- Dominion Bureau of Statistics, Review of Employment and Payrolls, 1955.
- Dominion Bureau of Statistics, Review of Employment and Payrolls, 1959.
- Dominion Bureau of Statistics, Review of Employment and Payrolls, 1963.
- Dominion Bureau of Statistics, Salaries and Qualifications of Teachers in Public Elementary and Secondary Schools, Catalogue No. 81-202, 1963-1964.
- Dominion Bureau of Statistics, Statistics of Construction, Hospital, Public Utilities and Transportation, 1956.

- Dominion Bureau of Statistics, Statistics of Construction, Hospital, Public Utilities and Transportation, 1962.
- Dominion Bureau of Statistics, Statistics of Education, 1956.
- Dominion Bureau of Statistics, Statistics of Education, 1962.
- Dominion Bureau of Statistics, Statistical Review of Canadian Education, Catalogue No. 81-503, 1958.
- Dominion Bureau of Statistics, Student Progress Through the Schools, Catalogue No. 81-513, 1960.
- Dominion Bureau of Statistics, Survey of Education Finance, Catalogue No. 81-208, 1961.
- Dominion Bureau of Statistics, Survey of Production, 1926-1957.
- Dominion Bureau of Statistics, Survey of Production, 1961.
- Dominion Bureau of Statistics, Vital Statistics, 1949.
- Dominion Bureau of Statistics, Vital Statistics, 1951.
- Dominion Bureau of Statistics, Vital Statistics, 1956.
- Dominion Bureau of Statistics, Vital Statistics, 1958.
- Dominion Bureau of Statistics, Vital Statistics, 1964.
- Dominion Bureau of Statistics, Public Accounts of Canada, 1952.
- Dominion Bureau of Statistics, Public Accounts of Canada, 1957.
- Dominion Bureau of Statistics, Public Accounts of Canada, 1962.
- Provincial Government
- Department of Education, Annual Report, 1948.
- Department of Education, Annual Report, 1949.
- Department of Education, Annual Report, 1950.
- Department of Education, Annual Report, 1951.
- Department of Education, Annual Report, 1952.

- Department of Education, Annual Report, 1953.
- Department of Education, Annual Report, 1954.
- Department of Education, Annual Report, 1955.
- Department of Education, Annual Report and Statistical Supplement, 1956.
- Department of Education, Annual Report and Statistical Supplement, 1957.
- Department of Education, Annual Report and Statistical Supplement, 1958.
- Department of Education, Annual Report and Statistical Supplement, 1959.
- Department of Education, Annual Report and Statistical Supplement, 1960.
- Department of Education, Annual Report and Statistical Supplement, 1961.
- Department of Education, Annual Report and Statistical Supplement, 1962.
- Department of Education, Annual Report and Statistical Supplement, 1963.
- Department of Education, List of Schools in Newfoundland, 1964.
- Department of Finance, Budget Speech, 1964.
- Department of Finance, Public Accounts, 1949.
- Department of Finance, Public Accounts, 1950.
- Department of Finance, Public Accounts, 1951.
- Department of Finance, Public Accounts, 1952.
- Department of Finance, Public Accounts, 1953.
- Department of Finance, Public Accounts, 1954.
- Department of Finance, Public Accounts, 1955.



Department of Finance, Public Accounts, 1956.

Department of Finance, Public Accounts, 1957.

Department of Finance, Public Accounts, 1958.

Department of Finance, Public Accounts, 1959.

Department of Finance, Public Accounts, 1960.

Department of Finance, Public Accounts, 1961.

Department of Finance, Public Accounts, 1962.

Department of Finance, Public Accounts, 1963.





