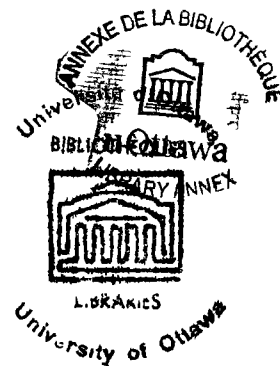


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INDICATORS OF ECONOMIC GROWTH
FOR LOWER CANADA, 1760-1850

by
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Thesis presented to the Department of Economics,
Faculty of Social Sciences of the University of
Ottawa, as partial fulfilment for the degree of
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CHAPTER I

INTRODUCTION

The period 1760-1850 was one of major political, social and economic changes in Quebec which were important in shaping the future of that Province and of Canada as a whole.

The object of this thesis is to make a survey of literature dealing with the economic history of Lower Canada for that period in order to collect statistical information concerning five indicators of economic growth and to evaluate the reliability of the sources from which the data are taken.

The scope of the subject matter necessitated a choice between either examining many indicators of economic growth for a relatively short period of time, for example, ten or twenty years, or limiting the number of indicators and extending the period of survey. The latter method has been chosen.

A survey of the literature concerning the economic history of Lower Canada prior to Confederation revealed a lack of published quantitative material. For the most part, such material as exists is of a descriptive rather than of

an analytical nature. One notable exception is the important contribution made by F. Ouellet with the publication of his Histoire économique et sociale du Québec, 1760-1850,¹ the result of many years of research, which constitutes an important step forward in this field.

In the initial pages of his work, the author presents an elaborate and useful bibliography² covering as completely as possible his subject matter. However, specific references to the statistical information used are absent from the text.³ Also the basic data are not published for the most part but are converted into rates of increase over time.

This makes it desirable to undertake a supplementary examination of possible sources of information with a view to establish consistent and economically meaningful statistical series for a relatively long period of time.

Indicators of economic growth are numerous and for the purpose of this thesis the following have been chosen: population, land occupied and cultivated, exports and imports, production and investment. Two factors dictate

¹F. Ouellet, Histoire économique et sociale du Québec, 1760-1850, (Montreal: Fides, 1966).

²Ibid., pp. XIX-XXXII.

³The author is well aware of this, and explains the reasons for this omission: "S'il avait fallu indiquer les sources exactes de toutes les données quantitatives utilisées, notre texte aurait été encombré d'un amas de références. Notre bibliographie visera donc à compenser pour ces omissions volontaires sur le plan des références." Ibid., p. XIX.

this choice.

The first is the relative importance of these indicators in a pre-industrial society, the shape Lower Canada was in, during the period under survey. While other indicators such as the level of education, technological developments and urbanization, were not altogether absent, especially in the latter part of the period, they are characteristic of more industrialized societies.

The second factor has to do with the object of this thesis, that is, the collection and evaluation of statistical information which may ultimately serve the purpose of examining economic growth that took place in Lower Canada from 1760 to 1850. There are other indicators significant for the early development of Lower Canada, e.g. entrepreneurship, but such factors are not readily quantified and they are not covered in the present inquiry.

Literature dealing in descriptive and qualitative terms with the economic history of Lower Canada for the period under survey is plentiful. A selection of a few of the most important professional contributions in this field is made below.

There are a number of studies of a general nature concerned with the economic history of Canada, usually covering a longer period of time than the years 1760-1850 included in this thesis. Canadian Economic History by W. T. Easterbrook

and H. G. Aitken,⁴ and An Economic History of Canada by M. Q. Innis⁵ are but two examples.

Of a specialized nature are books dealing with specific aspects of the economic development of Canada and Lower Canada. The Fur Trade in Canada, by H. A. Innis,⁶ Canadian Monetary, Banking and Fiscal Development, by R. C. McIvor,⁷ and The North American Assault on the Canadian Forest by A. R. M. Lower⁸ are examples.

There are also a great number of articles dealing with particular aspects of the economic development of Lower Canada, for example: "Historique de la Voirie dans la Province de Québec" by I. Caron;⁹ "Le régime seigneurial au pays de Québec, 1760-1854" by M. Séguin;¹⁰ and "A Revolution in the Agricultural Geography of Lower Canada, 1833-1838" by

⁴W. T. Easterbrook and H. G. Aitken, Canadian Economic History, (Toronto: Macmillan Co., 1956).

⁵M. Q. Innis, An Economic History of Canada, (Toronto: The Ryerson Press, 1935).

⁶H. A. Innis, The Fur Trade in Canada, An Introduction to Canadian Economic History, (2nd ed.; Toronto: The University of Toronto Press, 1956).

⁷R. C. McIvor, Canadian Monetary, Banking and Fiscal Development, (Toronto: Macmillan Co., 1958).

⁸A. R. M. Lower, The North American Assault on the Canadian Forest, (Toronto: The Ryerson Press, 1938).

⁹I. Caron, "Historique de la Voirie dans la Province de Québec", Bulletin de Recherches Historiques, Vol. 39, 1933, pp. 198-215, 278-300, 362-80, 463-82.

¹⁰M. Séguin, "Le régime seigneurial au pays de Québec, 1760-1850", Partie I, Revue d'histoire de l'Amérique française, Vol. 1, no 3, (décembre 1947), pp. 382-402, and Partie 2, op. cit., Vol. 1, no 4, (mars 1948), pp. 519-32.

W. H. Parker.¹¹

For the purpose of this thesis, secondary as well as published primary material has been surveyed in order to present quantitative information on population, land occupied and cultivated, exports and imports, production and investment in Lower Canada.

Chapter II is devoted to population growth. Available data concerning total population, natural rate of increase, immigration and emigration are presented and discussed. An attempt is also made to examine population by ethnic and religious groups.

Chapter III deals with increases in land occupied and cultivated in Lower Canada for the period under survey. The seigneurial regime as it existed in New France, the reasons for not abolishing it after 1760 as well as the causes which resulted in its abolition in 1854 are examined.

The factors contributing to increases in the area of land cultivated in Lower Canada at different periods are examined and an attempt is made to determine the relative amount of land occupied and cultivated under the two systems of land tenure, seigneurial and free and common soccage.

Data on exports and imports at Lower Canadian ports for the period under survey are discussed in Chapter IV. Quantitative information available in primary as well as secondary material are given on a yearly basis for a

¹¹W. H. Parker, "A Revolution in the Agricultural Geography of Lower Canada, 1833-1838", Revue Canadienne de Géographie, Vol. 11, no 4, (oct.-déc. 1957), pp. 189-94.

sample of seven export and five import commodities and the specific sources from which the data are taken are also given. Volume and weight indices are calculated and represented graphically for the twelve commodities in question. A great amount of data are available for exports and imports but their usefulness for economic analysis is hindered by three major difficulties: gaps in the statistical series especially for the period prior to 1792, inconsistencies in weights and volumes for the same commodities at different ports and over the years, and the problem of ascertaining the amount of exports originating in Lower Canada and the amount of imports consumed in that province. These problems are discussed and attempts are made to overcome them.

Chapter V is devoted to production. Since the scope of this thesis does not permit a survey of a wide range of products, two commodities, wheat and timber, are examined. The lack of statistical information on production makes it necessary, first to attempt to find ways and means to arrive at estimates for the period under survey, and secondly to rely heavily on qualitative information from available secondary material.

Chapter VI deals with large scale public and private investment. Capital expenditures on roads and bridges, canals and Montreal Harbour are examined under the heading public investment while railroads, banks and miscellaneous large scale capital expenditure are discussed under private investment.

The conclusions are presented in Chapter VII where the meaning and the shortcomings of the data which have been found are discussed.

In order not to burden the text with excessively long tables, the quantitative information on exports and imports are assembled in Appendix I.

The graphical illustrations of volume and weight indices for seven export and five import commodities are presented in Appendix II.

The scope of this thesis necessarily limited the amount of primary and secondary material that could be consulted and consequently some suggestions for further research are given in Appendix III.

CHAPTER II

POPULATION

I. Total Population

A continuous and reliable population series for Lower Canada for the period 1760-1850 is difficult to arrive at mainly because censuses were not taken at regular intervals during this period. However, census data for the years 1754, 1765, 1784, 1790, 1825, 1827, 1831, 1844 and 1851 are available,¹² as well as estimates for the years 1763, 1806, 1814, 1822 and 1848.

G. Langlois has estimated the population of Lower Canada at 65,000 for the year 1763 using the 1754 total population as it appeared in the census for that year, and adding to it the yearly excesses of births over deaths of the French Canadian population from 1754 to 1763.¹³

Joseph Bouchette, Surveyor General of Lower Canada, has estimated the population of Lower Canada at 250,000 in

¹²Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, (Ottawa: 1876), pp. 61, 64, 65, 74, 75-77, 83, 87, 95, 106, 146, 202.

¹³G. Langlois, Histoire de la population canadienne-française, (Montréal: Lévesque, 1935), p. 235.

1806,¹⁴ at 335,000 in 1814¹⁵ and at 427,465 in 1822.¹⁶

Estimates of the population of Lower Canada for the year 1848 can be found in the Journals of the Legislative Assembly of the Province of Canada.¹⁷ The population was variously estimated at 765,797, 770,000, 774,764, 777,129 and 786,693. These estimates unfortunately are not accompanied by any explanation as to how they were made and the choice of one estimate among the five is not easily resolved. However, since census population figures for the years 1844 and 1851 exist, the annual population growth rate, compound, can be calculated for the period 1844-51. This works out to a yearly population increase of 3.6 per cent.

An estimate of the population in 1848 can be arrived at by applying this yearly growth rate to the 1844 population figure. The calculation gives 803,015 souls as the estimated population of Lower Canada in 1848. It can be seen that, of

¹⁴J. Bouchette, The British Dominions in North America; or a Topographical and Statistical Description of the Provinces of Lower and Upper Canada, New Brunswick, Nova Scotia, the Islands of Newfoundland, Prince Edward and Cape Breton, Vol. 2, (London: Longman, 1832), p. 235.

¹⁵J. Bouchette, Description topographique de la Province du Bas-Canada avec des remarques sur le Haut-Canada et sur les relations des deux provinces avec les Etats-Unis d'Amérique, (London: Faden, 1815), p. 10.

¹⁶Journals of the House of Assembly of Lower Canada, 1823-24, (Québec: Neilson and Cowan), App. R.

¹⁷Journals of the Legislative Assembly of the Province of Canada, 1849, (Montréal: Rollo and Campbell), App. B.

the five estimates given above, the one which is closest to the calculated estimate of 803,015 is 786,693. On that basis it is chosen as the most realistic population figure for that year.

Table 1 shows the total population figures for Lower Canada for different dates for the period 1754-1851, according to official census returns and various estimates as well as the annual average growth rate, compound, of total population for the same period.

A close look at Table 1 shows a decrease in total population of Lower Canada from 479,288 in 1825 to 473,475 in 1827, a decrease therefore of 5,813 souls. However, the excess of births over deaths for the Catholic population of Lower Canada increases steadily from 1825 to 1827,¹⁸ and the arrivals of immigrants at the Port of Québec show an increase throughout this period¹⁹. Moreover, as will be seen below there was no exceptional outward migration of population from the province prior to 1830. However it does not necessarily follow from these observations that the census population for the year 1827 is too low. A look at the annual average rate of increase, compound, of the total population for the period 1754-1851 will shed some light on this.

¹⁸The excess of births over deaths is as follows:
1825 = 8,923 ; 1826 = 9,315 ; 1827 = 11,004. See: G. Langlois, op. cit., p. 260.

¹⁹The arrivals at the Port of Québec are as follows:
1825 = 9,097 ; 1826 = 10,731 ; 1827 = 16,862. See Table 8.
As will be seen below, only a fraction of these immigrants remained in Lower Canada.

TABLE 1
 TOTAL POPULATION OF LOWER CANADA ACCORDING
 TO OFFICIAL CENSUS REPORTS AND DIFFERENT
 ESTIMATES, 1754-1851

Year(s)	Total Population	Annual Average Increase, Compound (Per Cent)
1754	55,009	-
1763	65,000	1.9
1765	69,810	3.6
1784	113,012	2.6
1790	161,311	6.1
1806	250,000	2.8
1814	335,000	3.7
1822	427,465	3.1
1825	479,288	11.2
1827	473,475	- 0.6
1831	553,134	4.0
1844	697,084	1.8
1848	786,693	3.1
1851	890,261	4.2
1822-27		2.1
1822-31		2.9
1754-1851		2.9

Source: For 1754, 1765, 1784, 1790, 1825, 1827, 1831, 1844 and 1851, from: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, (Ottawa: 1876), pp. 61, 64, 65, 74077, 83, 87, 95, 106, 146, 202.

Source-Continued

For 1763, from: G. Langlois, Histoire de la population canadienne-française, (Montréal: Lévesque, 1935), p. 159.

For 1806, from: J. Bouchette, The British Dominions in North America; or a Topographical and Statistical Description of the Provinces of Lower and Upper Canada, New Brunswick, Nova Scotia, The Islands of Newfoundland, Prince Edward and Cape Breton, Vol. 2, (London: Longman, 1832), p. 235.

For 1814, from: J. Bouchette, Description topographique de la Province du Bas-Canada avec des remarques sur le Haut-Canada et sur les relations des deux provinces avec les Etats-Unis d'Amérique, (London: Faden, 1815), p. 10.

For 1822, from: Journals of the House of Assembly of Lower Canada, 1823-24, (Québec: Neilson and Cowan), App. R.

For 1848, from: Journals of the Legislative Assembly of the Province of Canada, 1849, (Montreal: Rollo and Campbell), App. B.

The annual average rate of increase, compound, of total population for the period 1822-25 is 11.2 per cent, considerably out of line with the rates of changes during other periods. The annual average rates of increase, compound, of the population for the periods 1822-27 and 1822-31, as shown in Table 1, are 2.1 per cent and 2.9 per cent respectively. These rates seem more realistic, keeping in mind what has been said concerning birth rates, immigration and emigration for the period 1825-27.

There appears to be sufficient evidence to conclude that the census population figure for 1825 represents an overstatement. A more realistic figure can be arrived at by applying the annual average rate of increase, compound, of the total population for the 1822-27 period to the population of 1822. Using this method, the total population in 1825 is approximated at 454,965 inhabitants instead of 479,288 as the census for 1825 indicated, a difference of 5.4 per cent.

Table 2 shows the adjusted population data for Lower Canada for the period 1754-1851, as well as the total per cent increases and the annual average rates of increase, compound, from one data year to the next. These statistics are represented graphically in Figure 1.

TABLE 2
TOTAL POPULATION OF LOWER CANADA, 1754-1851,
ADJUSTED FOR THE YEAR 1825

Year	Total Population	Adjusted Total Increase (Per Cent)	Annual Average Rate of Increase, Compound (Per Cent)
1754	55,009	-	-
1763	65,000	18.2	1.9
1765	69,810	7.4	3.6
1784	113,012	61.9	2.6
1790	161,311	42.7	6.1
1806	250,000	54.9	2.8
1814	335,000	34.0	3.7
1822	427,465	27.6	3.1
1825	454,965 ^a	6.4	2.1
1827	473,475	4.7	2.1
1831	553,134	17.2	4.0
1844	697,084	26.0	1.8
1848	786,693	12.9	3.1
1851	890,261	13.2	4.2

^aEstimate.

Source: For 1754, 1765, 1784, 1790, 1827, 1831, 1844 and 1851, from: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, (Ottawa: 1876), pp. 61, 64, 65, 74-77, 83, 87, 95, 106, 146, 202.

Source-Continued

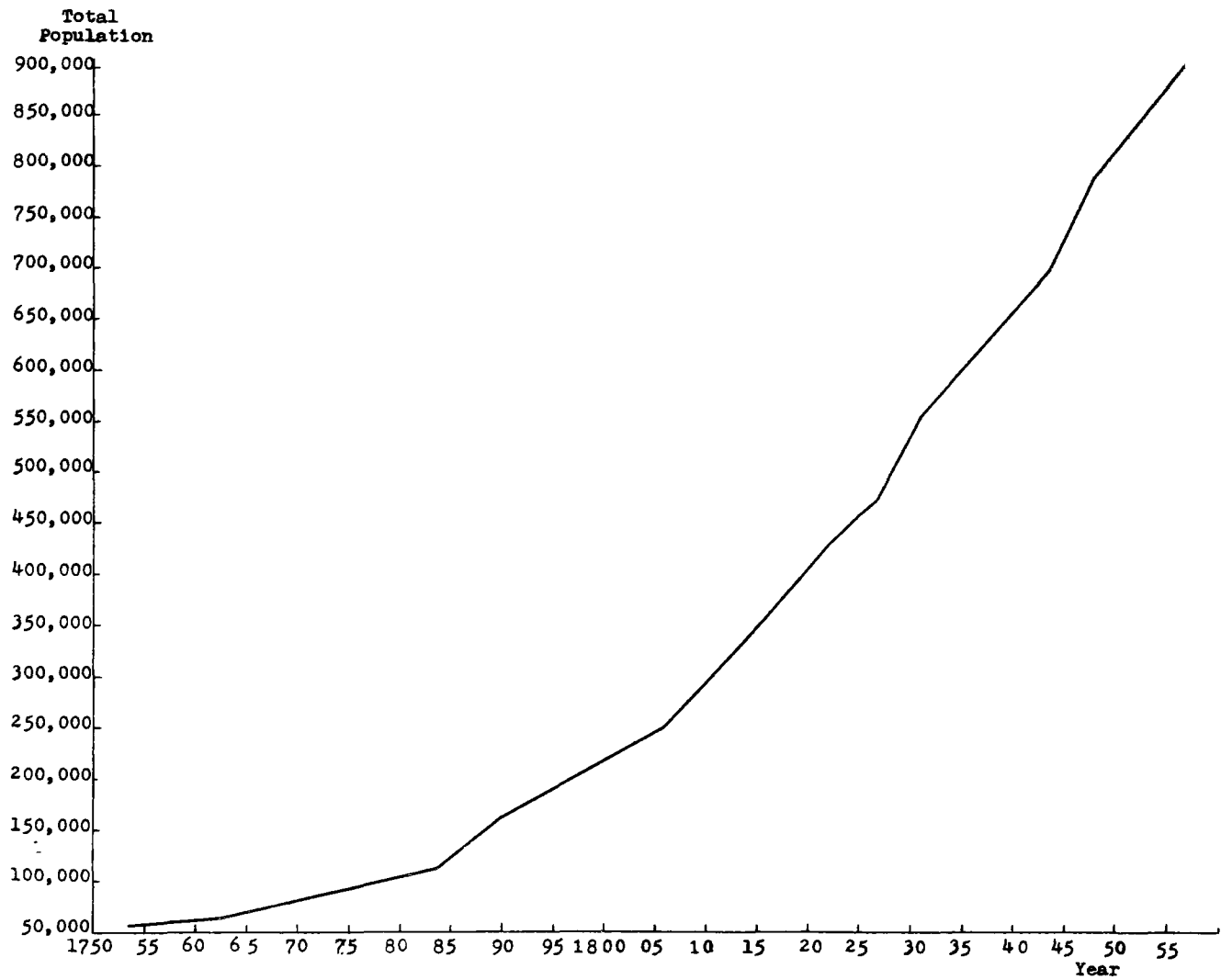
For 1763, from: G. Langlois, Histoire de la population canadienne-française, (Montréal: Lévesque, 1935), p. 159.

For 1806, from: J. Bouchette, The British Dominions in North America; or a Topographical Statistical Description of the Provinces of Lower and Upper Canada, New Brunswick, Nova Scotia, The Islands of Newfoundland, Prince Edward and Cape Breton, Vol. 2, (London: Longman, 1832), p. 235.

For 1814, from: J. Bouchette, Description topographique de la Province du Bas-Canada avec des remarques sur le Haut-Canada et sur les relations des deux provinces avec les Etats-Unis d'Amérique, (London: Faden, 1815), p. 10.

For 1822, from: Journals of the House of Assembly of Lower Canada, 1823-1824, (Québec: Neilson and Cowan), App. R.

For 1848, from: Journals of the Legislative Assembly of the Province of Canada, 1849, (Montreal: Rollo Campbell), App. B.



Source: Table 2

Fig. 1.--Total population of Lower Canada, 1754-1851.

II. Population by Ethnic and Religious Groups

Unfortunately, censuses taken during this period, except for the years 1844 and 1851, do not give a breakdown of population by ethnic groups. It is, therefore, difficult to know what proportion of the population was French during these years.

Some evidence is available, however, for the period prior to 1791. In 1766, Governor Murray estimated the number of British settlers in Lower Canada at 450.²⁰ In 1780 there were 2,000 settlers of British origin in the colony, according to Governor Haldimand.²¹

The census for the year 1784 states that there were 15,000 settlers of British origin in Lower Canada,²² forming 13 per cent of the population.²³

Dorchester estimated that the number of British settlers made up 20 per cent of the population of the Province

²⁰G. Langlois, op. cit., p. 132.

²¹Archives Publiques du Canada, Documents relatifs à l'histoire constitutionnelle du Canada, 1759-1828, Vol. 1, (Ottawa: Imprimeur du Roi, 1915-35), p. 710.

²²Census of Canada, 1870-71, Vol. 4, p. 74

²³Ouellet, using the same source, states that there were 25,000 inhabitants of British origin in Quebec in 1784. See: F. Ouellet, op. cit., p. 44. The statement in the census distinguishes between settlers in Lower Canada and settlers in Canada West: "The number of settlers of British origin then in Lower Canada was estimated at 15,000 souls. The United Empire Loyalists settled in Canada West, not enumerated in this Census, were estimated at 10,000 souls."

in 1789,²⁴ giving a total of approximately 32,265.²⁵

Some indications have been found to ascertain what proportion of these settlers were United Empire Loyalists. The Loyalist population in Lower Canada was estimated at 853 in 1778, 1,023 in 1779, 3,204 in 1783 and 5,576 in 1784.²⁶ Extrapolating from 1778 and 1779, there were approximately 1,193 Loyalists in Lower Canada in 1780.

Table 3 shows total population of British origin in Lower Canada as well as the number of Loyalist and non-Loyalist settlers for the period 1766 to 1789.

If the data in Table 3 are reliable, then, from 1780 to 1784 there immigrated to Lower Canada 8,617 settlers from the British Isles²⁷ and 4,383 Loyalists. A further 10,000 Loyalists had left the United States to settle in Canada West.²⁸

The impact of immigration from the British Isles, from the Old British American Colonies prior to the American

²⁴Archives Publiques du Canada, op. cit., Vol. 2.

²⁵Calculations based on the total population in 1790. Census of Canada, 1870-71, Vol. 4, p. 83.

²⁶Canada, Dominion Bureau of Statistics, Seventh Census of Canada, 1931, (Ottawa: King's Printer, 1936), pp. 144-45.

²⁷This immigration from the British Isles within four years is exceptional in view of the fact that from 1766 to 1780 the number of British settlers increased by only 357. This suggests that Haldimand's figure for the number of British settlers in Lower Canada in 1780 is an underestimate. On this point see: F. Ouellet, op. cit., p. 44.

²⁸See footnote 23.

TABLE 3
POPULATION OF BRITISH ORIGIN IN LOWER CANADA, 1766-89

Year	Loyalist Population	Non-Loyalist Population	Total British Population	Total Population	British Population (Per Cent)
1766	0 ^a	450	450	69,810 ^d	0.6
1778	853	- ^c	-	-	-
1779	1,023	-	-	-	-
1780	1,193	807	2,000	-	-
1783	3,204	-	-	-	-
1784	5,576 ^b	9,424	15,000	113,012	13.3
1789	-	-	32,265	161,311 ^e	20.0

^aThere were no United Empire Loyalists prior to the American Revolution of 1775-76.

^bThere were also 10,000 Loyalists settled in Canada West in that year. See: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, (Ottawa: 1876), p. 74.

^cNot available.

^dPopulation for 1765.

^ePopulation for 1790.

Source: Loyalist population in 1778, 1779, 1783 and 1784, from: Canada, Dominion Bureau of Statistics, Seventh Census of Canada, 1931, (Ottawa: King's Printer, 1936), pp. 144-45.

Source-Continued

Non-Loyalist population is calculated by subtracting the number of Loyalists from total population.

Total British population in 1766, from: G. Langlois, Histoire de la population canadienne-française, (Montréal: Lévesque, 1935), p. 132.

Total British population in 1780, from: Archives Publiques du Canada, Documents relatifs à l'histoire constitutionnelle du Canada, 1759-1828, Vol. I, (Ottawa: Imprimeur du Roi, 1915-35), p. 710.

Total British population in 1784, from: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, (Ottawa: 1876), p. 74.

Total British population in 1789, from: Archives Publiques du Canada, op. cit., Vol. 4, p. 77.

The data for total population: in 1765, 1784 and 1790, from: Canada, Department of Agriculture, op. cit., Vol. 4, pp. 64-65, 74, 77.

revolution and from the United States after that revolution, is evident from Table 3. The proportion of British settlers in Lower Canada passed from approximately 0.6 per cent in 1766 to 20 per cent in 1789. This greatly changed the demographic equilibrium in Lower Canada in the latter part of the eighteenth century.

The first census to divide population on a religious basis appeared in 1831 and the first to divide it on a country of origin basis was in 1844. The 1844 and 1851 censuses give breakdowns of population by religious as well as by ethnic groups. These data are reproduced in Table 4 where population is divided into French Canadian, non-French Canadian, not given, and, Catholic, non-Catholic, not given.

It is assumed that the population classed "not given" comprises approximately the same proportion of French Canadians, non-French Canadians, Catholics and non-Catholics as the population for which the ethnic origin and religion are known. Table 5 shows the population by ethnic and religious groups adjusted to include, in the four categories, the population classed "not given".

On the basis of these data, in 1844, 89.7 per cent of the Catholic population were French Canadians and in 1851, 89.3 per cent. For these two years, therefore, approximately 89.5 per cent of the Catholics were French Canadians. Assuming that all French Canadians in Lower Canada were Catholics in 1831, and, applying this 89.5 per cent to the Catholic population for that year, the French Canadian population can be

TABLE 4

POPULATION OF LOWER CANADA BY ETHNIC AND RELIGIOUS GROUPS, 1844 AND 1851, UNADJUSTED

Year	French Canadian Population	Non-French Canadian Population	Not Given	Total Population	Catholic Population	Non-Catholic Population	Not Given	French Canadian Population (Per Cent)	Catholic Population (Per Cent)
1844	524,244	168,205 ^a	4,635	697,084	572,439	105,847	18,798	75.7	84.4
1851	669,528	218,587	2,146	890,261	746,854	137,833	5,574	75.4	84.4

^aIncludes 85,660 English Canadians.

Source: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, (Ottawa: 1876), pp. 146-48 and 204-07.

TABLE 5

POPULATION OF LOWER CANADA BY ETHNIC AND RELIGIOUS GROUPS, 1844 AND 1851, ADJUSTED

Year	French Canadian Population	Non-French Canadian Population	Total Population	Catholic Population	Non-Catholic Population	Catholics which are French Canadians (Per Cent)
1844	527,753	169,331	697,084	588,339	108,745	89.7
1851	671,146	219,115	890,261	751,558	138,703	89.3

Source: Figures based on Table 4.

approximated. In 1831, there were 412,717 Catholics, 72,662 non-Catholics and 67,755 "not given".²⁹ Incorporating the latter in the Catholic and non-Catholic categories, as was done for 1844 and 1851, gives a Catholic population of 470,512 and a non-Catholic population of 82,622. Assuming that 89.5 per cent of the Catholic population were French Canadians, there were approximately 421,108 French Canadians comprising 76.1 per cent of the total population in 1831.

A fairly strong case can be made that the proportion of Catholics of French origin in 1831 was greater than 89.5 per cent, since immigration to Lower Canada on a large scale only began in 1831, especially immigration from Ireland. The Irish formed the largest group of immigrants from 1831 to the end of the period under study.³⁰ The fact that many were Catholics reduced the percentage of Catholics who were of French origin from 1831 to 1844, when this percentage was 89.5 per cent. Therefore, to apply this percentage to the Catholic population of 1831 results in a minimum French Canadian population for that year. Table 6 recapitulates the population data for the years 1831, 1844 and 1851.

²⁹Census of Canada, 1870-71, Vol. 4, p. 109.

³⁰H. Cowan, British Emigration to British North America, the First Hundred Years, (Toronto: University of Toronto Press, 1961), p. 289.

TABLE 6

POPULATION OF LOWER CANADA BY ETHNIC AND RELIGIOUS GROUPS, 1831, 1844, 1851, ADJUSTED

Year	French Canadian Population	Non-French Canadian Population	French Canadian Population (Per Cent)	Total Population	Catholic Population	Non-Catholic Population	Catholic Population (Per Cent)
1831	421,108 ^a	183,026 ^a	76.1 ^a	553,134	470,512	82,622	85.1
1844	527,753	169,331	75.7	697,084	588,339	108,745	84.4
1851	671,146	219,115	75.4	890,261	751,558	138,703	84.4

^aEstimate.

Source: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, (Ottawa: 1876), pp. 109, 146-48, 204-07.

III. Natural Increase in Population

Jacques Henripin, in Tendances et facteurs de la fécondité au Canada, has calculated the birth, mortality and marriage rates of the Catholic population of Canada for the period 1681-1880.³¹ Mr. Henripin's study is based on the data collected by Mgr. Tanguay in his Dictionnaire généalogique.³² The author chose at random a sample of 1,100 French Canadian families from Mgr. Tanguay's dictionary, which is the history of all French Canadian families. He calculated the rates using this sample by taking the average yearly births, deaths and marriages for each decade for the period 1681-1880, and applying these averages to the population of the sample in the middle year of each decade.³³ The rates for the period 1760-1850 are reproduced in Table 7 as well as the rates of natural increase per thousand obtained by subtracting the death rate from the birth rate for each decade.*

The marriage rate is more or less constant, fluctuating around 10 per thousand up to 1820, after which there is a slight decline from 9.3 per thousand for the decade 1821-30

³¹J. Henripin, Tendances et facteurs de la fécondité au Canada, (Ottawa: Imprimeur de la Reine, 1968), p. 5.

³²Mgr. C. Tanguay, Dictionnaire généalogique des familles canadiennes, 7 volumes, (Montréal: Sénécal, 1871-90).

³³For a clear and concise explanation of J. Henripin's approach see: Henripin, La population canadienne au début du XVIIIème siècle, Thèse pour le Doctorat, Université de Paris, (Paris: Institut national d'études démographiques, 1954), pp. 25-38.

*The number of annual marriages, births and deaths from 1631 to 1880 are given in G. Langlois, op. cit., pp. 255-61.

TABLE 7

MARRIAGE, BIRTH AND MORTALITY RATES (PER THOUSAND)
OF THE CATHOLIC POPULATION OF CANADA, 1761-1850

Decade	Marriage Rate	Birth Rate	Mortality Rate	Natural Rate of Increase ^a
1761-1770	11.3	65.2	33.8	31.4
1771-1780	10.3	64.9	34.7	30.2
1781-1790	9.9	62.1	32.4	29.7
1791-1800	10.2	61.1	29.5	31.6
1801-1810	9.7	58.4	30.0	28.4
1811-1820	9.7	56.0	27.5	28.5
1821-1830	9.3	56.0	27.1	28.9
1831-1840	8.9	54.0	27.3	26.7
1841-1850	8.8	53.0	23.8	29.2

^aBirth rate minus mortality rate.

Source: J. Henripin, Tendances et facteurs de la fécondité au Canada, (Ottawa: Imprimeur de la Reine, 1968), p. 5.

to 8.8 per thousand for the decade 1841-50.

The birth rate during the first ten years of British rule reaches 65.2 per thousand, one of the highest if not the highest birth rate for a country with a white population.³⁴ From 1780, the rate continuously declines from 62.1 per thousand during the decade 1781-90 to 53.0 per thousand during the decade 1841-50.

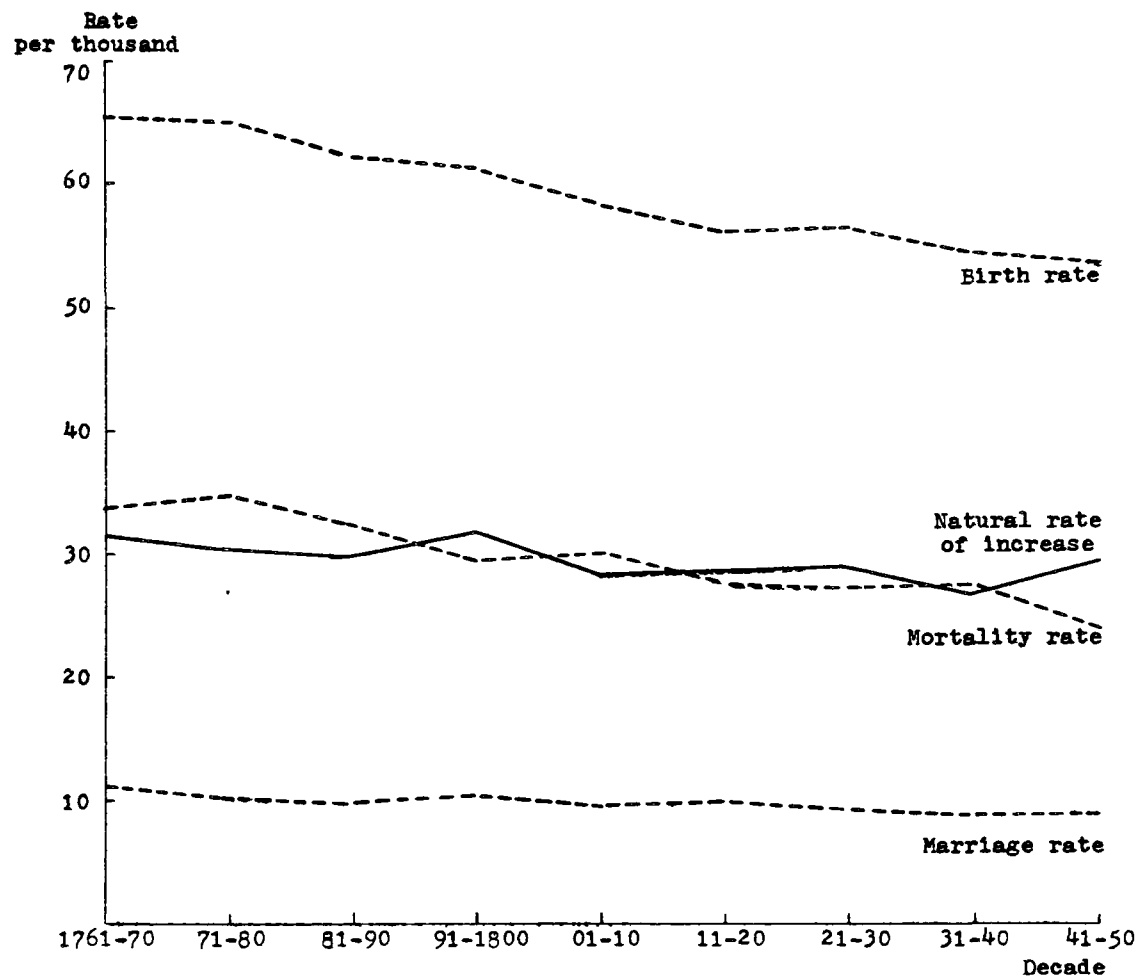
The mortality rate follows closely the trends in the birth rate. For the first twenty years after the conquest it maintains itself at approximately 35 per thousand after which it decreases progressively to 23.8 per thousand during the decade 1841-50.

The trends in the birth, mortality and marriage rates are illustrated graphically for the nine decades in question in Figure 2.

These rates were calculated, however, for the Catholic population and not for the French population of Canada. It is reasonably safe to assume that for the period prior to 1830 the birth, mortality and marriage rates of the Catholic population and of the French population do not diverge significantly, because the Catholic population was almost exclusively of French origin.

However, the massive Irish immigration which began in 1831 and which continued for many decades makes the above assumption doubtful for the 1831-40 and 1841-50 decades. The

³⁴G. Langlois, op. cit., p. 144.



Source: J. Henripin, Tendances et facteurs de la fécondité au Canada, (Ottawa: Imprimeur de la Reine, 1968), p. 6.

Fig. 2.--Diagram of marriage, birth and mortality rates, natural rate of increase, (per thousand), of the Catholic population of Canada, 1761-1850.

massive immigration of Irish Catholics decreased the proportion of Catholics who were French Canadian and the birth rates for these two decades as they appear in Table 7 cannot be regarded as the French Canadian birth rate. There is some evidence to suggest that the birth rate of the French Canadians during these two decades was greater than that of the Irish.³⁵ On this basis, it can be reasoned that the birth rate of the Catholic population of Canada is an underestimate of the birth rate of the French population.

The average rate of natural increase of the Catholic population was 29.4 per thousand per annum for the period under review. This means that the Catholic population doubled every twenty-three years on the basis of natural increase only.³⁶

The fact that the French Canadian reproduction rate was so high during the first twenty years of British rule and maintained itself as one of the highest in the world until the middle of the nineteenth century was one of the main factors, along with restricted British immigration before 1815 which made it possible for the habitants to maintain their majority in Lower Canada.³⁷ This trend carried over into the twentieth century though the factors contributing to this preponderance changed significantly during the intervening period.

³⁵Ibid., pp. 111 and 144.

³⁶J. Henripin, Tendances et facteurs de la fécondité au Canada, (Ottawa: Imprimeur de la Reine, 1968), p. 5.

³⁷Another important factor contributing to this was the survival of the seigneurial system until 1854 in Quebec, which will be discussed in the next chapter.

IV. Immigration

Immigration from overseas to Lower Canada began on a significant scale only in 1815³⁸ and the first official figures available are for the year 1819. Table 8 shows the arrivals of immigrants at the Port of Quebec for the period 1819-50.

This table was compiled from two different sources. R. Christie in his history of Lower Canada reproduces figures for the years 1819 to 1833 inclusive.³⁹ In an appendix to her book on British emigration to North America, H. Cowan shows the arrivals at the Port of Quebec from the British Isles, Europe and the Maritime colonies for the period 1829-50.⁴⁰ These figures are taken from the British Parliamentary Papers. For the years 1829 to 1833 inclusive, therefore, both sets of data are available, and on the whole they do not diverge significantly.

These data indicate the arrivals of immigrants at the Port of Quebec only. Immigration into Lower Canada passed also through other ports of lesser importance. However, it appears that the great majority of immigrants did arrive at the Port of Quebec and these statistics give some information of the flow of immigrants into the colony.

³⁸H. Cowan, op. cit., pp. 40-41.
G. Langlois, op. cit., p. 137.

³⁹R. Christie, A History of the Late Province of Lower Canada, Vol. 3, (Montreal: Worthington, 1866), p. 512.

⁴⁰H. Cowan, op. cit., p. 289.

TABLE 8

ARRIVALS OF IMMIGRANTS AT THE PORT OF QUEBEC, 1819-50

Year	Immigrants	Year	Immigrants
1819	12,807	1835. . . .	12,527
1820	11,239	1836. . . .	27,722
1821	8,050	1837. . . .	21,901
1822	10,468	1838. . . .	3,266
1823	10,258	1839. . . .	7,439
1824	6,515	1840. . . .	22,234
1825	9,097	1841. . . .	28,086
1826	10,731	1842. . . .	44,374
1827	16,862	1843. . . .	21,727
1828	11,697	1844. . . .	20,142
1829	13,357 (15,945)	1845. . . .	25,375
1830	24,391 (28,000)	1846. . . .	32,753
1831	49,259 (50,254)	1847. . . .	89,562
1832	51,422 (51,746)	1848. . . .	27,939
1833	22,062 (21,752)	1849. . . .	38,494
1834	30,935	1850. . . .	32,292

Source: For 1819-33, from: R. Christie, A History of the Late Province of Lower Canada, Vol. 3, (Montreal: Worthington, 1866), p. 512.

For 1829-33 (in parentheses in the table) and for 1834-50, from: H. Cowan, British Emigration to British North America, the First Hundred Years, (Toronto: University of Toronto Press, 1961), p. 289.

Also these figures do not necessarily indicate the immigration into Lower Canada since the immigrants who arrived at the Port of Quebec either settled in Lower Canada or went on to other parts of North America such as Upper Canada or the United States.

The Quebec Gazette of 1826 estimates at one third the number of immigrants landed at the Port of Quebec who settled in Lower Canada from 1818 to 1825:

The aggregate number of emigrants arrived at the Port of Quebec in the last seven years, is 68,534. Probably a third of this number have settled in Lower Canada, of such the most numerous appear to be tradesmen, journeymen and day labourers, living in the towns of Quebec and Montreal; others have taken up new land, but in Lower Canada, such are not so numerous as might be imagined. A third, it is probable, have gone to the United States, and the remainder may be settled in Upper Canada.⁴¹

J. Bouchette, Surveyor-General of Lower Canada at the time, comes to the same conclusion but explains the difficulties of arriving at reliable data concerning the distribution of the immigrants throughout North America.

We have not the means of establishing with precision how much of the increase of the population of the province arises from births, and how much is to be attributed to emigration. The number of families and even the number of souls, landed at the various ports of the colonies, are indeed easily ascertained from the customs house returns; but what is the distribution of these emigrants subsequently to their arrival, what part of them remains in the province, and what part merely passes through it, to settle eventually in Upper Canada, or in the United States, is not so satisfactorily known. That the adjunction which annually takes place by the influx of emigration is considerable, there can be no doubt,

⁴¹R. Christie, op. cit., Vol. 3, p. 103.

admitting even that one-third only of the emigrants landed on the wharfs at Quebec permanently settle in Lower Canada.⁴²

A petition of the Unionists at Montreal in 1822, states that only one-twentieth of the immigrants arriving in Lower Canada for the period following the American war to 1822 have remained in that province, the rest for the most part having moved on to the United States.

The predominance of the French population in the legislature has occasioned obstacles to the settlement of British emigrants that have not been surmounted; so that the vast increase of British population to have been expected, from this cause has been, in a great degree, prevented. The injury sustained in this particular, may be easily appreciated, when it is observed that, since the late American war, upwards of 80,000 souls (that is a number equal to one fourth of the actual French population) have found their way to this province from Great Britain and Ireland; and of those scarcely one-twentieth part remain within its limits, the rest, with the exception of a small number who have settled in Upper Canada having been induced, by the foreign character of the country in which they had sought an asylum, and the discouragement they experienced, to try their fortune in the United States.⁴³

It was to the advantage of the petitioners to exaggerate the tendency of immigrants to leave the province and it is reasonable to accept one-third as a realistic average for that proportion of the immigrants staying on in Lower Canada. It is probable that less than one-third of total immigrants remained in Lower Canada and that the great

⁴²J. Bouchette, The British Dominions in North America; or a Topographical and Statistical Description of the Provinces of Lower and Upper Canada, New Brunswick, Nova Scotia, the Islands of Newfoundland, Prince Edward and Cape Breton, Vol. 1, (London: Longman, 1832), pp. 358-59.

⁴³R. Christie, op. cit., Vol. 2, pp. 393-94.

majority proceeded to the United States during the period 1838-39 because of the rebellion and the ensuing disorders which marked these years in Lower and Upper Canada.

From Table 8 it is evident that immigration began on a large scale only in 1831, falling back significantly however in 1835, 1838 and 1839.

V. Emigration

Having examined the natural rate of increase of the Catholic population of Lower Canada and the extent of immigration into the Province, a final step will be to look at the emigration from the Province of Lower Canada.

In 1849 a select committee of the Legislative Assembly was appointed to inquire into the importance and causes of the emigration of the population of Quebec to the United States for the previous five years. The report of this committee, although unable to come up with precise information as to the importance of the emigration, throws some light on the problem.

Although the report states that "It would be very difficult for Your Committee to state, even approximately, the number of persons who have emigrated to the United States, and the amount of capital thus withdrawn from the Province",⁴⁴

⁴⁴Report of the Select Committee of the Legislative Assembly Appointed to Enquire Into the Causes and Importance of the Emigration Which Takes Place Annually from Lower Canada to the United States, (Montreal: Campbell, 1849), p. 7.

the Committee nevertheless goes on to estimate that the emigration during each of the five years preceeding the Report amounted to 4,000 people, of whom 2,000 belonged to the District of Montreal, 1,000 to the Districts of Three Rivers and St. Francis and 1,000 to the Districts of Quebec and Gaspé. The Report also states that one-third of the emigrants were from the working class and two-thirds from the agricultural class,⁴⁵ and finally that nine tenths of the emigrants were French Canadians.⁴⁶

The Report states that the emigration began mainly after the insurrection of 1837-38 and was confined to the Montreal District.⁴⁷ Henripin, in an article published in the Canadian Journal of Economics and Political Science, 1957, writes that the emigration of the habitants started on a large scale around 1830.⁴⁸ Le Journal de Québec estimated at 25,000 the total number of French Canadians living in the United States in 1839.⁴⁹ This seems to confirm the hypothesis that emigration began before the 1837-38 Rebellion.

Statistics of emigration on a yearly basis have not been found. Many historians however have estimated the

⁴⁵Ibid., p. 9.

⁴⁶Ibid., p. 8.

⁴⁷Ibid., p. 5.

⁴⁸J. Henripin, "From Acceptance to Nature", in Canadian Journal of Economics and Political Science, Vol. 23, No. 1, (February, 1957), p. 13.

⁴⁹Le Journal de Québec, 16 janvier 1849, in G. Lanctôt, Les Canadiens-français et leurs voisins du Sud, (Montréal: Valiquette, 1941), p. 294.

number of emigrants for different periods. B. Sulte estimated the number of habitants who left Quebec from 1831 to 1844 at 40,000.⁵⁰ According to Lanctot, from 1840 to 1850, 35,000 French Canadians left Quebec.⁵¹ G. Langlois for his part estimated that from 1760 to 1851, 48,742 French Canadians emigrated from Quebec.⁵²

Although these estimates are made for different periods, they are not contradictory and it can be assumed that from 1830 to 1850 there emigrated from Quebec approximately 60,000 Canadians, making for an average of 3,000 a year.

VI. Conclusion

An attempt has been made in this chapter to collect the available data concerning the population growth of Lower Canada for the period under study and to dissect this growth into its main components, that is, natural increase, immigration and emigration.

Total population figures are available from censuses taken during the period in question and from different estimates the majority of which were made by Joseph Bouchette, in his official capacity, as Surveyor General of Lower Canada.

⁵⁰G. Langlois, op. cit., p. 174.

⁵¹G. Lanctot, op. cit., p. 294.

⁵²B. Sulte, Histoire des Canadiens-français, 1608-1880, (Montreal: Wilson and Co., 1882-84), p. 132.

The Census reports were taken at unequal intervals. The following comments concerning the reliability of population figures, published in the 1851-52 Census, by William Hutton, Secretary of the Board of Registration and Statistics, are significant.

In reference to the degree of accuracy which may be attributed to the Returns, it must be borne in mind that they are chiefly dependent on voluntary information, tested, however, to some extent by the observation and local knowledge of the Enumerators. It is, however, a curious fact, and one to which most of them bear testimony, that a very general feeling was found to prevail throughout the Colony, that the Census had some direct or indirect reference to taxation and in this belief the Enumerators were frequently received most ungraciously, and the information sought was, not only partially, but, in some cases, altogether withheld. It is much to be regretted that the value of this important work which displays the progress of a Colony, in which the elements of improvement are working with such increasing and almost unexampled energy, and which affords the only available means of satisfactorily proving the production, distribution, and consumption of its natural wealth, and the moral and physical condition of its people, should have been thus to some extent counteracted by ignorance and prejudice. It is, however, an evil which exists in other Countries, and in taking the last Census of the United States, it became necessary, in some districts, to put in force the Act of Congress for refusal to reply to the Interrogatories of Enumerators. The only remedy for this, perhaps, is to be found in the increasing intelligence and education of the community.⁵³

There is no way to evaluate the reliability of Bouchette's data. Although he made his estimates in his official capacity of Surveyor General of Lower Canada, it is likely that the administrative apparatus at his disposal was not as extensive as that used for the official censuses.

⁵³Canada, Board of Registration and Statistics, Census of the Canadas, 1851-52, Vol. 1, (Quebec: Lovell, 1853-55), p. iv.

It can be noted that the annual average rate of increase, compound, of the total population of Lower Canada for the period 1754-1851 as presented in Table 1 is identical to the average yearly rate of natural increase of the Catholic population for the period 1760-1850,⁵⁴ both being equal to 2.9 per cent. If these data can be considered realistic for the period in question, this would mean that the average annual rate of increase, compound, of the total population of Lower Canada due to the natural increase of the non-Catholic population, plus immigration minus emigration, is also equal to 2.9 per cent for the same period.

In order to verify this result, however, the statistics for the yearly immigration to and emigration from Lower Canada as well as the average rate of natural increase of the non-Catholic population must be known. Unfortunately such information has not as yet been unearthed.

⁵⁴See p. 30.

CHAPTER III

LAND OCCUPIED AND UNDER CULTIVATION

I. Land Tenure in 1760⁵⁵

At the time New France became a British colony, land tenure was based on the seigneurial system.⁵⁶ It consisted in granting land to an entrepreneur or seigneur whose duty it was to divide the land into censives and to rent these to settlers, called censitaires, willing to cultivate the land. The censitaires were bound to the seigneur and the seigneur to the sovereign State by well defined rights and obligations.

The seigneur firstly had duties to the Crown. He swore before the intendant that he would fulfill his obligations. It was the seigneur's responsibility to prove that he

⁵⁵Except when indicated otherwise, the information on the seigneurial system given in this section are from: M. Trudel, Le régime seigneurial, (Ottawa: Société historique du Canada, Brochure no 6, 1956).

⁵⁶For a detailed description of the seigneurial system in New France, see: R. C. Harris, The Seigneurial System in Early Canada, A Geographical Study, (Quebec: Les Presses de l'Université Laval, 1966); W. B. Munro, The Seigneurial System in Canada: A Study in French Colonial Policy, (New York: Longman, Green, and Co., 1907); E. Salone, La colonisation de la Nouvelle-France, étude sur les origines de la nation canadienne-française, (Paris: Guilmoto, 1906); M. Trudel, op. cit.

was populating his land. He reserved for the King all timber and mineral resources found on or beneath the surface of his land. In order to discourage speculation, when the seigneurie changed hands by sale, payment was required of a droit de quint to the State, which was a tax equivalent to twenty per cent of the value of the property.

The seigneur also had obligations to his censitaires. First he was required to build a manor which had to be inhabited year-round, either by himself or by someone directly responsible to him. Secondly, the seigneur granted lands to whoever demanded such tracts for the purpose of settlement. Thirdly, he was required to construct and maintain a flour mill for his censitaires.

The censitaire, for his part, also had obligations to the seigneur. Most of these obligations were monetary. He was required to pay a rent, called cens et rentes, determined by the State and specified in the grant contract. The censitaire was also required to pay the seigneur a tax equivalent to one twelfth of the value of the property granted. For the use of the flour mill he was required to give to the seigneur one bushel of wheat for every fourteen bushels milled. The censitaire was also obliged to work a limited number of days a year for the seigneur, usually three, at the most four.

The seigneurial system was adopted from the beginning of the settlement of New France, because, at the time, it seemed to be the most efficient way to populate the colony

and to cultivate the land. However, the conditions which prevailed in the colony were radically different from those in the old country, and the system was gradually adapted to the new environment:

. . . la rareté des hommes et l'abondance des terres le [régime seigneurial] rendaient absurde au Canada. L'environnement allait donc remouler des institutions, un mode de vie et des coutumes venus de la vieille France.⁵⁷

II. Changes in Land Tenure, 1760-1854

The seigneurial system continued in existence after the Conquest, and the majority of the seigneurs remained in the colony.⁵⁸ The Royal Proclamation of 1763, however, ordered that all lands be granted under free and common soccage.⁵⁹ and that all seigneurial land be administered according to English law.⁶⁰ In 1771, Governor Guy Carleton, recognizing

⁵⁷J. P. Wallot, "Le régime seigneurial et son abolition au Canada", The Canadian Historical Review, Vol. L, No. 4, (December, 1969), p. 369.

⁵⁸M. Séguin, "Le régime seigneurial au pays de Québec, 1760-1854", Partie 1, Revue d'histoire de l'Amérique française, Vol. 1, (Décembre 1947), p. 382.

⁵⁹Under free and common soccage tenure, ". . . the landholder being wholly unshackled by any condition whatsoever, neither rents, corvées, mutation fines, banalité or the obligation of grinding his corn at the seignorial mill; in fact, the soccage freeholder is bound to no other obligations than those of allegiance to the king and obedience to the laws." J. Bouchette, The British Dominions in North America; or a Topographical and Statistical Description of the Provinces of Lower and Upper Canada, New Brunswick, Nova Scotia, the Islands of Newfoundland, Prince Edward and Cape Breton, Vol. 1, (London: Longman, 1832), p. 380.

⁶⁰M. Séguin, op. cit., Partie 1, p. 382.

the advantages of the seigneurial system,⁶¹ ordered that all new land be granted in the form of seigneurial tenure.⁶²

The Loyalists who took refuge in Quebec during and after the American Revolution refused to take up land under the seigneurial system. In 1784, Governor Dorchester permitted the granting of lands under free and common socage to the Loyalists who settled in the Eastern Townships, in the Gaspé Peninsula and in that part of the colony which was to become Upper Canada in 1791.⁶³

Under the Constitutional Act of 1791, all lands in Upper Canada had to be granted under free and common socage, while in Lower Canada lands could be granted either as seigneuries or in free and common socage, according to the wishes of the grantee.⁶⁴ However the instructions which accompanied the Act encouraged the administrators of the colony to grant lands under free and common socage and to discourage seigneurial tenure.⁶⁵ Only twelve seigneuries were

⁶¹Governor Carleton believed that the internal harmony of the colony and the obedience of the civil authority could be achieved through the satisfaction of the French population, strongly attached to the seigneurial system. N. MacDonald, "English Land Tenure on the North American Continent: A Summary", Contributions to Canadian Economics, Vol. 7, (Toronto: University of Toronto Press, 1934), p. 35.

⁶²M. Séguin, op. cit., Partie I, p. 382.

⁶³Ibid., p. 384.

⁶⁴Archives Publiques du Canada, op. cit., Vol. 1, p. 706.

⁶⁵Archives Publiques du Canada, op. cit., Vol. 2, p. 13.

granted after 1774 in Lower Canada.⁶⁶

Since settlers of British origin in general refused to be subjected to seigneurial tenure,⁶⁷ a law was passed in 1822 enabling seigneurs to convert their idle lands into free and common soccage property,⁶⁸ with the view to opening up these lands to British settlement. Because most of the fertile lands in the seigneuries were already occupied by this time, the law did not produce the results hoped for.⁶⁹ In 1825 another statute was passed permitting the seigneur to convert occupied lands on his seignury into property to be held in free and common soccage, if this was the wish of the censitaires who occupied these lands.⁷⁰ The law further specified that the converted lands would fall under English law as to their sale, heritage and grant.⁷¹ But most habitants were reluctant to convert their lands for a simple reason: the conversion into free and common soccage property required that they buy these lands. However, most of the habitants were so

⁶⁶J. Boucher, "Les aspects économiques de la tenure seigneuriale au Canada, 1760-1854", Recherches d'histoire économique, (Paris: Presses universitaires de France, 1964), p. 175.

⁶⁷The British did not object to owning seigneuries however, since, prior to 1888, British merchants owned 35 seigneuries; F. Ouellet, op. cit., p. 86.

Also around 1837 half of the seigneurs in Lower Canada were of British origin; J. P. Wallot, op. cit., p. 384.

⁶⁸M. Séguin, op. cit., Partie I, p. 391.

⁶⁹Ibid., p. 392.

⁷⁰Ibid., p. 392.

⁷¹Ibid., pp. 393-94.

poor that they could not afford to pay the price asked for.⁷² Also the fact that the land was to be administered under English law did not appeal to them.

Not until 1854 was the question of land tenure officially settled in Lower Canada. A compromise was finally reached that year by which all land in Lower Canada was to be converted into property held in free and common socage, but was to be administered under the French civil law.⁷³

Although the British did not favour the seigneurial system of land tenure, conditions in the colony were favorable to maintaining it after the Conquest. First, immigration to the colony from the British Isles was insignificant prior to 1815. Although Loyalists immigrated in great numbers during and after the American Revolution, fertile land on which they could settle was abundant outside the seigneurial territory. Secondly, with the change of administration agriculture was encouraged and new markets were available for the export of wheat, which, under the French regime, was produced almost exclusively for local consumption.⁷⁴ As a result wheat production increased and surpluses were soon available for export.

During the first half of the nineteenth century the reversal of these conditions made the British authorities impatient to abolish the seigneurial system.

⁷²J. Boucher, op. cit., p. 153.

⁷³M. Séguin, op. cit., Partie I, p. 400.

⁷⁴F. Ouellet, op. cit., pp. 81-85.

The rapid increase of the French Canadian population after the Conquest and during the first decades of the nineteenth century created a scarcity of fertile lands within the limits of the seigneuries which gave rise to demands for the granting of new seigneuries.⁷⁵ This was counterbalanced by large scale British immigration after 1815 which created an increasing demand for land to be held under free and common soccage.

Other important factors such as the severe agricultural crisis in Lower Canada as well as abuses on the part of seigneurs who charged excessive rents⁷⁶ made abolition of the seigneurial system only a matter of time.⁷⁷

III. Extent of Land Holdings

The census data for the period in question, though censuses were taken at long intervals, show a clear trend of continuing growth in lands occupied and lands under cultivation⁷⁸ with some variations in rates of growth. Table 9 summarizes the census data.

The census for the year 1784 shows 1,569,818 arpents of land, or 1,326,182 acres, as being under cultivation.

⁷⁵J. P. Wallot, op. cit., p. 386.

⁷⁶Ibid., p. 386.

⁷⁷For a more detailed view of land tenure in Lower Canada for the period 1760-1854, See: J. Boucher, op. cit.; D. A. Henecker, The Seigneurial Regime in Canada, (Quebec: L. A. Proulx Printer, 1927); W. B. Munro, op. cit., Parties 1 et 2.

⁷⁸Except for the year 1784 which will be discussed below.

TABLE 9
ACRES OF LAND OCCUPIED AND CULTIVATED IN
LOWER CANADA (UNADJUSTED), 1765-1851

Year	Land Occupied (acres) ^a	Land Cultivated (acres) ^a
1765	794,112	- ^b
1784	- ^b	1,326,182
1827	2,946,565	1,002,198
1831	4,208,664	1,745,537
1844	5,668,852	2,257,270
1851	8,113,408	3,605,167

^aIn all censuses, except for 1827 and 1851, the unit of measurement of land is arpents. They have been converted into acres here.

^bNot available.

Source: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, pp. 67, 74, 96, 109, 154 and 220.

M. Séguin claims that the data refer, not to arpents of land under cultivation, but to arpents of land occupied.⁷⁹

According to M. Séguin, if the census data are to be accepted as they stand, then every rural family would have possessed approximately 100 arpents or 84.5 acres of cultivated land, which represent rather large tracts of land for that time. Three years before the census was taken, an inquiry was made in 28 important seigneuries inhabited by 5,000 families. The result showed that 550,000 arpents had been granted of which only 136,000 arpents or 114,893 acres had been cultivated. This works out to 24.4 arpents or 20.6 acres of cultivated land per family.⁸⁰ Supporting evidence, as M. Séguin points out, is to be found in the 1784 census returns, as they appear in the Haldimand Collection. These give 1,569,818 as the number of arpents of "land area", presumably occupied, and not as the number of arpents of "land under cultivation".⁸¹

The area of land under cultivation is not available from the census returns for the years 1765 and 1784. However, the survey of 28 important seigneuries in 1781-82, referred to above, indicated that the average area of land under cultivation per family was approximately 20.6 acres. By multiplying this average by the number of rural families in Lower

⁷⁹M. Séguin, op. cit., Partie 2, p. 523.

⁸⁰Ibid., p. 523.

⁸¹Ibid., p. 523.

Canada during the year 1784, a preliminary estimate of the total area of land under cultivation for Lower Canada can be arrived at. The number of families living outside Montreal, Quebec and Trois-Rivières can be approximated from the 1784 census returns by subtracting from the total number of married men in the province, the number of married men living in these three cities.⁸² Although the number of married men is not necessarily equivalent to the number of families in the colony, it can be considered as an acceptable approximation. M. Séguin states that there was a total of 16,000 rural families in Lower Canada at the time⁸³ but unfortunately he does not explain how he arrives at this figure.

There were, according to the census for 1784, 20,131 married males in Lower Canada of which 1,137 lived in Montreal, 1,116 in Quebec City and 133 in Trois-Rivières.⁸⁴ There were therefore 17,745 married males living outside these three cities, which appears to be acceptable as a rough approximation of the number of rural families in Lower Canada in 1784. Multiplying this by the average number of acres cultivated per family, e.g. 20.6, gives 365,547 as the total number of acres of land under cultivation, or 28 per

⁸²The families living in Montreal, Quebec City and Trois-Rivières did cultivate some land. This acreage is small, however, compared to the area of land cultivated outside these regions and therefore can be ignored without affecting the results appreciably.

⁸³Ibid., p. 522.

⁸⁴Public Archives of Canada, Manuscript Group 21, G 2, B 225.

cent of the total area of land occupied.

It appears difficult to reconstruct the number of acres of land under cultivation for the year 1765, as was done for the year 1784. M. Séguin estimates that land under cultivation in 1765 did not exceed 250,000 arpents, or 211,200 acres. This is based on data pertaining to the French regime and on a survey made in the Trois-Rivières region, which showed that out of a total of 110,000 arpents occupied, 20,000 were cultivated.⁸⁵ Table 10 can now be completed for the years 1765 and 1784.

Lower Canada was a largely agricultural society and increases in acres of cultivated land would be expected to follow closely increases in population. Other factors such as enterprise, private and public encouragement and the use of more efficient farm implements are also important factors, although their contribution to the increase in acres of land cultivated is not easily ascertained.

Table 11 shows total per cent increases and annual rates of increase, compound, of total population and of acres of land cultivated. This table indicates that increases in the area of land cultivated follow closely increases in population for the periods 1765-84 and 1831-44. During the former period population increased by 61.9 per cent while acres of land cultivated increased by 73.1 per cent. In terms of annual average growth rates, compound, population

⁸⁵M. Séguin, op. cit., Partie 2, p. 522.

TABLE 10

ACRES OF LAND OCCUPIED AND CULTIVATED IN LOWER CANADA, (ADJUSTED), 1765-1851

Year	Land Occupied		Land Cultivated	
	Total (Acres)	Annual Average Rate of Increase, Compound (Per Cent)	Total (Acres)	Annual Average Rate of Increase, Compound (Per Cent)
(1)	(2)	(3)	(4)	(5)
1765	794,112	-	211,200 ^a	-
1784	1,326,182	2.7	365,547 ^a	3.0
1827	2,946,565	1.9	1,002,198	2.4
1831	4,208,664	9.3	1,745,537	14.9
1844	5,668,652	2.3	2,257,270	2.0
1851	8,113,408	5.3	3,605,164	6.4

^aEstimate.

Source: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, (Ottawa: 1876), pp. 67, 74, 96, 109, 154 and 220.

TABLE 11

TOTAL PER CENT INCREASES AND ANNUAL AVERAGE RATES OF INCREASE, COMPOUND, OF
TOTAL POPULATION AND ACRES OF LAND CULTIVATED IN LOWER CANADA, 1765-1851

Period	Population		Land Cultivated	
	Total Increase (Per Cent)	Annual Average Rate of Increase, Compound (Per Cent)	Total Increase (Per Cent)	Annual Average Rate of Increase, Compound (Per Cent)
(1)	(2)	(3)	(4)	(5)
1765-1784	61.9	2.6	73.1	3.0
1784-1827	319.0	3.4	174.2	2.4
1827-1831	16.8	4.0	74.1	14.9
1831-1844	26.0	1.8	29.3	2.0
1844-1851	27.7	3.6	59.7	6.4

Source: Calculations for land cultivated based on Table 10.
Calculations for population based on Table 2, (Chapter II).

increased by 2.6 per cent and land cultivated by 3.0 per cent.

During the latter period the annual average rate of increase, compound, of land cultivated was 2.0 per cent compared to 1.8 per cent for population.

These rates suggest that, for these two periods, population growth was the main factor contributing to the increase in land cultivated in Lower Canada.*

However, for the other periods, the data suggest that other factors were determinant, either in diminishing the rate of increase in acres of land cultivated for the years 1784 to 1827, or in rapidly increasing it from 1827 to 1831 and from 1844 to 1851.

From 1827 to 1831 the total increase in acres of land cultivated was 74.1 per cent, considerably higher than the total increase in population for the same period, 16.8 per cent. In terms of annual average growth rates, compound, land cultivated increased by 14.9 per cent, more than triple the 4.0 per cent yearly increase in population.

The fact that the increase in acres of land cultivated reached such heights suggests that agriculture developed rapidly during this period. Furthermore the difference between the rate of increase of total population and that of acres of land cultivated indicates that factors other than population growth contributed to this expansion.

Evidence is available, however, to show that the period 1827-31 was one of stagnation in the agricultural sector.

* Although total population data are used throughout this section, it would be more realistic to use statistics relating to agricultural population only.

According to R. L. Jones, the 1827 harvest was just sufficient to meet the requirements of the population of the province.⁸⁶ Agriculture during the years 1828 and 1829 was marred by crop failures owing to the devastating effects of the wheat midge.⁸⁷

Further evidence indicates that private encouragement did not play a significant role in agricultural development during this period. Although agricultural societies had been formed in the latter period of the eighteenth century⁸⁸ their attempts to convince the habitants to adopt more efficient agricultural techniques were not successful:

Les sociétés d'agriculture ont beau distribuer des prix, recommander l'établissement de fermes-modèles, mener une propagande intensive, tout cela atteint à peine la masse qui non seulement n'est pas motivée au progrès mais le voit, en autant qu'il modifie les habitudes acquises, d'un mauvais oeil.⁸⁹

Secondly, the chartered banking establishments in Lower Canada were severely criticized for their lack of interest in agricultural development in 1829 and 1831.⁹⁰

⁸⁶R. L. Jones, "French Canadian Agriculture in the St. Lawrence Valley, 1815-1850", Agricultural History, Vol. 16, (July, 1942), p. 141.

⁸⁷Ibid., p. 141.

⁸⁸V. C. Fowke, Canadian Agricultural Policy, The Historical Pattern, (Toronto: The University of Toronto Press, 1946), p. 74.

⁸⁹F. Ouellet, op. cit., p. 255.

⁹⁰H. C. Pentland, "The Role of Capital in Canadian Economic Development before 1875", Canadian Journal of Economics and Political Science, Vol. 16, (November, 1950), No. 4, p. 473.

The preceding comments suggest that the rapid increase in the number of acres of land cultivated from 1827 to 1831, as shown in Table 11, is not justified.

During the preceding period, from 1784 to 1827, population increased by 319.0 per cent while land cultivated increased by only 174.2 per cent. As will be seen in Chapter V, there is no evidence of such slow growth in agriculture and it would be expected that land cultivated follow closely increases in population during these years.

It seems therefore that the increase in acres of land cultivated is underestimated for the period 1784-1827 and overestimated for the period 1827-31. This suggests that the number of acres of land cultivated in 1827, given in the census for that year, is low. This becomes clearer if, ignoring this figure for land cultivated in 1827, the total increase as well as the annual average rate of increase, compound, for total population and for acres of land cultivated are calculated and compared for the period 1784-1831. The results are shown in Table 12. The increase in land cultivated follows closely the increase in total population and this seems to be in accordance with the conditions prevailing at the time.

The 1827 census figure for acres of land cultivated can be adjusted by applying to the 1784-1827 period the annual average growth rate, compound, of land under cultivation for the period 1784-1831, that is 2.4 per cent. On this basis, a figure of 1,539,200 acres of land under cultivation is arrived at for the year 1827, instead of the

TABLE 12

INCREASES IN TOTAL POPULATION AND IN LAND CULTIVATED IN LOWER CANADA, 1784-1831

Period	Population		Land Cultivated	
	Total Increase (Per Cent)	Annual Average Rate of Increase, Compound (Per Cent)	Total Increase (Per Cent)	Annual Average Rate of Increase, Compound (Per Cent)
(1)	(2)	(3)	(4)	(5)
1784-1831	389.4	3.43	377.5	3.38

Source: Calculations for land cultivated based on Table 10.
 Calculations for population based on Table 2 (Chapter II).

1,002,198 acres shown in the census report for that year.

The same calculations can be made for the area of land occupied in 1827. The annual average rate of growth, compound, of acres of land occupied for the period 1784-1831 is 2.5 per cent. This rate applied to the 1784-1827 period gives 3,814,300 as the number of acres of land occupied for the year 1827 as compared to 4,208,664 acres as shown in the census.

For the period 1844-51, according to Table 11, acres of land cultivated increased more rapidly than population. The annual average rate of increase, compound, of total population is 3.6 per cent while that of acres of land cultivated reaches 6.4 per cent.

These differences may be due to wider use of newly developed agricultural machinery and by the development of transportation in the province:

Agricultural machinery rapidly increased in use, for the price of wheat was high, labour was scarce and land had been levelled and stumps removed, so that the employment of machinery became practicable. At the same time, the building of railroads and the expansion of industry made such machinery less expensive. Ploughs and harrows were improved, but the greatest advance was made in harvesting machinery.⁹¹

The difference in rates of growth between land cultivated and population may also be explained by the fact that, after the numerous crop failures in Lower Canada from 1828 to 1844, renewed efforts to cultivate wheat were made

⁹¹M. Q. Innis, op. cit., p. 199.

from 1845 to 1851.⁹²

Table 13 gives the data for land occupied and land cultivated with the 1827 figures adjusted as above.

What proportion of land occupied and land cultivated was held in free and common soccage and what proportion was held under the seigneurial tenure is difficult to evaluate. However some indications are available as to these proportions.

In 1844, 1,706,993 acres of land were held in free and common soccage of which 540,256 were cultivated.⁹³ Therefore using these figures and the data on total occupied and cultivated land in Table 13, Table 14 can be arrived at.

In De la tenure seigneuriale en Canada et projet de commutation, J. C. Taché gives a breakdown of land occupied and land under cultivation into land held in free and common soccage and land held under seigneurial tenure for the year 1851⁹⁴ and this is shown in Table 15.

⁹²F. Ouellet and J. Hamelin, "Les rendements agricoles dans les seigneuries et les cantons du Québec: 1700-1850", in France et Canada français du XVI^e au XX^e siècle, edité par C. Galarneau and E. Lavoie, Colloque de Québec, 10-12 octobre 1963, Les Cahiers de l'Institut d'Histoire, no 7, (Québec: Les Presses de l'Université Laval, 1966), p. 97.

⁹³JLAPC, 1849, App. B.

⁹⁴J. C. Taché, De la tenure seigneuriale en Canada et projet de commutation, (Québec: Lovell et Lamoureux, 1854), App. 3.

TABLE 13

LAND OCCUPIED AND LAND UNDER CULTIVATION FOR LOWER CANADA, (ADJUSTED), 1765-1851

Year	Land Occupied		Land under Cultivation	
	Total (Acres)	Annual Average Rate of Increase, Compound (Per Cent)	Total (Acres)	Annual Average Rate of Increase, Compound (Per Cent)
(1)	(2)	(3)	(4)	(5)
1765	794,112	-	211,200 ^a	-
1784	1,326,182	2.7	365,547 ^a	3.0
1827	3,814,300 ^a	2.5	1,539,200 ^a	3.4
1831	4,208,664	2.5	1,745,537	3.4
1844	5,668,852	2.3	2,257,270	2.0
1851	8,113,408	5.3	3,605,167	6.4

^aEstimate.

Source: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, (Ottawa: 1876), pp. 67, 74, 96, 109, 154 and 220.

TABLE 14

LAND HELD IN FREE AND COMMON SOCCAGE AND UNDER
THE SEIGNEURIAL TENURE IN LOWER CANADA, 1844

Tenure	Land Occupied	Land Cultivated	Land Cultivated as a Per Cent of Land Occupied
Free and Common Socage	1,706,993	540,256	31.6
Seigneurial.	3,961,859	1,717,014	43.3
Total	5,668,852	2,257,270	39.8

Source: Journals of the Legislative Assembly of the Province of Canada, 1849, App. B.
Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, p. 154.

TABLE 15
 LAND HELD IN FREE AND COMMON SOCCAGE AND UNDER
 THE SEIGNEURIAL TENURE IN LOWER CANADA, 1851

Tenure	Land Occupied	Land Cultivated	Land Cultivated as a Per Cent of Land Occupied
Free and Common Soccage	2,133,869	713,174	33.4
Seigneurial.	5,979,510	2,891,902	48.4
Total	8,113,379	3,605,076	44.4

Source: J. C. Taché, De la tenure seigneuriale en Canada et projet de commutation, (Quebec: Lovell et Lamoureux, 1854), App. 3.

IV. Conclusion

Statistical information concerning land occupied and land under cultivation in Lower Canada have been taken mainly from the census reports. The census returns for the years 1765 and 1784 do not indicate the number of acres of land cultivated. It was possible to fill these gaps with estimates of the number of acres cultivated for these years, taken from an article written by M. Séguin.

It was found that the rapid increase in land cultivated from 1827 to 1831 given in the census returns for these years is not justified in view of the agricultural conditions prevailing at the time. These conditions, e.g. poor harvests, failure of the agricultural societies in trying to bring about a change in methods of cultivation, lack of interest in agriculture on the part of the banks, suggest that the most important factor contributing to the increase in land cultivated during this period, was population growth.

This was found to be the case for the years 1765-84, 1831-44 and also for the period 1784-1831 when the 1827 figure for land cultivated was not taken into account. It was assumed that the number of acres of land under cultivation in 1827, given in the census for that year, is underestimated. A more realistic figure was estimated on the basis of the annual average rate of increase, compound, of land cultivated for the period 1784-1831.

From 1844 to 1851, the census data indicate that acres of land cultivated increased more rapidly than population.

This can be justified by the use of improved farm machinery, improvements in transportation and renewed attempts to produce wheat on a large scale during this period.

Two systems of land tenure coexisted in Lower Canada during the period under survey: seigneurial and free and common soccage. Data on the amount of land occupied and cultivated under both systems are available for the years 1844 and 1851 only. In 1844 43.3 per cent of the occupied seigneurial land was cultivated while 31.6 per cent of the occupied land held in free and common soccage was cultivated. In 1851 these percentages were 48.4 and 33.4 respectively. These figures suggest that there was a relative scarcity of seigneurial land in Lower Canada at that time. More research is needed however in order to determine to what extent the seigneurial system was a stimulus or a hindrance to agricultural development at different periods from 1760 to 1850.

Agricultural production will be discussed more fully in Chapter V and suggestions for further research are given in Appendix III.

CHAPTER IV

EXPORTS AND IMPORTS

I. Extent of Export and Import Statistics

The task of collecting relevant information concerning exports and imports for Lower Canada for the period 1760-1850 is a complex one, since the majority of secondary material, with few exceptions, deals rather briefly or not at all with this subject matter. One notable exception is a paper written by G. Paquet and J. P. Wallot,⁹⁵ but it covers only a limited period of time, fifteen years.

In order to arrive at a more or less continuous series for exports and imports, it is essential to examine primary sources available in the Public Archives of Canada, as well as secondary sources.

A. Export and Import Data, 1760-92

Data on exports and imports for this period have been found in Manuscript Group 23 of the Public Archives of Canada, and in the Public Archives Report for the year 1888.⁹⁶

⁹⁵G. Paquet and J. P. Wallot, "Aperçu sur le commerce international et les prix domestiques dans le Bas-Canada (1793-1812)", Revue d'histoire d'Amérique française, (décembre 1967), pp. 447-73.

⁹⁶D. Brymner, Report on Canadian Archives, 1888, (Ottawa: Queen's Printer, 1889).

There are many gaps in the series and for some years only partial returns have been found.

B. Export and Import Data, 1793-1806

G. Paquet and J. P. Wallot, in an article referred to above, show the quantity of goods exported from the Port of Quebec for the period 1793-1806 inclusive, and the quantity of goods imported at the Port of Quebec from 1793 to 1802 inclusive, which they obtained from Manuscript Group 11 of the Public Archives of Canada. Although some goods were exported to and imported from the United States at the Port of St. John during this period, the great bulk of trade passed through the Port of Quebec.⁹⁷

C. Export and Import Data, 1807-50

The Appendices to the Journals of the House of Assembly of Lower Canada and to the Journals of the Legislative Assembly of the Province of Canada contain almost all the quantitative information available concerning the imports and exports of Lower Canada from 1807 to 1850. They show the yearly quantities of goods exported and imported, the ports from which the goods left or at which they entered the colony, and, for some years, the country of origin and the country of destination of the commodities in question. There is one break in the export series and one in the import series. The

⁹⁷G. Paquet and J. P. Wallot, op. cit., p. 450.

Journals of the Legislative Assembly of the Province of Canada give only fragmentary data on exports during the period 1843-48. In 1843 only the exports through the Port of St. John are given. In 1844 and 1845 the only commodity for which export data are available is wheat, from the ports of Quebec, Montreal and St. John in 1844 and from the Ports of Quebec and Montreal in 1845. For the years 1847 and 1848 export data are not published. Likewise import data are not available for the years 1846 and 1847.

The specific sources from which data on exports and imports have been taken for the period under survey are given in Table 1 in Appendix I.

II. Sample of Available Data

In order to emphasize the importance as well as the deficiencies of available data, statistics for seven export products and for five import commodities have been extracted from the sources outlined above, and are given in Tables 2 and 3 in Appendix I. Volume or weight indices for these commodities have been calculated and are reproduced in Tables 5 and 6 in Appendix I. These indices are represented graphically in Appendix II.

The export commodities have been chosen on the basis of their relative importance as staples at different periods from 1760 to 1850 and include the following: wheat, flour, beaver skins, marten skins, raccoon skins, oak timber and pine timber. The export of deals and planks was also of relative importance, although it is not dealt with here.

Four import commodities, molasses, coffee, salt and tea, have been chosen on the basis of their importance as consumption goods for the period in question and the other, rum, because of its importance as an indian trade good.

III. Evaluation of Available Data

Although a considerable amount of data is available, three major problems as to their utility for economic analysis arise. These are the following:

A. Breaks in Data

This problem is particularly pressing for the period prior to 1793. The first export figures found are for the year 1764 and refer only to the export of pelts to Great Britain. The first figures available for imports are for the year 1767. Exports of pine and oak timber are incomplete prior to 1793 except for two years, 1767 and 1788. For 1784, 1789, 1790, 1791 and 1792 no export data have been found.

Similarly import data have not been found for the period 1770-73 inclusive as well as for the period 1787-92 inclusive.

B. Inconsistency of Data

1. Table 1 in Appendix I shows that data have been collected for all ports for some years and for only a few ports for other years and this adds to the complexity of interpreting the data. For example, export data for the

year 1827 have been collected from four ports, Quebec, Gaspe, New Carlisle and St. John, while the export statistics for 1828, 1835, 1843, 1844 and 1845 are available for three ports or less.

This problem, however, is not serious. The most important ports in Lower Canada were by far the Ports of Quebec, St. John and, after 1831, the Port of Montreal. The great bulk of exports and imports passed through these ports, the other ports playing only a minor role. Furthermore, prior to 1808 the great majority of exports and imports passed through the Port of Quebec. The predominance of Quebec as the most important port in Lower Canada at the time can be illustrated by comparing the quantities exported and imported at the Port of Quebec to the quantities exported and imported at all ports in Lower Canada for which data are available, for the years 1824 and 1827. These data are shown for seven export commodities in Table 16 and for five import commodities in Table 17. Therefore, as long as the export and import series contain data collected at these ports, they can be said to represent an acceptable approximation of the total exports and imports passing through Lower Canada.

If the data given in Tables 2 and 3 in Appendix I are examined with these criteria in mind, they are found to be relevant. They show the exports and imports at the Port of Quebec for the period prior to 1807. From 1808 to 1850, with few exceptions,⁹⁸ they show the exports and imports at

⁹⁸These exceptions are:

- for exports: 1843, 1845, 1846, 1847 and 1848;
- for imports: 1846 and 1847;

TABLE 16
EXPORT OF SEVEN COMMODITIES FROM THE PORT OF QUEBEC AND
FROM ALL LOWER CANADIAN PORTS FOR WHICH DATA
ARE AVAILABLE, 1824 AND 1827

Item (1)	Exports in 1824		Exports in 1827	
	All Ports ^a (2)	Port of Quebec (3)	All Ports ^b (4)	Port of Quebec (5)
Wheat (Bushels)	5,396	5,396	391,420	391,420
Flour (Barrels)	41,901	41,901	53,839	53,839
Beaver (Pelts)	20,799	20,799	7,355	7,355
Marten (Pelts)	7,685	7,685	14,580	9,484
Raccoon (Pelts)	3,522	3,522	19	0
Oak Timber (Pieces)	19,994	19,994	17,649	17,411
Pine Timber (Pieces)	99,682	96,026	67,874	64,575

^aIncludes Ports of Quebec, Gaspe, St. John, Coteau du Lac.

^bIncludes Ports of Quebec, Gaspe, New Carlisle and St. John.

Source: See Table 1 in Appendix I.

TABLE 17
 IMPORT OF FIVE COMMODITIES AT THE PORT OF QUEBEC AND AT
 ALL LOWER CANADIAN PORTS FOR WHICH DATA
 ARE AVAILABLE, 1824 AND 1827

Item (1)	Imports in 1824		Imports in 1827	
	All Ports ^a (2)	Port of Quebec (3)	All Ports ^b (4)	Port of Quebec (5)
Molasses (Gallons)	83,642	79,689	51,642	48,779
Rum (Gallons)	994,555	987,555	959,866	953,163
Coffee (Pounds)	239,355	239,236	159,973	159,111
Tea (Pounds)	165,585	164,890	1,054,776	1,054,459
Salt (Bushels)	217,136	150,801	271,604	190,824

^aIncludes Ports of Quebec, Gaspé, New Carlisle, St. John and Coteau du Lac

^bIncludes Ports of Quebec, Gaspé, New Carlisle, St. John and Sainte Marie Nouvelle Beauce.

Source: See Table 1 in Appendix I.

the Ports of Quebec and St. John and after 1831 at the Port of Montreal.

2. There is another aspect of inconsistency. Units of weights and volumes, for the same commodities, change from one period to another. To deal with this problem, conversion factors are required. Such factors are available for pine timber, oak timber and beaver skins.

a) Pine Timber

From 1767 to 1826, pine timber was measured in pieces, with no distinction between white and red pine. After 1825 pine was measured in tons,⁹⁹ a capacity measurement equivalent to forty cubic feet.

It is possible to convert tons into pieces for the period 1826-50 only if the proportion of white pine to red pine exported is known for that period and, furthermore, if the size of an average piece of white pine and that of an average piece of red pine are known for the same period.

Only for the years 1837-42 were white and red pine measured separately. For these years, exports on the average consisted of 62 per cent white pine and 38 per cent red

for which the data for one or many of the three ports, Quebec, St. John and Montreal, have not been found.

⁹⁹D. G. Creighton in his Commercial Empire of the St. Lawrence, 1760-1850, does not seem to have noted this point. The author, using the export statistics as they appear in the Appendices to Journals of the House of Assembly of Lower Canada, interprets these data for pine and oak timber as being tons instead of pieces for the period prior to 1826. See: D. G. Creighton, The Commercial Empire of the St. Lawrence, 1760-1850, (Toronto: The Ryerson Press, 1937), pp. 150, 187, 210.

pine. These percentages can be used as an approximation of the proportion of white and red pine exported for the period 1826-50 with some confidence since the 62:38 ratio is based on data for a period of six years, 1837-42, which represents almost exactly the middle period between 1826 and 1850.

The average size of white and red pine have been found for the year 1842 only. In that year, an average piece of white pine timber consisted of 69 cubic feet, while that of red pine timber consisted of 39 cubic feet.¹⁰⁰ It would of course be helpful to know what these averages were for other years and in other timber regions. But such data have not been uncovered as yet. In the absence of such information, the average size of pine timber for the year 1842 has been used as a rough approximation of the average pine timber size for the period 1826-50.

On this basis a conversion factor for pine timber can be established. This factor has been found to be 0.75. That is 0.75 piece of pine timber is equivalent to one ton.¹⁰¹

¹⁰⁰A. R. M. Lower, op. cit., p. 17.

¹⁰¹Conversion factor for pine timber:

Assuming that 62 per cent of pine timber exported was white pine, that 38 per cent red pine and that, on the average, a piece of white pine timber measured, for the period in question, 69 cubic feet while a piece of red pine measured 39 cubic feet. Let A represent the total number of tons of pine timber exported during a given year.

Therefore $40 A$ = total cubic feet of pine timber exported during that year since, as was stated above, a ton is a capacity measurement equal to 40 cubic feet.

Also, $40 A \times 0.62$ = cubic feet of white pine exported, and

$40 A \times 0.62 \times \frac{1}{69}$ = pieces of white pine timber exported.

By multiplying tons of pine timber exported yearly by 0.75 gives pine timber in pieces.

It is also necessary to convert board feet of timber into pieces since, after 1826, at the Port of St. John, pine timber exports were measured in board feet. One cubic foot of timber was the equivalent of twelve board feet.¹⁰² It is therefore possible to convert these board feet into cubic feet and then into pieces. For example, in 1828, at the Port of St. John there were exported 354,000 board feet of pine timber. If divided by 12, this yields a total of 29,500 cubic feet. It is assumed that 62 per cent was white pine timber and 38 per cent red pine timber. On this basis 18,290 cubic feet of white pine timber and 11,210 cubic feet of red pine timber were exported. Dividing the former by 69 cubic feet and the latter by 39 cubic feet gives the number of pieces of white and red pine timber exported during that year. The factor for converting board feet of white pine timber into pieces is thus 0.00155.

Similarly, $40 A \times 0.38 \times \frac{1}{39} = \text{pieces of red pine timber exported.}$

Therefore, the total exports of pine timber in pieces is:

$$40 A \times \frac{.62}{69} + 40 A \times \frac{.38}{39} = 40 A \left(\frac{.62}{69} + \frac{.38}{39} \right) = 0.75 A.$$

Therefore one ton of pine timber = 0.75 piece. .

¹⁰²R. G. Albion, Forests and Sea Power: The Timber Problem of the Royal Navy, 1652-1852, (Cambridge: Harvard University Press, 1926), p. 9.

b) Oak Timber

As in the case of pine, oak timber was measured in pieces prior to 1826 and in tons from 1826 to 1850. However, unlike pine, only one type of oak timber was exported from Lower Canada during the period under study. One problem is therefore eliminated. An average piece of oak timber measured fifty cubic feet during this period.¹⁰³ On this basis, in the same manner as was done for pine timber, a conversion factor of 0.8 has been found for oak timber, that is 0.8 piece of oak timber is equivalent to one ton. The number of pieces of oak timber exported can therefore be arrived at by multiplying the number of tons of oak timber by 0.8

Again, as in the case of pine timber, oak timber exports were measured in board feet at the Port of St. John after 1826 and a conversion factor of 0.00166 has been calculated for oak timber.

For both pine and oak timber, it was decided to convert tons into pieces instead of pieces into tons mainly for two reasons.

First, in going from tons to pieces, the period for which the conversion is made is relatively shorter, (23 years), than the period for which the conversion of pieces into tons would have to be made, (60 years). This is also important because the relative proportion of white and red pine in the total pine timber exports varies significantly from one period

¹⁰³Ibid., p. 9

to another according to the demand for these two types of timber. Applying the 1837-42 percentages of white and red pine timber to the shorter period, that is, 1826-50, quite likely results in greater accuracy. Furthermore, as noted above, the ratio of white to red pine for the period 1837-42 can be considered an acceptable approximation for the period 1826-50.

Secondly, the average size of timber varied over the years.¹⁰⁴ Applying the 1842 average pine timber size to the shorter period 1827-50 also appears to add to the reliability of the estimates.

As the timber trade grew, in one region, the average size of timber decreased since the biggest and best quality trees were cut first. But at the same time new timber regions were discovered to counterbalance the decreasing average size of timber cut in the older settled areas.

c) Beaver Skins

A conversion factor is also necessary for the exports of beaver skins. From 1764, the first year for which statistics are available, to 1829, the exports were measured in "number of skins" or "pelts". From 1830 to 1835 they were measured in "pounds" at the Port of St. John and in "number of skins" at other ports. From 1836 to 1850 they were measured in "pounds" at all ports for which data are available.

¹⁰⁴L. Dechêne, "Les entreprises de William Price, 1810-1850", Histoire sociale, no 1, (Avril 1968), p. 23.

This lack of comparability in units of measurement makes it necessary to establish a conversion factor for this item.

Harold Innis in his Fur Trade in Canada states "that the pelt of an average adult (beaver) weights from one and one-half to one and three quarter pounds although Lahontan gives two pounds."¹⁰⁵. Since this is the average weight of an adult beaver, one and a half pounds will be used since during the decline of the fur trade it is probable that younger beavers were caught for their pelts.

C. Allocation of Imports and Exports Between Upper and Lower Canada

The fact that all the sea ports in Canada were situated in Lower Canada from 1791, when Canada was divided into two provinces, until 1840, when these provinces were reunited, creates a problem if the objective is to determine exports and imports separately for the two provinces. All exports and imports as they appear in the Journals of the House of Assembly of Lower Canada are grouped according to the ports they leave or enter, and are not grouped by place of origin or place of destination. The problem is to know what proportion of the imports into Lower Canada go on and are consumed in Upper Canada and what proportion of the goods exported from the sea ports in Lower Canada were produced in Lower Canada.

¹⁰⁵H. A. Innis, op. cit., p. 4.

1. Imports

The primary source of revenue of Upper and Lower Canada was the revenue obtained from the levy of duties on imported goods. Since all sea ports were situated in Lower Canada and duties were collected at the ports by Lower Canada custom agents, Upper Canada officials had to see that the tariffs collected on the goods going on to their Province were turned over to them. From 1791 to 1840, many revenue sharing agreements were arrived at by the two provinces.

The first agreement was reached in 1795 when Lower Canada paid £333 to its sister province as a refund for duties collected under the Provincial Revenue Act of 1793.¹⁰⁶ From then on, Upper Canada, by agreeing not to levy duties on goods imported into Lower Canada, would receive one eighth of the net proceeds of duties collected in the St. Lawrence Ports.¹⁰⁷

In January, 1797, a new agreement of a different nature was reached. All goods imported into Lower Canada and destined for Upper Canada passed through Coteau du Lac. An inspector was appointed to examine all imports at that port and revenues collected were allocated on the basis of his reports.¹⁰⁸ This agreement was maintained until May 1, 1816.¹⁰⁹

¹⁰⁶A. Shortt and A. G. Doughty, ed., Canada and Its Provinces, A History of the Canadian People and Their Institutions by One Hundred Associates, Vol. 4, (Toronto: Edinburgh University Press, 1914-17), p. 506.

¹⁰⁷Ibid., p. 506.

¹⁰⁸Ibid., p. 506.

¹⁰⁹Ibid., p. 507.

A new agreement was not concluded until May 1817. Lower Canada agreed to pay the sum of £20,000 to Upper Canada as a reimbursement of its part of duties collected during the period from May, 1816 to May, 1817. Also by this agreement Upper Canada would receive yearly one fifth of all duties collected by Lower Canada. This arrangement expired on July 1, 1819 and Upper Canada was once more without its principal source of revenue.¹¹⁰

The dispute over the reimbursement of duties to Upper Canada lasted until the Canada Trade Act came into effect in 1822.¹¹¹ The Act specified that Lower Canada reimburse Upper Canada one fifth of the net revenue from duties collected in Lower Canada since 1819 and continue paying this proportion yearly until July, 1824.¹¹² The proportion of net duties to be granted to Upper Canada would, after 1824, be re-evaluated in the light of a report presented every four years by arbitrators named by each Province.¹¹³

From July, 1824, to July, 1828, Lower Canada was required to transfer to Upper Canada one quarter of the net revenue from duties collected on imports in the St. Lawrence

¹¹⁰Ibid., p. 507.

¹¹¹Ibid., p. 507.

¹¹²Canada Trades Act, Article XXIV, in Public Archives of Canada, Documents Relating to the Constitutional History of Canada, 1759-1828, Vol. 3, (Ottawa: Queen's Printer, 1915-35), p. 144.

¹¹³Ibid., p. 115.

ports, this percentage being based on the relative population of the two provinces.¹¹⁴ The same percentage was allotted Upper Canada for the following four years ending July 1, 1832.¹¹⁵ The percentage of revenues from imports going to Upper Canada was increased to 33 1/3 per cent for the period extending from July, 1832, to July, 1836,¹¹⁶ and was again raised to 40 per cent for the period 1836-40.¹¹⁷

The two Canadas were united in 1840 and the right to regulate trade was reserved to the Imperial Government.¹¹⁸ All revenues from tariffs were consolidated. No evidence has been found to establish what percentage of the imports coming in from the ports of Lower Canada were consumed in Upper Canada.

From 1793 to 1840, except for the period 1797-1816, the tariff agreements give some indication as to what proportion of the imports into the ports of Lower Canada went on to and was consumed in Upper Canada.

For the period 1797-1816, as was seen earlier, an inspector was required to report the amount of imports from Lower Canada coming into Upper Canada at the Port of Coteau du Lac. These data for the years 1797 and 1802 to 1816 are

¹¹⁴A. Shortt and A. G. Doughty, ed., op. cit., Vol. 4, p. 514.

¹¹⁵H. A. Innis and A. R. M. Lower, ed., Select Documents in Canadian Economic History, 1783-1885, (Toronto: University of Toronto Press, 1933), p. 382.

¹¹⁶Ibid., pp. 382-83.

¹¹⁷O. J. McDiarmid, Commercial Policy in the Canadian Economy, (Cambridge: Harvard University Press, 1946), p. 48.

¹¹⁸Ibid., p. 50.

available in the Journals of the House of Assembly of Lower Canada and the statistics for five import commodities are reproduced in Table 4 in Appendix I. Subtracting these quantities from the total quantities of these goods imported into Lower Canada gives the net imports of Lower Canada for those years. Using these figures, an approximation of the proportion of imports, and in the same manner, the percentage of duties of each province can be arrived at. These calculations show that from 1797 to 1816, there passed through the Port of Coteau du Lac approximately 11 per cent of the goods imported into different ports of Lower Canada.

Table 18 is a recapitulation of the percentages arrived at through the agreements from 1793 to 1840. Thus while there does not exist a full measurement of the quantity of goods imported into Lower Canada and consumed in Upper Canada, except for a few years between 1800 and 1817, the revenue agreements between the two provinces contain information as to the proportion of the imports which went on to Upper Canada.

2. Exports

As all sea ports were situated in Lower Canada during the period under survey the bulk of exports from Upper and Lower Canada were shipped through these ports. Commodities produced in the United States were also exported from Lower Canadian ports in order to benefit from the preferential tariffs imposed on goods originating from these ports.¹¹⁹

¹¹⁹This is discussed in greater detail in Chapter V, on Production.

TABLE 18
 PROPORTION OF DUTIES ON IMPORTED GOODS GOING
 TO UPPER AND LOWER CANADA, 1793-1840

Period	Duties Going To Upper Canada (Per Cent)	Duties Going To Lower Canada (Per Cent)
1793-1797. . .	12.5	87.5
1797-1817. . .	11.0	89.0
1817-1824. . .	20.0	80.0
1824-1832. . .	25.0	75.0
1832-1836. . .	33.3	66.7
1836-1840. . .	40.0	60.0

Source: For the period 1793-97, from: A. Shortt and A. G. Doughty, ed., Canada and Its Provinces, A History of the Canadian People and Their Institutions by One Hundred Associates, Vol. 4, (Toronto: Edinburgh University Press, 1914-17), p. 506.

For the period 1797-1817: Calculations based on Table 4 in Appendix I.

For the period 1817-24, from: Canada Trades Act, Article XXIV, in Public Archives of Canada, Documents Relating to the Constitutional History of Canada, 1759-1828, Vol. 3, (Ottawa: Queen's Printer, 1915-35), p. 144.

For the period 1824-32, from: A. Shortt and A. G. Doughty, ed., op. cit., Vol. 4, p. 514; and H. A. Innis and A. R. M. Lower, ed., Select Documents in Canadian Economic History, 1783-1885, (Toronto: University of Toronto Press, 1933), p. 382.

For the period 1832-36, from: Ibid., pp. 382-83.

For the period 1836-40, from: O. J. McDiarmid, Commercial Policy in the Canadian Economy, (Cambridge: Harvard University Press, 1946), p. 48.

Therefore the export data given in Appendix I, Table 2 include commodities produced in Upper Canada, in the United States as well as in Lower Canada.

Unlike the case for imports there were no agreements, such as those on tariffs between Upper Canada and Lower Canada, or between the United States, Upper and Lower Canada, which can be used to evaluate the approximate contribution of each to total exports.

Data on imports into Lower Canada from the United States through the Ports of St. John and Coteau du Lac and from Upper Canada through Coteau du Lac are given in the Appendices to the Journals of the House of Assembly of Lower Canada for some years only.

Imports at Coteau du Lac are available for the years 1817-25 only while these at the Port of St. John for the years 1807-45 inclusive and 1848-50 inclusive.¹²⁰ These data will be partially examined in Chapter V in order to estimate the production of two commodities in Lower Canada, wheat and timber.

IV. Conclusion

The period under survey presents major difficulties in gathering data on commodities exported and imported from Lower Canada:

- Political Events: The separation of Canada in two distinct provinces in 1791 and their union in 1840, creates

¹²⁰See: Table 1, Appendix I.

important problems in the attribution of exports and imports between the two provinces, mainly because all sea ports were situated in Lower Canada. A problem also arises in distinguishing between exports originating from the United States and those originating in Lower Canada, as will be seen in the next chapter.

- Official Government Estimates: Not until the publication of the Journals of the House of Assembly of Lower Canada for the years 1823-24 were the official data on exports and imports at the ports of Lower Canada published, and these only show data from the year 1807 onwards. The figures for the period 1760-1806 cannot be considered as data endorsed by the authorities.

- Inconsistencies in Weights and Measures: While these are numerous, there are ways and means to develop conversion factors for a limited number of commodities but lack of comparability over time plague many individual commodity series.

Notwithstanding these major handicaps a considerable amount of quantitative information concerning exports and imports are available for economic analysis.¹²¹

¹²¹Suggestions for further research are given in Appendix III.

CHAPTER V

PRODUCTION

Data concerning the export of commodities from the ports of Lower Canada for the period 1760-1850 reflect mainly the ability of the merchants of the colony to attract to the St. Lawrence valley surplus commodities from the interior regions of North America. They can also be considered as an index of the growth of the commercial trade of the St. Lawrence valley. What the export data do not show, however, is the productive activity of the population of Lower Canada since exports from the St. Lawrence ports originated partly from Upper Canada, partly from the United States, and therefore only partly from Lower Canada.

Further information must be obtained in order to determine the part played by the population of Lower Canada in the development of that trade. Data on the production of a wide range of commodities, if available, would of course be useful. A preliminary survey of secondary material and published primary material indicates a general lack of such quantitative information.

The scope of this thesis does not permit an extensive survey of a wide range of commodities. To illustrate

what needs to be done and what can be done, two commodities are examined: wheat and timber.*

I. Wheat Production

Under the French regime fur trade was the main activity in the St. Lawrence valley, and agriculture developed mainly as a consequence to that trade. Being the main route for the transportation of furs and related provisions, it was essential that the St. Lawrence River be protected from attacks by the Iroquois and the English.¹²² Settlement along its banks assured a certain amount of security to the trade.

Agriculture also developed as a source of provision for other activities such as cod fisheries and the cod fish trade, sugar plantations and the sugar trade, the latter necessary for the production of rum, a valuable commodity in trading with the Indians.¹²³

Agriculture in New France was never considered a possible staple industry. Although wheat crops were important enough in some years to export surpluses to the French West Indies and Cape Breton, these markets were uncertain and relatively unimportant.¹²⁴ Harvests were often meagre due to drought and insect pests, and the colony, in some instances, was compelled to import cereals from the mother country to

¹²²V. C. Fowke, op. cit., p. 24.

¹²³Ibid., pp. 27-28.

¹²⁴M. Q. Innis, op. cit., p. 38.

* Although not discussed in this thesis, shipbuilding was a major activity in Lower Canada during the period under survey.

meet her needs.¹²⁵

A. 1760-1799

With the conquest and the change in administration, agriculture entered a new era. The British authorities wanted to integrate Lower Canadian agriculture with the mercantile interests of the British Empire.¹²⁶ The cultivation of hemp and flax, in demand in Great Britain at the time was encouraged by Governor Murray.¹²⁷ Newly arrived British settlers introduced new methods of cultivating wheat.¹²⁸ British merchants built flour mills to increase the quality of flour, in order to make it competitive in external markets.¹²⁹

As a consequence from 1765 to 1784, land cultivated increased by 73.1 per cent and population by 61.9 per cent.¹³⁰ As virgin lands were cultivated, production increased and in 1767, the first year for which export data are available, 15,910 bushels of wheat and 686 barrels of flour were exported,¹³¹ mostly to other North American colonies and to the British West Indies.¹³²

¹²⁵V. C. Fowke, op. cit., p. 28.

¹²⁶Ibid., p. 68.

¹²⁷Ibid., p. 68.

¹²⁸M. Q. Innis, op. cit., p. 61.

¹²⁹F. Ouellet, op. cit., p. 134.

¹³⁰See Table 11, Chapter III.

¹³¹See Table 2, Appendix I.

¹³²F. Ouellet, op. cit., p. 84.

Lower Canadian wheat and flour did not have access to the British home market at that time since the Corn Laws did not distinguish between colonial and foreign products.¹³³ Lower Canada could not compete with New England States due to the higher cost of transporting wheat and flour by the St. Lawrence route.

Prospects for further expansion were nourished by the American Revolution. Wheat producers believed that the agricultural produce of the United States would be banned from Britain and that Lower Canadian wheat would finally penetrate the British home market. But the New England population had long been consumers of British products, and it was not to Britain's advantage to close its market to American products.¹³⁴

In 1785, as a consequence of the American Revolution, Britain prohibited all maritime trade between her colonies and the United States and the following year, United States' imports were prohibited to enter all Lower Canadian ports.¹³⁵

This gave rise to protests from the Quebec merchants, who had been trying to attract the products of the United States to St. Lawrence ports. They had been handling agricultural surpluses from Vermont mainly for local consumption in times of crop failures in Lower Canada, and also for

¹³³Ibid., p. 132.

¹³⁴Ibid., p. 135.

¹³⁵Ibid., p. 135.

re-export from the St. Lawrence ports, although this last destination was relatively unimportant prior to 1800.¹³⁶

In 1787, as a consequence to the protests of the merchants, the Legislative Council of Lower Canada was given the authority to resolve this question and it immediately repealed the law of 1785. Free trade between Lower Canada and the United States was reestablished.¹³⁷

In 1790, new legislation, voted in Britain, specified that all products shipped from Lower Canadian ports imported into Great Britain, would be considered products of the colony.¹³⁸

In the meantime, Loyalists who had settled in Upper Canada were producing wheat surpluses as early as 1792 and their first shipment to Lower Canada was made in 1794. During that year 12,823 bushels of wheat and 896 barrels of flour were sent down to Montreal.¹³⁹ Until 1800, when flour from mills along Lake Ontario was going down the St. Lawrence in considerable amounts, surpluses from Upper Canada never surpassed those shipped in 1794.¹⁴⁰

Prior to 1800 therefore efforts on the part of Quebec merchants to attract agricultural surpluses from the

¹³⁶Ibid., pp. 135-36.

¹³⁷Ibid., p. 135.

¹³⁸Ibid., pp. 133 and 135.

¹³⁹R. L. Jones, History of Agriculture in Ontario, 1613-1880, (Toronto: The University of Toronto Press, 1946), p. 25.

¹⁴⁰Ibid., pp. 25 and 27.

United States to the St. Lawrence ports were unsuccessful. Also, during the same period, shipments of produce from Upper Canada were still unimportant. It can be assumed therefore, that the bulk of wheat and flour exported from Lower Canada was the product of that province and consequently export data for these products, shown in Table 2 in Appendix I, can be regarded as an index of the quantity of wheat and flour produced by the population of Lower Canada. In order to arrive at data showing total production, information concerning local consumption of these products must be obtained.

An indication as to the amount of wheat annually consumed in Lower Canada is available from the estimates prepared by R. L. Jones. He suggests that the quantity of wheat produced in Lower Canada, as reported in the 1827 Census,¹⁴¹ was approximately equivalent to the requirements of the province for local consumption.¹⁴² During that year 2,921,240 bushels of wheat were harvested.¹⁴³ The population of Lower Canada during that same year was estimated at 471,875 (see Table 2, Chapter II). If Jones' estimate as well as the census figure for population and wheat production are realistic the average consumption of wheat per capita was approximately 6.2 bushels in 1827.*

¹⁴¹The Census for 1827 is the first to show data concerning agricultural production.

¹⁴²R. L. Jones, "French-Canadian Agriculture in the St. Lawrence Valley, 1815-1850", Agricultural History, Vol. 16, (July, 1942), p. 141.

¹⁴³Census of Canada, 1870-71, Vol. 4, p. 96.

* Jones does not indicate if this 6.2 figure includes the amount of seed used by the agricultural population.

In the absence of more precise information on the consumption of wheat for the years 1760-99 this figure will be used as an approximation of the annual average amount of wheat consumed per person in Lower Canada during that period.

This assumption may be subject to criticism on two counts. First it implies that the estimate of 6.2 bushels of wheat per person is correct. R. L. Jones is an authority in the field of the history of agriculture, more specifically that of Upper Canada, and his estimate can be attributed a relatively fair amount of confidence.¹⁴⁴ Secondly, even if his judgement is well founded, the diet of the population may have changed over the years.¹⁴⁵ Consequently, applying the 1827 estimate of wheat consumption per person to the period 1760-99 may somewhat prejudice the resulting approximations. They can, nevertheless, indicate trends in the production of wheat.

If it is assumed that the yearly amount of wheat consumed per capita is 6.2 bushels for the period 1760-99, wheat consumption will therefore increase at the same rate

¹⁴⁴Jones' estimate compares favorably with an estimate of wheat consumption during the French regime, made by R. C. Harris. He estimated that the average consumption of wheat per person amounted to a minimum of 5.7 bushels a year. See: H. C. Harris, op. cit., p. 160.

¹⁴⁵F. Ouellet suggests that, due to a wheat crisis in Lower Canada, the habitant had begun to substitute potatoes and peas for bread around 1827. See: F. Ouellet, op. cit., p. 257.

R. L. Jones, on the other hand, estimates that this substitution occurred much later, in the late 1830's. See: R. L. Jones, "French Canadian Agriculture in the St. Lawrence Valley, 1815-1850", Agricultural History, Vol. 16, (July, 1942), p. 143.

as total population. These rates have been calculated and are given in Table 2 (Chapter II). The first step consist in finding the total consumption of wheat in 1765. This is arrived at by multiplying the total population for that year, e.g. 69,810 (see Table 2, Chapter II), by 6.2, giving a total consumption of 432,822 bushels of wheat. Applying the annual average rates of increase, compound, of total population of Lower Canada for the period 1765-84 to this figure gives the approximate yearly consumption of wheat during that period. The operation is repeated by applying the 1784-90 and 1790-1806 population growth rates to the resulting wheat consumption estimates for 1784 and 1790 respectively. A continuous series for the total wheat consumption of Lower Canada for the period 1760-99, based on these calculations, are given in Table 19.

In order to arrive at total yearly wheat production estimates, exports of wheat and flour¹⁴⁶ and inventory changes must be added to the amounts locally consumed. Finally wheat and flour annually imported into the province must be subtracted.

Although precise quantitative information concerning wheat surpluses are not available, F. Ouellet states that from 1770 production reached such heights that farmers and merchants were unable to sell all the wheat and had to stock thousands of bushels.¹⁴⁷ It is likely however that these

¹⁴⁶Throughout this section, flour is converted into wheat at the rate of one barrel of flour equals five bushels of wheat. See: R. L. Jones, "Agriculture in Lower Canada, 1792-1815", Canadian Historical Review, Vol. 27, No. 1, (March, 1946), p. 40.

¹⁴⁷F. Ouellet, op. cit., p. 85.

TABLE 19
ESTIMATE OF THE YEARLY CONSUMPTION OF WHEAT
AND FLOUR^a IN LOWER CANADA, 1765-99

Year	Local Wheat Consumption	Year	Local Wheat Consumption
1765	432,822	1783	687,003 ^b
1766	444,075	1784	700,674 ^b
1767	455,619	1785	743,417
1768	467,468	1786	798,764
1769	479,620 ^b	1787	836,876
1770	492,088	1788	887,927
1771	504,885	1789	942,090 ^b
1772	518,010	1790	1,000,128 ^b
1773	531,476	1791	1,028,134 ^b
1774	545,296	1792	1,050,520
1775	559,476	1793	1,080,139
1776	574,021	1794	1,110,383
1777	588,944	1795	1,141,476 ^b
1778	604,258	1796	1,173,437
1779	619,969 ^b	1797	1,206,291
1780	636,089 ^b	1798	1,240,068
1781	652,624 ^b	1799	1,274,788
1782	669,594 ^b		

^aFlour is converted into wheat: One barrel of flour equals five bushels of wheat.

^bThese were years of complete or partial crop failures and it is likely that less wheat was consumed by the population than the estimates indicate.

Source: Local wheat consumption based on a yearly wheat consumption of 6.2 bushels per person and on population data for 1765, 1784 and 1790 in: Canada, Department of Agriculture, Census of Canada 1870-71, Vol. 4, (Ottawa: 1876), pp. 64-65 and 74-77.

surpluses were exported in later years when production was less important or were sold locally during the years 1779-84 which were marked by successive crop failures.

As was stated above, imports of wheat and flour originating from Vermont and Upper Canada were relatively unimportant prior to 1800 and have not been taken into account. Except for the years of complete and partial crop failures, when greater quantities of breadstuff may have been imported for local requirements,¹⁴⁸ the omission of these imports from the calculations do not alter significantly the estimated production series.

Table 20 shows the total production of wheat for the 1760-99 period broken down into local consumption and exports. It has been assumed for the purpose of the calculations that wheat and flour were exported during the same year in which they were produced. In fact, this is only partly true. The production of one year's harvest was not shipped necessarily the same year since sea ports were closed from late autumn to early spring. This is reflected in the export data. During the period under survey, there were serious crop failures in 1769, from 1779 to 1784,¹⁴⁹ and from 1789 to 1791 and a partial failure in 1795.¹⁵⁰ While the 1769 failure is reflected in the exports for that year, the 1795 failure reduced the

¹⁴⁸Wheat and flour were also imported from England in some years of particularly severe crop failures. See: F. Ouellet, op. cit., p. 130.

¹⁴⁹F. Ouellet and J. Hamelin, op. cit., pp. 90-92.

¹⁵⁰Ibid., p. 92.

TABLE 20

ESTIMATE OF WHEAT PRODUCTION IN LOWER CANADA, 1765-99

Year	Local Wheat Consumption	Exports	Total Production	Year	Local Wheat Consumption	Exports	Total Production
1765	432,822	- ^a	-	1783	687,003	20,430	707,433 ^b
1766	444,075	-	-	1784	700,674	39,680	740,354 ^b
1767	455,619	19,340	474,959	1785	743,417	16,592	760,009
1768	467,468	24,052	491,520	1786	798,764	156,204	954,968
1769	479,620	0	479,620 ^b	1787	836,876	-	-
1770	492,088	59,247	551,335	1788	887,927	249,698	1,137,625 ^b
1771	504,885	197,929	702,814	1789	942,090	-	-
1772	518,010	240,386	758,396	1790	1,000,128	-	-
1773	531,476	276,831	808,307	1791	1,028,134	-	-
1774	545,296	467,373	1,012,669	1792	1,050,520	-	-
1775	559,476	187,494	846,970	1793	1,080,139	541,679	1,621,817
1776	574,021	557,284	1,131,305	1794	1,110,383	483,486	1,593,869
1777	588,944	56,604	645,548	1795	1,141,476	484,587	1,626,063 ^b
1778	604,258	83,145	687,403	1796	1,173,437	24,866	1,198,303
1779	619,969	0	619,969 ^b	1797	1,206,291	101,109	1,307,400
1780	636,089	0	636,089 ^b	1798	1,240,068	139,377	1,379,445
1781	652,624	0	652,624 ^b	1799	1,274,788	201,245	1,476,033
1782	669,594	300	669,894 ^b				

^aNot Available.

^bEstimates are probably high as these were years of complete or partial crop failures.

Source: For export figures, See: Table 1, Appendix I
 Estimates of local wheat consumption are based on population data for 1765, 1784 and 1790 in: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4, (Ottawa: 1876), pp. 64-65 and 74-77; and on an annual estimate of 6.2 bushels of wheat per person.

quantities exported which fell from 484,587 in 1795 to 24,866 bushels.

During the years of crop failures, cereals were imported for local consumption and estimates of total production for these years as shown in Table 20 are somewhat overestimated.

Table 20 suggests that the year 1770 marked the beginning of a period of expansion in wheat production reaching a climax of approximately 1,130,000 bushels in 1776 of which 557,284 were exported.

In 1777, Lower Canadian agriculture entered a period of difficulties which culminated in six consecutive crop failures from 1779 to 1784.

From 1786 to 1788, wheat production increased mainly because of the high prices for that product in England.¹⁵¹

There is a gap in export data for the years 1788-92. This however was a period of severe crop failures and famine in the colony and in 1790 the export of agricultural products was prohibited by the Government.¹⁵²

From 1792 to 1799, excepting the partial failure in 1795, wheat production greatly increased owing mainly to the European wars which isolated Britain from its normal supply channels and to the bad crops which plagued Europe during this period.¹⁵³

¹⁵¹F. Ouellet, op. cit., p. 130.

¹⁵²Ibid., p. 131.

¹⁵³R. L. Jones, "Agriculture in Lower Canada, 1792-1815", Canadian Historical Review, Vol. 27, No. 1, (March, 1946), p. 39.

B. 1800-1826

From 1800 onwards wheat and flour were imported from the United States and Upper Canada on an important scale. Export data from the St. Lawrence ports are more indicative of the activity of the Quebec merchants than of the trends in agricultural production in Lower Canada. Data concerning the imports of wheat and flour from the United States and Upper Canada at the ports of St. John and Coteau du Lac must be taken into account. It can be seen from Table 1 in Appendix I that data concerning imports and exports at these interior ports contain many gaps.

Imports from Upper Canada and from the United States through Coteau du Lac are available for the period 1817-25 inclusive only, while imports from the United States through St. John are available from 1807 to 1846 and from 1848 to 1850.

Therefore, only for nine years, 1817 to 1825, are data complete. Since data concerning the total exports of wheat and flour from Lower Canada are also available for these years,¹⁵⁴ it is possible to determine the proportion of wheat and flour exported from Lower Canada, which was effectively produced in that province.

Table 21 shows the yearly imports of wheat and flour, in bushels of wheat, from Upper Canada and from the United States, as well as the total exports of these products,

¹⁵⁴These figures are given in Appendix I, Table 2.

TABLE 21

TOTAL EXPORTS OF WHEAT AND FLOUR^a FROM LOWER CANADA, AND IMPORTS OF WHEAT AND FLOUR
AT THE PORTS OF ST. JOHN AND COTEAU DU LAC, 1817-25

Year	Wheat and Flour Imported into Lower Canada at St. John and Coteau du Lac			Wheat and Flour Exported from Lower Canadian Ports ^b	Exports Produced in Lower Canada
	From The United States (Bushels)	From Upper Canada (Bushels)	Total (Bushels)	Total (Bushels)	Total (Bushels)
1817	19,735	194,002	213,737	340,083	126,246
1818	3,160	223,095	226,255	554,548	328,293
1819	20,039	63,074	83,109	98,409	15,300
1820	250,594	164,353	414,296	568,858	154,562
1821	275,771	154,591	430,362	433,463	3,101
1822	123,846	205,382	329,227	236,670	-92,557
1823	2,662	508,326	510,986	235,970	-275,016
1824	8,445	130,569	139,014	214,901	75,887
1825	4,113	177,382	181,495	918,248	736,753

^aFlour is converted into bushels of wheat: 1 barrel of flour equals 5 bushels of wheat.

^bThe ports for which data are available for these years are given in Appendix I, Table 1.

Source: See Appendix I, Table 1.

from Lower Canadian ports.

Subtracting the total imports from total exports of wheat gives the quantity of wheat exported that was produced in Lower Canada when the figure is positive. A negative result as is the case in 1822 and in 1823, suggests that there were crop failures during these years and that wheat imported from Upper Canada and from the United States was required to meet local consumption. However, before this deduction can be made, the data must be complemented with qualitative material.

In order to estimate the total wheat production in Lower Canada, the quantities required for local consumption must be added to the surpluses exported. Consumption requirements for the period 1817-25 are derived in the same manner as was done for the 1760-99 period, assuming again that the annual average consumption of wheat per person was 6.2 bushels.

Table 22 shows the yearly quantities of wheat consumption of the population of Lower Canada, the exports of wheat produced in Lower Canada and the resulting yearly estimates for total wheat production for the period 1817-25.

In the absence of quantitative information for the years 1800-16, it is necessary to resort to qualitative material. This will also be useful in interpreting the estimated figures for wheat production for the 1817-25 period.

The expansion of the wheat trade begun in 1792 continued into the early years of the nineteenth century.

TABLE 22

ESTIMATE OF WHEAT PRODUCTION IN LOWER CANADA, 1817-25

Year	Local Consumption (Bushels)	Wheat Exports Produced in Lower Canada (Bushels)	Total Production (Bushels)
1817	2,276,212	126,246	2,402,458
1818	2,346,774	328,293	2,675,067
1819	2,419,525	15,300	2,434,825
1820	2,494,533	154,562	2,649,095
1821	2,571,865	3,101	2,574,966
1822	2,650,283	-92,557	2,557,726
1823	2,705,940	-275,016	2,430,924
1824	2,762,763	75,887	2,838,659
1825	2,820,783	736,753	3,557,536

Source: Data on local consumption are based on a yearly consumption of 6.2 bushels of wheat per person, on total population for the year 1814 and on the annual average rates of increase, compound, of total population for the periods 1814-22 and 1822-25 given in Chapter II, Table 2.

Exports of wheat produced in Lower Canada, from: Table 21.

From 1800 to 1802, good harvests in Lower Canada were accompanied by increased British demand for agricultural products.¹⁵⁵

Although British demand for Lower Canadian wheat was still relatively strong from 1803 to 1808 there were but slight surpluses of wheat for export in Lower Canada, which constituted only a small fraction of the total wheat exports to Britain.¹⁵⁶

From 1802 to 1812, wheat production declined¹⁵⁷ and by 1815 much of the seigneurial land was exhausted due to inefficient methods of cultivation.¹⁵⁸ It is beyond the scope of this thesis to discuss methods of cultivation in existence in Lower Canada, but references to material dealing with this are given in Appendix III which presents suggestions for further research.

In the meantime wheat was rapidly becoming the staple product of Upper Canada and from 1800, breadstuffs from that province were regularly shipped to Lower Canada.¹⁵⁹ Although data are unavailable prior to 1817, it appears from Table 22 that the quantities shipped reached important

¹⁵⁵R. L. Jones, "Agriculture in Lower Canada, 1792-1815", Canadian Historical Review, Vol. 27, No. 1, (March, 1946), p. 39.

¹⁵⁶F. Ouellet, op. cit., p. 181.

¹⁵⁷F. Ouellet and J. Hamelin, op. cit., p. 94.

¹⁵⁸R. L. Jones, "French-Canadian Agriculture in the St. Lawrence Valley, 1815-1850", Agricultural History, Vol. 16, (July, 1942), p. 141.

¹⁵⁹R. L. Jones, "Agriculture in Lower Canada, 1792-1815", Canadian Historical Review, Vol. 27, No. 1, (March, 1946), pp. 28, 29 and 35.

proportions during some years.

Lower Canada had also been importing breadstuffs from the United States.¹⁶⁰ Table 23 shows the amount of wheat and flour imported into Lower Canada at the Port of St. John from 1807 to 1816.

TABLE 23

IMPORTS OF UNITED STATES' WHEAT INTO LOWER CANADA
THROUGH THE PORT OF ST. JOHN, 1807-16

Year	Imports of Wheat (Bushels)
1807	7,182
1808	196
1809	239
1810	625
1811	6,482
1812	0
1813	35
1814	0
1815	12,092
1816	31,551

Source: See Appendix I, Table 1.

In 1820, lower prices for wheat in Great Britain closed the British market to Canadian wheat as well as to American wheat shipped from the St. Lawrence ports.¹⁶¹

From 1787, trade had been free between Lower Canada and the United States and the latter country's wheat competed

¹⁶⁰Ibid., p. 41.

¹⁶¹H. A. Innis and A. R. M. Lower, Select Documents in Canadian Economic History, 1783-1885, (Toronto: University of Toronto Press, 1933), p. 264.

with Upper Canadian wheat on the Lower Canada market and even in the Upper Province.¹⁶² In 1822 duties were imposed on American cereals imported into Lower Canada at the request of Upper Canadian merchants.¹⁶³

The effects of this policy were immediate. Wheat imported from the United States into Lower Canada decreased from 123,846 bushels in 1822 to 2,662 in 1823 and 8,445 in 1824 while imports of wheat from Upper Canada increased from 205,382 bushels in 1822 to more than 500,000 in 1824 (see Table 21).

In 1822 and 1823 more wheat was imported into Lower Canada from the United States and Upper Canada than was exported from Lower Canada. The difference, however, does not necessarily indicate a deficit in the production of wheat in Lower Canada for these years. The closing of the British market to colonial wheat in 1820 reduced by about half the total exports of wheat from Lower Canadian ports from 1822 to 1823 (see Table 21).

It is probable that great amounts of wheat and flour which could not be exported to England were stocked for future shipping.

According to F. Ouellet the wheat crop in 1823 was such that there was a shortage of 25,000 barrels of flour for

¹⁶²Ibid., p. 44.

¹⁶³R. L. Jones, History of Agriculture in Ontario, 1613-1880, (Toronto: The University of Toronto Press, 1946), p. 46.

local consumption.¹⁶⁴ If his estimate is correct and if the figures in Table 21 are also correct, this would mean that approximately 250,000 bushels of wheat and flour had not been exported nor consumed in 1823.

In 1825 the Corn Laws were amended in favour of the Canadas¹⁶⁵ and British demand for wheat expanded rapidly. However, after an exceptional harvest in 1824 which permitted the export of 736,753 bushels of wheat and flour, Lower Canada experienced successive poor harvests until 1827 when production was just sufficient to meet local requirements.

C. 1827-1850

From 1827 to 1850, information concerning exports and imports cannot be used in evaluating the agricultural production of Lower Canada since data on the quantity of foodstuffs entering Lower Canada at Coteau du Lac are not available. Fortunately agricultural censuses were taken in 1827, 1831, 1844 and 1851¹⁶⁶ and the data taken from these censuses are given in Table 24.

As was noted earlier, the 1827 wheat crop was sufficient to meet local consumption requirements. The crops of 1828 and 1829 were ravaged by the wheat midge "the worst pest the wheat growers of the Canadas ever had to contend with."¹⁶⁷

¹⁶⁴F. Ouellet, op. cit., pp. 331-32.

¹⁶⁵Ibid., p. 331.

¹⁶⁶Census of Canada, 1870-71, Vol. 4, pp. 96, 109, 155, 221-22.

¹⁶⁷R. L. Jones, "French-Canadian Agriculture in the St. Lawrence Valley, 1815-1850", Agricultural History, Vol. 16, (July, 1942), p. 141.

In 1831, 3,404,756 bushels of wheat were produced. This, as in 1827, was approximately equal to the requirements for local consumption, that is 6.2 bushels per person.

Table 24 shows that the different grains were produced in approximately the same proportions in 1827 and 1831. From 1831 to 1844 however, the data suggest that agriculture underwent important changes. During this period, wheat production decreased from 3,404,756 to 942,835 bushels, while the production of barley increased from 394,795 to 1,195,456 bushels.

A series of crop failures, again due to the wheat midge, in 1832, 1833, 1834, 1835, 1836 and 1839 compelled the habitants to substitute oats and other grain for wheat.¹⁶⁸ Soil exhaustion seems to have contributed to the decrease in wheat production, since the amount grown in newly settled regions of the province showed increases during the same period.¹⁶⁹ W. H. Parker suggests that the regions which were affected mostly by the successive crop failures were the most important wheat producing regions in the province in 1831.¹⁷⁰

The wheat midge did not disappear until 1845 after which new efforts to revive the cultivation of wheat were made. However the production of wheat in 1851 had not

¹⁶⁸R. L. Jones, "French-Canadian Agriculture in the St. Lawrence Valley, 1815-1850", Agricultural History, Vol. 16, (July, 1942), p. 141; and W. H. Parker, "A Revolution in the Agricultural Geography of Lower Canada, 1833-1838", Revue Canadienne de Géographie, Vol. 11, no 4, (oct.-déc. 1957), p. 190.

¹⁶⁹Ibid., p. 190.

¹⁷⁰Ibid., p. 191.

TABLE 24

AGRICULTURAL PRODUCTION IN LOWER CANADA FOR THE YEARS 1827, 1831, 1844 and 1851,
AS GIVEN IN THE CENSUSES FOR THOSE YEARS

Year	Wheat (Bushels)	Barley (Bushels)	Peas (Bushels)	Oats (Bushels)	Rye (Bushels)	Potatoes (Bushels)	Buck Wheat (Bushels)	Indian Corn (Bushels)
1827	2,931,240	363,117	823,318	2,341,529	217,543	6,796,310	121,397	333,150
1831	3,404,756	394,795	948,758	3,142,274	234,529	7,357,416	106,050	339,633
1844	942,835	1,195,456	1,219,420	7,238,753	333,446	9,918,869	374,809	141,008
1851	3,073,943	494,766	1,415,806	8,977,380	325,422	4,424,016	532,412	401,284

Source: Canada, Department of Agriculture, Census of Canada, 1870-71, Vol. 4,
(Ottawa: 1876), pp. 96, 109, 155, 221-22.

surpassed that of 1831 (see Table 24).

The repercussions of the agricultural crisis on wheat production can be shown by comparing the ratio of wheat production to barley, peas and oats for the four census years. The calculations are given in Table 25.

TABLE 25

RATIO OF WHEAT PRODUCTION TO BARLEY, PEAS
AND OATS, 1827, 1831, 1844 and 1851

Year	Wheat To Barley Ratio	Wheat To Peas Ratio	Wheat To Oats Ratio
1827	8.1 : 1	3.6 : 1	1.3 : 1
1831	8.6 : 1	3.6 : 1	1.1 : 1
1844	0.8 : 1	0.8 : 1	0.1 : 1
1851	6.2 : 1	2.2 : 1	0.3 : 1

Source: Calculations based on data in Table 24.

From 1827 to 1831 the ratio of wheat to barley increased slightly, that of wheat to peas remained constant while that of wheat to oats decreased lightly. However, the devastating effects of the wheat midge, the exhaustion of the land and the consequent replacement of wheat by other grains from 1831 to 1844 are apparent from the ratios in 1831 and 1844. The ratios in 1851 indicate however, that the substitution was temporary, although wheat had not regained the importance it had in 1831.

D. Conclusion

A review of secondary as well as published primary material indicates that quantitative information concerning agricultural production is scarce for the period under survey. Data have been found in the census reports, only for the later part of the period, e.g. for the years 1827, 1831, 1844 and 1851.

Consequently, an attempt has been made to estimate the production of wheat in Lower Canada for the period prior to 1827. This required an assumption as to the amount of wheat and flour annually consumed by the population of the province and secondly the use of available export and import data. The numerous gaps in the statistical series for exports and imports limited the number of years for which wheat production could be estimated. It was therefore necessary to refer to qualitative material to fill these gaps.

The estimate of wheat production, the qualitative information from secondary sources consulted as well as the census data for the later years of the period under survey suggest that wheat production in Lower Canada made some progress during the first forty or fifty years of the period under survey owing mainly to agricultural encouragement by the colonial authorities and the higher productivity of newly cultivated land.

Evidence was found to suggest that the exhaustion of the soil by 1815 and later severe crop failures due to

the ravages of the wheat midge compelled the habitants to substitute other grains for wheat.

II. Timber Production

A. General Outlook on the Timber Trade in Lower Canada

Although forest resources in New France were plentiful, the forest industry could not expand because of want of external markets. The only markets available were the mother country and the French West Indies. The former had sufficient resources and could rely on supplies from the Baltic regions if necessary while the latter imported timber from New England. High costs of transportation of forest products from New France excluded it from these markets and consequently timber remained a domestic industry.¹⁷¹

The Conquest brought to Lower Canada British merchants eager to integrate the forest resources into the British commercial system. However, the Conquest had not reduced transportation costs and Lower Canada could not compete with New England and Baltic timber imported into England.

Conditions could not be favorable to the expansion of the timber trade until New England was excluded from the British market and until duties were imposed on timber originating from the Baltic regions.

As a consequence of the American Revolution, supplies of forest products in England had decreased

¹⁷¹M. Q. Innis, op. cit., pp. 42-43

appreciably. This together with an unfavorable military climate in Europe compelled Britain to consider her North American colonies as possible sources of timber.¹⁷² Consequently, in 1795 a tariff of 10s was imposed on every load (50 cubic feet) of Baltic timber imported into England.¹⁷³

However, transportation costs from the St. Lawrence ports to Great Britain were so high that this measure had no appreciable effect on timber exports from Lower Canada.¹⁷⁴

Timber supply shortages in England, increased shipbuilding activity and a reluctance to depend on European supplies of timber in times of war resulted in a further increase of tariffs on foreign timber in 1805,¹⁷⁵ in order to encourage timber exports from British North American colonies.

This led to an immediate expansion of shipments of pine and oak timber from Lower Canada, two products closely linked to shipbuilding. Exports of pine timber increased from 896 pieces in 1805 to 23,699 pieces in 1809 and oak timber exports increased from 4,535 to 10,143 pieces during the same period (see Table 2 in Appendix I).

In 1806, the Berlin Decree was issued and Britain was completely cut off from timber originating from the

¹⁷²F. Ouellet, op. cit., pp. 188-89.

¹⁷³Ibid., p. 189.

¹⁷⁴Ibid., p. 189.

¹⁷⁵J. W. Hughson and C. C. J. Bond, Hurling Down the Pine, (2nd ed., revised, Quebec: The Historical Society of the Gatineau, 1965), p. 6.

Baltic regions. Further efforts had to be made to increase the imports of timber from its North American colonies.¹⁷⁶

Consequently tariffs on foreign timber were increased to 34s 8d in 1810¹⁷⁷ which resulted in the tripling of both oak and pine timber exports from Lower Canada from 1809 to 1810.

The preferential tariffs were modified in 1814.¹⁷⁸ In that year, the tariffs on foreign timber reached a maximum 65s a load.¹⁷⁹

There resulted major increases in the export of pine timber from Lower Canada. Oak exports did not increase appreciably since resources of this timber had decreased to a critical level by this time.¹⁸⁰

From 1795 to 1820 timber exports from Lower Canada had been entering the British market duty free and had increased the price of timber in England, since duties were imposed on timber originating in the Baltic regions. This created pressures for levying duties on imported colonial timber and in 1821 a tariff of 10s a load was imposed on timber imported from the British North American colonies and the tariff on

¹⁷⁶W. T. Easterbrook and H. G. Aitken, op. cit., pp. 192-93.

¹⁷⁷Ibid., p. 193.

¹⁷⁸Ibid., p. 193.

¹⁷⁹F. Ouellet, op. cit., pp. 216-17.

¹⁸⁰Ibid., p. 192.

foreign timber was reduced by the same amount.¹⁸¹

In 1842 the tariffs on foreign timber were reduced from 55s to 30s a load. Further reductions were made in 1845, 1846, 1848 and 1851 and by 1860 the tariff was abolished completely.¹⁸²

By this time however the Canadian timber trade had developed rapidly owing mainly to the stimulus afforded by the tariff preferences from the beginning of the nineteenth century. Consequently the reduction and finally the abolition of the duties on foreign timber did not appreciably affect the timber trade.¹⁸³ After 1850, technological changes were responsible for the decline of the timber trade.

B. Data on Timber Production

The task of determining the amount of timber actually cut within the boundaries of Lower Canada presents a number of difficulties.

Timber boundaries do not correspond to political boundaries and it is difficult to ascertain the quantity of timber cut in Lower Canada and that cut in Upper Canada and the United States, since timber from all these regions were shipped from Lower Canadian ports.

¹⁸¹A. R. M. Lower, "The Trade in Square Timber", Contributions to Canadian Economics, Vol. 6, 1933, p. 45.

¹⁸²W. T. Easterbrook and H. G. Aitken, op. cit., p. 201.

¹⁸³Ibid., p. 201.

1. Pine Timber Regions

Evidence is available as to the most important timber regions in Canada at the time. As regards pine timber:

In eastern North America the area of greatest density of these two forest species [white and red pine] lay largely about the drainage system of the St. Lawrence River. The finest and richest stands were in Michigan. In Canada the Trent River watershed provided much good timber. British North America's greatest pine district, however was the Ottawa River basin.¹⁸⁴

Another author suggests that the Quebec side of the Ottawa Valley was more important as a timber supply region than the Upper Canadian side:

For over a century--since June 11, 1806, when the first raft of pine left the mouth of the Gatineau--the valley of the Ottawa on the Quebec side of the river has been regarded as the chief centre of the pine industry of Canada.¹⁸⁵

The Journals of the Legislative Assembly of the Province of Canada contain information as to the amount of timber originating from different parts of Canada and the United States, inspected and measured at the Port of Quebec. Unfortunately these data are available for the years 1844, 1845, 1846 and 1850 only. They are presented in Table 26 for white and red pine.

The pine timber originating in Lower Canada included timber from the Montreal and Quebec regions and from

¹⁸⁴J. W. Hughson and C. C. J. Bond, op. cit., p. 1.

¹⁸⁵S. Shortt and A. G. Doughty, ed., op. cit., Vol. 16, pp. 531-32.

TABLE 26

AMOUNT OF PINE TIMBER MEASURED BY THE SUPERINTENDENT OF CULLERS AT QUEBEC,
1844, 1845, 1846 and 1850
(Pieces)

Regions	White Pine				Red Pine			
	1844	1845	1846	1850	1844	1845	1846	1850
Ottawa River, Above Bytown .	92,280	128,327	125,780	127,527	102,753	109,548	118,131	46,161
Ottawa River, Below Bytown .	36,452	60,447	92,827	32,805	248	362	3,964	44
Sub Total * *	128,732	188,774	218,607	160,332	103,001	109,910	122,095	46,205
Quebec and Montreal . . .	8,175	12,933	22,624	5,805	2	383	4,264	49
Gatineau . . .	9,727	19,252	23,284	6,208	3,337	1,494	3,959	317
Sub Total . .	17,902	32,185	45,908	12,013	3,339	1,877	8,223	366

TABLE 26-Continued

Regions	White Pine				Red Pine			
	1844	1845	1846	1850	1844	1845	1846	1850
St. Lawrence from Montreal to Head of Lake Ontario	34,615	61,381	108,541	30,594	1,727	1,554	8,391	68
Rideau	7,758	18,228	26,527	6,692	33	1,095	1,778	193
Grand River and Lake Erie	1,079	3,678	4,508	4,113	0	990	5	141
Sub Total	43,452	83,287	139,576	41,399	1,760	3,639	10,174	402
T O T A L	190,086	304,246	404,091	213,744	108,100	115,426	140,492	46,973

Source: For 1844, from: Journals of the Legislative Assembly of the Province of Canada, 1844-45, App. K.
 For 1845, from: JLAPC, 1846, App. T.
 For 1846, from: JLAPC, 1847, App. AA.
 For 1850, from: JLAPC, 1851, App. LLL.

the Gatineau, and also partly from the Ottawa River region.

The data confirm the supremacy of the Ottawa Valley as the most important source of white and red pine timber. In 1844, white pine timber cut in the Ottawa Valley region and brought to Quebec totaled 128,732 pieces compared to 61,354 pieces cut in the other timber regions; in 1850, these figures are 160,332 and 53,412 pieces respectively. However information must be found as to the amount of this timber that was cut on the Lower Canadian bank of the River from that cut on the Upper Canadian side.

The only quantitative information that has been found, which distinguishes the amount of pine timber cut in Lower Canada from that cut in Upper Canada for the Ottawa Valley region, concerns the amount of pine timber floated down the Ottawa River in 1838, 1839 and 1840 on which duties have been collected at Bytown. The data are given in Table 27.

TABLE 27

AMOUNT OF PINE TIMBER FLOATED DOWN THE OTTAWA RIVER
IN 1838, 1839 AND 1840, ON WHICH DUTIES
HAVE BEEN COLLECTED AT BYTOWN
(Pieces)

	Originating in Lower Canada		Originating in Upper Canada	
	White Pine	Red Pine	White Pine	Red Pine
1838	5,824	23,050	2,474	55,140
1839	8,942	20,471	4,609	60,529
1840	13,931	27,512	14,003	66,461
Total	28,697	70,983	21,086	182,130

Source: Journals of the Legislative Assembly of the Province of Canada, 1841, App. G.

The figures do not indicate the supremacy of the Lower Canadian timber region as far as total pine timber production is concerned. For the three years the number of pieces of red pine timber originating in Upper Canada was more than double the number of pieces originating in Lower Canada.

The number of pieces of white pine cut on the Lower Canadian side of the River (28,697) is only slightly superior to that cut on the Upper Canadian side (21,086).

These data are not conclusive however since the timber that passed Bytown only represents that amount originating in the Ottawa Valley region above Bytown.

2. Oak Timber Regions

Oak timber came mostly from Northern New York, Ohio, Michigan and Western Upper Canada.¹⁸⁶

The number of pieces of oak timber measured at Quebec by the supervisor of cullers in 1844, 1845, 1846 and 1850 are shown in Table 28. From a total of 13,826 pieces of oak timber inspected in 1844, 421 pieces came from the Quebec and Montreal regions and the Gatineau, 988 from the Ottawa Valley region and 12,417 from the other three regions situated mostly in Upper Canada.

These data indicate that oak timber was produced mostly in regions outside Lower Canada.

¹⁸⁶W. T. Easterbrook and H. G. Aitken, op. cit., p. 197.

TABLE 28

AMOUNT OF OAK TIMBER MEASURED BY THE SUPERINTENDENT
OF CULLERS AT QUEBEC, 1844, 1845, 1846 and 1850
(Pieces)

Regions	1844	1845	1846	1850
Ottawa River, Above Bytown	703	5,857	5,184	2,265
Ottawa River, Below Bytown	285	2,179	4,163	145
Sub Total	988	8,036	9,347	2,410
Quebec and Montreal	419	19	65	58
Gatineau	2	32	38	31
Sub Total	421	51	103	89
St. Lawrence from Montreal to Head of Lake Ontario	3,375	7,090	10,061	1,953
Rideau	931	1,200	817	528
Grand River and Lake Erie	8,111	22,464	32,212	12,919
Sub Total	12,417	30,754	43,090	15,400
T O T A L	13,826	38,841	52,540	17,899

Source: For 1844, from: Journals of the Legislative
Assembly of the Province of Canada, 1844-45,
App. K.
For 1845, from: JLAPC, 1846, App. T.
For 1846, from: JLAPC, 1847, App. AA.
For 1850, from: JLAPC, 1851, App. LLL.

The scarcity of data on production of timber requires that export and import data for timber be examined in order to estimate the relative proportion of exported timber originating in Lower Canada.

C. Data on Exports and Imports of Timber

Data concerning imports of oak and pine timber from the United States through the Port of St. John are available from 1807 to 1835 inclusive and are shown in Table 29. Timber was imported from the United States for re-export at the Port of Quebec to benefit from the tariff advantages allowed the British colonial timber imported to Britain.¹⁸⁷

Statistics for timber imports from Upper Canada and the United States through Coteau du Lac are available for the years 1823, 1824 and 1825 only. Also total exports of timber from Lower Canadian ports are available for these years (see Table 2 in Appendix I) and it is possible to estimate the amount of timber exported which was cut in Lower Canada for these three years only.

Imports from St. John and Coteau du Lac and total exports from Lower Canadian ports are shown for pine timber and oak timber in Tables 30 and 31 respectively.

Pieces of pine timber exported from Lower Canadian ports in 1823, 1824 and 1825 amounted to 315,223 of which

¹⁸⁷D. Creighton, The Empire of the St. Lawrence, (Toronto: Macmillan Co. of Canada Ltd., 1956), p. 169.

TABLE 29
 IMPORTS OF PINE AND OAK TIMBER FROM THE UNITED STATES
 THROUGH THE PORT OF ST. JOHN, 1807-35
 (Pieces)

Year	Pine Timber	Oak Timber	Year	Pine Timber	Oak Timber
1807	2,307	9,060	1822	759	80
1808	9,036	1,071	1823	1,803	0
1809	5,072	70	1824	495	26
1810	34,302	22,640	1825	4,555	12,276
1811	27,071	10,181	1826	341	126
1812	0	0	1827	0	0
1813	0	0	1828	0	0
1814	0	0	1829	1,389	0
1815	1,656	74	1830	30	2,677
1816	5,617	1,842	1831	30	78
1817	10,851	311	1832	1	0
1818	14,420	1,601	1833	0	0
1819	41,007	6,112	1834	0	0
1820	509,039	9,746	1835	164	4,006
1821	25,477	846			

Source: See Appendix I, Table 1.

TABLE 30

IMPORTS OF PINE TIMBER AT ST. JOHN AND COTEAU DU LAC AND TOTAL EXPORTS
FROM LOWER CANADIAN PORTS, 1823, 1824 and 1825
(Pieces)

	Imports			Total Exports from Lower Canada	Exports Produced in Lower Canada ^a
	From St. John	From Coteau du Lac	Total		
1823	1,803	59,699	61,502	82,954	21,452
1824	495	42,435	42,930	99,682	56,752
1825	4,555	29,398	33,953	132,587	98,634
Total	6,853	131,532	138,385	315,223	176,838

^aTotal exports minus total imports.

Source: See Appendix I, Table 1.

TABLE 31

IMPORTS OF OAK TIMBER AT ST. JOHN AND COTEAU DU LAC AND TOTAL EXPORTS
FROM LOWER CANADIAN PORTS, 1823, 1824 and 1825
(Pieces)

	Imports			Total Exports from Lower Canada	Exports Produced in Lower Canada ^a
	From St. John	From Coteau du Lac	Total		
1823	0	15,184	15,184	16,668	1,484
1824	26	20,374	20,400	19,994	-406
1825	12,276	29,895	42,171	33,152	-9,019
Total	12,302	65,453	77,755	69,814	-7,941

^aTotal exports minus total imports.

Source: See Appendix I, Table 1.

176,838, if the data are exact,¹⁸⁸ were cut in Lower Canada (see Table 30).

Pieces of oak timber imported at Coteau du Lac and St. John amounted to 77,755 for the years 1823, 1824 and 1825 while total exports from Lower Canada amounted to only 69,814. This suggests that approximately -7,941 pieces were imported into Lower Canada to meet the requirements of that province. This seems to confirm the fact that oak timber regions were situated mainly outside Lower Canada.

D. Conclusion

Quantitative data on timber production in Lower Canada have been unearthed for five years of the last decade of the period under survey only. These data as well as qualitative information on the main timber regions of North America suggest that the most important pine timber region in Canada at the time was the Ottawa Valley. Since these forests are situated partly in Upper Canada and partly in Lower Canada and since all the timber in this region was floated down the Ottawa River, it is difficult to ascertain the number of pieces cut within the boundaries of Lower Canada. Data on the amount of timber passing Bytown in 1838, 1839 and 1840 distinguish between timber cut within the boundaries of Upper Canada from that cut in Lower Canada. The

¹⁸⁸ A. R. M. Lower suggests that the data on imports into Lower Canada are not reliable because of the difficulty in distinguishing American from Canadian timber at inland ports. See: A. R. M. Lower, op. cit., pp. 94 and 95.

figures indicate that the Upper Canadian part of the Ottawa Valley was more important as a supply region for red pine timber while Lower Canada had a slight advantage as a supplier of white pine timber. However these data refer only to timber cut in the region above Bytown. Evidence suggests that the timber region below Bytown was also important (see Table 26). However information as to the relative importance of the two provinces as timber supply regions in this part of the Ottawa Valley has not been unearthed as yet.

Many sources of information concerning the timber industry are available and some of these are given in Appendix III.

CHAPTER VI

INVESTMENT

I. Investment in Lower Canada, 1760-1850

From 1760 to 1850 Lower Canada underwent major changes¹⁸⁹ which made it progress from a largely self-sufficient agricultural economy to an exchange economy.

From 1760 to approximately 1817, when government outlays on transportation improvements, e.g. roads, bridges and canals, became significant, investment in Lower Canada was for the most part "in the form of hard work and self-maintenance",¹⁹⁰ translated into improved farm land and transportation. Prior to 1817 road and bridge construction was the responsibility of the inhabitants of the Province,¹⁹¹ and this represented an important investment in the infrastructure of the Lower Canadian economy.

¹⁸⁹Some of these were the rise of more fixed capital intensive staple industries such as wheat and lumber, replacing furs, and the large capital outlays on transportation development.

¹⁹⁰H. C. Pentland, op. cit., p. 463.

¹⁹¹A few roads were built by army troops when it was impractical for the population to build them. One notable example is the Craig road, built from 1800 to 1810. See: G. P. de T. Glazebrook, A History of Transportation in Canada, (Toronto: The Ryerson Institute, 1938), p. 132.

The surpluses earned by the agricultural population were invested in the land either in the form of implements, barns and houses, cleared land, fences and livestock.

It was estimated that it required an investment of \$10^{*} to clear and fence one acre of land in Canada in 1848.¹⁹² If this estimate is realistic for Lower Canada for the period 1765-1850, the investment in cleared land can be approximated. During those eighty-six years, 3,383,964 acres of land were cleared and cultivated,¹⁹³ making for an investment of \$33,839,640 in cleared land.

From 1820 to the end of the period foreign capital poured into Lower Canada from Great Britain to be invested for the most part in land, water and rail communications.¹⁹⁴ H. C. Pentland notes that imported capital equipment constituted only a minor fraction of the whole capital inflow; the greater part of this went to pay individual workers and contractors.¹⁹⁵ This led to private accumulation of wealth on the part of the latter which could later be invested in railroad construction and banking.¹⁹⁶

Canals and railroads were designed primarily to intensify staple production and intra-continental division of

¹⁹²H. C. Pentland, op. cit., p. 463.

¹⁹³See Table 13 in Chapter III.

¹⁹⁴H. C. Pentland, op. cit., p. 463.

¹⁹⁵Ibid., p. 465.

¹⁹⁶Ibid., p. 466.

^{*}This figure is neither discussed nor justified by the author.

labor.¹⁹⁷ In the end they had exactly the opposite effect.

This is the suggestion put forward by H. C. Pentland:

They [canals and railroads] represented, first, a commitment of fixed capital, overhead costs, and permanent staffs, that are the essence of metropolitan economies. By integrating the Canadian market, they opened the way for Canadian manufacturers to conquer it. Most important, the inflow of foreign capital into Canada made it possible at the second and third remove for Canadians to amass funds which could be invested in new enterprises. The water sites created by the canals, the metal industries necessarily introduced by the railroads, and the mass of labour with urban preferences drawn by the construction work, all had the same result.¹⁹⁸

Data from official government sources concerning public as well as large scale private investment are plentiful for the period covered and their collection as well as the statement of the sources from which they are taken may be used as a starting point for a more elaborate analysis which is beyond the scope of this thesis.

Only large scale public and private investment are dealt with here, in the following order.

- Public investment comprises:

- A. Roads and Bridges¹⁹⁹
- B. Canals
- C. Montreal Harbour

Although the Government was engaged in the construction and repair of public buildings, such as prisons, court

¹⁹⁷Canals were also constructed for military reasons.

¹⁹⁸Ibid., p. 463.

¹⁹⁹Although prior to 1817, transportation development in the form of road and bridge construction were the responsibility of the population in general, the gradual take over of this field by the public sector makes it necessary to include it in public investment.

houses and post offices and subsidized the construction of schools, these expenditures were small compared to those on roads and bridges, canals and Montreal Harbour. They have been omitted.

- Private investment includes:

- A. Railroads²⁰⁰
- B. Banks
- C. Miscellaneous

II. Public Investment

A. Roads and Bridges

1. New France

The first roads constructed in New France, were those within the cities of Quebec and Montreal. Then as seigneuries were gradually opened and inhabited, other roads were built. During the French Regime roads were classified under three heads:²⁰¹

(1) The king's roads or chemins royaux were the widest of the three and were used to travel from one parish to another. They were built and repaired by the habitants and owners of land in proportion to the area of land they occupied.

²⁰⁰ Although the Government contributed to the construction of railroads through loans and bond guarantees, they were essentially private undertakings.

²⁰¹ I. Caron, op. cit., p. 204.

(ii) The communication roads or chemins de communication were used to go from one farm to another within the same parish. These roads were built and repaired by the inhabitants who required them.

(iii) The mill roads or chemins de moulin lead to the flour mill within each seigneurie.²⁰² The censitaires were required to open and repair these roads.

During the winter months every habitant was responsible for removing the snow which covered the roads adjacent to his land.

Bridge construction and repair were carried out in the same manner as roads.

The responsibility for opening up new roads and bridges and repairing existing ones was given to the grand voyer. He was a special officer appointed to inspect all existing roads and bridges as well as construction in general, such as military fortifications, monuments, buildings and houses, in the colony.²⁰³ The grand voyer visited all parts of the colony in order to determine what and where new roads and bridges should be built and which should be repaired.

2. English Regime

With the Conquest the system of road and bridge construction in the colony underwent minor changes. Army

²⁰²As of 1686 every seigneur was supposed to build a flour mill on his seigneurie and the censitaires were obliges to use it to mill their grain. Ibid., p. 205.

²⁰³Ibid., pp. 199-200.

troops were used more often to open new roads and bridges and to repair existing ones. After 1760 a grand voyer was chosen in each district of the colony by the inhabitants of those districts. However the general rule remained that the population was responsible for roads and bridges and the government did nothing to relieve them of this burden, until much later.²⁰⁴

According to I. Caron from 1767 to 1782 work on roads and bridges were completely neglected. This may have been partly due to the difficulties encountered by Governor Carleton during his first administration and to the American invasion of 1775.²⁰⁵

However after 1783, an important project was undertaken mainly for security reasons: the Portage route, a new postal road between the colony and New Brunswick. The road was built between 1783 and 1786 by soldiers residing in the parishes adjacent to the road. For the first time, compensation was offered to the soldiers for their work in the form of food supplies plus a minimal pay of 12 shillings a day.²⁰⁶

In 1793, Jean Renaud, Grand Voyer for the district of Quebec, presented a report to the House of Assembly on the state of the roads in the Province. The report contains evidence showing that from 1783 to 1793, the habitants and the army had been quite active in road and bridge construction,

²⁰⁴Ibid., pp. 278-81.

²⁰⁵Ibid., p. 283.

²⁰⁶Ibid., p. 287.

although the former were more and more reluctant to work without pay.²⁰⁷

In 1796, a law was passed changing somewhat the system of road and bridge construction. The law reasserted the inhabitants' responsibilities for road and bridge construction. However they could be exempted from physical work on these projects subject to the payment of a tax.²⁰⁸

In 1806, the Government decided to give contracts to individuals to build roads. However since no money had been appropriated for such public works, pieces of land, adjacent to these roads were given to those individuals as compensation, on condition that they succeed in establishing one farmer on every mile of road built.²⁰⁹

However the new road construction policy by which tracts of land were given to those individuals who agreed to build new roads was altogether unsuccessful since settlers found it difficult to meet the conditions of the grants. To deal with this problem, new legislation, passed in 1815, permitted the Government to subsidize such public works.²¹⁰ Since the funds available were limited, only those projects considered to be of high priority were subsidized. These

²⁰⁷Ibid., pp. 291-94.

²⁰⁸Ibid., p. 295.

²⁰⁹Ibid., p. 365.

²¹⁰Statutes of Lower Canada, 1815, 55 Geo. 3, c. 8.

included:

(i) Construction and repair of roads, leading to another province or from one district to another;

(ii) Main postal roads;

(iii) Main local roads;

(iv) Bridges over the most important rivers.²¹¹

The Government also permitted individuals to build bridges at their own expense and to charge a toll to persons crossing the bridges. This policy of bridge construction was relatively successful since, from 1805 to 1841, 41 bridges were authorized to be built in this manner.²¹² Table 32 shows the number of yearly authorizations for building toll bridges in Lower Canada from 1805 to 1850.

In 1817, a sum of £55,800²¹³ was voted to subsidize the improvement of internal communications of which £19,000 were to be spent in the district of Quebec, £24,500 in the district of Montreal, £9,200 in the district of Three Rivers and £2,500 for the improvement of navigation.²¹⁴

According to a report of the House of Assembly in 1821, of the total, only £3,141 sterling had been spent on road and bridge construction.²¹⁵

²¹¹I. Caron, op. cit., p. 371.

²¹²See Table 32.

²¹³Throughout the text of this chapter, except when indicated otherwise, sums of money are given in Halifax currency. £1 (Halifax currency) = \$4 and £1 sterling = £1 4s 4d Halifax.

²¹⁴I. Caron, op. cit., p. 372

²¹⁵Journals of the House of Assembly of Lower Canada, 1821-22, App. C. According to Table 33, from 1817 to 1821 inclusively, £5,223 sterling had been spent on transportation. The difference between this amount and the sum of £3,141 stated in the Report went towards the improvement of navigation.

TABLE 32

NUMBER OF TOLL BRIDGES AUTHORIZED TO BE CONSTRUCTED BY
INDIVIDUAL CONTRACTOR IN LOWER CANADA, 1805-49

Year	Number of Bridges	Year	Number of Bridges
1805	2	1825	2
1808	3	1827	1
1812	2	1830	2
1813	1	1831	2
1817	4	1832	1
1818	7	1834	2
1819	2	1845	1
1821	2	1847	3
1824	1	1849	3

Source: Statutes of Lower Canada,

1805: 45 Geo. 3, c. 4
 1808: 48 Geo. 3, c. 12, c. 16, c. 33
 1812: 52 Geo. 3, c. 17, c. 22
 1813: 53 Geo. 3, c. 10
 1817: 57 Geo. 3, c. 35, c. 36, c. 37, c. 38
 1818: 58 Geo. 3, c. 19, c. 20, c. 21, c. 22,
 c. 23, c. 24, c. 25
 1819: 59 Geo. 3, c. 26, c. 27
 1821: 1 Geo. 4, c. 23, c. 24
 1824: 4 Geo. 4, c. 34
 1825: 5 Geo. 4, c. 35, c. 36
 1827: 7 Geo. 4, c. 21
 1830: 10 & 11 Geo. 4: c. 55, c. 56
 1831: 1 Will. 4, c. 49, c. 50
 1832: 2 Will. 4, c. 62
 1834: 4 Will. 4, c. 29, c. 30

Statutes of Canada,

1845: 8 Vic., c. 90
 1847: 10 Vic., c. 96, c. 97, c. 99
 1849: 12 Vic., c. 186, c. 187, c. 189

However from 1822 onward and particularly during the period 1829 to 1833, transportation development was given great impetus, although public expenditures for such works accounted for only a small fraction of total expenditures. Table 33 shows the yearly expenditures of the Civil Government of Lower Canada for the improvement of internal transportations from 1817 to 1841.²¹⁶

Another aspect of road construction and repair was the permission granted by the government to individuals or associations to build toll or turnpike roads. This policy became effective in 1840 with the incorporation of the Montreal Trust responsible for building roads in the Montreal region. The following year, the Quebec Turnpike Trust, responsible for building roads in the region of Quebec, was incorporated. From 1840 to 1850, these Trusts were permitted through various statutes to obtain loans or to raise a certain amount of capital in order to build the necessary roads.²¹⁷ Table 34 shows the yearly authorized

²¹⁶Internal transportation development also includes minor works concerned with the improvement of navigation. However throughout the period up to 1841, these expenditures on navigation form only a small fraction of expenditures on internal communications. For example, in 1817 of the £55,800 appropriated for internal communications £2,500 only went for improving navigation.

²¹⁷Two road companies of lesser importance were also incorporated: The Saint-Michel Road Company in 1841 with an authorized capital of £30,000 currency and The Huntington Plank Road Company in 1846 with an authorized capital of £3,000 currency. Statutes of Lower Canada, 1841, 4 Vic., c. 22 and Statutes of Canada, 1846, 9 Vic., c. 84.

TABLE 33
EXPENDITURES ON INTERNAL COMMUNICATIONS AND
TOTAL EXPENDITURES OF THE CIVIL GOVERNMENT
OF LOWER CANADA, 1817-41
(Pounds Sterling)

Year	Expenditures on Internal Communications	Total Expenditures
1817	1,935	109,305
1818	1,197	120,580
1819	1,198	72,355
1820	0	53,675
1821	892	78,708
1822	3,627	73,929
1823	2,329	106,498
1824	5,786	83,763
1825	0	80,350
1826	998	80,140
1827	869	100,514
1828	1,023	64,219
1829	17,822	169,533
1830	44,836	160,992
1831	50,729	163,738
1832	11,245	165,974
1833	12,266	126,079
1834	2,826	124,237
1835	1,047	70,718
1836	-a	-a
1837	-a	-a
1838	715	222,558
1839	5,969	165,362
1840	5,865	151,362
1841	415	45,984
Total	173,589	2,590,573

^aThe Public Accounts for the years 1836 and 1837 were never laid before the Legislature.

Source: Journals of the Legislative Assembly of the Province of Canada, 1847, App. KKK.

TABLE 34

TOTAL LOANS AUTHORIZED TO BE MADE BY THE MONTREAL
AND QUEBEC TURNPIKE TRUSTS, 1840-49
(Pounds currency)

Year(s)	Montreal Turnpike Trust	Quebec Turnpike Trust	Total
1840	47,000	0	47,000
1841	0	25,000	25,000
1842-44	0	0	0
1845	4,000	8,882	12,882
1846	27,000	0	27,000
1847-48	0	0	0
1849	12,000	25,000	37,000

Source: Statutes of Lower Canada,

1840: 3 Vic., c.31
1841: 4 Vic., c. 17

Statutes of Canada,

1845: 8 Vic., c. 55, c. 56
1846: 9 Vic., c. 67
1849: 12 Vic., c. 115, c. 120

loans to the Montreal and Quebec Turnpike Trust from 1840 to 1849.

With the Union of Upper and Lower Canada in 1841 a Board of Works was set up, known in 1846 as the Department of Public Works,²¹⁸ which was responsible for all public works. During the first nine years of its existence efforts were mainly concentrated on the construction of canals, and the expenditures on roads and bridges, although greater than prior to the Union, constituted but a small fraction of its budget.²¹⁹ Table 35 shows the expenditures of the Board of Works for canals and transportation improvements.

3. Conclusion

Prior to 1817 all road and bridge construction was the direct responsibility of the inhabitants of Lower Canada. No precise estimate of the cost of such works can be made at this time. The reports of the Committees created by the House of Assembly to look into the problem of internal communications within the Province give a detailed view of what construction was carried on. These reports can be found almost on a yearly basis in the Appendices of the Journals of the House of Assembly after 1792. As for the period prior to 1792, information relating to road and bridge construction can be found in the Reports of the Grand

²¹⁸J. E. Hodgetts, Pioneer Public Service, An Administrative History of the United Canadas, 1841-1867, (Toronto: University of Toronto Press, 1955), pp. 176-77.

²¹⁹Ibid., p. 177.

TABLE 35
PUBLIC EXPENDITURES OF THE BOARD OF WORKS IN LOWER CANADA, 1841-50
(Pounds sterling)

Item	From 18-09-41 to 01-09-43	From 01-09-43 to 01-07-44	From 01-07-44 to 01-01-46	From 01-01-46 to 15-05-47	From 15-05-47 to 01-01-48	1848	1849	1850
<u>Canals</u>								
Lachine	16,109	29,300	138,681	109,344	33,579	24,093	11,435	13,840
Beauharnois . .	68,856	93,425	132,030	7,252	2,282	5,416	8,776	10,125
Chambly	14,000	0	0	0	448	2,114	2,165	2,259
Sub Total . . .	98,965	122,725	270,711	116,596	36,309	31,623	22,376	26,224
<u>Improvement of Navigation</u>	39,167	14,331	14,276	18,101	8,678	6,077	5,959	8,092

TABLE 35-Continued

Item	From 18-09-41 to 01-09-43	From 01-09-43 to 01-07-44	From 01-07-44 to 01-01-46	From 01-01-46 to 15-05-47	From 15-05-47 to 01-01-48	1848	1849	1850
<u>Roads and Bridges</u>								
Roads	25,759	14,056	6,608	27,279	25,418	22,225	10,887	2,785
Bridges	15,076	6,960	16,300	5,134	3,058	3,350	105	452
Sub Total	40,835	21,116	22,908	32,413	28,476	25,575	10,992	3,237
<u>Total</u>	178,967	158,172	307,895	167,110	73,463	63,275	39,327	37,553

Source: From 18-09-41 to 01-09-43: Board of Works Report, 1843, Journals of the Legislative Assembly of the Province of Canada, 1843, App. Q.
 From 01-09-43 to 01-07-44: Board of Works Report, 1844, JLAPC, 1844-45, App. AA.
 From 01-07-44 to 01-01-46: Board of Works Report, 1846, JLAPC, 1846, App. N.
 From 01-01-46 to 15-15-47: First Report of the Commissioners of Public Works, 1847, JLAPC, 1847, App. QQ.

Source-Continued

From 15-05-47 to 01-01-48: Second Report of the Commissioners of Public Works, 1847, JLAPC, 1848, App. N.

For 1848: Report of the Commissioners of Public Works, 1848, JLAPC, 1849, App. BB.

For 1849: Report of the Commissioners of Public Works, 1849, JLAPC, 1850, App. HH.

For 1850: Report of the Commissioners of Public Works, 1850, JLAPC, 1851, App. T.

Voyer²²⁰ in the Public Archives of Quebec.

From 1817 to 1841 the most important public works, such as the construction of canals and the opening up of the more important roads and bridges, were subsidized and the expenditures on these works are given in the Public Accounts of Lower Canada, published in the Appendices of the Journals of the House of Assembly of Lower Canada.

After 1841, the expenditures on different projects are published in the Reports of the Board of Works for the years 1843, 1844, 1846, 1847, 1848, 1849 and 1850.

Over the ninety year period reviewed, public expenditures comprised only a fraction of the total capital expenditures on roads and bridges in Lower Canada. Direct investment by the population in general, prior to 1817, also played an important role in the development of transportation.

B. Canals

The period 1821-50 was one of continuous public expenditures for the construction of canals in Lower Canada. The outlays on the three most important, the Lachine, Chambly and Beauharnois canals are presented here.

1. Lachine Canal

The Lachine Canal was built to by-pass the Lachine Rapids between the Montreal Harbour and Lake St. Louis.

²²⁰I. Caron, op. cit., p. 202.

Attempts to construct this canal were made in the late seventeenth and early eighteenth centuries by Dollier de Casson but the project was never completed due to the lack of necessary funds.²²¹ In 1819 a joint stock company was incorporated and authorized to raise a capital stock of £150,000. In 1821 this company was dissolved and the Government of Lower Canada decided to undertake the construction of the Canal.²²²

Work on the canal began on July 17, 1821. It was opened to traffic in August, 1824 with work continuing until 1829.²²³

The construction of the Canal cost the Government of Lower Canada approximately £106,449, spent over a period of eight years. Table 36 shows the yearly expenditure on the canal from 1822 to 1829.

In addition to this amount, the British Government contributed £10,000 to the project.²²⁴

After the union of the two Canadas, the Canal was enlarged under the authority of the Board of Works between 1843 and 1848. The public expenditure on these works, up to the end of 1850, is shown in Table 35.

²²¹L. Chevrier, La Voie Maritime du Saint-Laurent, (Ottawa: Le Cercle du Livre de France, 1959), pp. 21-22.

²²²W. Kingsford, The Canadian Canals: Their History and Cost With an Inquiry Into the Policy Necessary to Advance the Well-Being of the Province, (Toronto: Rollo and Adam, 1865), p. 40.

²²³Canadian Department of Transport, History of Canals of Canada and Related Subjects, (Ottawa: 1949), p. 2.

²²⁴W. Kingsford, op. cit., p. 40.

TABLE 36
EXPENDITURE OF THE GOVERNMENT OF LOWER CANADA FOR THE
CONSTRUCTION OF THE LACHINE CANAL, 1822-29
(Pounds sterling)

Year	Expenditures
1822	10,350
1823	13,050
1824	11,157
1825	1,062
1826	10,447
1827	2,198
1828	3,098
1829	55,087
Total	106,449

Source: Journals of Legislative Assembly of the
Province of Canada, 1847, App. KKK.

2. Chambly Canal

The Chambly Canal was conceived to by-pass the Chambly Rapids from Chambly to St. John on the Richelieu River. Work began in 1821 but was suspended from 1835 to 1840 by reason of lack of funds and the rebellion during 1837-38. Work on the Canal resumed in 1840 and it was completed in 1843.²²⁵ The public expenditures on the Canal from 1830 to 1841 are shown in Table 37. Over the whole period total capital expenditures amounted to £61,380 sterling.

²²⁵ Ibid., p. 19.

TABLE 37
 YEARLY PUBLIC EXPENDITURE FOR THE CONSTRUCTION
 OF THE CHAMBLY CANAL, 1830-41
 (Pounds sterling)

Year	Expenditures
1830	360
1831	4,617
1832	9,000
1833	13,500
1834	18,000
1835	13,923
1836	0
1837	0
1838	0
1839	1,677
1840	303
1841	0
Total	61,380

Source: Journals of the Legislative Assembly
 of the Province of Canada, 1847, App. KKK.

3. Beauharnois Canal

The Beauharnois Canal connects Lake Saint Louis and Lake St. Francis, overcoming the Cascades, Cedars and Coteau Rapids.²²⁶ This Canal replaces three Canals, the Cascades, the Split Rock and the Coteau du Lac Canals built between 1779 and 1783 by the Royal Engineers.²²⁷

²²⁶Ibid., pp. 44-45

²²⁷Department of Transport, op. cit., p. 10.

Work on the Beauharnois Canal began in 1842 and the first vessels passed through it in October, 1845.²²⁸

The costs of the Canal which totalled £328,162 sterling in 1850 are given in the reports of the Board of Works (see Table 35).

C. Montreal Harbour

In 1830, Commissioners were appointed and authorized to raise loans for the purpose of improving and enlarging the Montreal Harbour. Interest on these loans were paid out of government funds. From 1830 to 1850 the total loans authorized through various government statutes totalled £273,775. Table 38 shows the amount of loans authorized for the period 1830-50.

III. Private Investment

A. Railroads

The first railway legislation in Lower Canada is the incorporation act of the Champlain and St. Lawrence Railroad Company in 1832.²²⁹ From that date to 1850 the

²²⁸W. Kingsford, op. cit., p. 52.

²²⁹J. M. Trout and E. Trout, The Railways of Canada for 1870-71, Showing the Progress, Mileage, Cost of Construction, the Stocks, Bonds, Traffic, Earnings, Expenses and Organization of the Railways of the Dominion. Also a Sketch of the Difficulties Incident to Transportation in Canada in the Pre-Railroad Days, (Toronto: Office of the Monetary Times, Printer, 1871), p. 51.

TABLE 38
AMOUNT OF LOANS AUTHORIZED FOR WORK ON
MONTREAL HARBOUR, 1830-50
(Pounds sterling)

Year(s)	Loan Authorized
1830	10,000
1831	10,000
1832	15,000
1833-37	0
1838	40,000
1839	0
1840	23,000
1841	17,000
1842-44	0
1845	119,275
1846	0
1847	7,000
1848	0
1849	0
1850	32,500
Total	273,775

Source: Statutes of Lower Canada,

1830: 10 & 11 Geo. 4, c. 28
 1831: 1 Will. 4, c. 11
 1832: 1 Will. 4, c. 36
 1838: 1 Vic., c. 23
 1840: 3 Vic., c. 28

Statutes of Canada,

1841: 4 Vic., c. 12
 1845: 8 Vic., c. 76
 1847: 10 & 11 Vic., c. 56
 1850: 13 & 14 Vic., c. 97

number of railroad companies incorporated increased rapidly although many lost their charter privileges, when they were unable to raise the required capital.²³⁰

Financial reports submitted at the request of the Legislative Assembly of Canada and showing capital expenditures prior to 1850 have been found for four railroad companies only. However, information concerning the date of commencement of operations of railroads, other than these, suggest that various companies incorporated before 1850, made capital expenditures prior to that year. They will also be discussed.

1. Champlain and St. Lawrence Railroad Company

This railroad, running from Laprairie to St. John, was built mainly as a portage route to connect Lower Canada with New York in order to draw the trade of the neighbouring states to the St. Lawrence.²³¹

The company was incorporated in 1832 and authorized to raise a capital stock of £65,000.²³² Work began in 1835 and the road, 16 miles long, was opened in 1836.²³³ The cost

²³⁰H. C. Pentland, op. cit., p. 463; Proceedings of the Standing Committee on Railroads and Telegraph Lines; Together with the Minutes of Evidence, (Toronto: Lovell and Gibson, 1851), App. 3.

²³¹G. P. de T. Glazebrooke, A History of Transportation in Canada, (Toronto: Ryerson Press, 1938), p. 152.

²³²Statutes of Lower Canada, 1932, 2 Will. 4, c. 58

²³³M. L. Bladen, "Constructions of Railways in Canada to the year 1885", Contribution to Canadian Economics, (Toronto: University of Toronto Studies, History and Economics, 1932), pp. 43-60.

of the line was reported at £33,500.²³⁴ From 1841 the Company submitted annual reports before the Legislative Assembly which showed that the total expenditures on the railways to 1841 was £51,063 and to 1850 amounted to £133,596.²³⁵ which is more than double the initially authorized capital.

In 1850 the Company was authorized to raise a further £260,000 in order to extend the railroad.²³⁶ One stretch was opened in 1851, running from St. John to Rouse's Point on the American border, a distance of 22 miles and another was opened in 1852, 20 miles long from St. Lambert to St. John.²³⁷

2. St. Lawrence and Atlantic Rail Road Company

Incorporated in 1845, this was the Canadian counterpart of the American chartered Atlantic and St. Lawrence Rail Road Company, which together, planned to build a railroad from Montreal to Portland.²³⁸ The Canadian section was to run from Montreal to St. Hyacinthe and from there to a point on the Canadian-American border considered most advantageous to make

²³⁴N. Thompson and J. H. Edgar, Canadian Railway Development from the Earliest Times, (Toronto: Macmillan Co. of Canada Ltd., 1933), p. 6.

²³⁵Journals of the House of Assembly of the Province of Canada, 1841, App. E; 1842, App. D; 1843, App. W; 1844-45, App. P; 1846, p. 14; 1847, p. 34; 1848, App. D; 1849, App. R; 1850, App. G, 1851, App. R.

²³⁶Statutes of Lower Canada, 1850, 13 & 14 Vic., c. 114.

²³⁷M. L. Bladen, op. cit., p. 44.

²³⁸Ibid., p. 45.

the junction with its American counterpart.²³⁹

The Company, through its charter was authorized to raise an initial capital of £600,000 and a further £500,000 if necessary.²⁴⁰

For the first time in Canadian railroad history the charter of the Company empowered the City of Montreal, the ecclesiastics of the Seminary of Saint Sulpice or any other corporate body to take stock or to lend money to the Company.²⁴¹

The railway was constructed in four sections as follows:²⁴²

	<u>Distance</u>	<u>Opened in</u>
Montreal to St. Hyacinthe	30 miles	1857
St. Hyacinthe to Richmond	41 miles	1851
St. Hyacinthe to Sherbrooke	66 miles	1852
St. Hyacinthe to Portland, Maine	262 miles	1853

In a report presented to the Legislative Assembly in November, 1848,²⁴³ the Company reported a total capital expenditure of £192,653 since the beginning of its operations.

3. Montreal and Lachine Railroad Company

The projected railroad from Montreal to Lachine was to replace the stage route around the Lachine Rapids in

²³⁹J. M. Trout and E. Trout, op. cit., p. 52.

²⁴⁰Statutes of Lower Canada, 1845, 8 Vic., c. 25.

²⁴¹J. M. Trout and E. Trout, op. cit., p. 52.

²⁴²M. L. Bladen, op. cit., p. 45.

²⁴³Journals of the Legislative Assembly of the Province of Canada, 1849, App. HH.

the St. Lawrence River.²⁴⁴ The company was incorporated in 1846 and authorized to raise an initial capital of £75,000 and a further £40,000 if necessary.²⁴⁵ The railroad, eight miles long was opened in 1847.²⁴⁶ The total expenditure on this project to 1850 was reported at £110,127.

The Company was later amalgamated with the Lake St. Louis and Province Line Rail Road Company into the Montreal and New York Railroad Company.²⁴⁷

4. St. Lawrence and Industry Village Railroad Company

Incorporated in 1847 with £12,000 initial capital authorized and with permission to raise a further £4,000,²⁴⁸ the railroad was constructed from Lanoraie to St. Industrie (Joliette), a distance of twelve miles, and was opened in 1850.²⁴⁹ The Company reported total capital expenditure of £12,643.²⁵⁰

²⁴⁴N. Thompson and G. H. Edgar, op. cit., p. 13.

²⁴⁵Statutes of Lower Canada, 1846, 9 Vic., c. 82

²⁴⁶M. L. Bladen, op. cit., p. 45.

²⁴⁷N. Thompson and G. A. Edgar, op. cit., p. 14.

²⁴⁸Statutes of Lower Canada, 1847, 10 & 11 Vic., c. 64

²⁴⁹M. L. Bladen, op. cit., p. 47.

²⁵⁰Journals of the Legislative Assembly of the Province of Canada, 1851, App. R.

5. Lake St. Louis and Province Line Railway Company

The Company was incorporated in 1847 and was authorized to raise a capital of £150,000 with permission to raise a further £50,000 if required.²⁵¹

The railway was projected to run from Sault Saint Louis in the county of Huntington to some convenient point in the county of Beauharnois or Huntington in order to make a junction with another railway to be constructed to connect the north western part of the State of New York with Lake Champlain.²⁵² The railroad, 32 miles long, was opened in 1852.²⁵³ A report on the cost of the railroad prior to 1850 was not submitted to the Legislative Assembly.

6. The Carillon and Grenville Railway Company

The Railway was incorporated in 1847 and was authorized to raise a capital of £60,000.²⁵⁴ The line, a short portage railway, 13 miles long, by-passing the Long Sault Rapids on the Ottawa River, was opened in 1854.²⁵⁵ The Journals of the Legislative Assembly contain no information as to the Company's investment before 1850.

²⁵¹Statutes of Lower Canada, 1847, 10 & 11 Vic., c. 120

²⁵²J. M. Trout and E. Trout, op. cit., p. 53.

²⁵³M. L. Bladen, op. cit., p. 45.

²⁵⁴Statutes of Canada, 1847, 10 & 11 Vic., c. 119

²⁵⁵M. L. Bladen, op. cit., p. 47.

7. Montreal and Vermont Junction Railway Company

The Company was incorporated in 1849, with an authorized capital of £100,000. Provision was made for the Company to raise a further £40,000 if necessary.²⁵⁶

The railroad, 25 miles long, from St. John to the Provincial Line, was opened in 1864.²⁵⁷ Accounts of expenditure on the project before the close of the period under survey have not been found in the Journals of the Legislative Assembly.

8. Railroad Companies incorporated in 1850

Incorporated in the last year of the period under study, it is probable that these companies did not commence work on their respective projects until after 1850. Their main characteristics are presented in Table 39.

B. Banking²⁵⁸

The first bank to do business in Lower Canada was the Bank of Montreal, in 1817.²⁵⁹ The following year two banks began operations, the Quebec Bank and the Bank of

²⁵⁶Statutes of Canada, 1849, 12 Vic., c. 178.

²⁵⁷M. L. Bladen, op. cit., p. 49.

²⁵⁸Only commercial banking is dealt with in this section. Savings banks, opened as early as 1819 in Lower Canada, were modest undertakings compared to these. R. C. McIvor, op. cit., p. 25.

²⁵⁹Ibid., p. 25.

TABLE 39
RAILROAD COMPANIES OF LOWER CANADA INCORPORATED IN 1850,
CAPITAL AUTHORIZED AND PROJECTED ROUTES
(Pounds currency)

Name of Company	Capital Authorized	Projected Routes
Industry Village and Rawdon Railroad Co.	13,000	From Rawdon Village to St. Industrie
St. Lawrence and Ottawa Grand Junction Rail Road Co.	750,000	To continue existing line between Montreal and Lachine, and from Lachine to Prescott
Quebec and Richmond Railroad Co.	650,000	From Point Lévy to New Brunswick Province Line
Quebec and St. Andrews Railroad Company	750,000	From Point Lévy to New Brunswick Province Line

Source: Statutes of Canada, 1850, 13 & 14, Vic., c. 115

Canada.²⁶⁰ Acts to incorporate these three Banks were voted in 1821. Not until 1822, however, did they receive their charters.²⁶¹

Writing in 1899, B. E. Walker, then General Manager of the Canadian Bank of Commerce, states that "these first charters are the substructure on which all subsequent improvement have been built, and that no very radical changes have been at any time necessary."²⁶² The most important provisions which underwent only minor changes, or none at all, to the end of the 19th century are the following:²⁶³

(i) The charter was granted for ten years;

(ii) The directors were not to act as private bankers and were remunerated by compensation voted by shareholders at annual meetings.

(iii) The directors were required to declare dividends, when profits were earned, every six months. They could not encroach upon the capital in paying out dividends. They were obliged to present an annual statement of the bank's position to the shareholders.

(iv) The bank could receive deposits, deal in bills of exchange and discount notes. It could further buy gold,

²⁶⁰R. M. Breckenridge, The History of Banking in Canada, (Washington: Govt. Printing Office, 1910), p. 4.

²⁶¹Statutes of Lower Canada, 1822, 1 Geo. 4, c. 25, c. 26, c. 27

²⁶²B. E. Walker, A History of Banking in Canada, (Toronto: 1899), pp. 17-18.

²⁶³Ibid., p. 18.

silver coins and bullion.

(v) The bank was not permitted to lend money directly upon real property, nor to lend money to a foreign country.

(vi) A statement of the position of the bank, under oath, could be required at any time by the government.

The charters fixed the amount of capital to be raised by the three banks, as follows:²⁶⁴

- Bank of Montreal: £250,000
- Quebec Bank : £ 75,000
- Bank of Canada : £200,000

Prior to its incorporation, in 1818, the Bank of Montreal had a paid up capital of £87,500. In 1824 it had been raised to £187,500 while during the same year the Bank of Canada had raised £93,825 and the Quebec Bank £51,377.²⁶⁵

The Bank of Canada met early with important financial difficulties, and within ten years of receiving its charter, merged with the Bank of Montreal.²⁶⁶

In 1833, the City Bank received its charter and was authorized to raise a capital of £200,000.²⁶⁷ The charter specified that the Bank could not begin business before one fifth of the authorized capital, that is £40,000, had been

²⁶⁴ Statutes of Lower Canada, 1821, 1 Geo. 4, c. 25, c. 26, c. 27

²⁶⁵ R. M. Breckenridge, op. cit., p. 13.

²⁶⁶ R. C. McIvor, op. cit., p. 29.

²⁶⁷ Statutes of Lower Canada, 1833, 3 Will. 4, c. 32

paid up and was in the possession of the corporation.²⁶⁸

The charters of the three Lower Canadian Banks expired June 1, 1837.²⁶⁹ During that year, a Special Council of the Province of Lower Canada was created because of the Rebellion which broke out in the Province.

The banks obtained temporary charters from the Royal Government for one year.²⁷⁰ In 1838 and 1839, short-term charters were obtained from the Special Council changing in no way the provisions of the original charters except that the Bank of Montreal was authorized to increase its stock by £250,000.²⁷¹

In 1835 a private banking establishment was formed called Viger, De Witt et Cie,²⁷² and was incorporated eight years later, in 1843, as La Banque du peuple, with an authorized capital of £200,000.²⁷³

In 1846 the Bank of Montreal was authorized to raise a further capital amounting to £250,000, the Quebec Bank could raise its stock to £225,000 and the City Bank was allowed to raise a further £100,000.²⁷⁴

²⁶⁸R. M. Breckenridge, op. cit., p. 30.

²⁶⁹B. E. Walker, op. cit., p. 26.

²⁷⁰R. M. Breckenridge, op. cit., p. 30.

²⁷¹Ibid., p. 30.

²⁷²B. E. Walker, op. cit., p. 27.

²⁷³Statutes of Lower Canada, 1843, 7 Vic., c. 66

²⁷⁴R. M. Breckenridge, op. cit., p. 51.

In the same year La Banque des Marchands was incorporated and authorized a capital of £150,000.²⁷⁵

In 1847, statutes were passed raising further the capital of the Bank of Montreal by £250,000, that of the City Bank by £200,000 and that of the Quebec Bank to £200,000.²⁷⁶

Commercial banks submitted financial statements to the Legislative Assembly at irregular intervals. Table 40 shows, for the period 1824-50, the amount of capital raised by these banks, except La Banque des Marchands which did not present a financial statement prior to 1851.

C. Miscellaneous

This section deals with all other private investment projects which were sanctioned by law in Lower Canada for the period covered.

These vary from water and gas works in Quebec and Montreal to the establishment of the Quebec Exchange. Other works of a lesser importance such as the construction of a Hotel Café or the construction of market places are also included since information as to their nature and projected cost are available in the Statutes of Lower Canada.

Although the only information available in the Statutes as to the importance of the investment is the capital stock or loans authorized, this and the number of incorporations

²⁷⁵Statutes of Lower Canada, 1846, 9 Vic., c. 115

²⁷⁶Ibid., 1847, 10 & 11 Vic., c. 114

TABLE 40

CAPITAL RAISED BY FIVE COMMERCIAL BANKS OF LOWER CANADA, 1824-50
(Pounds currency)

Year	Bank of Montreal	Quebec Bank	Bank of Canada	City Bank	Banque du Peuple	Total
1824	187,500	51,377	92,825			331,702
1825	187,500	53,262	92,825			233,587
1826	187,500	59,127	92,825			339,452
1827	187,500	63,675	30,325			281,500
1828	209,835	64,645	3,812			278,292
1829	- ^a	-	-			-
1830	236,862	67,375	3,555			307,793
1831	250,000	74,212				324,212
1832	250,000	75,000				325,000
1833	-	-				-
1834	250,000	75,000		84,121		409,121
1835	250,000	75,000		154,002		479,002
1836	-	-		-		-
1837	-	-		-		-
1838	-	-		-		-
1839	-	-		-		-
1840	-	-		-		-

TABLE 40-Continued

Year	Bank of Montreal	Quebec Bank	Bank of Canada	City Bank	Banque du Peuple	Total
1841	500,000	75,000		200,000		575,000
1842	576,285	-		-		576,285
1843	639,768	-		-	-	639,768
1844	-	-		-	-	-
1845	-	-		246,043	-	246,043
1846	-	-		277,747	-	277,747
1847	750,000	100,000		289,760	185,608	1,325,369
1848	-	-		294,149	-	294,149
1849	-	-		294,467	-	294,467
1850	-	-		221,793	-	221,793

^aNot Available.

Source: Journals of the House of Assembly of Lower Canada,

1824; App. N; 1825, App. App. N; 1826, App. I; 1827, App. E; 1828-29, App. K; 1830, App. N; 1831, App. M; 1831-32, App. AA; 1834, App. S; 1835, App. S.

Journals of the Legislative Assembly of the Province of Canada,

1841, App. C; 1842, App. R; 1843, App. Y; 1844-45, App. Q; 1846, App. U; 1847, App. U; 1848, App. T; 1849, App. P; 1850, App. H; 1851, App. I

or works authorized per year, until further information is found, is an indicator of the investor's confidence in being able to raise the capital. The data may be considered as an indicator of economic activity of the time. The various incorporations and loan authorizations from 1801 to 1850 are shown in Table 41.

IV. Conclusion

The period 1817-30 marks the beginning of large scale capital expenditures in Lower Canada. During the period, the first Government subsidies were made toward the construction of roads and bridges. The Lachine Canal was built from 1822 to 29 at a cost of £106,449 sterling. In 1821 the first three chartered banks in Lower Canada were incorporated with a total authorized capital of £525,000.

During the next decade loans totalling £98,000 were authorized to improve and enlarge the Montreal Harbour.²⁷⁷ The first railroad, from Laprairie to St. John, was completed in 1836 by the Champlain and St. Lawrence Railroad Company. The fourth bank to receive its charter in Lower Canada, the City Bank, was incorporated in 1833 with an authorized capital of £200,000. Work on the Chambly Canal began in 1830 and by 1841, £61,380 sterling had been spent on this project.²⁷⁸ The Government continued to subsidize the development of

²⁷⁷See Table 38.

²⁷⁸See Table 37.

TABLE 41
 MISCELLANEOUS INVESTMENT PROJECTS AUTHORIZED BY
 STATUTES IN LOWER CANADA, 1801-50
 (Pounds currency)

Year of Incorporation or Year of Loan	Name of Company or Nature of Work	Capital or Loan Authorized
1801	Montreal Water Works	12,000
1805	Construction of a Hotel Café and Assembly Hall	10,000
1807	Market Place (Montreal). Market Place (Quebec). . .	2,500 1,500
1808	Market Place (Montreal). . .	250
1827	Market Place (Montreal). . .	2,500
1829	Market Place (Montreal). Quebec Fire Assurance Company	2,500 260,000
1830	Quebec Exchange Market Place (Montreal). . .	5,175 5,500
1831	Market Place (Quebec). . . Quebec & Halifax Steam Navigation Company	2,500 21,000
1832	Market Place (Quebec). . .	5,000
1836	Public Square (Montreal). Montreal Gas Light Company	10,000 25,000
1839	Canada Marine Insurance Company	150,000
1840	Montreal Public Bakery & Fuel Company Montreal Fire Associates Company.	5,500 500,000

TABLE 41-Continued

Year of Incorporation or Year of Loan	Name of Company or Nature of Work	Capital or Loan Authorized
1841	Canada Fire Assurance Company Quebec Board of Trade . . Montreal Board of Trade .	100,000 2,000 2,000
1842	Quebec Gas Light and Water Company	60,000
1843	Montreal Water Works . . Gaspé Fishery & Coal Mining Company	50,000 300,000
1845	Sherbrooke Coton Factory. Chambly Coton Manufacturing Company . .	8,000 22,500
1846	Quebec Gas Works Company. Quebec Water Works. . . .	30,000 50,000
1847	New City Gas Company of Montreal Montreal Gas Light Company British North America Electric Telegraph Association Montreal Telegraph Company	50,000 25,000 26,500 15,000
1849	Compagnie de télégraphe entre Montréal et Troy. . Quebec Gas Company. . . . New City Gas Company of Montreal Compagnie d'entrepôt de Québec. Compagnie de Transport de Québec	5,000 40,000 25,000 50,000 40,000
1850	Bytown & Montreal Telegraph Company	10,000

Source: Statutes of Lower Canada,

1801: 41 Geo. 3, c. 10

1805: 45 Geo. 3, c. 16

1807: 47 Geo. 3, c. 7, c. 8

Source-ContinuedStatutes of Lower Canada,

1808: 48 Geo. 3, c. 4
 1827: 7 Geo. 4, c. 14
 1814: 9 Geo. 4, c. 40, c. 58
 1830: 10 & 11 Geo. 4, c. 15
 1831: 1 Will. 4, c. 19, c. 33
 1832: 2 Will. 4, c. 13
 1836: 6 Will. 4, c. 7, c. 18
 1839: 2 Vic., c. 6
 1840: 3 Vic., c. 34, c. 37

Statutes of Canada,

1841: 4 & 5 Vic., c. 57, c. 90, c. 92
 1842: 7 Vic., c. 23
 1843: 7 Vic., c. 44, c. 45
 1845: 8 Vic., c. 91, c. 92
 1846: 9 Vic., c. 74, c. 113
 1847: 10 & 11 Vic., c. 79, c. 80, c. 82, c. 83
 1849: 12 Vic., c. 181, c. 182, c. 183, c. 192
 c. 193
 1850: 13 & 14 Vic., c. 120

transportation spending £129,633 sterling from 1830 to 1840 for the construction of roads and bridges.²⁷⁹

During the last decade of the period under survey, 1841-50, the Government authorized the Commissioners responsible for the enlargement of the Montreal Harbour to raise a further £176,000. From 1841 to 1850, ten railroad companies were incorporated, although many did not commence work until after 1850.

A Board of Works was created in 1841 responsible for all public works in Upper and Lower Canada.

Table 42 gives a breakdown of capital expenditures on Canals, on development of internal communications²⁸⁰ and on railroads prior to and after 1841.

The table shows that the last decade of the period under survey was one of feverish activity in the field of transportation development compared to the previous twenty years. Total capital expenditures on canals, roads and bridges, improvement of navigation and railways from 1841 to 1850 amounted to approximately £1,628,886 almost four times the amount spent from about 1820 to 1841, that is £460,765, giving a total expenditure of £2,089,651 from 1820 to 1850 and an annual average capital expenditure of approximately £69,000.

This chapter is concerned mainly with large scale private and public investment. Although, more difficult to evaluate, investment in the land by the agricultural population

²⁷⁹See Table 33.

²⁸⁰These data comprise Government expenditures only.

TABLE 42

EXPENDITURES ON CANALS, INTERNAL COMMUNICATIONS AND
RAILROADS IN LOWER CANADA, PRIOR TO AND AFTER 1841
(Pounds currency)

Item	Before ^a 1841	After 1841	Total
Canals	201,395	870,635	1,072,030
<u>Internal Communications</u>			
Roads and Bridges	- ^b	222,672	- ^b
Improvement of Navigation	- ^b	137,622	- ^b
Sub Total	208,307	360,294	568,601
Railroads	51,063	397,957	449,020
Total	460,765	1,628,886	2,089,651

^aPeriod extends from the first Government expenditure on internal communications, in 1817, to 1841.

^bPrior to 1841, roads and bridges and improvement of navigation were merged into one account.

Source: Data on canals and internal communications prior to 1841, from: Tables 33, 35 and 36. Data on canals and internal communications after 1841, from: Table 34. Data on railroads prior to 1841, from: Journals of the Legislative Assembly of the Province of Canada, 1841, App. EEE. Data on railroads after 1841, from: JLAPC, 1849, App. HH and 1851, App. R.

of Lower Canada cannot be neglected. Capital outlays for clearing land in Lower Canada can be estimated for the period 1827-51 assuming that it cost \$10 to clear one acre of land.²⁸¹ From 1827 to 1851, 1,065,967 acres of land were cultivated in Lower Canada.²⁸² At a rate of \$10 an acre, from 1827 to 1851 \$20,659,670 were invested in clearing land, an average yearly outlay of \$860,200.

It was shown above that the average yearly capital outlays on canals, internal communications, and railways amounted to \$69,000 from 1817 to 1850 which is equivalent to \$276,000.²⁸³ Thus, if the estimate of the annual investment in clearing land, that is \$860,200, is realistic for the period in question, the figures show that the yearly capital outlays for clearing land was almost four times as important as the yearly capital expenditures for transportation development for this period.

²⁸¹See p. 125.

²⁸²See Table 13.

²⁸³See footnote 213.

CHAPTER VII

CONCLUSION

The variety of sources from which statistical information concerning the five economic indicators have been obtained suggest that the authorities responsible for the administration of Lower Canada were not particularly pre-occupied with establishing meaningful and consistent quantitative evidence of the working of the economy for the period under survey.

Inconsistencies in recording exports and imports over the years and at different ports, the deficiency in available data on immigration prior to 1819, the scarcity of quantitative information pertaining to agricultural production as well as to the private sector of the economy in general suggest that the usefulness of recording statistics was determined mainly by administrative considerations.

The findings show that data availability varies considerably according to the indicators examined. The major gaps however occur in the series relating to the early years of the period under survey. This is the case for immigration and emigration, land under cultivation, exports and imports and wheat and timber production. In that early period capital expenditures other than efforts of the settlers to

develop their land were not particularly significant. However they played a more important role in the latter part of the period particularly canal and road building with railway construction commencing towards the end of the period.

I. Population

From 1754 to 1851, ten official counts, three semi-official estimates and one private estimate, distributed relatively evenly throughout the period, are available for the total population of Lower Canada.

For the period prior to 1800, information available from the correspondence of the Governors of Lower Canada and from the census report for 1831 suggest that, owing mainly to Loyalist immigration, the proportion of British settlers in Lower Canada passed from approximately 0.6 per cent in 1766 to approximately twenty per cent in 1789, changing considerably the demographic outlook of Lower Canada.²⁸⁴

Population by religious groups are available from census reports for the years 1831, 1844 and 1851 while population by ethnic groups are available for the two latter census years only. It was possible using these data to estimate at 76.1 per cent the proportion of French Canadians in Lower Canada in 1831. This percentage decreased to 75.7 in 1844 and to 75.4 in 1851.²⁸⁵

²⁸⁴See Table 3.

²⁸⁵See Table 6.

The marriage, birth and mortality rates of the Catholic population of Lower Canada are available for the period under survey, showing an annual average rate of natural increase of 29.4 per thousand from 1760 to 1850.²⁸⁶

The birth rate of the French Canadian population during the early years of British rule reached 65.2 per thousand and maintained itself at a relatively high level until 1850.

Statistics of yearly immigrant arrivals at the Port of Quebec are available for the period 1819-50. They show that large-scale immigration began in 1831 when approximately 50,000 persons arrived at that port and lasted until the close of the period under survey, except for a brief relapse in 1838 and 1839, years of political unrest in Lower and Upper Canada.²⁸⁷

For the great majority of immigrants, Lower Canada was but the doorway to the United States or to Upper Canada. It is possible, though not without difficulty to obtain an indication of the proportion who stayed in Lower Canada, mainly in the literature of the times.

While immigrants from the British Isles were arriving in great numbers at Quebec, inhabitants of Lower Canada were emigrating to the United States. A number of estimates have been found to indicate that from 1830 to 1850 approximately 60,000 inhabitants, of which nine-tenths were French Canadians, left Lower Canada.

²⁸⁶See Table 7.

²⁸⁷See Table 8.

II. Land Occupied and Under Cultivation

Data on the area of land occupied in Lower Canada for the period under survey are available from census reports for the years 1765, 1784, 1827, 1831, 1844 and 1851. The acres of land under cultivation are also available from these censuses, except for the years 1765 and 1784. Estimates for these years are given in an article on the seigneurial system by M. Séguin. The rates of increase of land cultivated were calculated and examined in the light of qualitative material dealing with the agricultural conditions prevailing in Lower Canada at the time. The evidence unearthed suggest that the rate of increase of acres of land cultivated for the period 1827-31 is overestimated, that the rate of increase for the 1784-1827 period is underestimated and that the major factor contributing to increases in land cultivated was population growth during these years. Consequently an attempt was made to arrive at a more realistic figure for land cultivated for the year 1827. It was found that when ignoring the census figure for that year, the rate of increase of land cultivated follows closely the rate of increase in total population for the period 1784-1831. An estimate of land cultivated was arrived at by applying the annual average rate of increase, compound, of acres of land cultivated for the period 1784-1831 to the period 1784-1827.

During the years 1765-84 and 1844-51 land cultivated increased more rapidly than population. During the former period interest in agricultural development on the part of

the colonial authorities and the cultivation of virgin land were mainly responsible for this difference in rates of increase. In the latter period the factors contributing to more rapid increases in land cultivated were the use of improved farm implements, transportation development and new attempts to cultivate wheat after a series of crop failures prior to 1844.

Two types of land tenure co-existed in Lower Canada during the period under review: seigneurial and free and common soccage. The relative importance of land occupied and cultivated under each system is available for 1844 and 1851.²⁸⁸ The data show that the proportion of occupied land under cultivation was relatively higher in the seigneuries than in the regions where land was held in free and common soccage. This may be explained by the fact that after 1774 only twelve seigneuries were granted in Lower Canada and that the high reproduction rate of the French Canadian population created a scarcity of the most fertile land within the seigneurial territory.

III. Exports and Imports

Data on exports and imports are available from a variety of sources for the period under survey. For the years prior to 1793, data have been found in documents held in the Public Archives of Canada. The series contain many gaps and for some years only partial returns have been found.

²⁸⁸See Tables 14 and 15.

Export data for the years 1793-1806 and import data from 1793 to 1802 are published in an article written by G. Paquet and J. P. Wallot. The data for these years as well as for the period 1760-92 refer to the exports and imports at the Port of Quebec only. However during these years, Quebec was the most important port in Lower Canada.

From 1807 to 1850 statistics for exports and imports at the most important ports of Lower Canada are published in the Appendices to the Journals of the House of Assembly of Lower Canada and to the Journals of the Legislative Assembly of the Province of Canada. Data on exports are incomplete from 1843 to 1846 and not published in 1847 and 1848. Likewise import data are not available for the years 1846 and 1847.

The specific sources from which data have been taken are given in Table 1, in Appendix I.

In order to show the extent of data available and to examine their usefulness as well as their shortcomings a sample of seven export and five import commodities were chosen.*

Inconsistencies in recording the data at different ports and from one period to another, and the problem of allocating the exports and imports between Upper Canada and Lower Canada present major problems as to their utility for economic analysis.

The use of different units of weights and measures at different ports over the years requires the use of

conversion factors to obtain statistics reasonably comparable over time. Such conversion factors have been found for pine timber, oak timber and beaver skins.

The fact that all sea ports in Canada during the period under survey were situated in Lower Canada made it necessary to determine the proportion of exports originating in Lower Canada as well as the proportion of imports consumed in that province. An attempt was made to overcome the latter difficulty using information concerning tariff agreements between Upper and Lower Canada.²⁸⁹

The problem of determining the quantity of exports produced in Lower Canada was found to be of a more serious nature since there were no agreements such as those on tariffs between the Upper and Lower Provinces and goods originating in the United States were also exported from Lower Canadian ports. This problem was referred to Chapter V dealing with production.

Data on exports and imports for seven export and five import commodities, from 1760 to 1850, are given in Tables 2 and 3 in Appendix I. Volume and weight indices for these products were calculated and are given in Tables 5 and 6 in Appendix I and are presented graphically in Appendix II.

Graphs 3, 4 and 5 in Appendix II, illustrating the volume indices of the export of beaver, marten and raccoon

²⁸⁹See Table 18.

pelts respectively show the impact of the absorption of the North West Company of Montreal by the Hudson Bay Company in 1821, on the St. Lawrence Valley as an important fur trade route. Within a few years the great majority of furs had abandoned the St. Lawrence route and were being exported from Hudson Bay.

Graphs 6 and 7, representing the volume indices for oak and pine timber respectively, show the relatively rapid growth of the export trade in pine and oak timber after 1800, inspired by British demand for these two types of timber.

Graph 1, representing the volume index for wheat exports, indicates severe fluctuations in the export trade of this commodity from 1767 to 1850 while Graph 2, illustrating the volume index of flour from 1767 to 1850 suggests a steady increase in the export of this product although subjected to important periodical fluctuations.

IV. Production

Two commodities, wheat and timber, were examined in order to show the extent and the limitations of available data on production.

Data on agricultural production are available in 1827, 1831, 1844 and 1851 only, from the census reports for those years.

Ways and means are available however to estimate the production of wheat for some years prior to 1827.

Qualitative information suggests that prior to 1800, imports of wheat and flour into Lower Canada from Upper Canada and the United States were relatively unimportant, except in years of crop failure. Thus the quantities of these commodities exported from the Port of Quebec from 1760 to 1799 were for the most part produced in Lower Canada. Adding to these exports the annual amount of wheat consumed by the population of Lower Canada gives the total amount of wheat produced in Lower Canada, adjusting this result for changes in inventory. R. L. Jones estimated the average consumption of wheat per person in Lower Canada at 6.2 bushels in 1827. Applying this figure to the total population of Lower Canada for the period 1765-99 results in an estimate of wheat consumption for these years. Adding to this the yearly exports of wheat and flour, in the years for which data are available, results in an approximation of the yearly production of wheat in Lower Canada from 1765 to 1799.²⁹⁰

From 1800 to 1826, large quantities of wheat and flour were imported into Lower Canada from the United States and the data on exports from Lower Canada cannot be used as an indicator of wheat production in that province. However imports of wheat and flour at the ports of Coteau du Lac and St. John are available from 1817 to 1825, and are used to determine the quantity of wheat exported from Lower Canada that was produced in that province. Again using the estimate

²⁹⁰See Table 20.

of the yearly average consumption of wheat per person, 6.2 bushels, and the population data for the period 1817-25, the total annual consumption of wheat of the population of Lower Canada can be approximated for these years. Adding this amount to exports minus imports gives the estimated annual production of wheat in Lower Canada for the period in question.²⁹¹

From 1825 to the close of the period under survey, four official counts of wheat production are available from the census reports for the years 1827, 1831, 1844 and 1851.

The estimates of wheat production prior to 1827 and the official data after 1827 suggest that Lower Canadian wheat production made some progress during the first forty or fifty years of the period under survey. Evidence was found to show that by 1815 soil exhaustion due to inefficient methods of cultivation on the part of the French Canadian population had resulted in slowing down agricultural production.

The census data from 1827 to 1851 indicate that this was a period of crisis in Lower Canadian wheat production, owing mainly to the ravages of the wheat midge from 1828 to 1844. From 1831 to 1844 the data suggest that the Lower Canadian farmers substituted other grains for wheat. From 1844 to 1851 renewed efforts to cultivate wheat met some success but the amount of wheat harvested in 1851 was still

²⁹¹See Table 22.

less than that harvested twenty years previously.

A survey of secondary and published primary material shows a general lack of data on timber production for the period under review. Data on timber measured at the Port of Quebec are available for the years 1844, 1845, 1846 and 1849, showing the regions from which the timber originated. This information as well as qualitative material dealing with forest production in Canada suggest that the prime pine timber region in Canada at that time was the Ottawa Valley and that oak timber regions were relatively scarce in Lower Canada.²⁹²

However the Ottawa River constitutes a border between Upper and Lower Canada and it is difficult to know from which bank of the river the timber originated.

Data on the amount of timber floated down the Ottawa River above Bytown are available for the years 1838, 1839 and 1840 from the Journals of the Legislative Assembly of the Province of Canada. The amount of timber originating in Lower Canada is distinguished from that originating in Upper Canada. The data show that the Upper Canadian bank of the Ottawa River was more important as a red pine timber region than the Lower Canadian bank. Lower Canada had a slight advantage however as a white pine timber region.²⁹³

Since quantitative information on timber production is lacking, an attempt was made to use export and import data in order to estimate the amount of timber exported

²⁹²See Tables 26 and 28.

²⁹³See Table 27.

from Lower Canada which was cut in that province. However data on imports of timber from Upper Canada and the United States are complete for the years 1823, 1824 and 1825 only. If the data are reliable, they indicate that of a total 315,223 pieces of white pine timber exported from Lower Canada from 1823 to 1825 inclusive, 176,838 pieces were cut in Lower Canada.²⁹⁴

The data on oak timber seem to confirm the fact that Lower Canada was not rich in oak timber resources. Over the three years 1823, 1824 and 1825, 77,755 pieces of oak timber were imported into Lower Canada while 69,814 pieces only were exported from the Province.²⁹⁵

More difficulties were encountered in dealing with timber production than in dealing with the production of wheat mainly because a complete set of data on imports of timber into Lower Canada is available for three years only.

V. Investment

Only large scale public and private investment have been examined in this thesis. The former include capital expenditures on roads and bridges, canals and Montreal Harbour while the latter comprise railroads, banks and miscellaneous capital outlays.

Prior to 1817 road and bridge construction was the direct responsibility of the population of Lower Canada.

²⁹⁴See Table 30.

²⁹⁵See Table 31.

The first subsidies were granted by the government in 1817 and from that year to 1841, £173,589 sterling were spent in road and bridge construction.

From 1827 to 1850 the three most important canals built in Lower Canada were the Lachine, the Chambly and the Beauharnois Canals. Capital outlays for these canals are available on a yearly basis in the Appendices to the Legislative Assembly Journals. From 1822 to 1850, investment in canals totalled approximately £1,072,030 of which £870,635 were expended after the Union of the Provinces.²⁹⁶

A project to enlarge and improve Montreal Harbour was undertaken in 1830 and Commissioners were appointed to raise money through loans for this purpose. From 1830 to 1850 they were authorized to borrow approximately £273,775 sterling.

The first railway legislation in Lower Canada was the Act incorporating the Champlain and St. Lawrence Railroad Company in 1832. The first railway line was opened by this company in 1836. Many railroads were incorporated during the last decade under survey and from 1841 to 1851 capital expenditures on railroads amounted to £397,957.

The first banks to receive their charters in Lower Canada were the Bank of Montreal, the Quebec Bank and the Bank of Canada, incorporated in 1821 with a total authorized capital of £525,000. Three other banks received a charter before the close of the period under survey: the City Bank,

²⁹⁶See Table 42.

La Banque du Peuple, and La Banque des Marchands.

A number of miscellaneous investment projects, from the construction of a market place in Quebec City to the incorporation of gas and light companies, were sanctioned by law from 1801 to 1850. The relative number of such incorporations or loan authorizations can be used as indicators of the economic activity of the times. Large-scale capital expenditures on canals, internal communications and railroads in Lower Canada from 1817 to 1850 amounted to approximately £2,089,651, making for an average yearly capital outlay of £69,000 or \$276,000.²⁹⁷

It was estimated that the average annual investment in clearing land on the part of the agricultural population of Lower Canada from 1827 to 1850 amounted to \$860,200, almost four times the capital outlays on internal communications, canals and railroads.

Therefore, although large scale capital expenditures in Lower Canada during the latter part of the period reached high levels, the investment in the form of land improvement by the settlers cannot be ignored.

From the data collected in the previous chapters some tentative conclusions can be made concerning the most important factors contributing to the economic development of Lower Canada from 1760 to 1850.

Evidence suggests that population growth, owing first to the high rate of natural increase of the French

²⁹⁷See Table 42.

Canadian population throughout the period under survey and, secondly to immigration on a relatively large scale after 1820 was the most important factor contributing to agricultural development in Lower Canada. Although other factors such as government encouragement during the early years of the period and the use of improved farm implements and farm practices in the latter part contributed to increases in agricultural production, in general acres of land cultivated followed closely population growth.

There appears to be a direct relationship between the increase in the number of immigrant arrivals at the Port of Quebec and the increase in large-scale capital outlays on transportation development during the last thirty years of the period under survey. On the one hand, immigrants contributed to transportation development by working on public and private projects such as canals and railroads, and, on the other hand, better transportation facilities gave rise to favorable economic conditions, either in the form of new employment opportunities or reduced commercial transportation costs, which encouraged immigration to Lower Canada and to Upper Canada.

More research is needed to assess the interrelationship of immigration and transportation development as two important factors in Canada's early economic development.

In this thesis only a few of the more important types of public and private capital expenditures were examined. The evidence suggests that investment in land on the part of the agricultural population constituted an important

part of total investment in Lower Canada during the period under study. However, before comments concerning the impact of each type of investment on the economic growth of Lower Canada can be made, further work is required for a fuller appreciation of the linkage effects of each type of investment on the other sectors of the Lower Canadian economy.

Another factor contributing to the development of Lower Canada was the rise of the export and import trade in the St. Lawrence Valley. This trade developed partly as a consequence of economic and political conditions prevailing in Britain at the time and partly to the continuing efforts on the part of the merchants of Lower Canada to attract to the St. Lawrence Valley products originating from Upper Canada and the United States.

APPENDIX I

DATA ON EXPORTS AND IMPORTS

TABLE 1

PORTS FOR WHICH DATA ON EXPORTS FROM AND IMPORTS TO LOWER
CANADA ARE AVAILABLE AND CORRESPONDING
SOURCES, 1764-1850^a

Year	Exports		Imports	
	Port(s)	Source	Port(s)	Source
1764	Q	PAC, MG 23, G 1, 10	- ^b	-
1765	Q	Ibid.	-	-
1766	Q	Ibid.	-	-
1767	Q	Ibid.,	Q	PAC, MG 23, G 1, 10
1768	Q	Ibid.	Q	Ibid.
1769	Q	Ibid.	Q	Ibid.
1770	Q	Ibid.	-	-
1771	Q	Ibid.	-	-
1772	Q	Ibid.	-	-
1773	Q	Ibid.	-	-
1774	Q	PAR 1888 ^c	Q	PAR 1888 ^c
1775	Q	Ibid.	Q	Ibid.
1776	Q	Ibid.	Q	Ibid.
1777	Q	Ibid.	Q	Ibid.
1778	Q	Ibid.	Q	Ibid.
1779	Q	Ibid.	Q	Ibid.
1780	Q	Ibid.	Q	Ibid.
1781	Q	Ibid.	Q	Ibid.
1782	Q	Ibid.	Q	Ibid.
1783	Q	Ibid.	Q	PAR 1888, ^c
1784	Q	PAC, MG 23, G 1, 10	Q	PAC, MG 23, G 1, 10
1785	Q	Ibid.	Q	Ibid.
1786	Q	Ibid.	Q	Ibid.
1787	-	-	-	-
1788	Q	Ibid.	-	-
1789	-	-	-	-
1790	-	-	-	-
1791	-	-	-	-
1792	-	-	-	-

TABLE 1-Continued

Year	Exports		Imports	
	Port(s)	Source	Port(s)	Source
1793	Q	Aperçu sur ^d	Q	Aperçu sur ^d
1794	Q	Ibid.	Q	Ibid.
1795	Q	Ibid.	Q	Ibid.
1796	Q	Ibid.	Q	Ibid.
1797	Q	Ibid.	Q	Ibid.
1798	Q	Ibid.	Q	Ibid.
1799	Q	Ibid.	Q	Ibid.
1800	Q	Ibid.	Q	Ibid.
1801	Q	Ibid.	Q	Ibid.
1802	Q	Ibid.	Q	Ibid.
1803	Q	Ibid.	Q	-
1804	Q	Ibid.	-	-
1805	Q	Ibid.	-	-
1806	Q	Ibid.	-	-
1807	Q G NC SJ	JLALC 1823-24 App. W	Q G NC SJ	JLALC 1823-24 App. W
1808	Q G NC SJ	Ibid.	Q G NC SJ	Ibid.
1809	Q G NC SJ	Ibid.	Q G NC SJ	Ibid.
1810	Q G NC SJ	Ibid.	Q G NC SJ	Ibid.
1811	Q G NC SJ	Ibid.	Q G NC SJ	Ibid.
1812	Q G NC SJ	Ibid.	Q G NC SJ	Ibid.
1813	Q G NC SJ	Ibid.	Q G NC SJ	Ibid.
1814	Q G NC SJ	Ibid.	Q G NC SJ	Ibid.
1815	Q G NC SJ	Ibid.	Q G NC SJ	Ibid.
1816	Q G NC SJ	Ibid.	Q G NC SJ	Ibid.
1817	Q G NC SJ	Ibid.	Q G NC SJ CL	Ibid.
1818	Q G NC SJ	Ibid.	Q G NC SJ CL	Ibid.
1819	Q G NC SJ	Ibid.	Q G NC SJ CL	Ibid.
1820	Q G NC SJ	Ibid.	Q G NC SJ CL	Ibid.
1821	Q G NC SJ	Ibid.	Q G NC SJ CL	Ibid.
1822	Q G NC SJ	Ibid.	Q G NC SJ CL	Ibid.
1823	Q G NC SJ SM	Ibid.	Q G NC SJ CL SM Sh St	Ibid.
1824	Q G NC SJ CL	JLALC 1825 App. AA	Q G NC SJ CL	JLALC 1825 App. AA
1825	Q G NC SJ CL SM	JLALC 1826 App. U	Q G NC SJ CL SM	JLALC 1826 App. U

TABLE 1-Continued

Year	Exports		Imports	
	Port(s)	Source	Port(s)	Source
1826	Q G NC SJ	JLALC 1827 App. N	Q G SJ NC	JLALC 1827 App. N
1827	Q G NC SJ	JLALC 1828-29 App. C	Q G NC SJ SM	JLALC 1828- 29, App. C
1828	Q SJ	Ibid.	Q SJ	Ibid.
1829	Q G NC SJ	JLALC 1830 App. W.	Q G SJ NC	JLALC 1830 App. W.
1830	Q G NC SJ	JLALC 1831 App. GG	Q G NC SJ SM	JLALC 1831 App. GG
1831	Q G NC SJ SM	JLALC 1831-32 App. SS	Q G NC SJ SM	JLALC 1831- 32, App. SS
1832	Q M G NC SJ SM	JLALC 1832-33 App. PP	Q G M NC SJ SM	JLALC 1832- 33, App. PP
1833	Q M G NC SJ	JLALC 1834, App. NN JLALC 1835, App. Z	Q G M NC SJ	JLALC 1834 App. NN JLALC 1835 App. Z
1834	Q M G NC SJ	Ibid.	Q G M NC SJ	Ibid.
1835	Q M SJ	JLALC 1835- 36, App. GGG	Q M SJ	JLALC 1835- 36, App. GGG
1836	Q M G NC SJ MI	JLALC 1837 App. E	Q M G NC SJ MI	JLALC 1837 App. E
1837	Q M G NC SJ MI	JLALC 1841 App. QQ	Q M G NC SJ MI	JLALC 1841 App. QQ
1838	Q M G NC SJ MI	Ibid.	Q M G NC SJ MI	Ibid.
1839	Q M G NC SJ MI	Ibid.	Q M G NC SJ MI	Ibid.
1840	Q M G NC SJ MI	Ibid.	Q M G NC SJ MI	Ibid.
1841	Q M G NC SJ	JLALC 1843 App. SS	Q M G NC SJ	JLALC 1843 App. SS
1843	SJ	JLALC 1844-45 App. TTT	Q M SJ	JLALC 1844- 45, App. TTT
1844	Q M SJ	Ibid. JLALC 1846 App. GG	Q M SJ	Ibid. JLALC 1846 App. GG

TABLE 1-Continued

Year	Exports		Imports	
	Port(s)	Source	Port(s)	Source
1845	Q M	JLALC 1846 App. GG	Q M SJ	JLALC 1846 App. GG
1846	- ^b	-	-	-
1847	-	-	-	-
1848	-	-	All Canadian Ports	JLAC 1850 App. A
1849	All Canadian Ports	JLAC 1850 App. A	All Canadian Ports	Ibid.
1850	All Canadian Ports	JLAC 1851 App. A	All Canadian Ports	JLAC 1851 App. Z

^aAbbreviations: Ports: Q - Quebec
 G - Gaspe
 NC - New Carlisle
 SJ - St. John
 CL - Coteau du Lac
 M - Montreal
 SM - Sainte Marie Nouvelle Beauce
 Sh - Sherbrooke
 St - Stanstead
 MI - Magdalen Islands

Source: JLALC - Journals of the House of
 Assembly of Lower Canada
 JLAC - Journals of the Legislative
 Assembly of Canadas
 PAC - Public Archives of Canada
 MG - Manuscript Group
 PAR - Public Archives Report

^bNot Available.

^cD. G. Brymner, Report on Canadian Archives, 1889, Being an Appendix to Report of the Minister of Agriculture. (Ottawa: Queen's Printer, 1889).

^dG. Paquet and J. P. Wallot, "Aperçu sur le commerce international et les prix domestiques dans le Bas-Canada (1793-1812)" Revue d'histoire d'Amérique française, (décembre 1967).

TABLE 2

EXPORT OF SEVEN COMMODITIES FROM SEVERAL PORTS OF LOWER CANADA, 1760-1850

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1760	- ^a	-	-	-	-	-	-
1761	-	-	-	-	-	-	-
1762	-	-	-	-	-	-	-
1763	-	-	-	-	-	-	-
1764	-	-	90,691	32,325	30,371	-	-
1765	-	-	104,000	40,300	20,343	-	-
1766	-	-	110,372	44,240	16,847	-	-
1767	15,910	686	107,276	39,800	22,426	3,475	23,741
1768	23,962	18	115,842	52,672	34,846	-	-
1769	0	0	98,272	62,145	101,726	-	-
1770	51,822	1,485	105,309	51,878	25,877	-	-
1771	193,814	823	98,292	52,488	35,581	-	-
1772	233,246	1,428	108,488	48,651	47,631	-	-
1773	264,916	2,383	96,665	30,544	36,608	425	-

TABLE 2--Continued

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1774	460,818	1,311	102,179	40,017	48,553	1,070	-
1775	175,059	2,487	103,730	49,665	110,647	1,834	-
1776	551,984	1,060	92,043	60,108	70,944	81	-
1777	17,004	7,920	118,248	111,640	191,660	-	-
1778	15,175	13,794	104,348	45,042	175,490	-	-
1779	0	0	137,740	35,534	116,988	-	-
1780	0	0	121,280	41,889	153,277	-	-
1781	0	0	125,782	43,533	22,447	-	-
1782	0	60	110,487	21,950	65,346	-	-
1783	0	4,086	105,434	44,119	93,252	-	-
1784	0	7,936	128,620	45,973	171,066	-	-
1785	3,092	2,700	151,249	34,496	99,159	-	-
1786	103,824	10,476	116,623	48,436	108,521	-	-
1787	-	-	-	-	-	-	-

TABLE 2--Continued

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1788	200,358	9,868	130,758	56,731	11,555	1,229	69,004
1789	-	-	-	-	-	-	-
1790	-	-	-	-	-	-	-
1791	-	-	-	-	-	-	-
1792	-	-	-	-	-	-	-
1793	487,099	10,916	182,346	26,680	190,476	1,240	0
1794	414,551	13,787	155,599	37,785	125,781	729	0
1795	394,752	17,967	144,995	45,214	124,839	316	620
1796	3,106	4,352	130,820	31,143	135,835	1,384	11
1797	31,449	13,932	124,612	54,218	189,992	2,888	255
1798	91,727	9,530	127,440	52,641	194,237	2,221	3
1799	128,870	14,475	117,165	35,267	135,468	2,299	104
1800	217,125	20,271	135,043	40,345	110,984	1,633	12
1801	472,723	38,146	119,965	24,451	92,345	1,268	1,061

TABLE 2--Continued

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1802	1,010,033	28,301	144,189	23,808	147,882	1,607	1,035
1803	360,892	15,432	93,778	31,441	152,333	3,819	3,153
1804	201,543	14,319	111,448	23,796	178,479	4,229	873
1805	22,016	18,590	92,003	14,275	124,319	4,535	896
1806	96,908	10,997	119,708	55,687	125,622	8,178	2,130
1807	231,943	20,442	166,293	71,157	120,612	11,195	3,333
1808	186,708	42,462	448,491	11,338	133,988	12,372	14,510
1809	198,469	19,476	117,708	20,653	55,648	10,143	23,699
1810	171,490	12,535	124,928	73,240	65,442	33,798	69,271
1811	866	19,340	81,195	1,874	29,426	34,741	58,575
1812	263,178	37,625	95,105	639	884	19,837	28,670
1813	0	517	77,630	20,206	556	8,737	9,605
1814	0	1,217	68,284	25,125	2,974	7,676	10,186
1815	0	1,922	56,562	81,201	12,099	5,301	14,093

TABLE 2--Continued

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1816	0	1,205	44,636	31,794	29,069	12,254	17,376
1817	148,958	38,225	72,117	84,648	15,152	5,504	25,673
1818	401,808	30,548	57,432	83,543	15,225	6,997	33,736
1819	37,911	12,099	55,395	71,877	4,975	19,081	75,124
1820	319,078	45,956	57,492	106,517	4,103	23,960	79,159
1821	318,483	22,996	56,080	75,562	607	12,160	83,015
1822	0	47,334	25,622	11,157	11,637	20,331	84,627
1823	4,710	46,252	6,156	11,372	3,136	16,668	82,954
1824	5,396	41,901	20,799	7,685	3,522	19,994	99,682
1825	718,083	40,033	13,962	30,326	2,123	33,152	132,587
1826	228,635	33,484	7,510	41,004	6,948	19,078	100,018
1827	391,420	53,839	7,355	14,580	19	17,649	67,874
1828	120,112	25,506	10,660	32,913	303	19,778	83,649
1829	40,464	11,684	8,858	19,624	34	21,166	145,696

TABLE 2--Continued

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1830	590,101	71,867	12,457	13,162	141	10,570	120,689
1831	1,329,279	81,114	71,523	24,130	99	14,938	145,968
1832	657,272	51,164	13,479	8,140	229	16,643	145,870
1833	653,748	91,144	11,883	18,080	193	18,948	143,399
1834	412,649	78,352	8,110	15,285	222	16,972	183,244
1835	80,411	92,483	9,150	12,528	165	15,878	230,178
1836	42,181	119,226	7	607	0	18,305	240,503
1837	5,261	39,476	69	1,076	0	17,733	208,716
1838	0	104,837	0	0	17	23,471	226,209
1839	3,408	49,591	371	1,897	2	27,141	275,339
1840	9,358	399,032	363	1,639	139	29,750	288,297
1841	564,862	367,834	296	5,221	400	28,158	281,444
1842	204,907	311,120	0	0	0	8,254	179,206
1843	2,978	570	-	-	-	-	-

TABLE 2--Continued

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1844	282,183	415,467	-	-	-	-	-
1845	313,502	211,093	-	-	-	-	-
1846	-	-	-	-	-	-	-
1847	-	-	-	-	-	-	-
1848	-	-	-	-	-	-	-
1849 ^b	1,002,269	490,335	-	-	-	42,626	296,152
1850 ^b	1,295,029	650,439	0	0	0	24,357	347,054

^aNot available.

^bData for the years 1849 and 1850 are the exports from all Canadian ports.

Source: See Appendix I, Table 1.

TABLE 3

IMPORT OF FIVE COMMODITIES AT SEVERAL PORTS OF LOWER CANADA, 1760-1850

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1760	- ^a	-	-	-	-
1761	-	-	-	-	-
1762	-	-	-	-	-
1763	-	-	-	-	-
1764	-	-	-	-	-
1765	-	-	-	-	-
1766	-	-	-	-	-
1767	69,621	296,106	33,860	13,168	0
1768	23,387	228,313	13,700	30,000	0
1769	41,643	270,798	22,500	20,200 440 ^b	0
1770	-	-	-	-	-
1771	-	-	-	-	-
1772	-	-	-	-	-
1773	-	-	-	-	-

TABLE 3--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1774	193,559	752,442	29,428	72,046	3,921
1775	64,701	7,400	1,428	14,376	13,903
1776	78,504	116,144	43,175	0	23,884
1777	60,250	263,911	37,502	4,500	49,743
1778	160,774	378,582	70,297	29,669	47,715
1779	83,199	450,842	46,676	12,350	34,854
1780	104,658	233,007	78,852	13,920	18,654
1781	80,331	0	97,188	51,849	50,540
1782	58,072	0	28,764	0	30,329
1783	139,481	265,230	7,168	35,683	23,045
1784	15,540	17,367	78 ^c 56 ^d	15,290	0
1785	19,840	121,044	84 ^c 106 ^d	102,869	0
1786	179,760	331,233	243 ^c	38,835	0
1787	-	-	-	-	-

TABLE 3--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1788	-	-	-	-	-
1789	-	-	-	-	-
1790	-	-	-	-	-
1791	-	-	-	-	-
1792	-	-	-	-	-
1793	25,740	320,620	16,540	150,732	-
1794	50,220	391,370	11,450	58,004	-
1795	17,767	116,124	18,404	35,450	-
1796	62,898	248,569	75,746	31,607	-
1797	63,525	162,684	21,814	38,513	-
1798	19,422	240,584	34,080	69,444	-
1799	69,165	492,969	48,857	83,536	-
1800	37,073	195,777	35,079	102,975	-
1801	65,693	302,930	50,816	136,010	-

TABLE 3--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1788	-	-	-	-	-
1789	-	-	-	-	-
1790	-	-	-	-	-
1791	-	-	-	-	-
1792	-	-	-	-	-
1793	25,740	320,620	16,540	150,732	-
1794	50,220	391,370	11,450	58,004	-
1795	17,767	116,124	18,404	35,450	-
1796	62,898	248,569	75,746	31,607	-
1797	63,525	162,684	21,814	38,513	-
1798	19,422	240,584	34,080	69,444	-
1799	69,165	492,969	48,857	83,536	-
1800	37,073	195,777	35,079	102,975	-
1801	65,693	302,930	50,816	136,010	-

TABLE 3--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1816	135,241	1,092,509	335,441	219,826	218,969
1817	60,547	1,125,848	35,995	186,247	239,170
1818	33,977	954,236	50,778	139,242	330,008
1819	105,334	1,133,056	43,091	162,911	280,497
1820	88,215	1,643,212	55,378	106,423	167,067
1821	60,187	1,118,357	73,173	198,855	166,855
1822	115,413	1,287,543	94,929	243,486	134,379
1823	38,078	973,691	40,700	247,196	70,925
1824	83,642	994,996	239,355	217,136	165,585
1825	41,563	1,031,026	56,421	271,770	1,117,477
1826	104,704	1,148,224	75,793	253,063	1,075,061
1827	51,642	959,886	159,973	271,604	1,054,776
1828	73,279	835,634	214,666	181,160	660,145
1829	90,159	1,136,407	70,467	433,607	12,314
1830	86,957	1,449,768	211,128	144,856	73,339

TABLE 3--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1831	102,166	1,428,683	122,617	297,479	587,174
1832	126,643	1,099,578	188,070	287,436	983,344
1833	101,474	1,017,464	122,896	252,836	1,408,179
1834	98,438	919,452	130,533	338,905	923,661
1835	128,239	976,048	92,227	213,938	587,081
1836	48,224	537,254	103,305	290,918 1,228 ^b	648,644
1837	79,828	404,174	116,694	242,429 1,853 ^b	642,422
1838	79,425	700,300	112,335	309,428 352 ^b	1,043,487
1839	190,688	391,031	172,597	467,576	973,435
1840	190,649	348,576	341,497	360,135 2,684 ^b	735,956
1841	77,628 83 ^c	147,562 740 ^c	389,356	322,704 901 ^b	1,057,445
1842	110,481 159,198 ^e	64,309 22 ^c	174,230	16,117 ^b	1,475,306

TABLE 3--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1843	1,798,188 ^e	75,741	481,770	21,808 ^b	776,066
1844	2,387,315 ^e	140,510	428,688	28,020 ^b	1,388,367
1845	3,942,648 ^e	118,194	396,230	12,151 ^b	1,503,207
1846	-	-	-	-	-
1847	-	-	-	-	-
1848	4,099,424 ^e	57,891	996,787	499,111 14,996 ^b	2,259,294
1849	6,239,723 ^e	32,891	1,034,091	1,047,721	3,076,528
1850	6,833,109 ^e	29,363	1,140,886	863,017	3,517,166

^aNot available.

^bTons.

^cCasks.

^dBags.

^ePounds.

Source: See Appendix I, Table 1.

TABLE 4

FIVE PRODUCTS ORIGINALLY IMPORTED INTO LOWER CANADA ON WHICH DUTIES HAVE BEEN COLLECTED,
AND GOING ON TO UPPER CANADA THROUGH THE PORT OF COTEAU DU LAC, 1797-1816.

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1797 ^a	603	50,679	6,874	2,874	-
1798	- ^b	-	-	-	-
1799	-	-	-	-	-
1800	-	-	-	-	-
1801	-	-	-	-	-
1802	471	41,180	4,710	3,543	-
1803	305	55,231	5,970	6,469	-
1804	216	59,457	6,223	7,717	-
1805	352	-	0	0	15,801
1806	282	62,848	3,908	4,591	14,760
1807	442	54,674	2,758	6,603	18,690
1808	1,240	68,466	5,526	11,196	23,359
1809	1,657	86,207	9,878	9,322	39,204
1810	914	87,693	5,481	4,751	47,857

TABLE 4--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1811	649	68,737	8,455	4,133	29,984
1812	251	67,245	7,495	7,772	24,325
1813	960	118,416	20,034	9,002	47,639
1814	1,112	615,740	33,287	6,595	34,703
1815	2,704	287,008	40,421	4,333	138,392
1816 ^c	190	50,109	2,700	1,365	24,857

^aImports from May 1, 1797, to January 1, 1798.

^bNot available.

^cImports from January 1, to May 1, 1816.

Source: For the years:

- 1797, from: Journals of the House of Assembly of Lower Canada, 1798, (Quebec: Neilson), pp. 71-78.
- 1802, from: JHALC, 1803, p. 82.
- 1803, from: JHALC, 1804, p. 140.
- 1804, from: JHALC, 1805, p. 340.
- 1805, from: JHALC, 1806, p. 196.
- 1806, from: JHALC, 1807, p. 243.

Source-Continued

- 1807, from: JHALC, 1808, p. 274
- 1808, from: JHALC, 1809, App. 14.
- 1809, from: JHALC, 1811, App. A, Table 16.
- 1810, from: JHALC, 1811, App. B, Table 17.
- 1811, from: JHALC, 1812, App. 15, 16 and 17.
- 1812, from: JHALC, 1812-13, App. E, Tables 14 and 16.
- 1813, from: JHALC, 1814, App. A, Tables 14-16.
- 1814, from: JHALC, 1815, App. A, Tables 14-17.
- 1815, from: JHALC, 1816, App. D, Tables 15-19.
- 1816, from: JHALC, 1817, App. H, Tables 14-17.

TABLE 5

VOLUME INDEX FOR SEVEN PRODUCTS EXPORTED FROM
SEVERAL PORTS OF LOWER CANADA, 1767-1850
(1767=100)

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1767	100	100	100	100	100	100	100
1768	151	0.26	108	132	155	- ^a	-
1769	0	0	92	156	454	-	-
1770	341	216	98	130	115	-	-
1771	1,218	120	91	132	159	-	-
1772	1,536	208	101	122	212	-	-
1773	1,665	347	90	77	163	12	-
1774	2,896	191	95	101	217	31	-
1775	1,100	363	97	125	493	53	-
1776	352	155	86	151	317	2	-
1777	107	1,155	110	281	855	-	-
1778	90	2,011	97	113	783	-	-
1779	0	0	129	89	522	-	-

TABLE 5--Continued

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1780	0	0	113	105	683	-	-
1781	0	0	117	109	100	-	-
1782	0	9	103	55	291	-	-
1783	0	596	98	111	416	-	-
1784	0	1,157	120	116	763	-	-
1785	19	394	141	87	442	-	-
1786	653	1,527	109	122	484	-	-
1787	-	-	-	-	-	-	-
1788	11,259	1,438	122	143	52	35	291
1789	-	-	-	-	-	-	-
1790	-	-	-	-	-	-	-
1791	-	-	-	-	-	-	-
1792	-	-	-	-	-	-	-
1793	3,062	1,591	170	67	849	36	0
1794	2,606	2,010	145	95	561	21	0

TABLE 5--Continued

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1795	2,481	2,619	135	114	557	9	3
1796	20	634	122	78	606	40	0.05
1797	198	2,031	116	136	857	83	1
1798	577	1,389	119	132	866	64	0.01
1799	810	2,110	109	88	604	66	0.44
1800	1,365	2,955	126	101	495	47	0.05
1801	2,971	5,560	112	61	412	36	4
1802	6,348	4,126	134	60	659	46	4
1803	2,268	2,250	87	79	679	110	13
1804	1,267	2,087	104	60	795	122	3
1805	138	2,710	86	36	554	131	4
1806	609	1,603	112	140	560	235	9
1807	1,458	2,980	155	179	538	322	14
1808	1,174	6,190	138	28	597	356	61
1809	1,247	2,839	110	52	248	292	100

TABLE 5--Continued.

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1810	1,078	1,827	116	184	291	972	291
1811	0.00	2,819	76	5	131	1,000	247
1812	1,654	5,485	89	2	4	571	121
1813	0	75	42	51	2	3	-
1814	0	177	64	63	13	221	43
1815	0	280	53	204	54	153	59
1816	0	176	42	80	130	353	73
1817	936	5,572	67	213	68	158	108
1818	2,526	4,453	54	210	68	201	142
1819	238	1,764	52	181	22	549	316
1820	2,006	6,699	54	268	18	690	335
1821	2,002	3,352	52	190	3	250	350
1822	0	6,900	23	28	52	585	356
1823	30	6,744	6	29	14	480	349
1824	34	6,108	19	19	16	575	420
1825	4,513	5,836	13	76	9	954	558

TABLE 5--Continued

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1826	1,437	4,881	7	103	31	549	421
1827	2,460	7,848	7	37	0.9	508	286
1828	755	3,718	10	83	1	569	352
1829	254	1,703	8	49	0.2	609	614
1830	3,709	10,476	12	33	0.6	304	508
1831	8,354	11,824	67	60	0.4	430	615
1832	4,131	7,458	13	20	1	479	614
1833	4,109	13,286	11	45	2	545	604
1834	2,594	11,422	8	38	1	488	772
1835	505	13,481	9	31	1	457	970
1836	265	17,380	0	2	0	527	1,013
1837	33	5,711	0.1	3	0	510	879
1838	0	15,282	0	0	0.1	675	953
1839	21	7,229	0.3	5	0.01	781	1,160
1840	59	58,168	0.3	4	0.1	856	1,214

TABLE 5--Continued.

Year	Wheat (Bushels)	Flour (Barrels)	Beaver (Pelts)	Marten (Pelts)	Raccoon (Pelts)	Oak Timber (Pieces)	Pine Timber (Pieces)
1841	3,550	53,620	0.3	13	2	810	1,214
1842	1,288	45,353	0	0	0	238	755
1843	19	83	-	-	-	-	-
1844	1,774	60,564	-	-	-	-	-
1845	1,970	30,772	-	-	-	-	-
1846	-	-	-	-	-	-	-
1847	-	-	-	-	-	-	-
1848	-	-	-	-	-	-	-
1849	6,300	71,477	-	-	-	1,227	1,247
1850	8,140	94,816	0	0	0	701	1,462

^aNot available.

Source: Calculations based on Appendix I, Table 2.

TABLE 6
 VOLUME AND WEIGHT INDICES FOR FIVE PRODUCTS IMPORTED AT SEVERAL
 PORTS OF LOWER CANADA, 1767-1850
 (1767 = 100)^a

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1767	100	100	100	100	0
1768	34	77	40	228	0
1769	60	91	66	-	0
1770	- ^b	-	-	-	-
1771	-	-	-	-	-
1772	-	-	-	-	-
1773	-	-	-	-	-
1774	278	254	87	547	100
1775	93	3	4	109	355
1776	113	39	128	0	609
1777	87	89	111	34	1,269
1778	231	128	208	225	1,217
1779	120	152	138	94	889
1780	150	79	233	106	476

TABLE 6--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1781	115	0	287	394	1,289
1782	83	0	85	0	774
1783	220	90	21	271	588
1784	22	6	-	116	0
1785	29	41	-	781	0
1786	258	112	-	295	0
1787	-	-	-	-	-
1788	-	-	-	-	-
1789	-	-	-	-	-
1790	-	-	-	-	-
1791	-	-	-	-	-
1792	-	-	-	-	-
1793	37	111	49	1,145	-
1794	72	132	34	440	-

TABLE 6--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1795	26	40	54	269	-
1796	90	84	224	240	-
1797	91	55	64	292	-
1798	28	81	101	527	-
1799	99	166	144	634	-
1800	53	66	103	782	-
1801	94	102	150	1,033	-
1802	71	130	87	768	-
1803	-	-	-	-	-
1804	-	-	-	-	-
1805	-	-	-	-	-
1806	-	-	-	-	-
1807	14	128	59	1,616	134
1808	52	141	401	1,175	106

TABLE 6--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1809	-	-	-	1,658	-
1810	67	245	78	617	273
1811	85	274	1,162	765	-
1812	103	288	186	891	609
1813	23	273	399	569	7,119
1814	166	525	499	652	-
1815	31	390	680	870	8,020
1816	194	369	991	1,669	5,585
1817	87	380	106	1,414	6,100
1818	49	322	150	1,057	8,416
1819	151	383	127	1,237	7,154
1820	127	555	164	808	4,261
1821	86	378	216	1,510	4,255
1822	166	435	280	1,849	3,427

TABLE 6--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1823	55	329	120	1,877	1,809
1824	120	336	707	1,649	4,223
1825	60	348	167	2,064	28,498
1826	150	388	224	1,922	27,418
1827	74	324	472	2,063	26,901
1828	105	130	634	1,376	16,836
1829	130	384	208	3,293	314
1830	125	490	624	1,859	1,870
1831	147	482	362	2,259	14,975
1832	182	371	555	2,183	25,078
1833	146	344	363	1,920	35,913
1834	141	311	386	2,574	23,556
1835	184	330	272	1,625	14,972
1836	69	181	305	-	16,542
1837	115	137	345	-	16,385

TABLE 6--Continued

Year	Molasses (Gallons)	Rum (Gallons)	Coffee (Pounds)	Salt (Bushels)	Tea (Pounds)
1838	114	237	332	-	26,613
1839	145	132	509	3,703	24,826
1840	274	118	1,009	-	18,770
1841	- ^c	- ^c	1,150	- ^c	26,969
1842	- ^c	- ^c	515	- ^c	37,626
1843	- ^c	26	1,423	- ^c	19,793
1844	- ^c	47	1,266	- ^c	35,408
1845	- ^c	40	1,170	- ^c	38,337
1846	-	-	-	-	-
1847	-	-	-	-	-
1848	- ^c	20	2,944	- ^c	57,620
1849	- ^c	11	3,042	7,957	78,463
1850	- ^c	10	3,369	6,554	89,701

^aFor Tea, Index Base: 1774 = 100.

^bNot available.

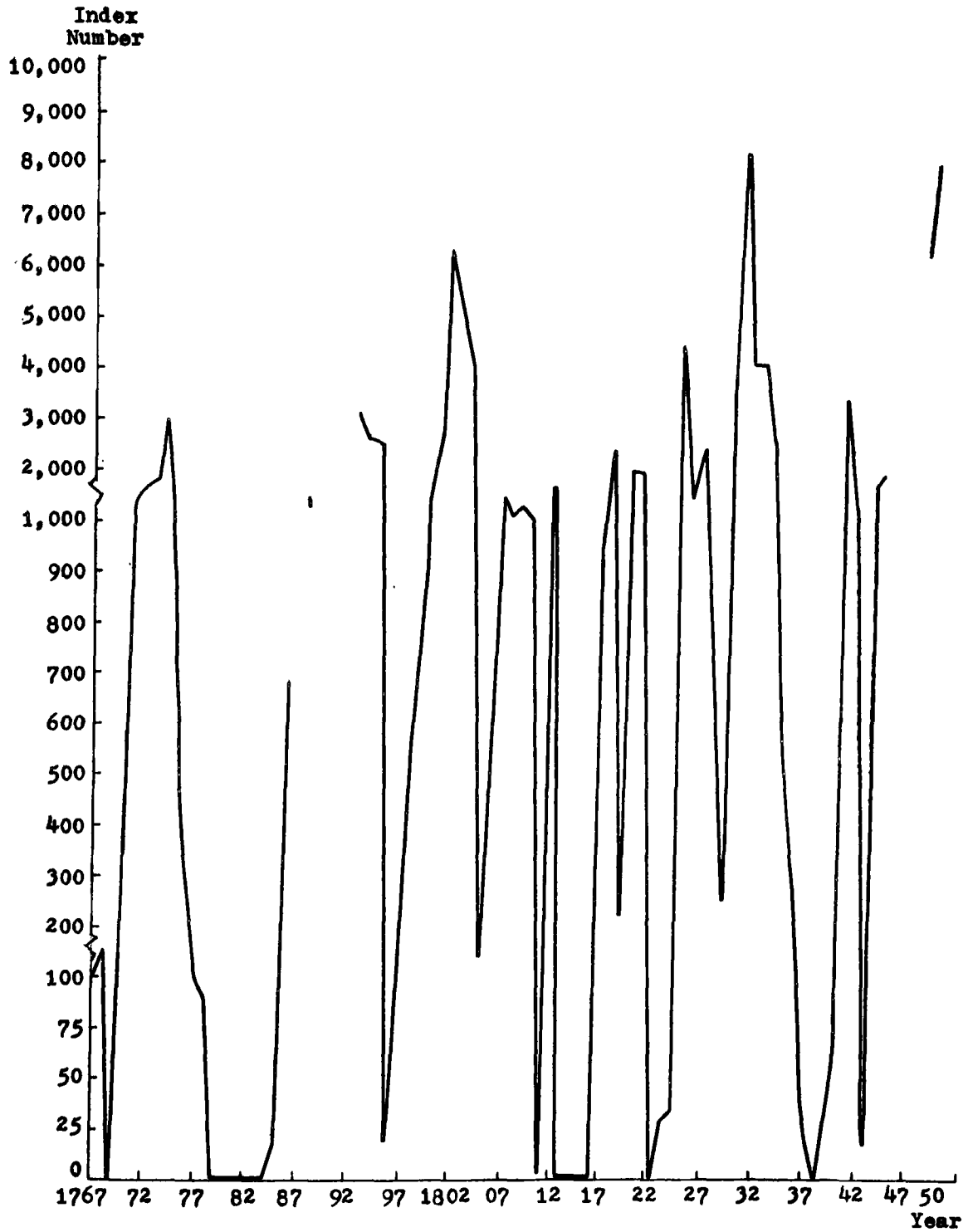
^cNot available: Weights and measures inconsistent with those in base year.

Source: Calculations based on Appendix I, Table 3.

APPENDIX I I

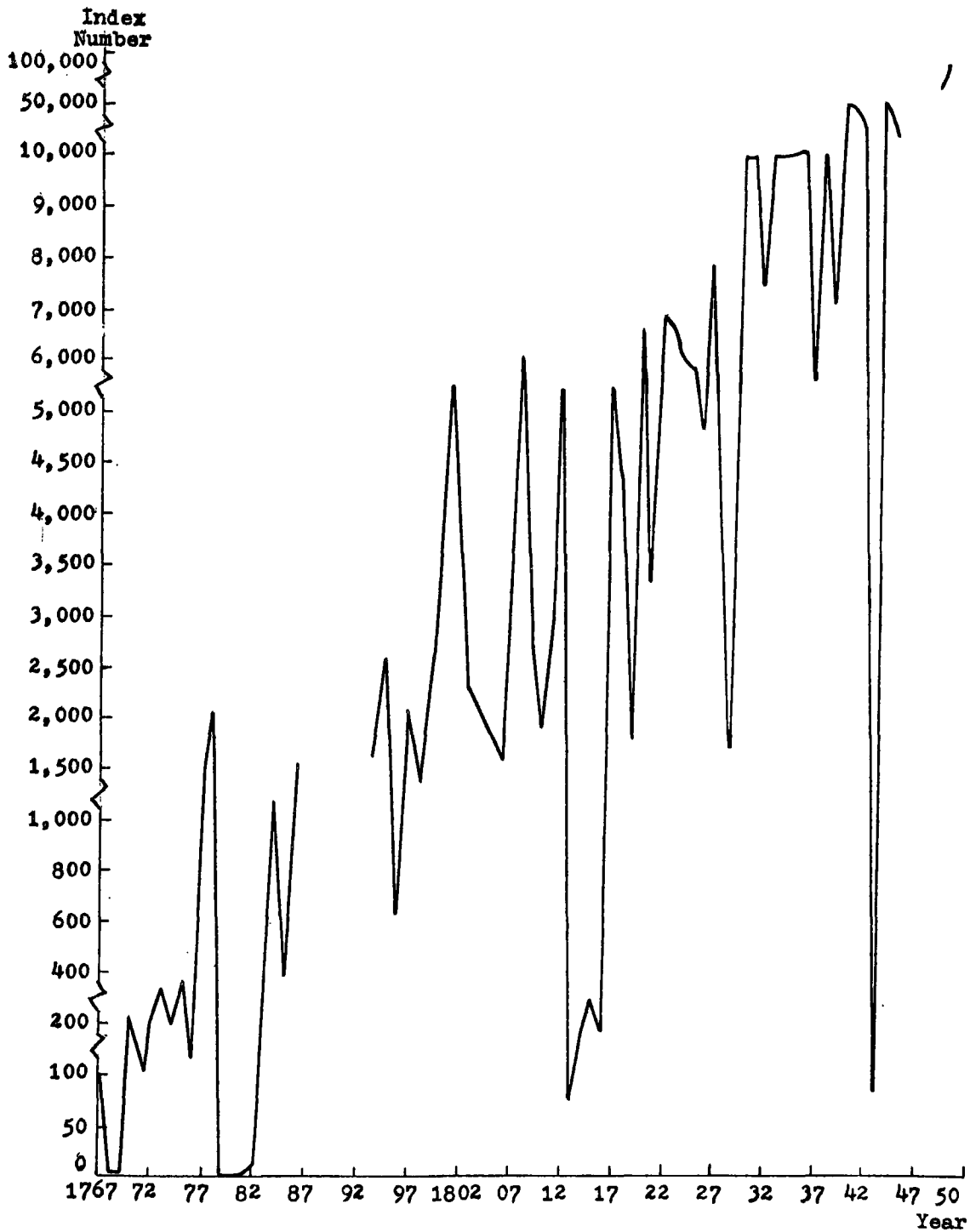
GRAPHICAL ILLUSTRATIONS OF INDICES

FOR EXPORTS AND IMPORTS



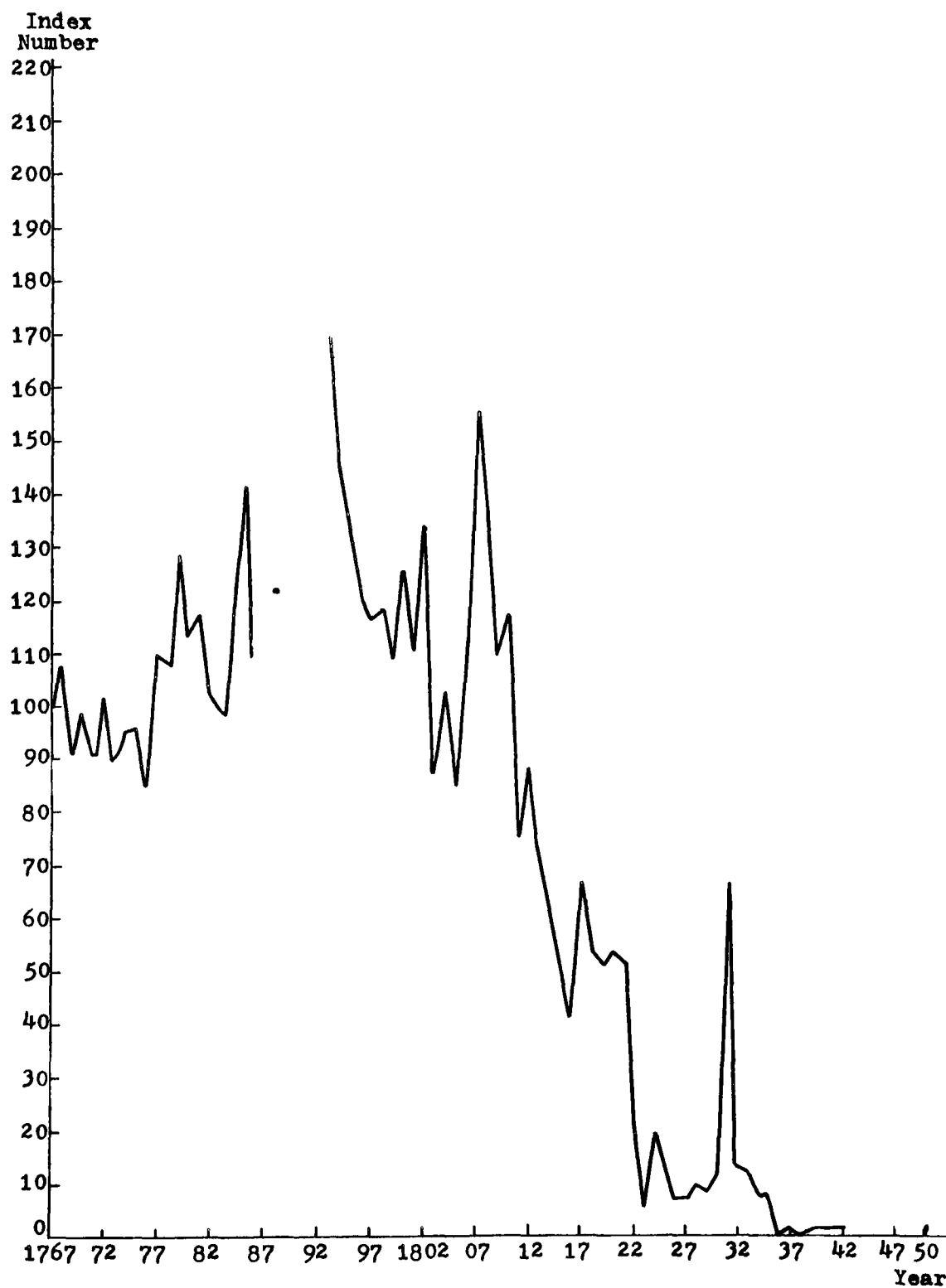
Source: Appendix I, Table 5

Graph 1.--Diagram of volume index for wheat exported from several ports of Lower Canada, 1767 - 1850 (1767 = 100).



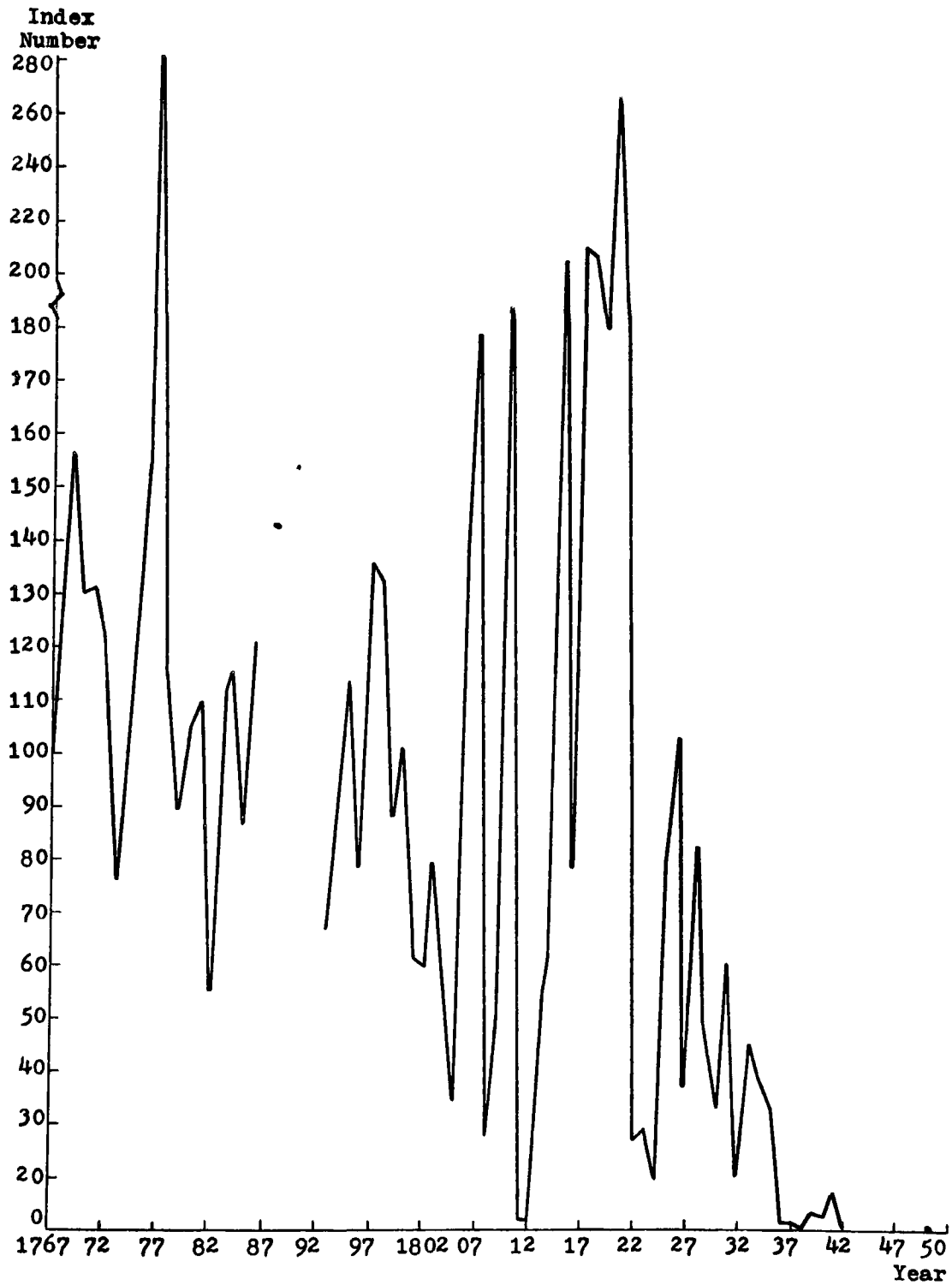
Source: Appendix I, Table 5

Graph 2.--Diagram of volume index for flour exported from several ports of Lower Canada, 1767 - 1850 (1767 = 100).



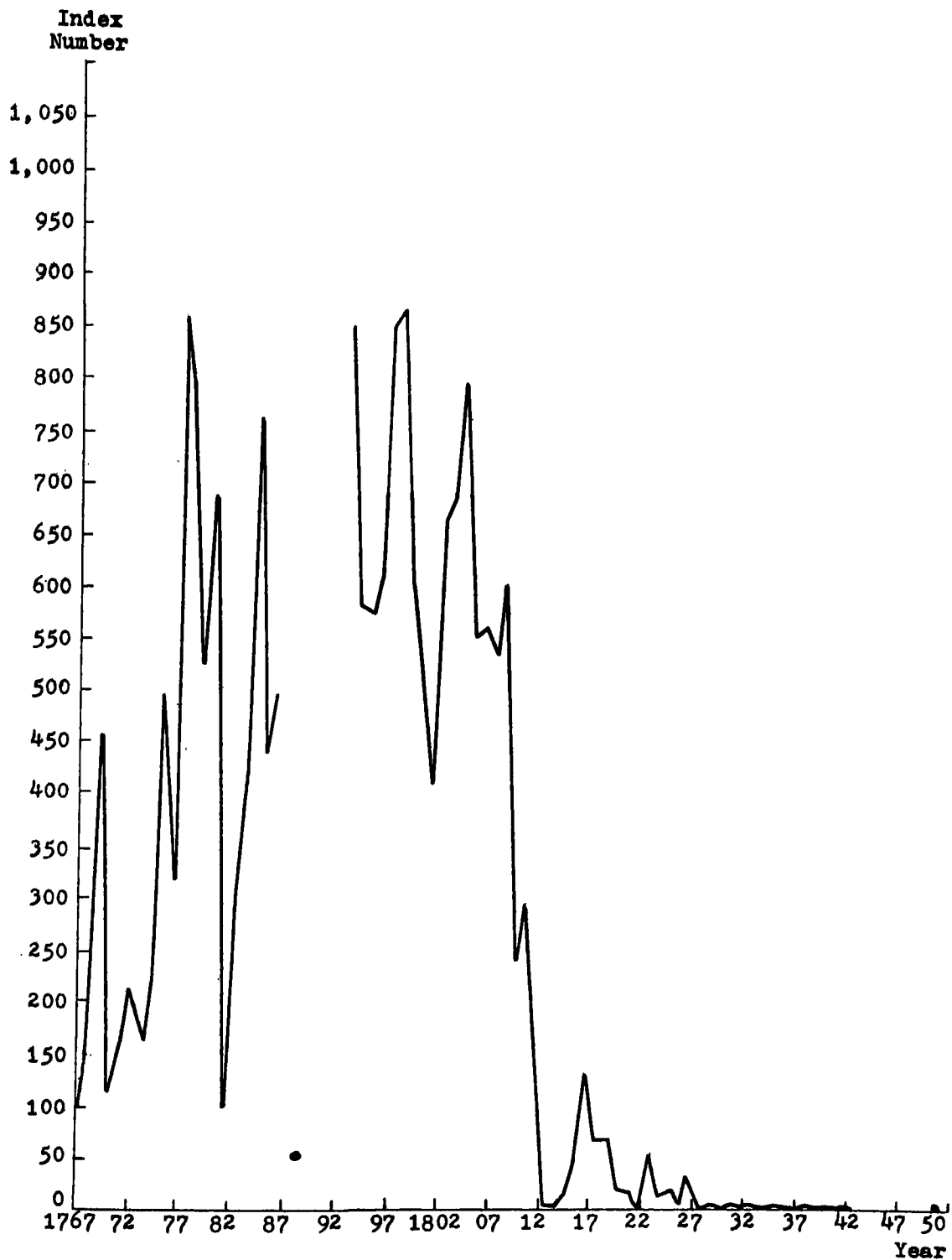
Source: Appendix I, Table 5

Graph 3. --Diagram of volume index for beaver pelts exported from several ports of Lower Canada, 1767-1850 (1767=100).



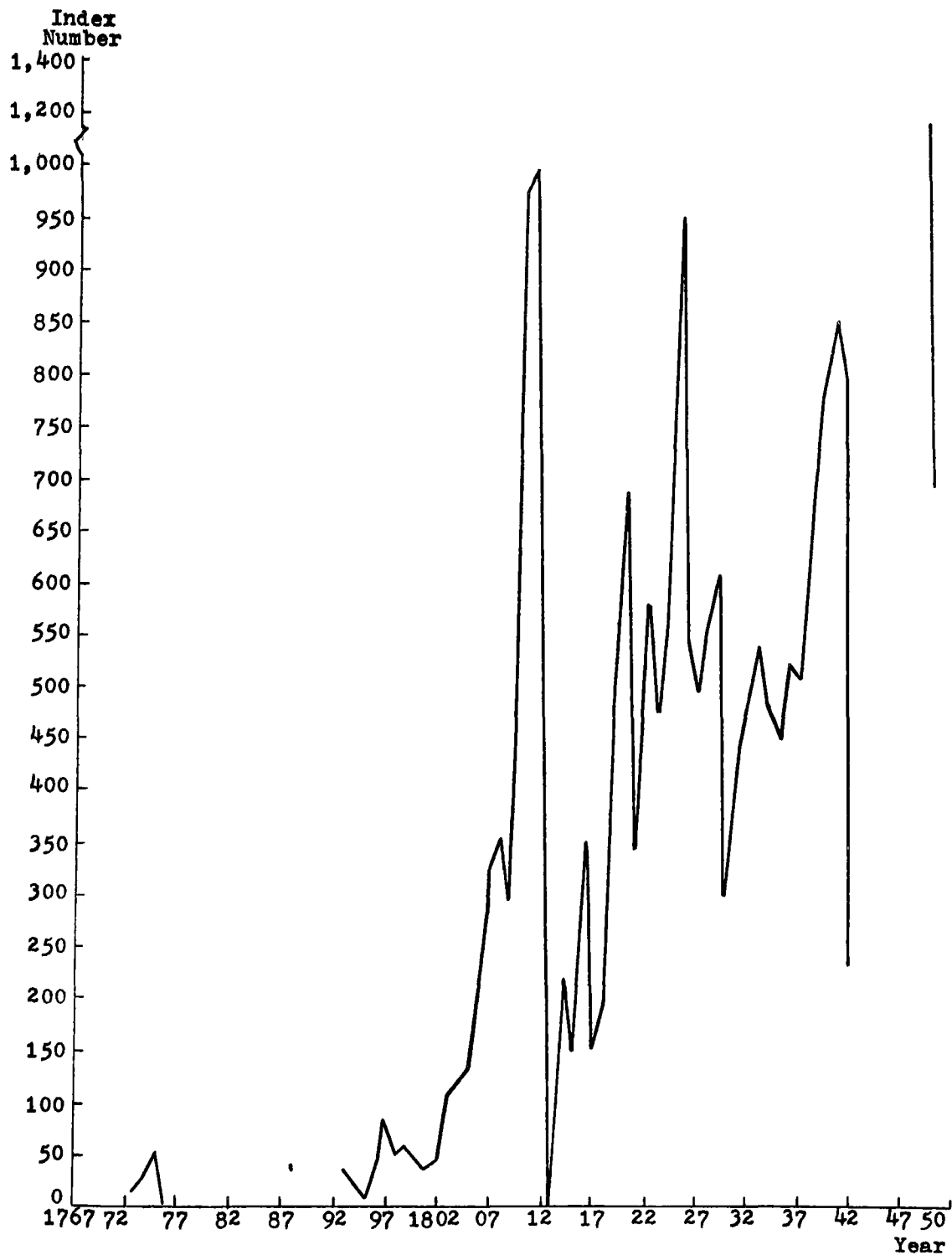
Source: Appendix I, Table 5

Graph 4.--Diagram of volume index for marten pelts exported from several ports of Lower Canada, 1767-1850 (1767=100).



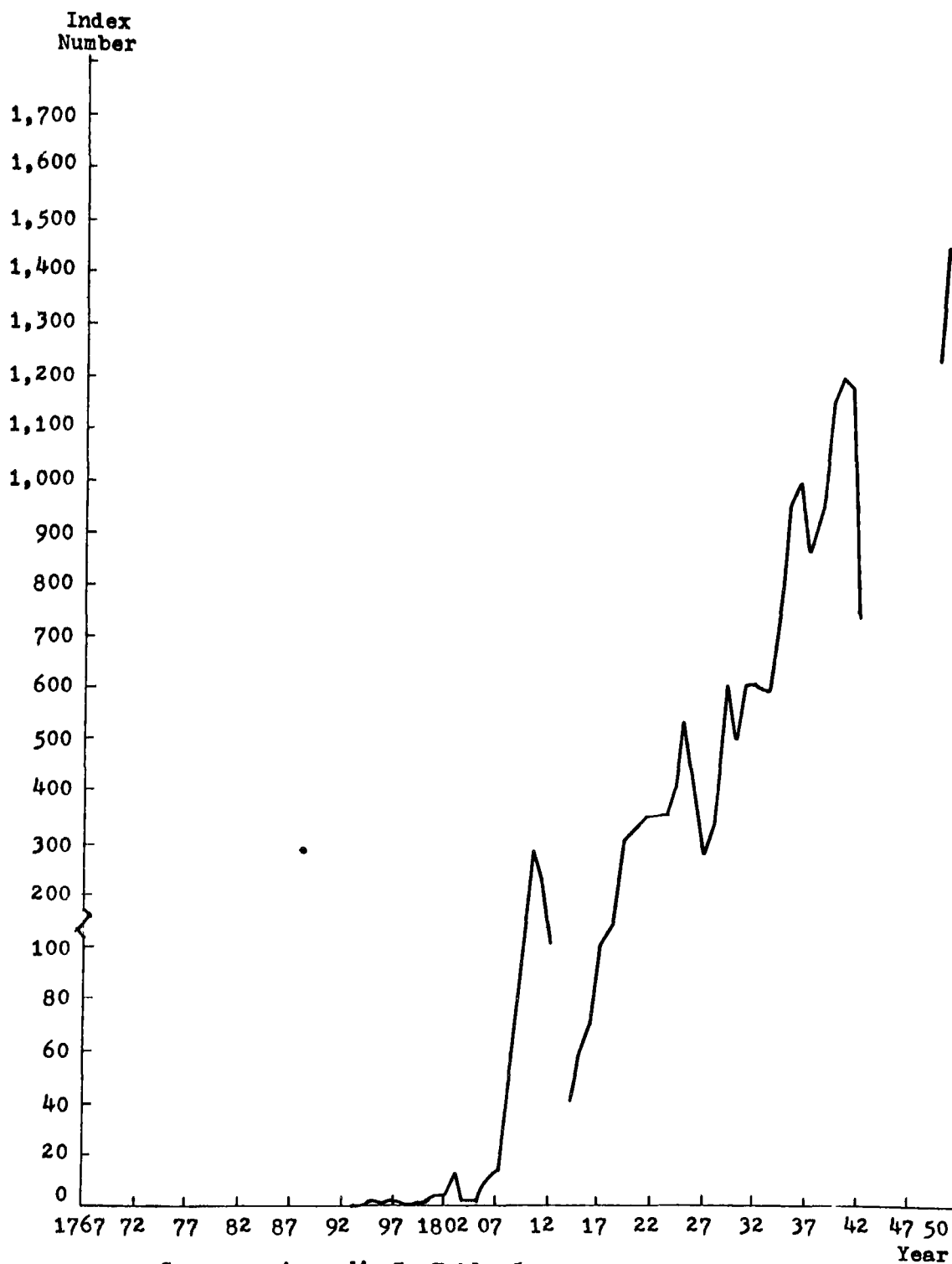
Source: Appendix I, Table 5

Graph 5.--Diagram of volume index for raccoon pelts exported from several ports of Lower Canada, 1767-1850 (1767=100).



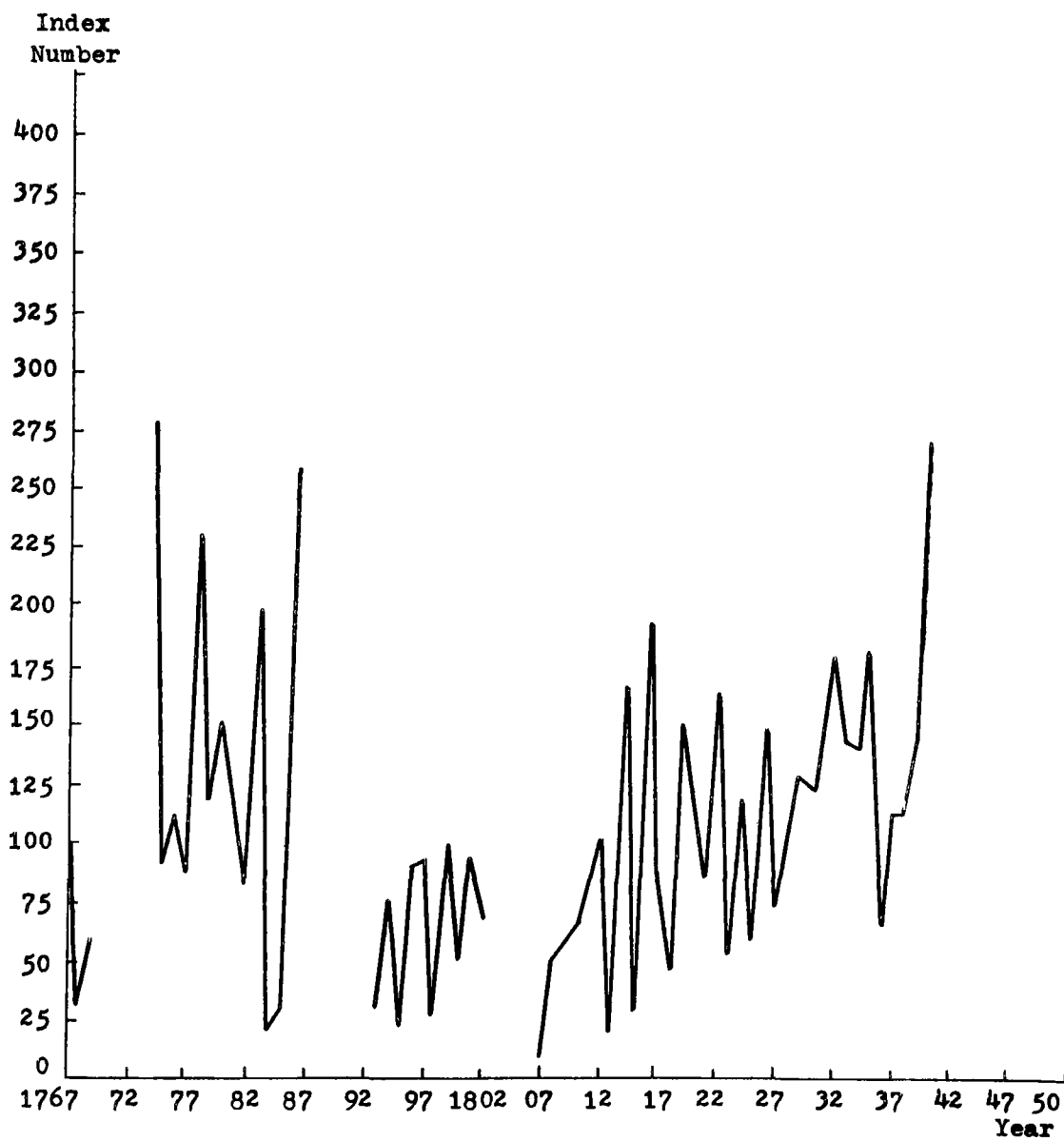
Source: Appendix I, Table 5

Graph 6.--Diagram of volume index for oak timber exported from several ports of Lower Canada, 1767-1850 (1767=100).



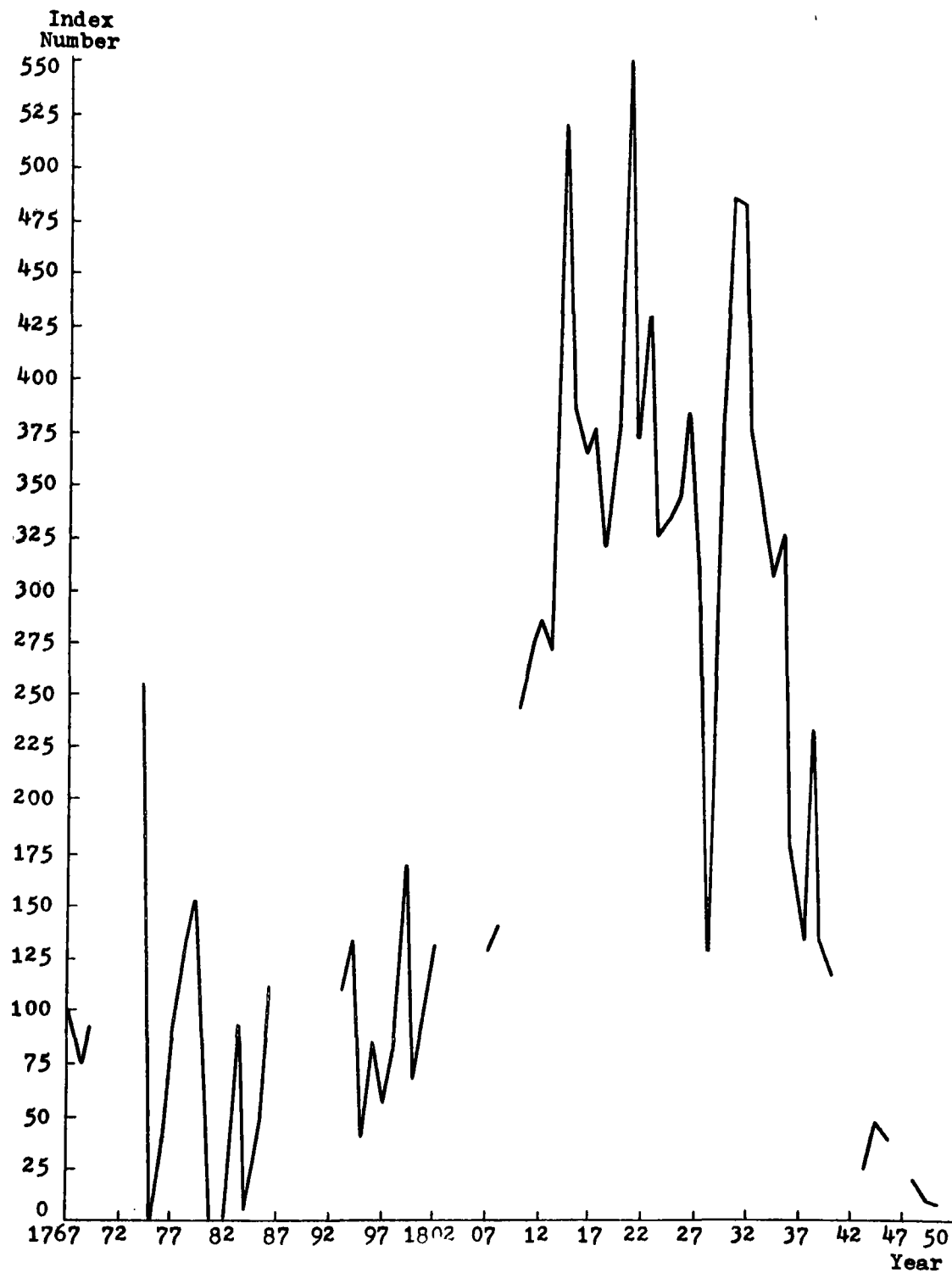
Source: Appendix I, Table 5

Graph 7.--Diagram of volume index for pine timber exported from several ports of Lower Canada, 1767-1850 (1767-100).



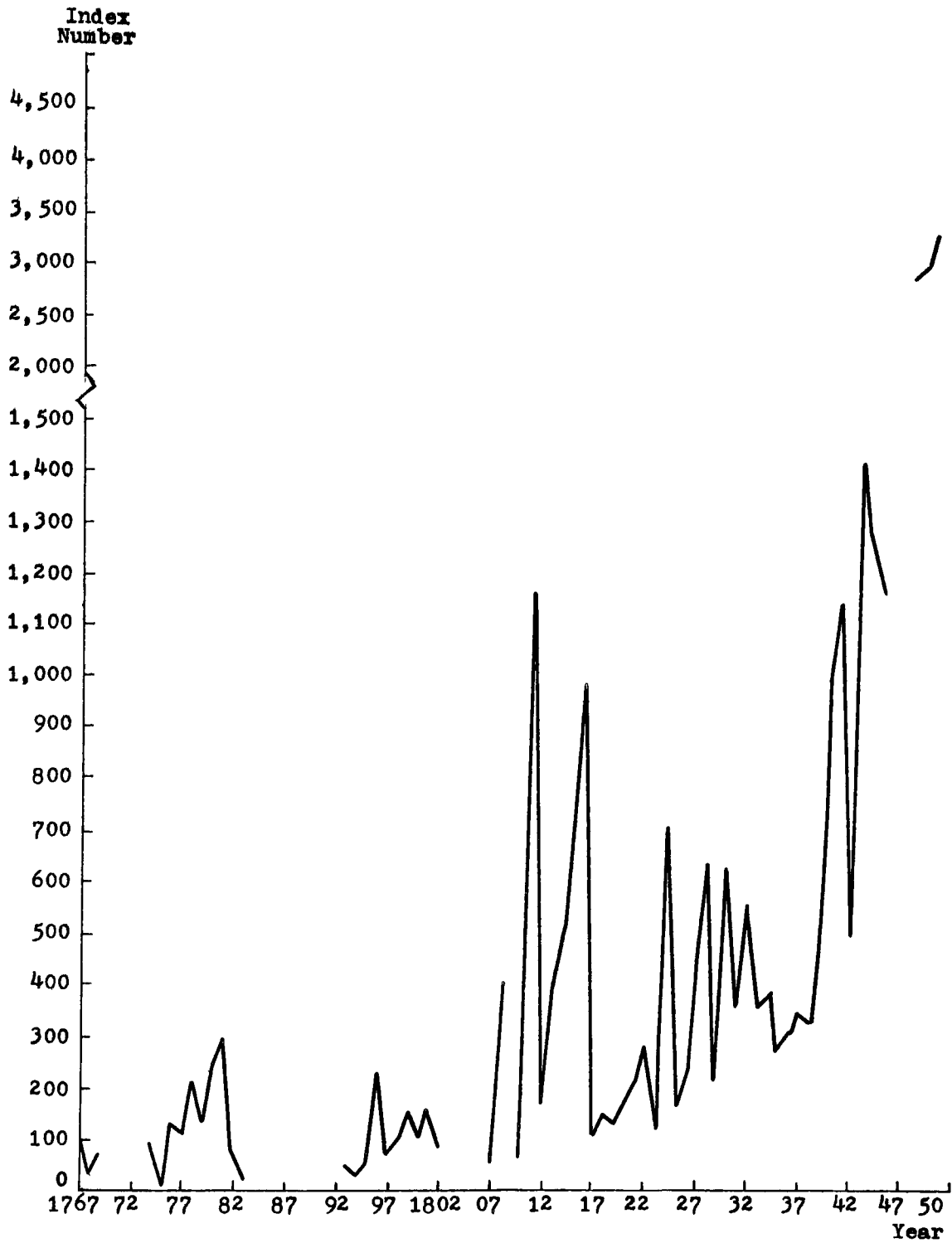
Source: Appendix I, Table 6

Graph 8. --Diagram of volume index for molasses imported at several ports of Lower Canada, 1767-1850 (1767=100).



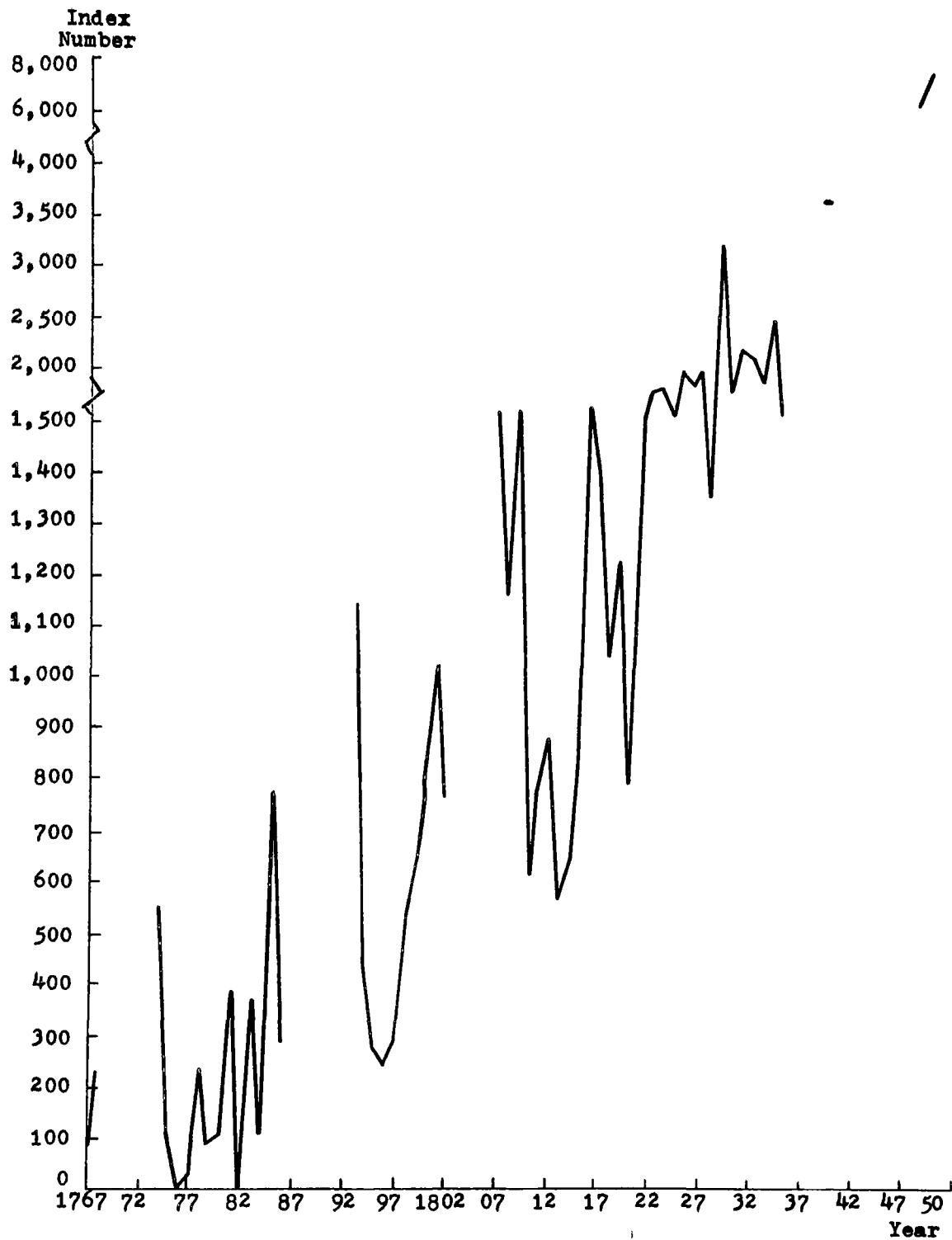
Source: Appendix I, Table 6

Graph 9.--Diagram of volume index for rum imported at several ports of Lower Canada, 1767-1850 (1767=100).



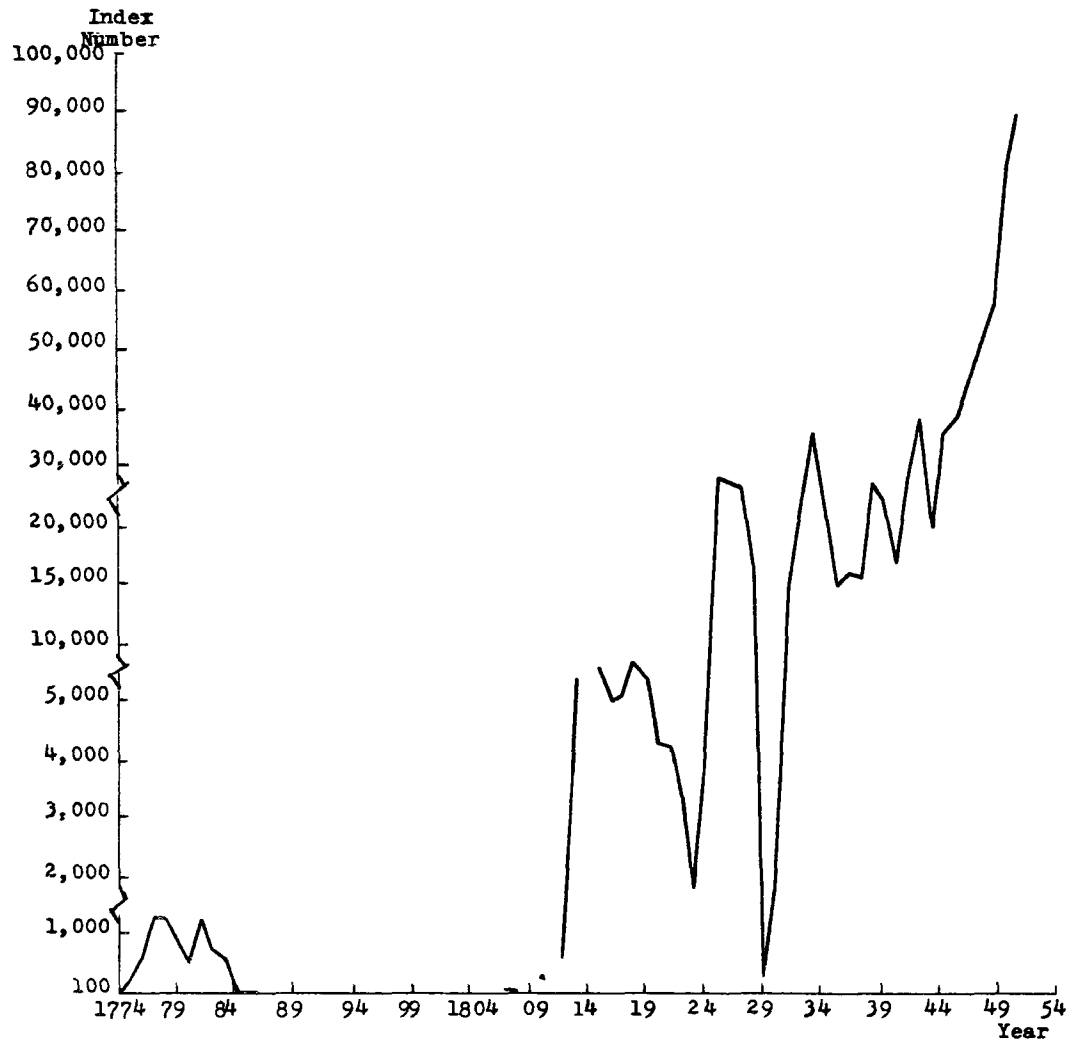
Source: Appendix I, Table 6

Graph 10.--Diagram of weight index for coffee imported at several ports of Lower Canada, 1767-1850 (1767=100).



Source: Appendix I, Table 6

Graph 11.--Diagram of volume index for salt imported at several ports of Lower Canada, 1767-1850 (1767=100).



Source: Appendix I, Table 6

Graph 12.--Diagram of weight index for tea imported at several ports of Lower Canada, 1774-1854 (1774=100).

APPENDIX III

SUGGESTIONS FOR FURTHER RESEARCH

The object of this Appendix is to offer the reader some supplementary sources of reference relating to subject matter which could not be dealt with in too great a detail within the scope of this thesis.

I. General

One of the richest source of information on the economic activity of Lower Canada for the period 1792 to 1850 are the Appendices to the Journals of the House of Assembly of Lower Canada, 1793-1837, and to the Journals of the Legislative Assembly of the Province of Canada, 1841-50. They contain an extensive amount of information, quantitative as well as qualitative on the many facets of the economy of Lower Canada, e.g. Public Income and Expenditure Accounts; Reports of the Agricultural Societies for the different districts of the Province; documents relating to intercolonial trade; financial accounts of various incorporated companies; public expenditures for education; statement of custom duties collected at different ports of Lower Canada; reports on road and bridge construction and repair (mostly of a descriptive nature). The Appendices are usually published separately from the Journals of Assembly, and contain a Table of contents.

II. Emigration from Lower Canada

In a paper noted "A Very Preliminary Draft - Not to be quoted", G. Paquet examines the emigration of French Canadians to the United States, from 1760 to 1900. The

author presents various estimates and presents his own. The author suggests that emigration of French Canadians to the United States began well before 1760 and his estimates for the period 1830-50 are somewhat higher than the estimates given in section VI in Chapter I of this thesis.

See: G. Paquet, "The French Canadian Emigration into the United States in the 19th century: An Explanatory Essay", A paper to be read at the joint meeting of the American Catholic Historical Association with the Centre de recherches en histoire religieuse du Canada. Toronto, 30 December, 1967.

III. Land Occupied and Cultivated

A comprehensive list of all lands granted by the Crown in the Province of Quebec was published in 1891. Unfortunately the grants are not listed in chronological order but in alphabetical order by counties and by grantees. The publication shows the number of acres granted and the date at which the letters of patent were issued.

See: Liste des terrains concédés par la Couronne dans la Province de Québec de 1763 au 31 décembre 1890, (Québec: C. F. Langlois ; 1891, 2 volumes).

IV. Exports and Imports

A report on the trade of the British North American colonies is available which contains a great amount of information on the trade between Great Britain and her North American Colonies, and on the trade between Canada and the

United States for the latter half of the period under survey. See: I. D. Andrews, Report on the Trade and Commerce of the British North American Colonies, (Washington: R.A. Armstrong, Printer, 1853).

Much information on the timber and lumber trades of Lower Canada, mostly of a descriptive nature, is available in a report of the Special Committee of the Legislative Council of the Province of Lower Canada. The Report contains estimates of the amount of capital invested in the sawmilling industry, estimates of the number of sawmills in the Province as well as information on lumber establishments and ship yards in Lower Canada.

See: "The Second Report of the Special Committee of the Legislative Council on the Trade of the Province of Lower Canada", Journals of the Legislative Council of the Province of Lower Canada, 1835-36, App. C.

V. French Canadian Agriculture

Most Economic Histories of Canada, covering the period 1760-1850, pay some attention to the archaic agricultural techniques of the habitant population, e.g. F. Ouellet, Histoire économique et sociale du Québec, 1760-1850, (Montréal: Fides, 1966). For further information on this subject: See F. Létourneau, Histoire de l'agriculture (Canada français), (Montréal: Imprimerie populaire Ltée, 1950); R. L. Séguin, "L'équipement aratoire prémachiniste au XVII^e, XVIII^e et XIX^e siècles", in C. Galarneau et E. Lavoie, ed., France et Canada Français du XVI^e au XX^e siècle, colloque de Québec 10-12

octobre 1963, Cahiers de l'Institut d'histoire, no 7, (Québec Les Presses de l'Université Laval, 1966), pp. 121-138; C. Lemelin, "The State of Agriculture", in C. Falardeau, ed., Essays on Contemporary Quebec, (Québec: Les Presses Universitaires Laval, 1953), pp. 55-6.

VI. Further Research

In this thesis the lack of data availability for many indicators of economic growth made it necessary to rely on estimates. This is the case for the calculation of the conversion factors for timber and beaver skins, the estimate of wheat consumption and the estimate of the investment in land by the agricultural population of Lower Canada. These estimates are often based on quantitative information available for one year only or for a relatively short period of time. Furthermore they are often weak and arbitrary. For example it was estimated that it cost approximately \$10 to clear one acre of land in Canada in 1848. This figure was used in order to arrive at total capital expenditures for clearing land in Lower Canada from 1765 to 1850. This results in a very rough approximation since it is likely that the cost of clearing one acre of land varied significantly from one period to another. Research is needed therefore in order to arrive at more realistic figures on which various estimates can be based.

This can be attempted by working on a sample of the Lower Canadian economy, either a district of the Province or a few seigneuries. Indicators of economic growth are studied for a given sample and the resulting relationships between

different variables can be applied to the Lower Canadian economy as a whole.

In the absence of statistics on an annual basis, annual average rates of increase, compound, are used for many indicators. This is the case for total population and the area of land occupied and cultivated for example. This process unfortunately leads to the smoothing out of short term fluctuations, which, until data on a yearly basis are found, can only be brought to light by the use of qualitative information.

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