Some Price Indexes for Quebec and Montreal (1760–1913)

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The study of price trends is of paramount importance to the economist and the historian interested in the socio-economies of the pre-industrial era. In Canada, many historians have collected various regional price data for the latter part of the eighteenth century and the first half of the nineteenth, but we are still lacking a consistent and composite price index that could help to extract the trends in real income, real production, and real wealth for the century before Confederation. A set of price indexes for the cities of Quebec and Montreal from 1761 to 1867 helps fill this gap. In the case of Quebec, these indexes are drawn from the data for 20 products over 106 years, while for Montreal (where sources are more limited) they are based on data for 10 products over 101 years. We extended the series of price indexes for Quebec to 1913 by splicing it with Humfrey Michell's price indexes for the latter part of the nineteenth century.

L'étude des tendances des prix revêt une importance primordiale pour l'économiste ou l'historien qui s'intéresse aux socio-économies de l'ère préindustrielle. Au Canada, de nombreux historiens ont recueilli diverses données régionales sur les prix pour la deuxième moitié du XVIII^e^ siècle et pour la première moitié du XIX^e^ siècle. Mais nous ne disposons toujours pas d'un indice composite et cohérent des prix qui nous aiderait à dégager les tendances du revenu réel, de la production réelle et de la richesse réelle durant le siècle qui a précédé la Confédération. Un ensemble d'indices des prix pour les villes de Québec et de Montréal et pour la période allant de 1761 à 1867 nous aide à combler cette lacune. Dans le cas de

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Québec, ces indices se fondent sur les données de 20 produits sur 106 ans, alors que dans celui de Montréal (où les sources sont plus limitées), ils reposent sur les données de 10 produits sur 101 ans. La série d'indices des prix pour Québec est prolongée jusqu'à 1913 en la raccordant avec les indices des prix de Humfrey Michell pour la deuxième moitié du XIX^e^ siècle.

> Les compensations statistiques font des merveilles, dès lors que la commune inspiration de la conjoncture anime les courbes particulières.
> *(Ernest Labrousse)*

THE STUDY OF PRICE TRENDS is of paramount importance to the economist and the historian interested in the socio-economies of the pre-industrial era. The classic work of Thomas Tooke (1838) has demonstrated the point most forcefully.[1] This is particularly true for the period of "commercial capitalism" that preceded, and in part overlapped, the vast movement of industrialization in the Western world. During that period, the penetrative powers of the price system have been a most important formative force. In the Canadian socio-economy, while the rent bargain remained a pillar of the largely agricultural community in the eighteenth century, already the price bargain played a pivotal role, driven by the Atlantic market, but also more and more by emerging local markets. Indeed, Atlantic and Canadian institutions were shaped in large part by these forces in the eighteenth and nineteenth centuries.

In Canada, many historians have collected various regional price data for the latter part of the eighteenth century and the first half of the nineteenth century, but we are still lacking a consistent and composite price index that could help to extract the trends in real income, real production, and real wealth for the century before Confederation. The existing indexes that have been used as deflators for arriving at estimates of trends in real standard of living or real standard of wealth are of limited use, as they pertain only to relatively short periods or are built on very skimpy data. Consequently, there is no meaningful price deflator for the period 1760 to 1867. To help fill this gap, we present a consistent set of price indexes for the cities of Quebec and Montreal from 1761 to 1867. In the case of Quebec, these indexes are drawn from the data for 20 products over 106 years, while for Montreal (where sources are much more limited), price indexes are based on data for 10 products over 101 years.

While some price series have been recently built for Canada in the pre-Confederation period, obstacles are encountered in any effort to constitute solid price indexes on the basis of very incomplete, varied, and sometimes incommensurable sets of price data. The results of our effort are presented in graphical form and spliced with Humfrey Michell's price indexes for the

1 Thomas Tooke, *A History of Prices and of the State of Circulation from 1793 to 1837* (London: Longman, Orme, Brown, Green, and Longmans, 1838), 2 vols.

latter part of the nineteenth century: our price series for Quebec is therefore extended in a bold and tentative way to 1913.

More refined analyses of these price series are in progress using sophisticated statistical techniques to uncover some of the patterns they contain. We present them now, however, to ensure that the index in its present form is immediately usable by other researchers. Two appendices contain additional information. Appendix I details the sources of the data and the range of products found in the records[2] as well as tables of useful concordances for quantities and monetary standards; in Appendix II, the "basic reconstructed" price indexes for Quebec and Montreal are recorded.[3] Those interested in more disaggregated data can obtain them from the authors.

About Price Data and the Price Indexes Available

Prices as Multivocal

Long-term price series have been used for quite some time by historians as broad instruments to record the pulse of certain sectors of the economy: the ups and downs of the economic experience with staple product economies, for instance. In the case of rudimentary economies based on one dominant staple product, the price series for the staple product often provides a reasonable approximation of the pulsations of the economy. However fascinating these price profiles may be, they do not "speak" clearly in and of themselves;[4] they must be analysed if they are to reveal the nature of the important forces that underpin the movements recorded on time series graphs. Price trends are multivocal indicators. They reflect the impact of a

2 Our original research on the period 1792–1812 attempted to be very comprehensive and to include as many products as possible in our data collection. The extensive list of products that were noted and the fact that they appeared regularly in the account books of religious institutions, hospitals, and seminaries illustrate the wide diversity of products available to consumers in Lower Canada at the time. A list (incomplete) of products is presented in Appendix I. This work helped us, in our efforts for the years 1760–1791 and 1813–1867, to focus on a narrower set of products that were more likely to spring up regularly.

3 The worksheets from which the indexes were extracted, the different consolidations, and other working papers will be deposited at the National Archives of Canada so that they can be used by scholars interested in the price data for specific products, including those not retained in the construction of our own price indexes for 1760–1867. In many cases, the price data collected are sufficient for a meaningful analysis of shorter periods and of specific products that had to be dropped because of lacunae in certain years. We could have incorporated these had we simply attempted to approximate indexes of specific and separate products over time, with gaps here and there. For instance, see Douglas McCalla's treatment of such "produce prices" turned into specific indexes for products in Upper Canada in *Planting the Province: The Economic History of Upper Canada 1784–1870* (Toronto: University of Toronto Press, 1993), appendix C.

4 As Pierre Chaunu once claimed in a bout of enthusiasm in his defence of *histoire sérielle*. See "L'histoire sérielle", *Revue d'histoire de l'Amérique française*, vol. 21 (September 1967), pp. 182–183. Robert Mandrou also has written that "la construction d'une courbe — fût-elle simplette — semble préférable à une fine page de définitions". See "Mathématiques et histoire", *Critica storica*, vol. 1 (1962), p. 39.

whole range of circumstances affecting the supply and demand of particular commodities (such as temporary seasonal shortages, wars, technical improvements in production and transportation, modification of the state regulation of trade or taxation, the general business climate, prosperity or stagnation, and the general state of the system of currency). Consequently, it is not always easy to interpret price trends for a single commodity: a price increase may equally well echo a local shortage or a wave of prosperity in the economy or any number of other particular circumstances.

The movement of an index synthesizing the general price drift (from an aggregation of the price trends of a number of commodities) casts a much wider net and captures a much broader picture. Such an index is in some sense easier to interpret as taking the temperature of the socio-economy. A major period of price increase is likely to be closely related to either an expansion in the real general level of economic activity or an across-the-board increase in costs of production, or to a general inflation or deflation pressure generated by specie flows or the actions of the monetary authorities. In the former case, a change in real aggregate demand or supply is the source of the price increase or decrease; in the latter case, the debauchery of the currency may generate a depreciation of the value of money as a means of exchange, and a consequent increase in the level of nominal prices, or the vagaries of the monetary system may bring about the reverse. A good example of a combination of these two forces is the experience of New France in the first two decades of the eighteenth century. One may observe price increases after 1708 both as a result of the opening of new external markets and of the inflationary card money scheme.[5]

Prices as Manifold Tools of Analysis

Prices are only one diagnostic indicator of economic activity. They are not sufficient as economic indicators to define accurately and definitely the fundamental economic character of a period. Not only do they require much interpretation based on a good understanding of the nature of the type of price mechanism upon which they are based, but it must be recognized that they echo dramatically different realities in a proto-market economy, in a planned economy, and in a commercial capitalist region. These difficulties should not lead one to believe that such an instrument is unusable. When handled with due diligence, price trend analysis can contribute significantly to the development of a reasonable diagnosis about a socio-economy.

Price data can also be handled as deflators that can be applied to wage and other income or wealth series to ascertain the evolution of real wages, real income, and real wealth over time. This makes possible comparison of real standard of living across regions or over time.

5 Jean Hamelin, *Économie et société en Nouvelle-France* (Québec: Presses de l'Université Laval, 1960). Louise Dechêne also explains the complexity of some of those issues in relation to New France in *Le partage des subsistances au Canada sous le Régime français* (Montréal: Boréal, 1994).

Price data may additionally be most useful in establishing the degree of economic integration of the different segments of an economic space or region. When the different segments of an economic space are very well connected by a working network of markets and a fair degree of economic integration prevails, price trends are closely correlated as a result of ongoing arbitrage between the sub-regions.

One must remain extremely cautious in interpreting price data, however. For instance, there is often evidence of price stickiness or "unnatural" price stability in certain markets where the *quid* for the *quo* transactions are much more complex than a simple exchange of commodity for money. In 1972 Abraham Rotstein had already shown that, in the fur trade for instance, a very complex set of *quids* and *quos* (including price but also various political, symbolic, and security dimensions) reduced the role of prices dramatically.[6] Much has been written in the same vein since. On the other hand, it would be equally unwise to underestimate the penetrative powers of the price system. Institutional changes of all sorts (such as the emergence of property rights in land in certain North American Indian tribes) are alleged to have been triggered by commercialization (by the price increases of fur in this particular case).[7] A careful price analysis may therefore help to throw much light on many aspects of the process of institutional change.

Price Data Available

In the 1930s there was a great interest in the history of prices in the pre-industrial era. The work of François Simiand, Ernest Labrousse, E. J. Hamilton, Lord Beveridge, and others led to a most important flurry of price studies that have illuminated many aspects of the evolution of Western economies.This work was continued by following generations of historians, notably the *Annales* group and a number of British and American historians.[8]

6 A. Rotstein, "Trade and Politics: An Institutional Approach", *Western Canadian Journal of Anthropology*, vol. 3, no. 1 (1972), pp. 1–28.

7 H. Demsetz, "Toward a Theory of Property Rights", *American Economic Review*, vol. 57 (1967), pp. 347–359.

8 François Simiand, *Le salaire, l'évolution sociale et la monnaie* (Paris: Alcan, 1932), and *Recherches anciennes et nouvelles sur le mouvement général des prix du XVI^e^ au XIX^e^ siècle* (Paris: Alcan, 1933); Lord Beveridge, *Prices and Wages in England from the Twelfth to the Nineteenth Century* (London: Longmans, Green & Co., 1939); E. J. Hamilton, *American Treasure and the Price Revolution in Spain, 1507–1650* (Cambridge, Mass.: Harvard University Press, 1934); Ernest Labrousse, *Esquisse du mouvement des prix et des revenus en France au XVIII^e^ siècle* (Paris: Dalloz, 1933), and *La crise de l'économie française à la fin de l'Ancien Régime et au début de la Révolution* (Paris: Presses Universitaires de France, 1943); M. Baulant and J. Meuvret, *Prix des céréales extraits de la mercuriale de Paris (1520–1698)*, 2 vols. (Paris: SEVPEN, 1960); Pierre Chaunu, *Séville et l'Atlantique (1504–1650)*..., 11 vols. (Paris: SEVPEN, 1956–1959); Pierre Goubert, *Beauvais et le Beauvaisis de 1600 à 1730* (Paris: SEVPEN, 1960); Emmanuel Le Roy Ladurie, *Les paysans du Languedoc* (Paris: SEVPEN, 1966); Douglas C. North, *The Economic Growth of the United States 1790–1860* (New York: W. W. Norton & Co., 1966).

This widespread movement influenced a certain number of Canadian historians. Work initiated by Adam Shortt's economic history of Canada in the series *Canada and its Provinces* appeared as early as the second decade of the twentieth century.[9] In 1931 Humfrey Michell examined agricultural prices back to 1848 and studied the general wholesale prices for the period 1868 to 1925, but his probe did not extend far into the pre-Confederation period.[10] Other authors such as Harold Innis, Donald G. Creighton, and Arthur R. M. Lower compiled bursts of statistics on different products or issues, but did not attempt to construct long-term price series or indexes.[11] Some of these statistics and numerous others drawn from such sources as censuses were later compiled by M. C. Urquhart.[12] The only available reliable series of price statistics exist solely for the post-Confederation period, however.

Only much later did an interest develop for the study of earlier price data in Quebec and Montreal. Important pioneering work was done in the 1960s, first by Jean Hamelin for the pre-1760 period,[13] then by Hamelin and Fernand Ouellet for the period 1760 to 1850.[14] These data were mined by Ouellet in three of his major books.[15] The authors of this article have also constructed price series and indexes for different segments of the 1790–1835 period,[16] while Louise Dechêne collected data on the evolution of the

9 Adam Shortt, "General Economic History, 1763–1841", in Adam Shortt and A. G. Doughty, eds., *Canada and its Provinces* (Toronto, 1914–1917), vol. 4. See also *Report of the Board of Inquiry into Cost of Living in Canada* (Ottawa, 1915), 2 vols. The second volume is a minority report by R. H. Coats.

10 Humfrey Michell, "Statistics of Prices", in *Contributions to Canadian Economic History* (Toronto: Macmillan, 1931), vol.2, pp. 47–101.

11 Apart from his classic *The Fur Trade* (1939) and *The Cod Fisheries* (1940), Harold Innis has written many interesting essays. See his *Essays in Canadian Economic History* (Toronto: University of Toronto Press, 1962); Donald G. Creighton, *The Commercial Empire of the St. Lawrence* (Toronto: University of Toronto Press, 1937); Arthur R. M. Lower, *Great Britain's Woodyard: British America and the Timber Trade, 1763–1867* (Montreal, 1973).

12 M. C. Urquhart and K. A. H. Buckley, *Historical Statistics of Canada* (Cambridge, 1962).

13 Jean Hamelin, *Économie et société en Nouvelle-France* (Québec: Presses de l'Université Laval, 1960).

14 Jean Hamelin and Fernand Ouellet, "Le mouvement des prix agricoles dans la province de Québec, 1760–1851", in C. Galarneau and E. Lavoie, eds., *France et Canada français du XVI^e au XX^e siècle* (Québec: Presses de l'Université Laval, 1966), pp. 35–48.

15 Fernand Ouellet, *Histoire économique et sociale du Québec, 1760–1850* (Montréal: Fidès, 1966); *Éléments d'histoire sociale* (Montréal: HMH, 1972); *Le Bas-Canada : 1791–1840 : changements structuraux et crise* (Ottawa: Presses de l'Université d'Ottawa, 1976).

16 Gilles Paquet et Jean-Pierre Wallot, "Aperçu sur le commerce international et les prix domestiques dans le Bas-Canada (1793–1812)", *Revue d'histoire de l'Amérique française*, vol. 21 (December 1967), pp. 447–473; "Crise agricole et tensions socio-ethniques dans le Bas-Canada, 1802–1812 : éléments pour une réinterprétation", *Revue d'histoire de l'Amérique française*, vol. 26 (September 1972), pp. 185–237; "The Agricultural Crisis in Lower Canada, 1802–1812: mise au point. A Response to T. J. A. Le Goff", *Canadian Historical Review*, vol. 56 (June 1975), pp. 133–161. The 1972 article comprised a price index of 12 products, while the 1975 one presented two price indexes (Quebec and Montreal) for 32 products, agricultural and non-agricultural.

prices of wheat in Montreal prior to 1760.[17] Since then, despite important works documenting all kinds of aspects of the socio-economic conditions in pre-Confederation Canada (demography, urban growth, social differentiation, trends in migrations, in exports, in the production of wheat or other agricultural products and techniques, and in the standards of living, or studies focused on a specific region or on specific individual prices),[18] very little new work has come forward except for the publication in 1982 of data collected in the 1960s by Ouellet, Hamelin, and Richard Chabot.[19]

Three Preliminary Attempts at Price Indexes

As mentioned earlier, we have taken part, on and off, in this investigation into pre-Confederation price data. We have worked first to develop a very extensive data base drawn from the account books of religious orders and merchants, from public records, including the *Journals of the House of Assembly*, military papers, and the like, and from newspapers and printed flyers, and then to analyse this data base to produce a variety of price indexes designed for specific uses. We have also drawn occasionally from our work on inventories after death (where price estimates are available on a large range of products), not so much to construct an index (estimates are not good enough, particularly when they are arrived at by different persons

17 Louise Dechêne, *Habitants et marchands de Montréal au XVII^e siècle* (Paris: Plon, 1974). More recently, in her *Le partage des subsistances au Canada,* she presents a table of the prices of wheat in Montreal (1675–1759) and in surrounding parishes (pp. 197–198), based on her previous work and on Sylvie Dépatie's Ph.D. thesis, "L'évolution d'une société rurale. L'Île Jésus au XVIII^e siècle" (McGill University, 1988).

18 It would be impossible to enumerate all the historians who have worked on those subjects: Christian Dessureault, Louis Michel, Louis Lavallée, Sylvie Dépatie, Louise Dechêne, Lise Saint-George, Claude Pronovost, Thomas Wien, Claude Desrosiers, John Dickinson, and Lorraine Gadoury, to name only a few. Some of their work can be found in the following compilations: Joseph Goy and Jean-Pierre Wallot, eds., *Évolution et éclatement du monde rural. France-Québec, XVII^e–XX^e siècles* (Paris and Montréal: EHESS, 1986); François Lebrun and Normand Séguin, eds., *Sociétés villageoises et rapports villes-campagnes au Québec et dans la France de l'Ouest, XVII^e–XX^e siècles* (Trois-Rivières and Rennes: Université du Québec à Trois-Rivières and Rennes, 1987); Gérard Bouchard and Joseph Goy, eds., *Famille, économie et société rurale en contexte d'urbanisation (17^e–20^e siècles)* (Chicoutimi and Paris: SOREP, 1990); Rolande Bonnain, G. Bouchard, and J. Goy, eds., *Transmettre. Hériter. Succéder. La reproduction familiale en milieu rural. France-Québec, XVIII^e–XX^e siècles* (Lyon: PUL, 1992). See also Allan Greer, *Peasant, Lord and Merchant: Rural Society in Three Quebec Parishes, 1741–1850* (Toronto: University of Toronto Press, 1985); Louis Lavallée, *La Prairie en Nouvelle-France, 1647–1760. Étude d'histoire sociale* (Montreal and Kingston: McGill-Queen's University Press, 1993); Serge Courville, *Entre ville et campagne. L'essor du village dans les seigneuries du Bas-Canada* (Québec: Presses de l'Université Laval, 1990); F. D. Lewis and R. M. McInnis, "Agricultural Output and Efficiency in Lower Canada, 1851", *Research in Economic History*, vol. 9 (1984), pp. 45–87.

19 Richard Chabot, Jean Hamelin, and Fernand Ouellet, "Les prix agricoles dans les villes et les campagnes du Québec d'avant 1850 : aperçus quantitatifs", *Histoire sociale/ Social History*, vol. 15, no. 29 (May 1982), pp. 83–127. For Upper Canada, see the list of prices or product specific price indexes in McCalla, *Planting the Province*, appendix C and p. 20, where a table compares the Chabot-Hamelin-Ouellet prices of wheat to those of Upper Canada.

in different places)[20] as to detect certain anomalies or to ascertain the plausibility of some "reconstructed" prices. This led to three different sets of price series and indexes which we published in 1967, 1975, and 1988.

We uncovered a very rich source of price data for the turn of the nineteenth century (the official prices on the Quebec market) which we used in our 1967 article, but this series unfortunately covered only less than ten years (1804 to 1813). This very rich material was especially useful in that it allowed us to demonstrate that the seasonal component in these series was so important that it had to be taken into account when dealing with incomplete price series — the only sort of series one can usually find. Not to do so would entail the risk of "detecting" fictional price increases or decreases from one year to the next simply as a result of differences in the seasonal pattern of observations for each year.

We also culled the religious archives existing at the time, the merchants' account books, public records of all kinds, and newspapers to build price indexes gradually for Quebec and Montreal for 32 products (agricultural and non-agricultural) for the period 1792 to 1811. These indexes, covering such aspects as food, drink, clothing, and construction materials, were published in 1975. This rich data bank of monthly or seasonal prices corroborated some of our 1967 findings and reinforced our contention that the casual use of yearly averages built on data collected for different months of the year can be grossly misleading. Prices drawn from one season in a given year and another season for the next might show a shift in conjuncture that is a pure "artifact".

As our research interests extended to 1835, we felt the need for reliable price indexes based on quarterly prices for a wide range of products. This led us to explore anew the basic sources of religious orders existing at the time, the official documents and newspapers, and some merchants' records when they covered a sufficiently long period (such as the Neilson papers, for instance).This proved to be a very time-consuming quest. In the meantime, there was a pressing need for some deflators. We developed some very rough price indexes for Quebec and Montreal based on six products from the data available in Chabot, Hamelin, and Ouellet (1982). These products were chosen because they seemed to comprise the most complete and continuous annual price series: they did not show significant gaps for the period we were covering (1792 to 1835).[21]

20 In comparing prices from the inventories after death and sale prices following the inventories (these *procès-verbaux de vente après inventaire* exist for nearly 21% of all the inventories, and in 71.3% of these cases, the commodities sold match those appraised in the inventories at a level over 90%), we have found that real sale prices surpass the estimated prices by nearly 140%!

21 In 1982 Fernand Ouellet claimed that, in our 1967 article, we denied all value to the 1966 Hamelin-Ouellet series ("Les prix agricoles dans les villes et les campagnes", note 17). This hardly reflects our cautious approach. Since the details of the data used by Ouellet in his works (from the 1960s to 1982) remained unavailable until the 1982 paper, one was asked to take the reliability of the series

Even though these sets of price series helped us to derive many useful approximations and to bolster many of our hypotheses, such series did not provide the consistent long-run price index that was deemed necessary by all the researchers on pre-Confederation Canada.

Sources Used and the Challenges They Pose

The construction of long-term price series for pre-Confederation Canada cannot rely at any time on one permanent and reliable source. Thus one cannot easily ensure a standardized array of comparable products and prices across the seasons for each year. For nearly all of the products there are many diverse sources, and available information on any of them suffers from "lapses": products disappear from the records for a few months, for one or many years, or they acquire new labels or characteristics.[22] Many religious orders do not have complete account books covering all the months and years and all of their activities (some having been destroyed or lost). Surprisingly, certain products that are bound to be regularly consumed are not regularly mentioned in the account books, while others, which could be deemed more exotic, appear suddenly and disappear as suddenly from the records. Thus in the end, despite the wide array of products used in different account books, very few of them can be relied upon to sustain a long-term price index.

Price of What?

The characteristics of the products, their unit of measure, and the currencies in which their prices are expressed change through time. The first two are often so vague that it can become impossible to use a price available for one product because one cannot decipher what the unit of measure means. Also,

on faith. Moreover, whatever data were in the public domain — the graphs or tables in his *Histoire économique et sociale du Québec* — were often presented in a confusing way. This justified a very cautious approach. Indeed, once the basic data were available in 1982, it became possible to extract from this material some useful series, which we did. We used them as the basis for a rough six-product price index to deflate some economic series. See the result notably in G. Paquet and J.-P. Wallot, "Une spectrographie des genres de vie dans la société rurale bas-canadienne (1792–1835)", in M. Baulant, A. J. Schuurman, and P. Servais, eds., *Inventaires après décès et ventes de meubles. Apports à une histoire de la vie économique et quotidienne. Actes du Neuvième Congrès International d'Histoire Économique (Berne 1986)* (Louvain: Academia, 1988), pp. 245–256, and *Lower Canada at the Turn of the Nineteenth Century: Restructuring and Modernization* (Ottawa: Canadian Historical Association, 1988), p. 19. It is still not clear, however, if these annual prices (notably those derived from "la Quête de l'Enfant Jésus", which comes around Christmas) take into account the seasonal variations.

22 Even in the case of fairly obvious products, such as wheat or peas, Hamelin and Ouellet's series show some such "lapses" for many years, particularly in Montreal. This is a problem that confronts every historian: the sources almost never provide continuous series, except perhaps for the general annual averages prepared by the Jesuits and Sulpicians for the prices of wheat in Quebec and Montreal. In this case, one still remains unclear as to how these recapitulations of annual averages have been constructed.

vague mentions of a generic product are often followed by very specific definitions, thus jeopardizing efforts to arrive at price series corresponding to a standardized product. For instance, beans may be quoted without any additional information on a certain page of an account book, then presented two pages later distinctly as "white" or "green" beans (with different prices); this makes one wonder, of course, what kind of beans comprised the previous entry in the same account book.

Different *monnaies de compte* or types of currencies are used as well, so that strict equivalencies among currencies must also be established. Moreover, prices found in religious orders' and merchants' account books do not necessarily reflect official retail prices on the markets in Quebec or Montreal, or match the data collected from newspapers. One must therefore make a decision about which prices may be used in the compilation of a coherent retail price series. However, because of the numerous gaps in the data, prices originating from many of these different sources must be used if one is to get a full array of prices across all seasons or continuous series through the years. This creates huge methodological problems.

Narrowing the Field of Study

Given the fact that the sources are varied (and the search quite time-consuming and impossibly costly), it has become essential to narrow considerably the scope of our investigations into prices *ab ovo*. We have limited our investigation (after the first flurry) to a range of some 70 products. We selected the most promising commodities on the basis of a preliminary examination of the data. We then carried out a systematic data collection in the archives of the Monastery of the Augustines, the Hôtel-Dieu of Quebec, the Hôpital Général of Quebec, the Seminary of Quebec, the Notre-Dame of Quebec parish, the Jesuits' Estates, the Congrégation de Notre-Dame (Quebec and Montreal), the Ursulines of Quebec, the Hôtel-Dieu of Montreal, the parish Notre-Dame-de-Montréal, and the Sulpicians and their estates, including the Domaine St-Gabriel and des Prairies as well as St-Joachim of Pointe-Claire and St-Joseph of Rivière-des-Prairies.

We have also mined other types of private sources such as a large number of merchants' account books in the National, Quebec, and McCord Archives, mostly for 1786 to 1815, as well as printed flyers (of which only a few copies have survived, generally printed in Quebec), the newspapers (notably the *Quebec Gazette* and *Montreal Gazette*, *The British American Register*, *The Quebec Mercury*, *The Canadian Courant and Montreal Advertiser*, *Le Canadien*, and *La Minerve*), quite irregular in their reporting and most of them incomplete, public records such as the military records (C series, rich in prices on construction and the cost of labour, for example), CO 42 and Q Series (correspondence between the Governor and London), and the *Journal of the House of Assembly*. (See Appendix I for a more comprehensive list of sources and the list of products.)

Quebec and Montreal

Prices are much more difficult to locate on a regular basis for Montreal than for Quebec,[23] but there is still much information on which to build. They may be subsumed under four general headings: account books of institutions, private merchants' account books, newspaper data, and official price series. The four series were processed in parallel.

We have collated the products and prices in the account books of each of the religious orders existing at the time and also in major institutions such as hospitals and seminaries in the two cities. Some data were collected from account books that originated from farms outside the city limits (for instance, in different parts of the Island of Montreal or at the outskirts of Quebec). Since the prices of these products are usually very close to those relating to sales in the city for the same institutions or religious orders, we have eventually amalgamated these prices in a single series for the religious orders, but we have excluded distant seigneuries or farms, such as in the case of the Jesuits' Estates, when the prices are clearly established as emerging from another region.

This material is the richest source and the most consistent of all the series over time. Generally it follows closely the "market" prices, when they exist, and can be considered, as Hamelin and Ouellet have asserted, the closest one could find (in any significant series) to retail prices.[24]

We also aggregated the data gathered in private archives, mostly merchants' account books, in a different folder, excluding however "wholesale" prices, when they were thus identified. We followed the same procedure for the newspapers and, finally, for the official series (market prices sent to London for information and generally concerning Quebec), or information appearing occasionally on flyers, or prices for the victuals and other products used by the military establishment in the colony. In the latter case, these readings may be misleading as they concern huge quantities of such commodities as wheat, flour, pork, beef, and peas and thus probably represent wholesale prices.[25] The same reasoning applies to the prices (mostly of non-agricultural products) published in the *Journal of the House of Assembly* in years when there were important construction activities. There are important gaps in all those price series (for most of the products).

23 Hamelin and Ouellet, "Le mouvement des prix agricoles"; Chabot, Hamelin, and Ouellet, "Les prix agricoles dans les villes et les campagnes".

24 Hamelin and Ouellet, "Le mouvement des prix agricoles", pp. 36ff.; Chabot, Hamelin, and Ouellet, "Les prix agricoles dans les villes et les campagnes", pp. 88–89.

25 For instance, the C series regularly identifies the prices for large quantities of victuals bought to nourish soldiers. The quantities are so huge that one cannot actually use those prices directly except as another indicator or a check on other prices. For instance, the rations of soliders in Canada in a year are as follows: 5,250 soldiers need 7,731,350 lbs. of flour, 4,375,016 lbs. of pork, 27,600 minots of peas, 338,840 lbs. of butter, and 451,786 lbs. of rice. Although the annual average per soldier may seem high, perhaps the army did take into account some percentage for spoilage, or else soldiers ate very well!

This is especially true for Montreal until the nineteenth century. However, these series can be meshed very prudently when the differences between them are not significant.

While recognizing the theoretical differences between the export price, the wholesale price, the semi-wholesale price (the prices paid by consumers on the public market), and the retail prices,[26] we found that in practice it was not always possible to determine exactly what sorts of prices we were encountering. When in doubt or when price data proved too discordant, given what we knew about the period, we have eliminated them from our files.

Different Currencies, Different Units of Measure

Another difficulty stems from the different currencies in circulation and *monnaies de compte* used at the time. The problem is not as daunting as it first might appear: for the period 1760 to 1790, most of the prices are in the French *livres de 20 sols* (not the *livre tournois*);[27] given the relative stability of exchange rates after the first few years of uncertainty in the 1760s and early 1770s, it was not a major problem to "translate" all currencies into the *livre française de 20 sols*, thus building on a single

26 For those distinctions, see Hamelin and Ouellet, "Le mouvement des prix agricoles", pp. 36–37.

27 The *livre française ancien cours* or *livre française de 20 sols* is different from the *livre tournois*. The different account books, from religious orders but also from private merchants such as Guy, indicate that there is the same difference between the *livre de 20 sols* and the *livre tournois* as there is between the pound Halifax currency and the pound sterling (English currency): in both cases, 10 *livres* or pounds in the colonial currency are worth 9 *livres* or pounds in the mother country's currency. The confusion may come from the fact that all *livres* comprise 20 *sols* and each *sol*, 12 *deniers*, the same as all pounds comprise 20 shillings and each shilling, 12 pence. When notaries or account books want to indicate the *livre tournois*, they always specify "*tournois*". If that adjective is not there, one must assume the currency is that of the colony or *ancien cours*. This difference, although not catastrophic, could warp long-term price indexes to a certain extent. In the case of the series used by Hamelin and Ouellet, who do not differentiate between these French currencies ("Le mouvement des prix agricoles", pp. 37–38, and Chabot, Hamelin, and Ouellet, "Les prix agricoles dans les villes et les campagnes", pp. 88s), it may not matter all that much, as their sources (essentially religious orders' and parish account books) are mostly in *livres de 20 sols,* and its relationship to the colonial pound or Halifax currency is well known (see the table in Appendix I). Given the fact that we use many types of sources, we have converted all the currencies and prices in *deniers* (in the French currency, *livres de 20 sols*). We are helped by the fact that the *monnaies de compte* maintain the same equivalencies for the whole period, except right after the Conquest, in the official documents and account books. See, for instance, A. B. McCullough, *Money and Exchange in Canada to 1900* (Toronto: Dundurn Press, 1984), table 40. Although McCullough calculates the variations in the rates of exchange of Bills on London (thus with variations in the Sterling Exchange depending on the season, the quantity, and other factors), there is nothing to support any change in the conversion rates of the different currencies in account books or in legislation. Douglas McCalla suggests that, from 1820 onward, £ sterling would be worth £1.217 Halifax currency instead of the regular 1.111, but he does not seem to take this into account in his own calculations in the appendix C on prices, nor is it clear from where he derives this shift (*Planting the Province*, pp. 35, 246, 327–345, 354). At any rate, for Lower Canada, there is no problem as prices used are quoted in local currency (Halifax or *livres de 20 sols* or *piastres*) after 1820.

monetary value or standard. This is particularly important as, with time, even religious orders sometimes used shillings or *piastres* (for instance, the Congrégation Notre-Dame beginning in 1843).

Much more difficult were the bizarre equivalencies between measures of quantities. One can easily find regular prices for beef, pork, lamb, veal, or other meat in the account books, but how much can a "quarter" weigh and how can we compare its price to that of another "quarter"?

Yet another difficulty had to do with the "quality" of the different products: there are quite a variety of adjectives used to qualify the commodity ("old", "rusted", "average", "bad quality", "fine", "superfine") that obviously affect prices. Rum is mentioned as such sometimes; at other times, there is a distinction between "Leward" and "Jamaica" and it comes by the pot, the gallon, the keg, the puncheon (puncheons have been known to contain anywhere between 84 and 114 gallons). Candles may be bought by unit, by the dozen, by pipe, and by chaldron. Tobacco presents itself, when there are specifications, under many forms: "Leaf American", "Plug Canadian", "pig tail", "manufactured". There is "English", "Liverpool", and local salt, apart from just salt and "average", "fine", and "big" ("gros") salt.

Lamp oil is bought by the gallon or the pot or the quart; molasses, by the ton (104 or 110 gallons?) or gallon. "New" and "old" hay do not fetch the same price, which is quoted sometimes by the 100 or 110 bundles. Flour (no mention, "fine", "superfine") can be found by the hundredweight ("cwt") or "quintal" (112 lbs.), but also by the barrel (between 196 and 224 pounds, with an average of 210 pounds), by the bushell, and by the bag. Wheat may be without mention or suddenly become "stained", "bad", "black", or "tythe" wheat.

Firewood is sold by the cord, by the "cage" (presumably floated down the St. Lawrence or another river), is without any specification, or is suddenly assigned various prices for hardwood, maple, birch, and other varieties. Coffee comes by the pound, the barrel, and the cask; coal, by pipe or chaldron, cask, or even "minot".

Religious orders' account books often do not differentiate between one chicken and a couple of chickens: if the price soars above 20 *sols*, we know the entry is for more than one. Butter is without specification or "melted", "fresh", or "salted". Beef is bought by the quarter, by the barrel, or by the pound, with the butcher's prices being about 20 to 25 per cent above that mentioned for the public market. Fish (a barrel of eels, a "hand" of cod, a "bag" — "*pochetée*" — of many other species, including trout, sparling, sturgeon, and salmon) is very important in eating habits, yet cannot be properly appraised in a price index.

One can find also a quarter, half, three-quarters, or remains ("*débris*") of veal. Red, white, and Port wine, without specification or with a mention of the origin — such as France or Rhine or Portugal — may be bought by the bottle, the quart, the pot, the hogshead, or the cask. There are floor,

covering, "battoe", and shingle nails; Canadian, French, beef, and militia shoes; Hyson, Twankay, and green tea; linseed oil and raw or boiled linseed oil.

These are but a few examples of the challenges that had to be met in the production of these indexes. In each case where some comparability could not be maintained or where the available information was not sufficient to allow a reasonable estimate, the information had to be discarded. This explains why, after enormous efforts to collect mountains of information, we were forced to be satisfied with price series for very few commodities and products indeed. Less reliable but still useful information can be garnered from the sources — and our work sheets — on a wider array of products for shorter periods, but with gaps of quarters or years. A long-term price index of multiple commodities cannot integrate these fragments.

Methodology

The methodology used to construct the price indexes may best be described as a five-step approach. The first phase was to construct quarterly averages from scattered monthly data for individual products. It was decided early that the data base was not complete enough to allow us to compile monthly series. The best that could be hoped for was a quarterly series of prices for each commodity, but even this quarterly reading could not be arrived at without some trepidation. This is due to the fact that data originate from many sources and often correspond to different months in a given quarter. The only way to arrive at one reading for the quarter has been to take a simple average of the readings available for the months of this quarter (I = January, February, March; II = April, May, June; III = July, August, September; and IV = October, November, December) either for Quebec or Montreal. Even this fairly loose approach could not generate readings for each quarter.

In the second phase, we developed a seasonal index for each product, for each region, and for a number of sub-periods using the method of ratio to moving average:

a) Calculation of a moving average over four quarters for each product from the data available from Phase I. This is a two-step process. First, a moving average for four quarters is calculated. This moving average for the four quarters of one calendar year, for instance, has its centre of gravity falling between the second and third quarter. As a second step, one must calculate the average of two moving average values — the moving average one quarter back (pertaining to the last quarter of the year before and the three quarters of the current year, which has its centre of gravity between the first and second quarter) and the moving average for the calendar year (with its centre of gravity falling between the second and third quarter) — to obtain a moving average value centred on the second quarter. Using the same procedure for succeeding

pairs of moving averages, one can obtain a series of moving averages centred on specific quarters.

b) Calculation of a seasonal index for six sub-periods on the assumption that, with the modernization of transportation and production methods, the seasonal pattern of prices may have evolved. For each of the sub-periods (1760–1780, 1781–1800, 1801–1820, 1821–1840, 1841–1860, and 1861–1867), a seasonal index has been calculated separately for Quebec and Montreal and for each product. This was done by dividing the observed price for every quarter by the moving average value for this quarter, if there is an observation for that quarter. The sum of these ratios over the same quarter for the whole of a sub-period is then divided by the number of observations. One secures in this way an approximation to the seasonal index value for the particular quarter, for a particular product, for a particular sub-period of historical time.

To avoid bias, the seasonal index must add up to 4 for the four quarters. If it were higher than 4, the index would tend to overstate the annual average; if it were less than 4, it would systematically tend to understate the annual average if it were used to produce an annual index. If this sum overshoots or undershoots, we must adjust the four quarterly indexes in the same proportion downward or upward to ensure that the sum of the indexes over the four quarters adds up to 4 exactly.

In Phase III, we used the seasonal index to fill the gaps in the price series of individual products. This is accomplished rather simply by a two-step process. First, one calculates the value of the price of commodity X for the quarter of a given year for which data are missing (say the third quarter of year 10) by two applications of a simple *règle de trois*: (1) the price of the product for the second quarter of that year divided by the seasonal index for that quarter and multiplied by the seasonal index for the missing quarter, and (2) the price of the product for the fourth quarter of that year divided by the seasonal index for that quarter and multiplied by the seasonal index for the missing quarter. Then, one computes the simple average of these two estimates to arrive at the proposed price information for the missing quarter.

In Phase IV, we calculated annual prices for each commodity for the whole period, concentrating on producing a consistent annual price index for each commodity both for Quebec and Montreal.

Finally, Phase V involved construction of various price indexes.The great difficulty in extracting price indexes from these annual price series has to do with the weights to be used. We do not have a sufficiently rich portrait of the evolving patterns of consumption over the century to generate from them an evolving and reasonably accurate set of weights. Consequently, we have been satisfied with an exploration of the robustness of the results using a variety of weights. Four different sets of weights were used for Quebec and three for Montreal. Despite wide variations in the weights, the general profile of the

price indexes proved quite robust. Consequently, we have retained the simplest version of this weight structure (5 per cent for each of the 20 products[28] in Quebec, and 10 per cent for each of the 10 products[29] in Montreal). The annual indexes still register wide variations, which we have moderated by using a 13-year moving average of both price series.

General Results in Graphical Form

This elaborate process has generated an immense amount of data. Some of the detailed information is available in Appendix II. Here, we compare some basic results with the 32-commodity price indexes for Quebec and Montreal that we published in 1975. Our price series would appear to dovetail sufficiently with Michell's price index for the period 1848 to 1867 (based on data for 15 products) to allow us to splice our Quebec price index to his in order to generate a continuous price index for the whole period of 1761 to 1913.

A Presentation of our Price Indexes

The following figures or graphs present the general profiles of the annual price indexes in Quebec in a raw form together with the 13-year moving averages (Figure 1). Figure 2 provides the same results for Montreal. Figure 3 shows the parallel evolution of the price indexes for Quebec and Montreal when they are compared in their raw form, and Figure 4 shows their parallel paths in the 13-year moving average versions.

The parallelism in the price index profiles for Quebec and Montreal revealed in Figures 3 and 4 may be regarded with suspicion by some observers, however, since they correspond to different baskets of commodities (20 in Quebec, 10 in Montreal). To eliminate any such unease, we have calculated for Quebec City another price index pertaining only to the 10 commodities retained in the Montreal price index. This 10-commodity Quebec price index, together with its 13-year moving averages, is presented in Figure 5. Figure 6 compares the profiles of the 13-year moving averages for the Montreal 10-commodity price index and for the 10-commodity and the 20-commodity Quebec price indexes.

In general, from these simple graphical summaries, it is clear that the patterns of price levels and movements have an uncanny congruence. Moreover, these patterns correspond to those observed in other parts of the Atlantic world, for instance in France, Great Britain, and the United States.[30] Both in Quebec and Montreal, price levels increased from the 1760s to the 1780s. There was a sharp price decline in the late 1780s and early 1790s,

28 The products are the following: oats, butter, wheat, beef, firewood, coffee, candles, coal, flour, hay, burning oil, molasses, eggs, straw, potatoes, peas, chickens, rum, salt, and tobacco.

29 Oats, butter, wheat, beef, firewood, flour, hay, eggs, peas, and chickens.

30 Ouellet *et al.* had already noted the parallel patterns of some prices between these countries. For instance, see "Le mouvement des prix agricoles", pp. 44–48 and *passim.* McCalla also provides some comparisons for wheat and flour (*Planting the Province,* p. 344).

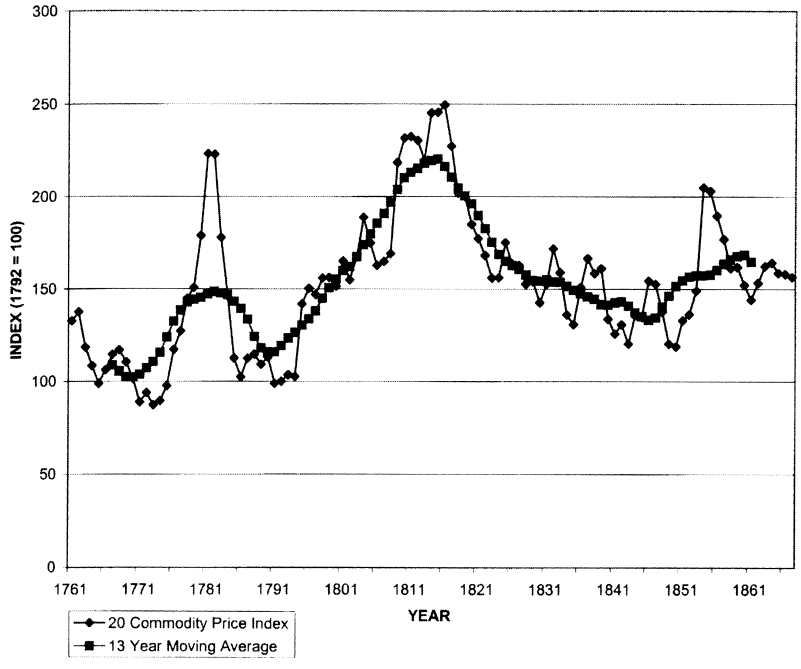

Figure 1 20-Commodity Price Index for Quebec, 1761–1867

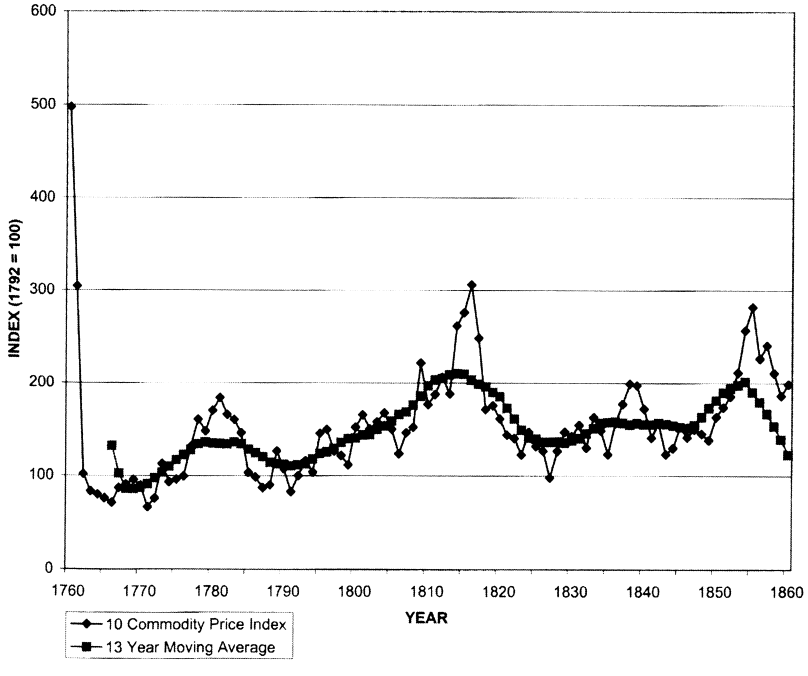

Figure 2 10-Commodity Price Index for Montreal, 1760–1860

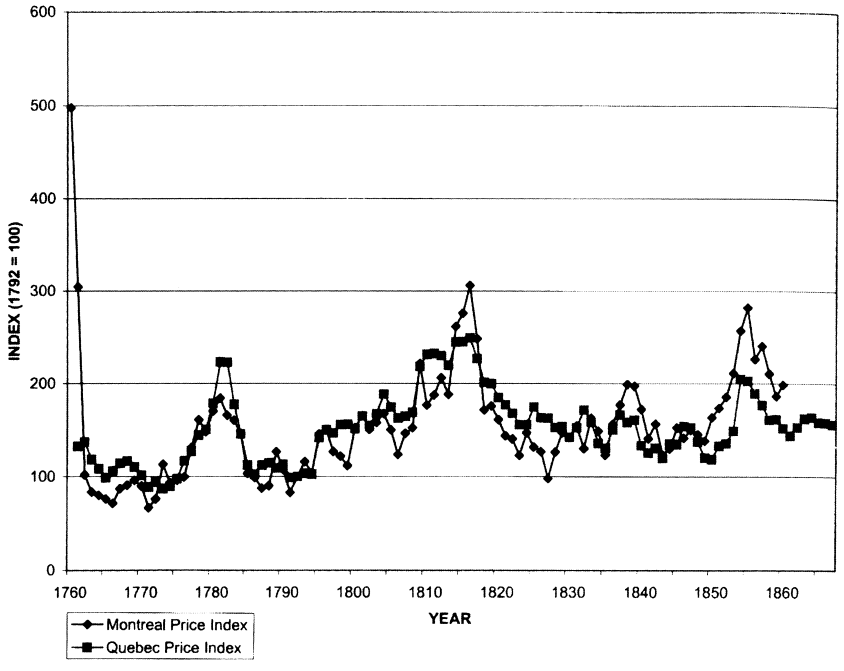

Figure 3 Comparison of Quebec/20 and Montreal/10 Price Indexes, 1760–1867

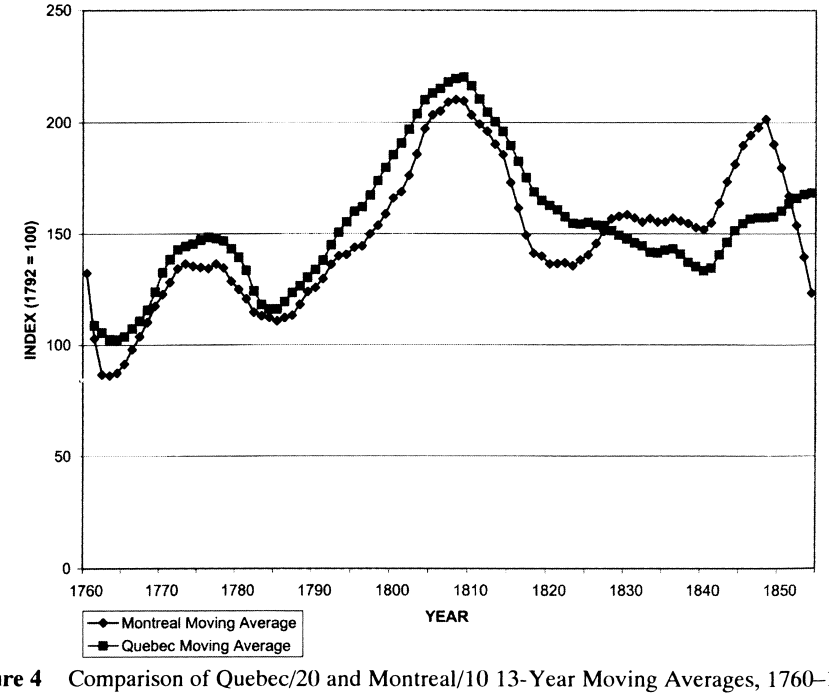

Figure 4 Comparison of Quebec/20 and Montreal/10 13-Year Moving Averages, 1760–1867

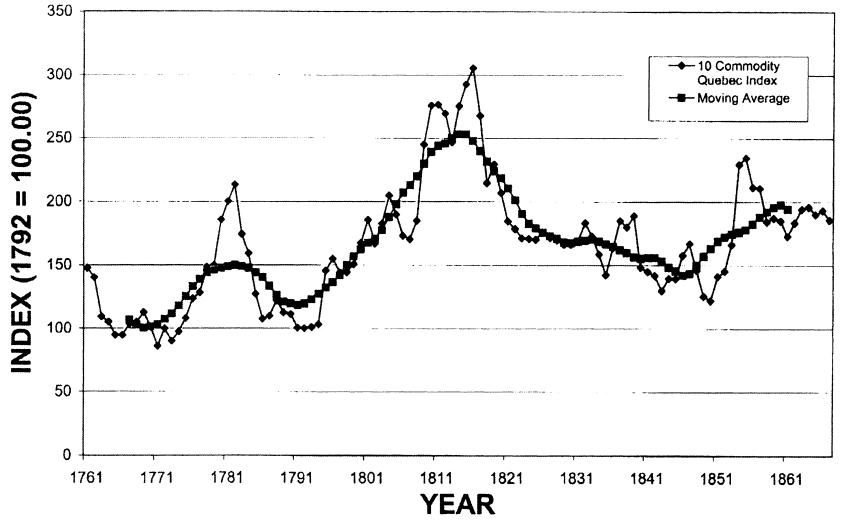

Figure 5 10-Commodity Price Index for Quebec, 1760–1867

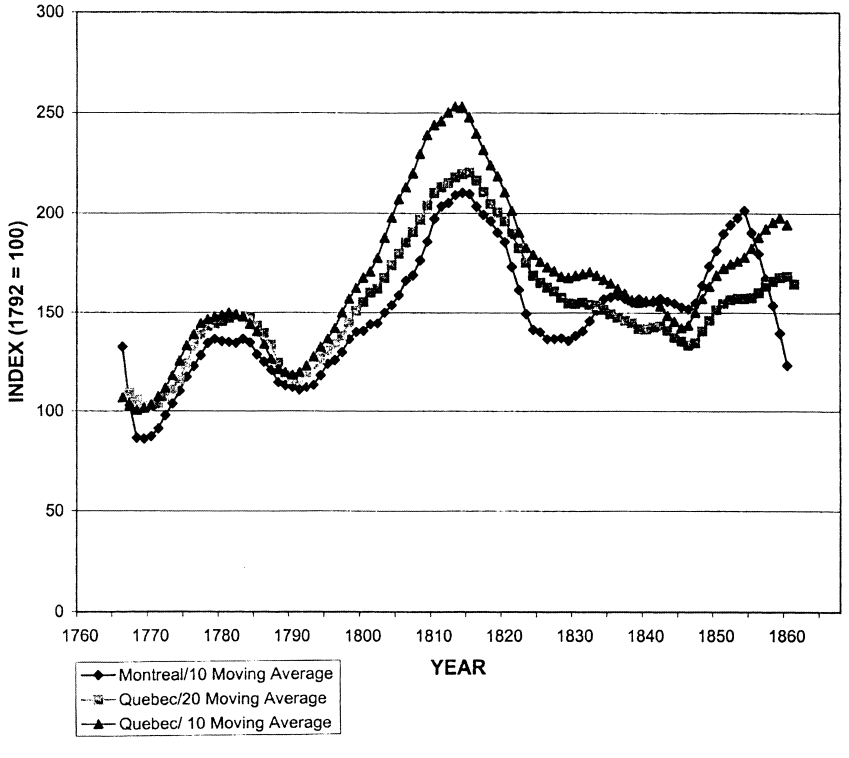

Figure 6 Comparison of Quebec and Montreal 13-Year Moving Averages, 1760–1867

and a long upward trend from the turn of the century to the beginning of the second decade of the nineteenth century. This was followed by a long price decline from 1810 to the 1840s and a revival afterward from the 1840s to the 1860s in Quebec. In Montreal, the price decline was much shorter and the revival may be said to have begun in the 1820s, although the sharp increase in prices did not occur until the 1840s.

The price trends in Quebec and Montreal are very closely correlated from 1760 to the 1820s, with the prices in Montreal tending to be a bit lower than in Quebec. While the long price slump that began in 1810 continued until the late 1840s in Quebec, it only lasted until the late 1820s in Montreal; from then on prices were on the upswing in Montreal — rising sharply at first, tending to stabilize from the mid-1830s to the mid-1840s, and then rising very sharply again. After 1840, the trends followed the same pattern in both cities, albeit with the Montreal price indexes at a higher level than those in Quebec. However, even in this new configuration, there is a strong correlation between the series. Finally, while price levels in Quebec would appear to have been more volatile than those in Montreal during the eighteenth century, one may observe the reverse in the nineteenth century.

Comparing our New Annual Price Indexes with the 1975 32-Commodity Price Indexes

Since the base year for both our new annual price indexes and our 1975 32-commodity price indexes is 1792, it is easy to show how closely related the two sets of series are. This is presented in Figures 7 and 8. Quite clearly the two series are more closely correlated in Quebec than in Montreal. In Montreal the broad trends are identical, but the new series is more volatile, and its turning points are much more sharply delineated than in the 1975 index, which comprises a much wider variety of products, locally produced and imported.

Splicing our Quebec Price Index with the Michell Price Index

Michell has constructed an agricultural price index pertaining to 15 commodities for the period 1848 to 1913.[31] Seven products are identical to the price data for our Quebec price index. We have recalculated both indexes on the basis of 1860 = 100, and we have superimposed our Quebec price index for 1848–1867 to the Michell index for the same period. As can be seen in Figure 9, the correlation between the two indexes is sufficiently strong to warrant our using the Michell index to complement the one we have constructed. The spliced index constructed from our Quebec price index for 1761 to 1867 and the Michell price index for 1868 to 1913, with a base 1860 = 100, is presented in Figure 10. This is an adventurous splice

31 Mitchell, "Statistics of Prices", p. 55. These commodities are: oats, bacon, butter, wheat, beef, flour, oat flour, cheese, ham, back-fat (lard), eggs, barley, peas, pork, and rye. Seven of these products appear in our own indexes: oats, wheat, butter, beef, flour, eggs, and peas.

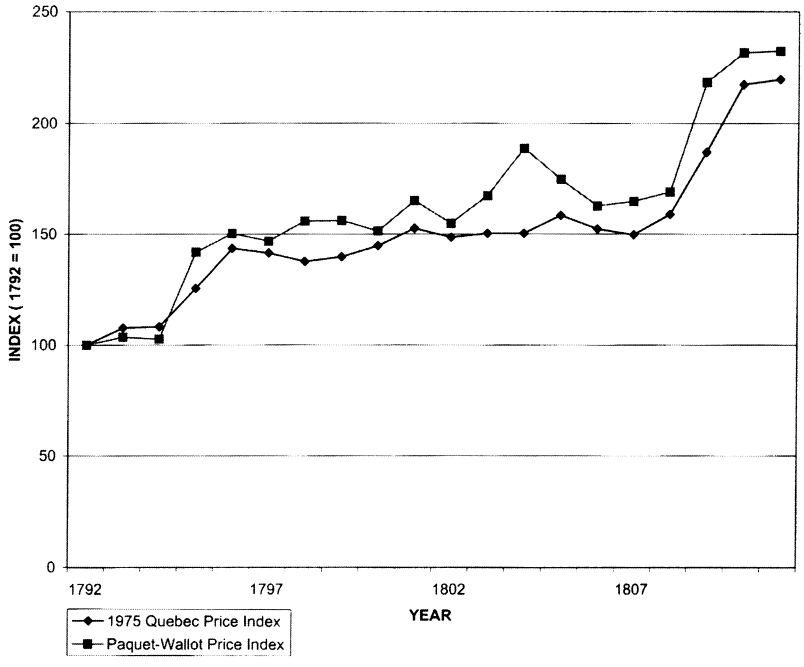

Figure 7 Comparison of 1975 Quebec Price Index and Paquet-Wallot Index

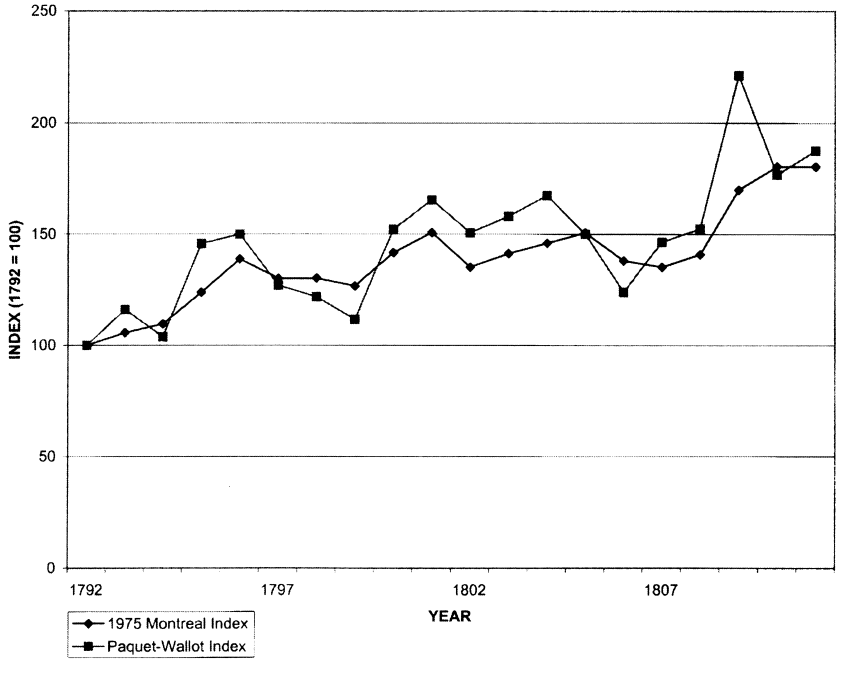

Figure 8 Comparison of 1975 Montreal Index and Paquet-Wallot Index

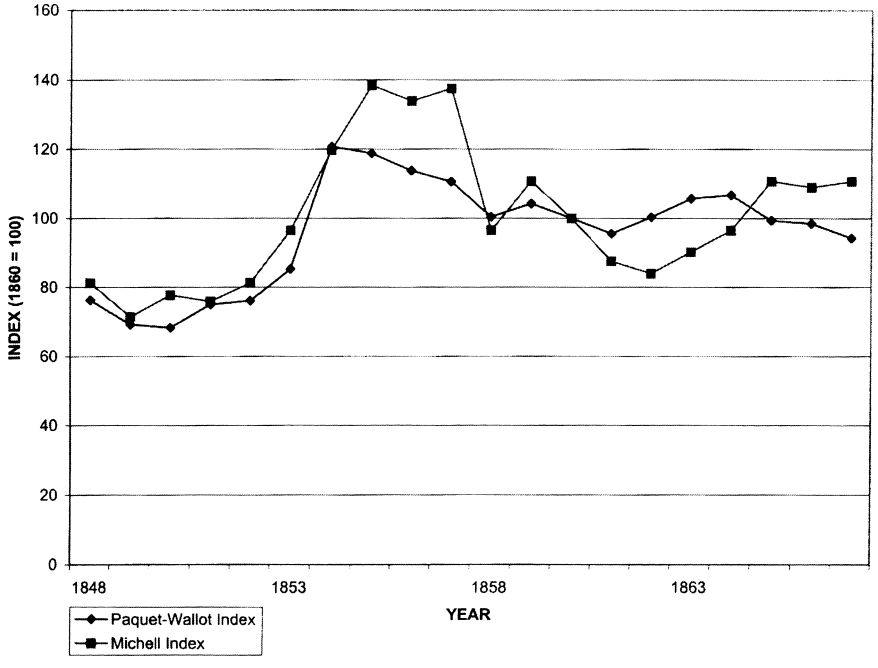

Figure 9 Comparison of 20-Product Paquet-Wallot Index and Michell Index for Quebec, 1848–1867

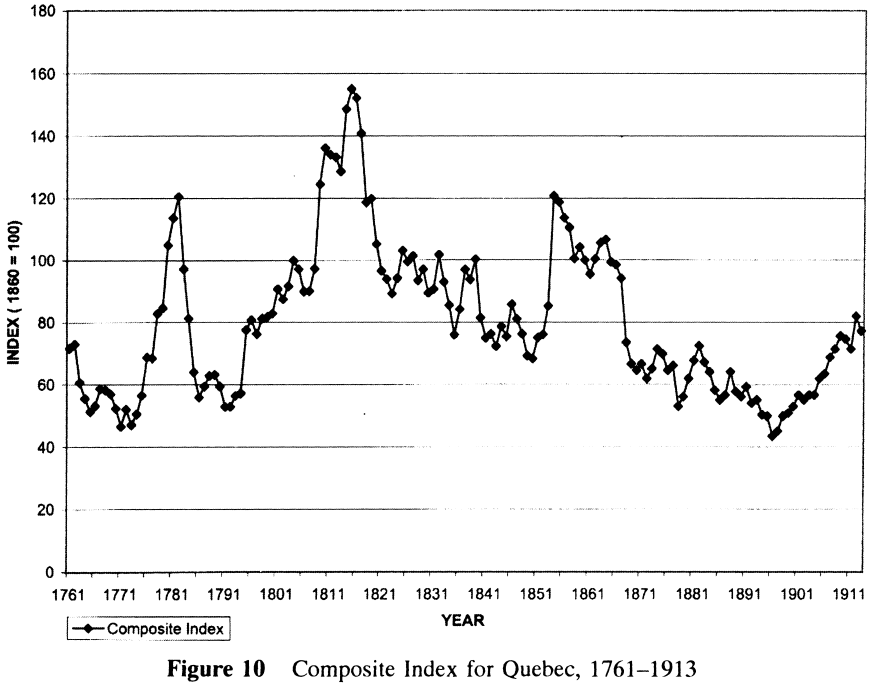

Figure 10 Composite Index for Quebec, 1761–1913

but one that has the advantage of providing a very rough price index covering some 150 years. Until a more refined instrument is available, this may serve as a rough deflator for this long period.

Preliminary Analysis

Probing the Two Broad Families of Forces at Work

One may suggest that two broad families of forces are having a dominant influence on price level. The first refers to the extent to which there are real changes in the conditions of aggregate demand (AD) or supply (AS). Using a very simple supply-demand scheme of analysis, it is possible to show that as AD shifts to the right as a result of strong market conditions abroad or general prosperity at home, price level will rise. In difficult times in external markets or in poor market conditions at home, AD shifts to the left and price level declines. There may also be important real shocks to the socio-economy from the aggregate supply side, as when major generalized crop failures or natural catastrophes generate scarcity and price increases. Price may also decline and output levels increase with technical improvements and productivity gains. The second set of forces has to do with the monetary or financial conditions in the economy. The monetary and financial technology evolved considerably over the century or more covered by our price indexes. Moreover, monetary and financial conditions in the Atlantic economy and on the American continent would have exerted a strong impact on price levels. A general shortage of currency or precious metal (as was experienced between the first and the second decade of the nineteenth century) would translate into a recession and a period of price deflation.

A rigorous analysis of the conjunction of these two sets of forces in the explanation of specific price movements over more than a century is not possible in a few paragraphs. Moreover, our knowledge of business conditions and financial circumstances remains too fragmentary: a true account of both sets of forces and the development of tractable indicators capable of taking into account the very important institutional changes must be postponed to another occasion. However, it is possible to glean from the available information some impressionistic portrait of the forces *en présence* or, at the very least, to suggest some preliminary observations that might indicate which one of those families of forces would appear to be dominating the scene at particular times.

Some provisional observations

On one hand, it would appear that the real factors dominated in the 1770s (significant economic progress), 1780s (frequent crop failures and poor market conditions), and 1790s (growing demand, production levels, and prosperity). On the other, the long period of price increase from the 1790s to about 1815 seems to have been the result of the conjunction of both series of forces. The erratic but sometimes strong external markets, as well

as quickly expanding local markets after 1805,[32] generated much demand for Canadian goods and most certainly were at the source of Canadian price increases.[33]

The long decline in prices from the middle of the second decade of the nineteenth century until the end of the 1840s is observed in most areas of the Atlantic economy. The somewhat sharper drop observed at times in the Quebec economy can be ascribed in part to the Quebec socio-economy suffering from a slower growth that the other three regions at the core of the North American continent (Ontario and soon the West in great expansion, New England to a lesser degree, although buoyed by early industrialization, and the American Midwest).[34] This relatively slower growth in the eastern portion of this economic space led not only to price decline but also to massive emigration. After 1850 the economic conditions improved considerably with railroad construction, the industrial development along the Lachine canal and some other points in the province, the Crimean war as a source of external demand, the Reciprocity treaty, the American Civil War, and greater reliance on Canadian products. Again, however, except in the 1850s, the Lower Canadian portion of the Province of Canada did not partake in this prosperous era as much as might have been expected.

The early 1860s experienced a disastrous price decline but there was a revival in the middle of fhe decade as a result of the Civil War in the United States. The sharp price declines and rises later in the 1860s and at the turn of the decade echoed price changes in the Atlantic economy. Indeed, from that point one may trace very clearly the booms and busts of the broader economic system: from 1873 on, business was bad. There was a sharp price reaction to the 1878 high-protection policy, but already by 1883 prices were falling following the worldwide financial crisis, and this was to continue until the middle of the 1890s. After 1896 a fortunate conjuncture of factors, including growth of urban population and the settlement of the West, lifted prices until 1913. One must add that the long periods of price decline from 1815 to the late 1830s and from the early 1870s to the middle of the 1890s correspond to major improvements in transportation, technological change, and the removal of many impediments to foreign supply.

Whether these rough comparisons can be corroborated is a matter that will require more extensive work and also a much more detailed analysis than the one we can provide here. What can be said briefly, however, is that the period from the 1760s to the end of the nineteenth century corresponds

32 The impact of the lumber boom which quadrupled exports between 1806 and 1810 cannot be overemphasized. Also, there is the rapid development of villages across the colony (see Courville, *Entre ville et campagne*.

33 See Paquet and Wallot, “Le système financier bas-canadien”.

34 For an early analysis of this shift of prosperity from East to West, see Albert Faucher, *Histoire économique et unité canadienne* (Montréal: Fidès), part 2, chap. 7.

to three well-defined price cycles (1760s–1790s, 1790s–1840s, and 1850s–1900). The variance of prices over these cycles ranges some 50 per cent on each side of the base point and therefore makes it impossible to rely on nominal values for income and wealth to ascertain real values.

Finally, these observations, based only on price data, are not meant to etch a vignette of the economic history of Quebec during this period of 150 years. Rather, they are only intended to suggest a certain number of hypotheses about the main forces at work during this period.

Conclusion

We have thus attempted to develop a coherent picture of price evolution in the century before Confederation and to splice it with some of the existing price series developed for the period 1867 to 1913. The use of such a tool for the purpose of comparison between periods is obvious, and the lack of such an instrument has been a major impediment to careful analyses. We have constructed these price indexes from bits and pieces of information gleaned from a variety of sources, and potential users of this tool should be aware of both the robustness and the weaknesses of these consolidations.

Our results are still preliminary insofar as they do not present any technical analysis of these series. This is work to be undertaken in the future. We have tried, however, to distinguish in what way such a series might at least appear to be corroborated by what we know about the general economic history of the period. We do not feel that price series are sufficient to recreate the economic history of the period any more that a few snowflakes in one's hand can help reconstruct the storm that brought them down. However, as we have shown, there are a number of important benchmarks that such series might provide. We therefore conclude on both a *caveat emptor* and an expression of our hopes that these indexes, so long in the making and so tedious to construct, will be of use to some colleagues.

APPENDIX I

Sources Examined

Not all the sources mentioned below yielded a large amount of information about prices, but together they provide prices for a very wide range of products over time. It would be too long and not particularly useful to detail here each specific account book (some cover a few months, others years; they have different names: *brouillard*, *journal*, *cahier d'économe*, *dépenses*, *recettes*, for example).

Religious orders and institutions

Archives du Séminaire de Québec
Archives de Notre-Dame de Québec
Archives du Monastère des Augustines
Archives de l'Hôtel-Dieu de Québec

Archives de l'Hôpital Général de Québec
Archives des Ursulines de Québec
Archives des Biens des Jésuites (kept by the Archives nationales du Québec, see further down), excluding the data coming from outside Quebec, although some prices have been used as a verifying tool to check other prices, for instance in Montreal and Trois-Rivières (this last region was dropped because of insufficient data)
Archives de Saint-Sulpice, including the Seminary, the Régie du Fort de la Montagne, Régie du Domaine Saint-Gabriel et des Prairies
Archives de Notre-Dame de Montréal (with the Archives de Saint-Sulpice)
Archives de la Congrégation Notre-Dame (for Quebec and Montreal; in Montreal, some prices come from a farm at Île Saint-Paul and Pointe Saint-Charles; in Quebec, they may come from their convent at Sainte-Famille, Île d'Orléans)
Archives des Soeurs grises de Montréal
Archives de l'Hôtel-Dieu de Montréal

Records kept by different archives, public and private
National Archives of Canada:
CO 42 series (microfilm) and MG11, Q Series (copies of part of the previous series — this is where the official prices on the Quebec market were discovered for the years 1804–1812); also CO 5 and CO 47; MG12 (War Office, microfilm); RG4, B.34, 35, 44, and 58 (statistical returns, accounts, customs, etc.); RG7, G.1 and G.14; RG8, C series (military papers, more than 1,500 boxes, which abound in prices, salaries, contracts, but not in a systematic way); RG11, 1, 8 (roads and bridges); RG19, B (Office of the Receiver General); MG12, E (Audit Office); MG19, A.2, 3 (Ermatinger papers); (microfilm M–851); MG19, A.2 (3), A.5 (Mctavish and Frobisher, transcripts), A.7 (Alexander Mackenzie, microfilm), A.12 (La Motte papers), A.16 (Quesnel papers), A.30 (North West Papers), A.33 (North West Company in Lord Strathcona collection), A.35 (McGillivray), B.1 (North West Company), C (Masson collection); MG21 (add. Mss); MG23, G.I, 10 (Trade statistics), G.II, 3 (Gray papers), G.II, 5 (Morrison papers), G.III, 1 (Allsopp papers), 5 (J. Morrison papers), 7 (Porteous-Richardson papers), 15 (Janverin Co.), 25 (microfilm of the Société archéologique et de numismatique), 26 (Ainsse papers), 28 (Guy Papers, microfilm), G.V, 3 (Ménard papers), I.17 (Parker Newton letters), K.26 (British Army, coins); MG24, B.1 (Neilson papers), B.6 (Viger papers), B.126 (Quesnel papers), D.1 (Hayes papers), D.3 (Gamelin papers), D.8 (Wright family), D.10 (trade, 1807–1831), D.11 (insurance) and A.3 (Douglas papers), D.42 (Dunlop papers), D.43 (Auldjo papers), D.46 (Parker papers), D.59 (Hemsworth papers), D.60 (salesbook of Donald McKay), D.63 (Gray papers), D.81 (Masson papers), G.6 (Moorhead papers), I.98 (Reynolds family papers), I.118–119 (Lotbinière and Joly the Lotbinière papers, microfilm), L.3 (Baby papers). Also, in printed form, the *Blue*

Books, 1821ff.; *Journal of the House of Assembly of Lower Canada* (1793–1837); *Journal of the Special Council* (1837–1841); *Journal of theHouse of Assembly of United Canada* (1840–1850).

Hudson Bay Company Archives (then in London, now at the Provincial Archives of Manitoba): papers of the North-West Company, 1792–1812.

McCord Museum Archives: McGill papers, 1792–1815.

Séminaire de Trois-Rivières: Hart family papers.

Molson Breweries: Molson Archives (now transferred to the National Archives of Canada).

Archives nationales du Québec à Montréal: MSS, feuilles volantes (some flyers of "Prices Current" exist there); MSS, Neilson papers.

Archives nationales du Québec à Québec: AP–N–2 (Neilson papers), also all private papers covering the period 1790–1815.

List of the main products for which prices may be found in the sources mentioned

The following list covers mostly products of daily consumption (for food, clothing, and the like). Inventories after death, particularly those of merchants, contain references to a much wider variety of household goods, tools, animals, store inventories, and farm products. Even if this list comprises only the main products found in the account books used, however, it throws some light on eating habits, clothing, tools, and activities of the Lower Canadians at the time. The different items are listed below in alphabetical order.

Account book; Almonds (sweet, sour, in shells); Anis; Apples; Apron (including leather apron); Ash; Asparagus; Axe; Axle; Back fat; Bacon; Balm (Turlington); Bar; Barley; Barrell; Basket (also for bottles); Batteau(toe) knee & standards; Beans (green, red, yellow, white); Beaver (also cured skins); Beef (fresh, also beef tongues, "pieces", quarters, "bellies", feet, heads, salted, etc.); Beer ("de table", simple, double, ale, porter, spruce); Beet; Bell (including small bells for horses); Bellow; Belt; Bird; Biscuit (also English biscuit); Black (smokey); Blacklead; Blue (Prussian, azur); Blueberries; Board or plank (of different kinds of wood, such as oak, maple, pine, and spruce); Bolter; Bolting cloth; Bonnet (without mention, wool, cotton, draped); Boots; Bottle; Bowl; Bran; Brandy; Bread ("small", "bis" or brown, eucharistic — "hostie"); Breeches (including in cotton); Brick (including furnace brick); Bridle; Broom (also in wood, etc.); Brush (without mention, from pig's, marten's, or rat's hair, small, big); Bucket, chaldron, pots and pans (including in cast iron); Bustard; Butter (fresh,

melted, salted); Button; Cabbage plants; Cable; Calico (printed — "Indienne"); Candle; Canoe (including in wood); Cape; Capon; Cards; Carmine; Carp; "Carreau" for the furnace; Carrot; Chair; Cheese (no mention, English, "stinking", refined); Chicken (alive, dead); Chocolate; Churn; Cider; Citrus Juice; Cloth (big or rough — "gros", wide, see linen cloth); Clove; Coal; Coat (including frock coat, hooded greatcoat); Cod (green, salted); Coffee; Coffee-pot; Coffin; Collar (horse); Corduroy; Coriander; Cork; Corn (including washed); Cotice ("contie" or "coty"); Cotton (including wick cotton, of "cinq quarts"); Cow; Cranberries; Cup (including in crystal, in tin, with saucer); Currycomb; Damask; Decantor; Dish (earth, white metal, sandstone); Draff; Dragées; Duck (including wild duck); Eels (including salted); Eggs; Faggot; Fastener (alone or by pairs); Faucet ("champlures") Feather; Fennel; Ferret; Figs; Firewood (see wood); Fish (golden, small, white — see also specific species); Flannel; Flintstone; Flour (gross, fine, superfine); Flowers (of all kinds); Funnel Gallon; Fustian; Ginseng; Glass; Glasses (to see); Gloves; Glue (including strong); Gobelet (see cup); Gold; Goose; Grains (scattered — "agrains"); Grapes; Grease; Gum (Arabic, fir, "gutte"); Halter; Hammer; Handkerchief; Hares; Harness; Hat; Hay (including new, old); Heels; Hen; Honey; Hoop; Horse (without mention, work-horse, racing horse); Incense; Indigo; Ink; Iron (white, etc.); Ivy; Kettle (including camp); Knife (many kinds); Lac; Lace; Ladder (long, small); Lamb (alive, dead); Lantern; Lard; Latch (of a door-lock); Lead (including plumb line); Lemon; Lime; Lindseed; Lindseed oil (raw, boiled); Linen cloth (from Russia, Turkey, Ireland, Canada — "country"); Lock; Mastic; Material (clothing); Milk; Millstone; Molasses; "Morlaix" (fine, gross, without mention); Mug; Muskelonge; Muslin (also coarse); Mustard; Mutton (see lamb); Nails (shingle, board, "battoe", floor, cart, roof, collar, horseshoe, etc.); Needle; Négligé ("déshabillé"); Nutmeg; Oak (including oak timber, logs, boards, planks of different thickness); Oats; Ochre (yellow, red); Oil (ordinary, fish, burning, lindseed — raw, boiled, olive); Onions; Orange; Oysters; Padlock; Paint (including fine, white, yellow); "Palemas Christi"; Pan; Paper (in all sizes and qualities, blotting); Parchment (sheets, pieces); Partridge (including young ones); Peacock; Peas (green, white, for animals, with their hull, etc.); Pekin (red, white); Pen; Pencil (including slate pencil); Pepper; Pickaxe; Pig (alive, dead, pig's trotter, ears, suckling pig); Pike; Pine (including square, planks, boards, logs); Piscina; Planks, boards; Plate (dinner plate: small, earth, sandstone); Plough (also ploughshare); Plums (without mention, "de Damas"); Pork (fresh, see also pig); Pot (earthenware, table, for jam, in white metal); Potato (red, yellow, no mention); Poultry; Powder (cannon, ink); Prunes; Pulley; Pump; Ribbon; Rice; Ring; Rope, line, roping; Rum (including Jamaica, Leward); Saddle; Saddle cloth; Saffron (in leaf, ordinary); Salmon (salted, green, smoked); Salt (white, grey, English, Liverpool, local, fine, big — "gros"); Sand; Satin; Sausage; Saw (without mention, hand saw); Scissors (including for horse hair, in wood, for shearing); Scoop ("louche"); Screws; Scythe; Serge; Shad;

Shallot; Shawl (including small); Sheet metal; Shingle; Shirt (including in cotton, in flannel); Shoes (beef, Canadian, French, militia, wooden, etc.); Shoebrush; Shovel (in wood, in iron); Sickle; Siftings; Silk; Silver; Skirt; Sledge; Sleigh (including sleigh and iron mounting); Snipe; Snuff-box; Soap (of France, white, shaving, etc.); Socks (without mention, woolen socks, thick socks — "chaussons"); Soup turreen (large, etc.); Spade; Sparling; Spirit ("eau de vie"); Spoon (in all kinds of metal, including pewter and tin); Stakes, posts and poles; Starch (including white, fine yellow); Stave; Stone; Stove (including iron stove); Straw (of oat, of wheat); Strawberries; String; Sturgeon; Sugar (of the country, maple, muscovado, royal, barley, brown, white, "en tête"); Suit (in blue cloth); Tallow (including melted tallow, lamb tallow, etc.); Tamarin; Tap (for barrel); Tar (indlucing coal tar); Tart ("tourte"); "Tavelle"; Tea (green, Hyson, Twankay, "bous"); Teal; Teapot; Tendril; Terrines (small, average, big); Thread ("country", marking, etc.); Thrush; Tile; Tobacco (in powder, twist, chewing, snuff, leaf American, plug Canadian, pig tail, manufactured); Tow ("étoupe"); Tray; Trout; Tub (small, large); Turkey (alive, dead); Turnip; Turpentine (including "spirit of"); Veal (dead, alive, pieces, feet, head, sweetbreads); Veil; Vermilion (including fine); Vinegar; Vitriol; Wadding; Watering can; Wax (yellow, white); Wheat (including sifted, rusted, bad, black, tythe wheat); Wheelbarrow; Wheels (cart, calash, with box); White (from Spain); White-lead; Wig; Window panes; Wine (red, white, Tenerif, Madeira, Port, Spain, Portugal, Malaga, Rhine, French, Bordeaux, etc.); Wire; Wood (hard, dry, green, for work, soft, "in cage" or "en cajeux", etc.); Wool.

List of some measures and their equivalencies

Many measures are very vague and others very precise, thus the difficulty in defining standard quantities that are an absolute prerequisite for constructing a price index. This explains why, from a list of so many products, only 20 could be found that provided reliable data for our indexes over a century. It would be too long to specify the precise source each time, although a few examples have been provided, but these measures and equivalencies are all drawn from the sources mentioned in Appendix I. Although many units of measure sometimes vary widely, in the case of products bought in large quantities, particularly by the army, there is some standardization.

Bag: of almonds = 4 "cwt" or hundredweights
of currants = 4 "cwt"
of flour = 56, 60, and 106 lbs.
of wheat = 2 minots
of barley = 279–280 "English" lbs.
of peas = 56 lbs.

Bale ("botte"): of hay or straw = 15 to 17 lbs (Séminaire and Hôtel-Dieu de Québec)

Barrel: 1 barrel = 5.77 cu. feet; 9,971 cu. inches = 2 firkins; 1½ barrel or 54 gallons = 1 hogshead; 2 barrels = 1 puncheon; 3 barrels = 1 butt; a large barrel is a cask, butt, or hogshead and may contain 54 gallons of beer
of flour = "196 lbs. or 224 lbs. net" (NAC, RG8, C, vol. 109, p. 85; also vol. 106)
of wheat = 5 "minots"
of pork: 6 barrels = 1,242 lbs. = 1,664 rations (1 barrel = 208 lbs., 200–208 lbs.) (C series, QBC–23)
of peas = 3 minots
of beef = 109–127 lbs.
of molasses = 32–38 gallons
of salt = 4 minots
of butter = 256 lbs. = 4 firkins = 32 gallons
of beer = 36 gallons on average (Molson Archives)
of brandy = 32–38 gallons
of Jamaica spirit = 32–38 gallons
of Port wine = 32 gallons
of Teneriffe wine = 32 gallons
of rum = 30–36 gallons
of rice = 593–601–605 lbs. (C series for 601)
of potash = 2 cwt
of soap = 280 lbs.

Boisseau: *not a bushell* in the account books, but ⅓ of a minot

Box: of salmon = 51 lbs.
of herring = 6 lbs.

Bushel (see minot): 1 bushel = 4 quarters; 32 bushels = 1 chaldron
of corn = 64 lbs

Butt: 1 butt = 3 barrels
of beer = 108 gallons
of whiskey = 108 gallons

Case: of vermillion = 2½ cwt or hundredweights

"Cwt": hundredweight = "quintal" = 112 lbs. (for wheat, flour, oat, hay, etc.)

Cask (large barrel):
of pork for the troops = 280 lbs. net
of wheat or flour = 2 "cwt" (see hundredweight)
of almonds = 3 cwt
of butter = 72–84 lbs.
of cider = 110 gallons
of coffee = 168½ lbs.
of geneva = 19½ gallons
of ginseng = 310 lbs.
of pickled fish = 200 lbs.
of porter = 51 bottles
of sugar = 717–832 lbs. (mostly c.755 lbs.)

Chaldron: of coal = 36 minots (*Quebec Gazette*, *Canadian Currant*) or 32 bushels
Chest: of tea = 70–80 lbs. (Ermatinger papers)
Cord: of firewood = 6' x 4' x 2'
Crib: 1 crib of firewood = 6 cords
Firkin: 2 firkins = 1 kilderken; 2 kilderkins = 1 barrel; 1½ barrel or 54 gallons = 1 hogshead; 2 barrels = 1 puncheon; 3 barrels = 1 butt
of ale = 8 gallons
of beer = 9 gallons
of butter = 56–70 lbs., mostly 65–67 lbs. (C series)
of soap = 56–60 lbs.
of sugar = 237–267 lbs.
Gallon: 2 gallons = 1 peck
of corn = 8 lbs
of olive oil (13 gallons = 104 lbs.) (Hôpital général de Québec)
Hogshead: 1 hogshead = 54 gallons = 1½ barrel
of beer = 54 gallons
of brandy = 59–61 gallons
of spirits and whiskey = 50–65 gallons
of molasses = 72.5 gallons, 100 gallons
of pork = 480 lbs.
of tobacco = 970–1,399 lbs.
Hundredweight: "cwt" = "quintal" = 112 lbs. = 4 "quarters"
Keg: of burning oil = 6 pots = 3 gallons
of brandy = 10–35 gallons
of Jamaica spirit = 14 gallons
of molasses = 10–32 gallons
of wine = 9 gallons
of Port wine = 9–18 gallons
of rum = 10–15 gallons
of Teneriffe wine = 10–15 gallons
of snuff = 50 lbs.
Kilderkins: 2 kilderkins = 1 barrel = 18 gallons (beer, etc.)
Load: of hay = 33–34 bales
of firewood = 3 cords
Loaf: of sugar = 9½ to 10½ lbs.
Minot: 1 minot = 20 "pots"; 1 Winchester bushel = 0.919 minot or about 8.75% more than a minot or 1/12 (e.g., 108,765 minots = 100,000 Winchester bushels[1]); or taken otherwise, 1 W. bushel = 1.0876

1 See Hugh Gray's observations (*Letters from Canada...*, London, 1809), as well as those of John Lambert (*Travels Through Lower Canada and the United States of North American in the Years 1806, 1807 and 1808*, 3 vols., London, 1810). In practice, unless there is an indication of "E" (for English) or "W" (for Winchester), bushels and minots are taken as equivalent (see the statistics in

minot;[2] 1 minot = 3 “boisseaux” (often mistakenly taken for or translated as bushels, thus many errors)
of peas = 60 lbs. (8 minots of peas = 1,024 army rations) (Hôpital général, NAQQ, QBC–23, t.3)
of oats = 60 lbs. (Seminaire de Québec, Ursulines)
of Canadian wheat = approx. 60 lbs. or 56 lbs. “avoir du poids”, 64 lbs. (2.3 minots = 1 “pochée”)
2 to 2½ minots of wheat = 100 lbs. flour; 25 minots = 1,000 lbs.
of flour = 60 lbs.
of coal = 60 lbs. (Hôtel-Dieu de Montréal, Séminaire de Québec)
of oats = 60 lbs.
of potatoes = 60 lbs.

Oak timber: pieces 20’ long and upwards, 12" square

Pack: of fur (9 packs = 600 muskrats and 2 beavers; 1 pack = 535 muskrats and 2 beavers; 1 pack = 74 skins fine scraped beaver and weight 100 lbs., or 121 same and still 100 lbs., or 55 beaver skins and 77 lbs. or 129 skins beaver and cub, or 104 lbs. (NAC, MG19, D4, vol. 2, last file)
of flour = 56 lbs. (NAQQ, QBC–20)
of pork = 56 lbs. (QBC–20)
of peas = 56–60 lbs.
of Indian corn = 85 lbs.
of tobacco = 87 lbs.

Peck: 4 pecks = 1 bushel
of corn = 16 lbs.

Pin: 1 pin = 4½ gallons of beer

Pint: 1 pint = “chopine” (see quart)

Pipe: of salt = generally 16 minots
of brandy = 102–122 gallons
of Madeira = 99–103 gallons
of rum = 104–110 gallons
of wine = 130–135 gallons

Plank trees will measure from 12" to 15" wide by 30’ to 40’ long (pine)

“Pochée”: see minot

the *Journal of the House of Assembly of Lower Canada* in English and in French). The “Q” series at the NAC shows that 8 minots of wheat will suffice a sailor during one year, 1/7 less than a man on land.

2 These equivalencies are confirmed by Régis Thibault, “Les unités de mesure dans les documents officiels du dix-neuvième siècle au Bas-Canada et au Québec”, *Revue d’histoire de l’Amérique française*, vol. 43, no. 2 (1989), pp. 228, 231. Later official documents such as censuses of 1852, 1861, 1871, 1881, and 1891 seem to assimilate “boisseaux” to bushels. There does not seem to be such equivalency in the religious orders’ account books or even the merchants’ account books during the period studied. At any rate, most mentions are either in minots or in “bushels” (English).

Puncheon: 1 puncheon = 2 barrels
of beer = 72 gallons
of brandy = 112–120 gallons
of rum = 90–114 gallons
of molasses = 105 gallons
of wine = 84 gallons
Quart: 1 quart = 2 pints; 4 quarts = 1 gallon
of molasses = 2 pints
(liquid) of coffee = 200 lbs.
Quarter: 1 quarter = 8 bushels; 3 quarters = 1 Flemish Ell;
4 quarters = 1 yard, 5 quarters = 1 English Ell,
6 quarters = 1 French Ell
"Quintal": see hundredweight
of salmon, herring, fish = 150–160 lbs.
of sugar = 151 lbs.
Roll: of tobacco = 33 lbs.
"Setier": of wheat = 4 minots = 244–248 lbs.
of oats = 24 "boisseaux" (*not* minots or bushels)
Staves: 1½" thick, 5 1/2' long and 5" wide
"Tierce": of flour = 336 lbs. (C series, vol. 106)
of peas = 336 lbs.
of pork = 300–318–320 lbs.
of rice = 270 lbs.
of wine, oil, honey = 42 gallons = ⅓ of a pipe
Tub or "Tinette":
of butter = 26 lbs. (NAQQ, pap. Labadie, Augustines)
Ton: of wheat = 42 minots
of molasses = 104–110 gallons (St-Sulpice)

For other equivalencies, see Dechêne, *Le partage des subsistances*, pp. 191–193, McCalla, *Planting the Province*, notes to appendices B and C; Richard Cole Harris, *The Seigneurial System in Early Canada: A Geographical Study* (Madison and Quebec, 1966); Greer, *Peasant, Lord and Merchant*, p. 250.

Some equivalencies between currencies used in accounts books in Lower Canada

For the years 1759, 1764, and 1777, one can find the equivalencies of species in Jean Hamelin, "À la recherche d'un cours monétaire canadien : 1760–1777", *Revue d'histoire de l'Amérique Française*, vol. 15 (June 1961), p. 31. We have reproduced this table in "Le système financier bas-canadien au tournant du XIX^{e} siècle", *L'Actualité économique*, vol. 59, no. 3 (September 1983), p. 511. The same article also presents two long tables for all gold and silver specie from 1777 to 1812 (p. 512). Although it is not necessary to reproduce these tables here, it seemed to us useful to provide

the readers with a table of the most frequently used equivalencies of the time, particularly in account books.

£1 = 20 shillings (20/–); 1 sh. or 1/– = 12 pence (–/12)
1# = 20 sols (20s); 1 sol = 12 deniers (12d)
£9 sterling (st) = £10 Halifax currency or "current" (c)
9# tournois (t) = 10# "de 20 sols" or "ancien cours"
24# "de 20 sols" = 20/– shillings = £1 (c)
1# "de 20 sols" = 1 franc = 5/6 of 1/– or .833 sh. c. (e.g., 3# x .833 = 2.499 sh. or 2/6)
1/– = 12 pence = 1# 4 sols or 24 sols = 288 deniers
1 "coppre" = 1 sol = ½ penny = 12 deniers (1 penny = 24 deniers)
$1 (Spanish or American) = 4/6 (st) or 4/8 (A.P.) or 5/– (c)
£ = English pound
A.P. = "Army Pay" currency
# = French livre
In our calculations, we have transposed everything in deniers.

Table 1 Price Indexes for Quebec and Montreal, 1760–1860/1867

This is a 20-product series for Quebec, 1761–1867 (oats, butter, beef, wood, coffee, candles, coal, flour, burning oil, molasses, eggs, straw, potatoes, peas, chickens, rum, wheat, hay, salt, and tobacco); a 10-product series for Montreal, 1760–1860 (oats, butter, wood, wheat, beef, flour, hay, eggs, peas, chickens); and a 10-product series for Quebec, 1761–1867 (oats, butter, wheat, beef, wood, flour, hay, eggs, peas, and chickens).

Year	Montreal index 10 products 10% weight	13-year moving average, Montreal/10	Quebec index 20 products 5% weight	13-year moving average, Quebec/20	Quebec index 10 products 10% weight	13-year moving average, Quebec/10
1760	497.51					
1761	304.39		132.70		147.53	
1762	102.02		137.59		140.30	
1763	83.55		118.48		109.37	
1764	80.01		108.43		105.20	
1765	75.96		98.90		94.55	
1766	71.34	132.28	106.24		94.46	
1767	87.17	102.81	114.51	108.91	103.27	106.83
1768	90.88	86.57	117.02	105.59	104.98	102.96
1769	95.97	86.12	110.48	102.52	112.75	100.49
1770	89.72	87.36	101.52	102.42	101.03	101.58
1771	66.43	91.30	88.85	103.87	85.96	103.37
1772	76.01	97.83	93.86	107.40	99.58	107.52
1773	113.05	103.73	87.29	110.83	89.80	111.78
1774	93.35	110.14	89.47	115.77	97.30	118.11
1775	96.14	117.32	97.72	123.95	108.16	125.42
1776	99.58	122.70	117.22	132.60	123.54	133.16
1777	131.28	128.14	127.26	138.47	128.39	138.79
1778	160.82	134.27	144.71	142.88	148.49	144.42
1779	148.15	136.38	150.85	144.31	149.85	146.55

Table 1 (*Continued*)

Year	Montreal index 10 products 10% weight	13-year moving average, Montreal/10	Quebec index 20 products 5% weight	13-year moving average, Quebec/20	Quebec index 10 products 10% weight	13-year moving average, Quebec/10
1780	170.45	135.29	178.81	145.48	185.54	147.92
1781	184.18	134.83	223.29	147.24	200.11	148.88
1782	165.96	134.37	223.00	148.54	213.27	149.95
1783	160.42	136.46	177.82	147.93	174.29	149.11
1784	146.12	134.63	146.06	146.84	159.19	147.80
1785	103.49	128.63	112.56	143.32	127.19	144.09
1786	98.86	124.93	102.39	139.41	107.58	140.26
1787	87.34	120.75	112.36	133.61	109.84	133.75
1788	90.19	114.57	114.69	124.33	122.05	126.31
1789	126.70	113.02	109.27	118.10	112.66	121.09
1790	107.48	112.22	113.10	115.98	111.33	119.59
1791	82.91	110.74	98.96	116.04	100.31	118.43
1792	100.00	112.15	100.00	119.37	100.00	119.75
1793	116.09	113.13	103.49	123.51	100.98	123.05
1794	103.82	118.13	102.63	126.51	103.31	127.48
1795	145.85	123.92	141.92	130.39	145.48	132.36
1796	150.04	125.77	150.30	133.90	154.77	136.54
1797	126.89	129.66	146.84	138.08	144.11	142.02
1798	121.76	136.17	155.89	144.99	144.31	150.05
1799	111.63	140.02	156.15	150.74	150.56	156.96
1800	152.28	140.62	151.42	155.30	167.41	162.51
1801	165.50	143.90	165.15	160.10	185.41	167.67
1802	150.70	144.41	154.88	162.19	167.08	170.70
1803	158.06	149.90	167.40	167.44	182.56	177.63
1804	167.53	153.75	188.78	173.96	204.62	187.76
1805	150.12	158.82	174.80	179.86	189.88	197.93
1806	123.86	166.09	162.81	185.56	173.15	207.07
1807	146.47	168.86	164.94	190.82	170.31	213.17
1808	152.43	176.26	169.14	196.98	184.87	220.09
1809	221.48	185.90	218.50	203.94	244.88	229.74
1810	176.91	197.28	231.70	210.26	275.87	239.19
1811	187.99	203.49	232.48	213.22	276.49	244.04
1812	206.19	205.14	230.30	215.29	269.41	245.95
1813	188.29	209.14	219.83	218.15	246.63	250.26
1814	261.63	210.28	245.16	219.70	275.35	253.08
1815	276.05	209.64	245.46	220.33	292.53	253.04
1816	305.98	203.41	249.49	216.46	305.51	247.93
1817	248.29	199.24	227.30	210.63	267.63	239.88
1818	171.54	196.11	201.68	204.76	214.65	231.75
1819	175.86	190.39	200.00	200.51	229.26	224.12
1820	161.36	185.67	185.09	196.18	206.89	218.66
1821	144.04	173.08	177.34	189.85	184.44	210.68
1822	140.45	161.59	168.17	182.72	178.48	201.24
1823	122.80	149.38	155.94	175.38	171.21	190.53
1824	146.98	141.23	156.09	168.86	170.74	182.73
1825	131.80	139.93	175.08	165.09	170.19	179.21
1826	126.96	136.43	163.58	162.92	175.75	175.67
1827	97.91	136.56	162.82	160.91	171.54	173.04
1828	126.71	136.92	152.75	157.73	169.88	171.05
1829	147.18	135.59	154.07	154.86	166.20	168.27
1830	142.38	138.19	142.62	154.47	166.21	167.69
1831	154.65	140.52	152.59	155.27	168.92	168.79

Table 1 (***Concluded***)

Year	Montreal index 10 products 10% weight	13-year moving average, Montreal/10	Quebec index 20 products 5% weight	13-year moving average, Quebec/20	Quebec index 10 products 10% weight	13-year moving average, Quebec/10
1832	130.32	145.70	171.78	154.00	183.27	169.54
1833	163.14	151.12	158.95	153.80	172.74	170.53
1834	148.71	156.85	136.06	151.57	158.55	168.74
1835	123.16	157.95	130.82	149.49	142.27	166.82
1836	156.53	158.68	150.87	147.69	163.74	164.94
1837	177.28	157.22	166.52	145.97	184.99	162.16
1838	199.17	155.32	158.50	144.67	179.91	159.90
1839	197.45	157.03	161.09	141.83	188.70	156.53
1840	172.34	155.37	133.73	141.48	148.18	155.38
1841	141.05	155.48	125.71	142.75	144.97	156.03
1842	156.63	157.19	130.71	143.28	141.80	156.31
1843	123.37	155.79	120.25	140.93	130.02	153.38
1844	129.97	154.73	135.74	137.27	139.54	148.54
1845	152.58	152.78	134.85	135.30	139.49	145.56
1846	141.59	151.88	154.36	133.39	157.84	142.22
1847	150.13	154.88	152.65	134.57	166.91	143.62
1848	145.33	163.81	137.66	140.66	145.93	150.11
1849	138.43	173.46	120.37	146.23	125.62	157.25
1850	163.47	181.39	118.83	151.57	122.06	163.50
1851	173.76	189.89	132.98	154.74	141.16	168.96
1852	185.75	194.36	136.18	156.77	145.35	172.42
1853	211.36	197.82	149.09	157.35	166.35	174.67
1854	257.11	201.57	204.96	157.32	229.36	176.05
1855	282.15	190.39	203.07	157.81	234.58	178.13
1856	226.46	179.74	189.63	160.35	211.36	182.57
1857	240.45	167.17	177.01	163.70	210.52	188.13
1858	210.71	153.80	161.21	166.10	184.37	192.33
1859	186.59	139.51	161.85	167.83	187.16	195.77
1860	198.85	123.26	152.25	168.52	184.89	197.84
1861			144.13	164.78	172.92	194.49
1862			153.33		183.37	
1863			162.41		194.27	
1864			164.17		195.84	
1865			158.64		190.07	
1866			158.06		193.28	
1867			156.41		185.71	

Table 2 32-Commodity Consumer Price Indexes Published in 1975 for Quebec and Montreal

Year	Quebec	Montreal
1792	100.0	100.0
1793	107.7	105.6
1794	108.2	109.6
1795	125.5	123.7
1796	143.6	138.8
1797	141.5	130.0
1798	137.7	130.1
1799	139.8	126.6
1800	144.7	141.7
1801	152.6	150.8
1802	148.5	135.2
1803	150.3	141.3
1804	150.4	146.0
1805	158.5	150.7
1806	152.4	138.0
1807	149.7	135.2
1808	158.9	140.9
1809	187.0	170.0
1810	217.5	180.5
1811	219.8	180.5

Source: Gilles Paquet and Jean-Pierre Wallot, "The Agricultural Crisis in Lower Canada, 1802–1812", *Canadian Historical Review*, vol. 56 (June 1975), pp. 133–161.

Table 3 Annual Price Index for Quebec 1761–1867 (20 Products)

Year	Paquet & Wallot 1792=100	Paquet & Wallot 1860=100	Michell 1860=100	Composite base 1860=100	Year	"1900=100" Statistical contribution to Canadian economic history
1761	135.69			71.73	1761	
1762	138.39			73.15		
1763	114.84			60.71		
1764	105.16			55.59		
1765	97.00			51.28	1765	
1766	100.67			53.22		
1767	111.08			58.72		
1768	110.29			58.30		
1769	107.75			56.96		
1770	98.92			52.29	1770	
1771	88.16			46.60		
1772	98.56			52.10		
1773	89.12			47.11		
1774	95.62			50.55		
1775	106.85			56.48	1775	
1776	130.21			68.83		

Table 3 (***Continued***)

Year	Paquet & Wallot 1792=100	Paquet & Wallot 1860=100	Michell 1860=100	Composite base 1860=100	Year	"1900=100" Statistical contribution to Canadian economic history
1777	129.66			68.54		
1778	156.81			82.89		
1779	160.17			84.67		
1780	198.37			104.86	1780	
1781	215.10			113.71		
1782	228.07			120.56		
1783	183.91			97.22		
1784	153.79			81.30		
1785	121.15			64.04	1785	
1786	105.69			55.87		
1787	112.36			59.39		
1788	118.89			62.85		
1789	119.56			63.20		
1790	112.38			59.40	1790	
1791	99.99			52.86		
1792	100.00			52.86		
1793	106.66			56.38		
1794	108.12			57.15		
1795	146.76			77.58	1795	
1796	152.82			80.78		
1797	144.28			76.27		
1798	153.71			81.26		
1799	154.71			81.79		
1800	156.74			82.86	1800	
1801	171.58			90.70		
1802	165.49			87.48		
1803	173.33			91.63		
1804	188.87			99.84		
1805	183.59			97.05	1805	
1806	170.19			89.97		
1807	170.41			90.08		
1808	184.02			97.28		
1809	235.49			124.49		
1810	257.44			136.09	1810	
1811	253.41			133.96		
1812	251.90			133.16		
1813	243.28			128.60		
1814	281.02			148.55		
1815	293.30			155.05	1815	
1816	287.74			152.11		
1817	266.33			140.79		
1818	224.32			118.58		
1819	226.73			119.85		
1820	198.99			105.19	1820	
1821	182.65			96.55		
1822	177.71			93.94		

Table 3 (***Continued***)

Year	Paquet & Wallot 1792=100	Paquet & Wallot 1860=100	Michell 1860=100	Composite base 1860=100	Year	"1900=100" Statistical contribution to Canadian economic history
1823	168.74			89.20		
1824	178.17			94.18		
1825	194.93			103.05	1825	
1826	188.25			99.51		
1827	191.72			101.35		
1828	176.82			93.47		
1829	183.56			97.03		
1830	169.25			89.47	1830	
1831	171.52			90.67		
1832	192.45			101.74		
1833	175.91			92.99		
1834	161.65			85.45		
1835	143.59			75.91	1835	
1836	159.12			84.12		
1837	183.36			96.93		
1838	177.35			93.75		
1839	189.69			100.28		
1840	154.02			81.42	1840	
1841	141.68			74.89		
1842	144.21			76.23		
1843	136.78			72.31		
1844	148.75			78.63		
1845	142.51			75.33	1845	
1846	162.23			85.76		
1847	153.37			81.07		
1848	144.18	76.22	81	76.22		91
1849	130.89	69.19	71	69.19		80
1850	129.14	68.26	78	68.26	1850	87
1851	141.90	75.01	76	75.01		85
1852	143.96	76.10	81	76.10		91
1853	161.17	85.20	96	85.20		108
1854	228.38	120.73	120	120.73		134
1855	224.63	118.74	138	118.74	1855	155
1856	215.13	113.72	134	113.72		150
1857	209.18	110.58	138	110.58		154
1858	189.99	100.43	96	100.43		108
1859	197.15	104.22	111	104.22		124
1860	189.17	100.00	100	100.00	1860	112
1861	180.67	95.51	88	95.51		98
1862	189.78	100.32	84	100.32		94
1863	199.90	105.67	90	105.67		101
1864	201.87	106.71	96	106.71		108
1865	187.98	99.37	111	99.37	1865	124
1866	186.30	98.48	109	98.48		122
1867	178.17	94.19	111	94.19		124
1868				73.48		139
1869				66.61		126

Table 3 (***Concluded***)

Year	Paquet & Wallot 1792=100	Paquet & Wallot 1860=100	Michell 1860=100	Composite base 1860=100	Year	"1900=100" Statistical contribution to Canadian economic history
1870				64.49	1870	122
1871				66.61		126
1872				61.85		117
1873				65.02		123
1874				71.36		135
1875				69.78	1875	132
1876				64.49		122
1877				66.08		125
1878				52.86		100
1879				56.03		106
1880				61.85	1880	117
1881				67.66		128
1882				72.42		137
1883				67.14		127
1884				63.96		121
1885				58.15	1885	110
1886				54.98		104
1887				56.56		107
1888				63.96		121
1889				57.62		109
1890				56.03	1890	106
1891				59.21		112
1892				53.92		102
1893				54.98		104
1894				50.22		95
1895				49.69	1895	94
1896				43.35		82
1897				44.93		85
1898				49.69		94
1899				50.75		96
1900				52.86	1900	100
1901				56.56		107
1902				54.98		104
1903				56.56		107
1904				56.56		107
1905				61.85	1905	117
1906				63.44		120
1907				68.72		130
1908				71.36		135
1909				75.59		143
1910				74.54	1910	141
1911				71.36		135
1912				81.94		155
1913				77.18		146